

Making a Hazardous Waste Determination

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Ask three fundamental questions:

1. What wastes do I generate?
2. Are these wastes hazardous?
3. How much do I generate?

What wastes do I generate?

- Wastes are materials that are discarded or spent.

May include materials that are removed from service and reclaimed or recycled
(such as spent solvents which are regenerated)

Wastes typically generated at salvage yards:

- discarded or recycled automotive fluids
(used oil, antifreeze, fuel)
- discarded or recycled automotive components
(tires, batteries, oil filters, metallics and non-metallics)
- contaminated wipes, rags, & absorbants
- cleaning fluids & solvents
- clean-up / remediation material (contaminated soil)

Are my wastes “hazardous wastes”?

(40 CFR 260 - 299, incorporated by Indiana rule 329 IAC 3.1)

EVERYONE who generates a waste must make hazardous waste determinations in order to know how their wastes might be regulated, unless explicitly excluded from the hazardous waste rules, as indicated in the following determination process. (40 CFR 262.11)

The **hazardous waste determination process** involves identifying whether or not wastes meet the regulatory definition of :

- **solid waste**, then of
- **hazardous waste**, and is not explicitly
- **excluded** from either classification

Definition of

Solid Waste

- Any material (liquid, solid or compressed gas) that will no longer be used for its intended purpose and therefore is discarded, or
- A material which must be reclaimed before reuse, &
- Is not excluded from definition of “solid waste”
- Note: “solid waste” does **not** refer to physical state

(40 CFR 261.2)

Solid Waste Exclusions

wastes not meeting regulatory definition of “**solid waste**”

- domestic sewage & wastes going to treatment plants
- NPDES-permitted industrial wastewater discharges
- **scrap metal that is recycled**
- certain other specified types of waste

(most not related to typical salvage operation)

Definition of

Hazardous Waste

consists of these two broad categories:

- Characteristic hazardous waste (40 CFR 261, Sub.C)

Ignitability

Corrosivity

Reactivity

Toxicity

- Listed hazardous waste (40 CFR 261, Subpart D)

certain types of wastes listed in the rule

Hazardous Waste Exclusions

“**Solid wastes**” which are excluded from definition of
“**hazardous waste**”

- household waste (residences, motels & hotels, campgrounds, etc)
- agricultural waste used as fertilizer
- certain production wastes (mining, petroleum, mfg processes)
- certain arsenical-treated wood or wood products
- petroleum contaminated media & debris from underground storage tank remediation (40 CFR 280)
- **non-terne plated used oil filters** (properly hot-drained)

Characteristic hazardous wastes

Ignitability

(hazardous waste code **D001**)

- A liquid waste having a flash point less than 140°F (60°C)
- An oxidizer or ignitable compressed gas (DOT defined)
- “spontaneously combustible” materials

Examples: spent low flash point cleaning solvents or mineral spirits; discarded cylinders still containing compressed ignitable gases; paint and/or solvent soaked rags or sorbants which may spontaneously combust while stored

Characteristic hazardous wastes

Corrosivity

(hazardous waste code **D002**)

- Liquid wastes with a pH less than or equal to 2.0 (acidic)
- Liquid wastes with pH equal to or greater than 12.5 (alkaline)
- Liquid wastes that corrode steel at rate greater than 0.25 in./yr.

Examples: extreme acidic or alkaline cleaning solutions;
battery acid

Characteristic hazardous wastes

Reactivity

(hazardous waste code **D003**)

Wastes which are unstable or explode, or produce noxious fumes, gases, or vapors when mixed with water or under conditions such as heat or pressure.

Examples: magnesium shavings; old unstable chemicals; certain cyanide or sulfide wastes; forbidden explosives

(this class of hazardous waste likely rarely encountered at auto salvage operations)

Characteristic hazardous wastes

Toxicity

(hazardous waste codes **D004** through **D043**)


Wastes determined by laboratory analysis (**TCLP**, or Toxicity Characteristic Leaching Procedure) to contain any of 40 specified constituents (primarily heavy metals, organic compounds, and pesticides/herbicides) above threshold concentrations listed in **40 CFR 261.24**.

Examples: waste from paints with high chromium or lead content; battery acid (lead); discarded gasoline or cleanup wastes (benzene); cleaning compounds containing certain solvents, or picking up contaminants such as lead or chromium in use; discarded **mercury switches**

Listed hazardous wastes

Non-specific “F-listed” sources

(hazardous waste codes Fxxx)

Halogenated or non-halogenated solvents or solvent mixtures used in cleaning or degreasing and containing  10% solvent constituent, before use, such as:

- trichlorethylene (TCE), methylene chloride, chlorinated fluorocarbons
(F001)
- xylene, acetone, methyl isobutyl ketone (MIK) **(F003)**
- toluene, methyl ethyl ketone (MEK), benzene **(F005)**
- materials, such as rags or sorbants, contaminated with these solvents

Listed hazardous waste

Specific “K-listed” sources

(hazardous waste code **Kxxx**)

- various types of treatment sludges
- certain distillation wastes
- specific types of manufacturing wastes

Examples: none likely encountered at auto salvage yards

Listed hazardous wastes

Discarded generic **commercial chemical** or **off-specification products** (“P- or U-listed”)

(hazardous waste code **Pxxx** if listed as **acutely hazardous**, or

Uxxx if otherwise listed as a discarded commercial chemical or off-specification product)

- any P- or U-listed discarded commercial chemical or off-specification product listed in 40 CFR 261.33
- container residues or spill cleanup waste from such products

Examples: any discarded unused product, residue, or spill cleanup waste of substances listed in this part of the rule

Specially regulated categories of waste

- Used oil
- Reclaimed lead-acid batteries
- Universal waste

Specially regulated categories of waste

Used oil

- not regulated as hazardous waste if destined for recycling and managed in accordance with the Indiana Used Oil Rule (329 IAC 13)
- applies to all handlers of used oil regardless of amount managed or type of handler
- application of used oil on any ground surface is **PROHIBITED** (IC 13-30-2-1(14))

Specially regulated categories of waste

Reclaimed lead-acid batteries

- handling for reclamation by generators, transporters, collectors, storers, or regenerators is exempt from most hazardous waste requirements (40 CFR 266.80(a))
- a battery reclaimer who *stores* batteries prior to reclamation is subject to most hazardous waste standards (40 CFR 266.80(b))
- lead-acid batteries may *alternatively* be managed as universal waste

Specially regulated categories of waste

Universal waste

Four specified categories of **hazardous waste** which may be managed under the reduced standards of the **Universal Waste Rule** (329 IAC 3.1-16, incorporating 40 CFR 273) *instead of* as fully regulated hazardous waste:

- **Universal waste batteries**
- **Universal waste pesticides**
- **Universal waste mercury thermostats**
- **Universal waste lamps**

Advantages of Management as Universal Waste

- Less stringent management requirements than for fully regulated hazardous waste
- Hazardous waste managed as Universal Waste is not counted toward total monthly hazardous waste generation rate

Universal Waste Categories

Universal waste batteries

- discarded primary (non-rechargable) & secondary (rechargable) batteries that contain elements such as cadmium, lead, or mercury

Examples: Ni-Cad, mercury-oxide, lead-acid batteries

Note: Automotive lead-acid batteries which are to be reclaimed may instead be managed under the exemption in 40 CFR 266.80 described above, which entails fewer requirements than management either as Universal Waste or as fully regulated hazardous waste.

Universal Waste Categories

Universal waste pesticides

- particular classes of discarded pesticides
likely rarely involving salvage yard practices

Universal waste mercury thermostats

- discarded intact thermostats or mercury-containing
thermostat ampules only

In Indiana, this does **not** include mercury-containing switches or other mercury-containing devices, which are regulated as hazardous wastes.

Universal Waste Categories

Universal waste lamps

- any discarded lamps which contain elements (such as mercury or lead) which may make them a characteristic hazardous waste

Example: fluorescent light bulbs

Note: this category does not include associated light fixtures such as ballasts.

Doing the Waste Determination

A waste determination may be performed either by:

- **laboratory testing (TCLP)**
of a representative sample of the waste
or

- **applying knowledge**
of the substances or processes producing the waste

Be able to verify or justify your waste determination.
(documentation is best)

A note about

Mixing hazardous with non-hazardous wastes

When hazardous and non-hazardous wastes are mixed, the entire mixture is regulated as hazardous if:

- the hazardous waste was a “listed” hazardous waste
i.e., any amount of listed hazardous waste in a mixture makes it all hazardous
- the hazardous waste was “characteristic,” and the mixture retains the “characteristic”

Dilution of a hazardous waste is prohibited treatment

and is subject to significant penalties under the rules.

So, I generate these hazardous wastes –

What do I have to do to be in
compliance with the hazardous waste rules?

To know what regulatory requirements apply to the management of
your hazardous waste, you next need to know

How much hazardous waste do I generate?

or, what is my

Generator Status