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IV. HAZARDOUS WASTE SELF-AUDIT CHECKLIST

This section contains a checklist and associated background information on the U.S. Environmental Protection Agency's (EPA) hazardous waste requirements for construction projects. Hazardous wastes are regulated under Subtitle C of the Resource Conservation and Recovery Act (RCRA), 40 CFR Parts 260 - 279. EPA may authorize states to take the lead on RCRA Subtitle C programs. EPA also authorizes states to establish regulatory programs for solid wastes, using federal guidelines provided in Subtitle D of RCRA. In addition, states regulate construction and demolition (C&D) debris.

This document includes a checklist for Subtitle C requirements for generators of **hazardous waste**. Operators of construction projects can use the checklist to identify who will be responsible for addressing each requirement, and to conduct a self-audit of their construction site. The checklist also can be used by compliance inspectors to conduct an inspection of a construction project.

Construction projects may be subject to state or local regulations under RCRA Subtitle C. Check with the EPA Region or state in which the construction project is located to determine the hazardous and non-hazardous solid waste handling requirements that apply to the site.

Background information on federal hazardous waste requirements follows the checklist. Attachment A provides a list of materials at construction sites that may be covered by the RCRA Subtitle C requirements. Attachment B lists exclusions for hazardous wastes. Attachment C includes a list of the hazardous wastes regulated by RCRA Subtitle C.

This checklist applies to hazardous waste requirements only. For non-hazardous solid waste and construction and demolition waste requirements, check with the state or local regulatory agency.

Section VI in Part I of this guide contains a more detailed discussion on hazardous and non-hazardous solid waste requirements.

CHECKLIST FOR HAZARDOUS WASTE REQUIREMENTS FOR CONSTRUCTION PROJECTS

BACKGROUND INFORMATION Name of Auditor: Name of Project/Site: There are three parts to this checklist. The first part covers identifying hazardous waste, determining generator size, and meeting the hazardous waste storage requirements. The second part is a field checklist for inspecting hazardous waste storage areas. The last part is a field checklist for transporting hazardous waste. A "notes" area is provided at the end of each section of this checklist. For every "No" answer, enter a description of the missing information and the action required to bring the site into compliance in the "notes" area. **IDENTIFYING HAZARDOUS WASTES (40 CFR Part 261)** Photocopy this page as many times as necessary to capture information on each of the hazardous wastes present at the site. Name of Material/Waste: _____ <u>No</u> <u>Yes</u> 1. Is the material a solid waste (for RCRA Subtitle C purposes) - see the definition in *Background* (following the checklist)? 2. Is the material excluded from the definition of solid waste or hazardous waste see Attachment B? If yes, the state should be contacted for any applicable requirements. State Contact: Applicable Requirements: 3. Is the material a listed or characteristic hazardous waste - see Attachment C?

RCRA requirements apply to these wastes.

4. Is the waste a universal waste (i.e., hazardous waste batteries, hazardous waste

programs), hazardous waste thermostats, and hazardous waste lamps)? Specific

pesticides (either recalled or collected through waste pesticide collection

REQUIREMENTS FOR HAZARDOUS WASTE GENERATORS (40 CFR Part 262)

<u>Yes</u>	<u>No</u>			
		5. Does the site generate ≤100 kilograms (220 pounds) of hazardous waste per month and store ≤1,000 kilograms (2,200 pounds) of hazardous waste? If yes, the site is a Conditionally Exempt Small Quantity Generator (CESQG) and should answer the applicable questions below. <i>Note: Some state hazardous waste management regulations do not recognize this generator status</i> .		
		6. Does the site generate between 100 and 1,000 kilograms (220 - 2,200 pounds) of hazardous waste per month and store ≤6,000 kilograms (13,200 pounds) of hazardous waste? If yes, the site is a Small Quantity Generator (SQG) and should answer the applicable questions below.		
		7. Does the site generate 1,000 kilograms (2,200 pounds) or more of hazardous waste per month OR store more than 6,000 kilograms (13,200 pounds) of hazardous waste? If yes, the site is a Large Quantity Generator (LQG) and should answer the applicable questions below.		
		Conditionally Exempt Small Quantity Generators (CESQG)		
CESC	Gs ar	e exempt from requirements listed in 40 CFR Parts 262 through 270 if they meet		
		nents in 40 CFR Part 261.5.		
		8. Did the site get an EPA Identification Number (i.e., a RCRA Hazardous Waste Generator Number) ¹ ?		
		EPA Identification Number (if applicable):		
		9. Is the waste properly accumulated in containers or tanks ¹ ?		
		10. Are the hazardous waste containers closed, marked as "Hazardous Waste," and marked with the date when accumulation began ¹ ?		
		11. Does the site have specified emergency responses ¹ ?		
		12. Is the site's basic safety information readily accessible ¹ ?		
		13. Are site personnel familiar with proper handing of hazardous waste and site emergency procedures ¹ ?		
		14. Does the site store greater than 2,200 pounds of hazardous waste? If yes, the site must start meeting the requirements for SQGs (see the checklist below).		

¹This is an optional federal requirement (40 CFR Part 261.5), but may be required by the state.

<u>Yes</u>	<u>No</u>				
	Small Quantity Generators (SQG)				
		15. Did the site get an EPA Identification Number (i.e., a RCRA Hazardous Waste Generator Number)?			
		EPA Identification Number (if applicable):			
		16. Is the waste properly accumulated in containers or tanks (also see the Self-Audit Field Checklist: RCRA Waste Storage Areas)?			
		17. Are the hazardous waste containers closed, marked as "Hazardous Waste," and marked with the date when accumulation began (also see the Self-Audit Field Checklist: RCRA Waste Storage Areas)?			
		18. Does the site have specified emergency responses? (Note: a written contingency plan is not required.)			
		19. Is the site's basic safety information readily accessible?			
		20. Are site personnel familiar with proper handing of hazardous waste and site emergency procedures?			
		21. Does the site store hazardous waste for longer than 180 days? If yes, a RCRA permit is required (see 40 CFR Part 270).			
		22. If stored for less than 180 days, does the site have documentation showing the waste was shipped off site within 180 days?			
Large Quantity Generators (LQG)					
		23. Did the site get an EPA Identification Number (i.e., a RCRA Hazardous Waste Generator Number)?			
		EPA Identification Number (if applicable):			
		24. Is the waste properly accumulated in containers, tanks, drip pads, or containment buildings (also see the Self-Audit Field Checklist: RCRA Waste Storage Areas)?			
		25. Are the hazardous waste containers closed, marked as "Hazardous Waste," and marked with the date when accumulation began (also see the Self-Audit Field Checklist: RCRA Waste Storage Areas)?			

<u>Yes</u>	<u>No</u>			
		26. Does the site store hazardous waste for longer than 90 days? If yes, a RCRA permit is required (see 40 CFR Part 270).		
		27. If stored for less than 90 days, does the site have documentation showing the waste was shipped off site within 90 days?		
		28. Does the site have an established personnel training program to educate workers on the proper handling of hazardous waste?		
		29. Were the state and local authorities contacted to identify any additional requirements for LQGs?		
		Contact Name/Department:		
		Date Contacted:		
RCRA Waste Storage Requirements (LQG & SQG)				
		30. Is there a secure location to store the hazardous waste containers?		
		Location(s):		
		31. Do site personnel perform weekly inspections of the hazardous waste containers?		
		32. Does the site have secondary containment around the hazardous waste storage area (also see the Self-Audit Field Checklist: RCRA Waste Storage Areas)?		
		33. Does the site have fire suppression equipment in the hazardous waste storage area (also see the Self-Audit Field Checklist: RCRA Waste Storage Areas)?		
		34. Does the site have radio or telephone communication available in the hazardous waste storage area (also see the Self-Audit Field Checklist: RCRA Waste Storage Areas)?		
		35. Is an emergency coordinator on site or on call at all times?		
		Emergency Coordinator(s):		
		How to Contact:		

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NOTES / ACTIONS NEEDED TO BRING SITE INTO COMPLIANCE:			

SELF-AUDIT FIELD CHECKLIST: RCRA WASTE STORAGE AREAS

Date of Audit/Self-Audit:
Auditor (name, title, qualifications):
Name & Location of Project/Site:
Name of Hazardous Waste Storage Area:
1. Is the waste properly accumulated in containers, tanks, drip pads, or containment buildings?
Accumulation Areas and Observations:
Corrective Actions Needed/Expected Completion Date:
2. Are the hazardous waste containers closed, marked as "Hazardous Waste," and marked with the date when accumulation began?
Accumulation Areas and Observations:
7 recumulation 7 freus and Gosel various.
Corrective Actions Needed/Expected Completion Date:

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3. Is adequate secondary containment in place?	
Accumulation Areas and Observations:	
Corrective Actions Needed/Expected Completion Da	
4. Is fire suppression equipment available and worki	
Accumulation Areas and Observations:	
Corrective Actions Needed/Expected Completion Da	ate:
5. Is the radio or telephone communication available	e and working in the storage area?
Accumulation Areas and Observations:	
Corrective Actions Needed/Expected Completion Da	ate:

SELF-AUDIT FIELD CHECKLIST: TRANSPORTING HAZARDOUS WASTES

Date o	f Trai	nsport:		
Audito	or (nai	me, title, qualifications):		
Name	& Loc	cation of Project/Site:		
		Hazardous Waste:		
<u>Yes</u>	<u>No</u>			
	Preparation for Transport (LQG, SQG, & CESQG)			
		1. Is the site using a licensed hazardous waste hauler for transport?		
		Hauler Name:		
		License Information:		
		2. Has the site properly packaged the hazardous waste to prevent leakage by following Department of Transportation (DOT) requirements?		
		3. Is the hazardous waste properly labeled and marked?		
		4. Does the transporter have the proper placards to identify the characteristics and dangers associated with the waste?		
		5. Has the site completed and signed the Uniform Hazardous Waste Manifest? (See checklist below.)		
Uniform Hazardous Waste Manifest Requirements (EPA Form 8700-22, Appendix to 40 CFR Part 262) Note this is an optional federal requirement for CESQGs, but may be required by the state.				
		6. Does the manifest include the name, address, and EPA ID number of the hazardous waste generator (the site), transporter, and designated treatment, storage, and disposal facility (TSDF)?		
		7. Does the manifest include a description of the waste's hazards as required by DOT rules?		
		8. Did the site provide the quantities of the waste being transported and the types of containers?		
		9. Did the site complete the certification?		

<u>Y es</u>	<u>No</u>	
		10. Did the site receive a copy of the signed and dated manifest from the designated TSDF (within 45 days of shipment for LQG or within 60 days for SQG)? If no, did the site submit an "exception report" to EPA and the state? Date of Exception Report Submittal (if applicable):
NOTE	ES / AC	CTIONS NEEDED TO BRING SITE INTO COMPLIANCE:

BACKGROUND ON HAZARDOUS WASTE REQUIREMENTS FOR CONSTRUCTION PROJECTS

DEFINITIONS

- Construction and Demolition (C&D) Debris. Waste material that is produced in the process of construction, renovation, or demolition of structures. Structures include buildings of all types (both residential and nonresidential), roads, and bridges. Materials considered C&D debris include concrete, asphalt, wood, metals, gypsum wall board, and roofing.
- **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 such solid waste or hazardous waste or any constituent may enter the environment (e.g., emitted into the air or discharged into any waters, including ground water).
- Generator. Any person, by site, whose act or process produces hazardous waste identified or listed in Part 261 (i.e., RCRA Subtitle C) or whose act first causes a hazardous waste to become subject to regulation. Note that the generator may not necessarily produce the waste. Generators fall under three size classes: 1) large quantity generators (LQG); 2) small quantity generators (SQG); and 3) conditionally exempt small quantity generators (CESQG). Most construction activities are considered conditionally exempt small quantity generators.

CESQGs generate:

- ≤ 220 pounds of hazardous waste per month,
- ≤ 2.2 pounds of acute hazardous waste, or
- ≤ 220 pounds of contaminated soil, waste, or debris from the cleanup of an acute hazardous waste spill.

Acute hazardous wastes are denoted with the hazard code "H" or are P-listed wastes.

SQGs generate between 220 and 2,200 pounds of hazardous waste per month.

LQGs generate:

- \geq 2,200 pounds of hazardous waste per month,
- > 2.2 pounds of acute hazardous waste per month, or

- > 220 pounds of contaminated soil, waste, or debris from the cleanup of an acute hazardous waste spill.
- **Hazardous Waste**. A solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may either cause, or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.
- Hazardous Waste Management. The systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous wastes.
- Solid Waste under RCRA Subtitle C. Discarded material by being either:
 - Abandoned (i.e., disposed of, burned, or incinerated),
 - Inherently waste-like (i.e., materials that pose a threat to human health and the environment, such as certain dioxin-containing wastes),
 - Military munition, or
 - Recycled (e.g., accumulated for speculative recycle).
- Solid Waste under RCRA Subtitle D. Any garbage; refuse; sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility; nonhazardous industrial wastes; and other discarded material including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, agricultural, and community activities.
- **Storage**. When used in connection with hazardous waste, means the containment of hazardous waste, either on a temporary basis or for a period of years, in such a manner as not to constitute disposal of such hazardous waste.
- Treatment. When used in connection with hazardous waste, means 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 such waste or to render such waste nonhazardous, safer for transport, amenable for recovery, amenable for storage, or reduced in volume. This includes

any activity or processing designed to change the physical form or chemical composition of hazardous waste so as to render it nonhazardous.

APPLICABILITY

RCRA Subtitle C applies to:

- Generators of hazardous waste;
- Transporters of hazardous waste; and
- Treatment, storage, and disposal facilities for hazardous waste (typically not applicable to construction sites).

RCRA Subtitle C requirements do not apply to CESQGs except for ensuring proper disposal of hazardous wastes and getting a RCRA permit for storage of more than 2,200 pounds of hazardous wastes. Note that states may regulate hazardous wastes differently. For example, some states require CESQGs to meet the same requirements as small quantity generators. Therefore, the state environmental department should be contacted to determine the site's hazardous waste requirements.

RCRA Subtitle D provides guidelines for states to develop their own solid waste programs. These can vary from state to state; therefore, the state should be contacted for the applicable requirements (e.g., recycling standards, types of wastes prohibited from disposal in RCRA Subtitle D landfills).

RCRA SUBTITLE C REQUIREMENTS

RCRA Subtitle C has several requirements:

- Preliminary notification to EPA of the generation, transportation, treatment, storage, or disposal of hazardous waste. Notify EPA within 90 days of this activity. The notification includes site location, description of construction activity, and the hazardous waste being handled. The notification form and instructions can be found on line at: http://www.epa.gov/epaoswer/hazwaste/notify/notiform.pdf and http://www.epa.gov/epaoswer/hazwaste/notify/noti-ins.pdf.
- EPA may require owners/operators of a construction site to perform monitoring, analysis, and testing if there is a substantial hazard to human health or the environment. For example, if waste containers are uncovered during construction

activities, the site may need to analyze the waste to determine the extent of the hazard.

- Large and small quantity generators must perform the following:
 - Identify and determine the amount of hazardous waste generated each month (this determines generator status),
 - Get an EPA identification (ID) number,
 - Comply with accumulation and storage requirements (including training, contingency planning, and emergency arrangements),
 - Prepare waste for transportation,
 - Track the shipment and receipt of such waste, and
 - Meet recordkeeping and reporting requirements.
- A treatment, storage, and disposal facility (TSDF) permit is required if the site stores hazardous waste:
 - Greater than 90 days for large quantity generators,
 - Greater than 180 days for small quantity generators, and
 - In quantities of 2,200 pounds or more for conditionally exempt small quantity generators.
- Conditionally exempt small quantity generators are only required to perform the following:
 - Identify hazardous waste,
 - Comply with storage limit requirements, and
 - Ensure proper hazardous waste treatment or disposal (on site or off site).
- Transporters of hazardous waste must follow recordkeeping, labeling, manifest, and transportation requirements.
- Sites cannot apply waste, used oil, or any other contaminated material as a dust suppressant.

• Sites cannot perform underground injection of hazardous wastes into any drinking water source.

Attachment A. Potential Hazardous Wastes at Construction Sites (RCRA Subtitle C)

- Ignitable wastes (flashpoint of less than 140 degrees) such as paint thinners, paints, paint and varnish strippers, epoxy resins, adhesives degreasers, and spent cleaning solvents.
- Corrosive wastes (acids with pH less than 2 or bases with pH greater than 12.5) such as rust removers, cleaning fluids, and battery acids.
- Reactive wastes (can explode or violently react) such as cyanide, plating waste, bleaches, waste oxidizers.
- Toxic wastes (meeting certain concentrations) such as materials containing metals (e.g., mercury, cadmium, or lead) or solvents (e.g., carbon tetrachloride or methyl ethyl ketone). Materials may include adhesives, paints, coatings, polishes, varnishes, thinners, and treated woods.
- Spent solvents listed under RCRA (hazardous waste code F).
- Discarded commercial chemical products containing listed chemicals under RCRA (hazardous waste codes P and U).
- Mercury-containing wastes (e.g., fluorescent bulbs, broken mercury switches, batteries, or thermostats).
- Lead-based paints (note that lead-based paint debris from homes and residences is not covered by hazardous waste requirements).
- Used oil and hydraulic fluid.
- Soil contaminated with toxic or hazardous pollutants.

To identify hazardous wastes at the construction site:

- Refer to the RCRA regulations at 40 CFR Part 261,
- Review the list of commonly reported hazardous wastes in EPA's *Notification of Regulated Waste Activities: Instructions and Forms* (available on-line at http://www.epa.gov/epaoswer/hazwaste/data/form8700/8700-12.pdf), and

 Contact the state or EPA Region for assistance (EPA's Notification of Regulated Waste Activities: Instructions and Forms includes a list of state contacts).

Attachment B. RCRA Subtitle C Hazardous Waste Exclusions

RCRA Subtitle C hazardous waste exclusions applicable to the construction industry include:

Exclusions from the definition of solid waste. Hazardous wastes must meet the definition of solid wastes. Exclusions applicable to the construction industry include the following:

- Radioactive waste;
- Spent sulfuric acid;
- Spent wood preservatives;
- Fuels comparable to pure or virgin fuels;
- Processed scrap metal;
- Shredded circuit boards; and
- Zinc fertilizers made from recycled hazardous secondary materials.

Exclusions from the definition of hazardous waste. Exclusions applicable to the construction industry include the following:

- Household hazardous waste:
- Wood treated with arsenic;
- Petroleum-contaminated media and debris from underground storage tanks;
- Spent chlorofluorocarbon refrigerants; and
- Used oil filters.

Exclusions for waste generated in raw material, product storage, or manufacturing units.

This exclusion applies while the waste remains in the unit (e.g., tanks, vehicles). This exclusion does **not** apply to surface impoundments. Once the unit temporarily or permanently ceases operation for 90 days, the waste is considered generated and subject to RCRA Subtitle C provisions.

Exclusions for laboratory samples and waste treatability study samples. These samples are small, discrete amounts of hazardous waste that are essential to ensure accurate characterization and proper treatment of hazardous wastes.

Exclusions for dredged material regulated under the Marine Protection Research and Sanctuaries Act of the Clean Water Act (CWA). Dredge materials subject to Section 404 of the CWA or Section 103 of the Marine Protection, Research, and Sanctuaries Act are excluded from the definition of hazardous waste.

Exclusion for Lead-Based Paint Debris from Homes and Residences. EPA classifies lead-based paint debris generated by contractors in households as "household waste" and excludes this debris from RCRA Subtitle C hazardous waste regulations.

Attachment C. Hazardous Wastes Regulated Under RCRA Subtitle C

Characteristic Wastes

- 1. *Ignitable waste*. Waste having one of the following properties:
 - Liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, with a flash point of less than 60°C (140 °F);
 - Not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard;
 - Ignitable compressed gas; or
 - An oxidizer.
- 2. *Corrosive waste*. Waste having one of the following properties:
 - Aqueous solution with pH < 2 or pH >12.5; or
 - Liquid that corrodes steel at a rate of > 6.35 millimeters (0.250 inch) per year at a test temperature of 55 °C (130 °F).
- 3. *Reactive waste.* Waste having one of the following properties:
 - Can explode or violently react when exposed to water or under normal handling conditions;
 - Can create toxic fumes or gases when exposed to water or under normal handling conditions;
 - Meets the criteria for classification as an explosive under DOT rules; or
 - Generates toxic levels of sulfide or cyanide gas when exposed to a pH range of 2 through 12.5.
- 4. *Toxic waste*. Waste where the listed toxic chemical concentration exceeds the regulatory level when sampled using the Toxicity Characteristic Leaching Procedure (TCLP). The following table lists wastes (and potential toxic chemicals) that may be generated at

construction sites and the corresponding hazardous waste regulatory level. See 40 CFR Part 261.24 for a complete list of toxic chemicals and their regulatory level.

Construction Waste	Potential Toxic Pollutant	Regulatory Level (mg/L) (a)	EPA Hazardous Waste Number
Painting operation	Chromium	5.0	D007
waste	Lead	5.0	D008
Cleaning fluids	Carbon tetrachloride	0.5	D019
	Methyl ethyl ketone (MEK)	200.0	D035
Contaminated soil	depends on the site		

⁽a) If the waste generated has any toxic chemical exceeding the regulatory level, the waste must be handled as a RCRA Subtitle C regulated hazardous waste.

Listed Wastes

- 1. *The F List*. Wastes from nonspecific sources. Potential F List wastes for construction sites are spent solvent wastes and dioxin-bearing wastes.
- 2. The K List. Wastes from specific sources. Not applicable to construction sites.
- 3. The P List. Discarded commercial chemical products. The waste must contain one of the chemicals on the P List and the chemical in the waste must be unused and in the form of a commercial chemical product (i.e., either 100 percent pure, technical (or commercial) grade, or the sole active ingredient in a chemical formulation).
- 4. *The U List*. Discarded commercial chemical products. The waste must contain one of the chemicals on the U List and the chemical in the waste must be unused and in the form of a commercial chemical product (i.e., either 100 percent pure, technical (or commercial) grade, or the sole active ingredient in a chemical formulation).

The complete list of RCRA-listed wastes can be found in 40 CFR Part 261 Subpart D, which can be found electronically at http://ecfr.gpoaccess.gov/ under "Title 40 - Protection of Environment."