



Waste Determination and Generator Status

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Waste Determination

- Definition
- Exclusions
- Testing Methods

Generator Status

CESQG

SQG

LQG

- Three Classes of Generators
- Waste Must Be Counted Monthly
- Episodic Generators

What is a Waste Determination?

The process of defining if a solid waste generated is hazardous or not.



What is a Solid Waste?

As defined in 40 CFR 261.2

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

Secondary Material	Use constituting disposal 261.2(c)(1)	Energy recovery/ fuel 261.2(c)(2)	Reclamation 261.2(c)(3)	Speculative accumulation 261.2(c)(4)
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Spent materials

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Sludges (listed in 261.31 or 261.32)

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Sludges exhibiting a characteristic of hazardous waste

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NOT A SOLID WASTE

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By-products (listed in 261.31 or 261.32)

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By-products exhibiting a characteristic of hazardous waste

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NOT A SOLID WASTE

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Commercial chemical products listed in 261.33

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NOT A SOLID WASTE

NOT A SOLID WASTE

Scrap metal other than excluded scrap metal

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Solid Waste Exclusions

40 CFR 262.4(a)

- Domestic sewage
- Secondary materials that are reclaimed and returned to the original process provided:
 - Only tank storage is involved and it is a closed process
 - Does not involve controlled flame combustion

Exclusions Continued



- Secondary materials are never accumulated for over 12 months without being reclaimed
- Reclaimed material is not used to produce a fuel
- Reclaimed material is not used to produce products that are used in a manner constituting disposal

40 CFR 260.30 and 260.31

- Case – by – case Basis
- Three (3) scenarios:
 - Materials accumulated speculatively
 - Materials that are reclaimed and then reused
 - Materials that have been reclaimed but must be reclaimed further
- Each scenario has particular criteria to follow.

Waste Determination Methods

- Determine if waste is excluded
- Determine if waste is listed as a hazardous waste (subpart D of 261)
- Determine if waste is identified in **Subpart C of 261** (if it is not listed)

Listed Hazardous Waste (Subpart D of 261)

- Solid Waste = Hazardous Waste
- F, K, P, and U EPA HW codes
 - www.epa.gov/swercepp/pubs/title3.pdf
- Hazard Codes:
 - Ignitable Waste (I)
 - Corrosive Waste (C)
 - Reactive Waste (R)
 - Toxicity Characteristic Waste (E)
 - Acute Hazardous Waste (H)
 - Toxic Waste (T)

How do you ID waste in Subpart C of 261???



- Testing the waste according to the methods in subpart C of 261 or an equivalent method
- Applying knowledge of the hazardous characteristic of the waste

Subpart C Testing Methods

- Ignitability (D001) properties:
 - Liquid: containing less than 24% alcohol by volume; flash point less than 60°C
 - Not a liquid, capable under STP of causing fire through friction, absorption of moisture or spontaneous chemical changes
 - An ignitable compressed gas (49 CFR 173.300)
 - An oxidizer (49 CFR 173.151)

- Corrosivity (D002) properties:
 - Aqueous and has pH less than or equal to 2 or greater than or equal to 12.5
 - Liquid and corrodes steel at a rate greater than 6.35mm (0.250 inch) per year at a test temperature of 55°C

- Reactivity (D003) properties:
 - Normally unstable and readily undergoes violent change without detonating
 - Reacts violently with water
 - Forms potentially explosive mixtures with water
 - When mixed with water it generates toxic gases
 - Is a cyanide or sulfide bearing waste, when exposed to pH conditions between 2 and 12.5, can generate toxic fumes
 - Readily capable of detonation or explosive decomposition or reaction at STP
 - Forbidden explosive (49 CFR 193.53) or Class B explosive (49 CFR 173.88)



- Toxicity properties:
 - Using the Toxicity Characteristic Leaching Procedure (TCLP), the extract from the sample of the waste contains any of the contaminants listed in Table 1 (40 CFR 261.24) at the concentration equal to or greater than the respective value.

Table 1 - Maximum Concentration of Contaminants for the Toxicity Characteristic (40 CFR 261.24)

- A solid waste that exhibits the characteristic of toxicity has the EPA HW code specified in this table, which is causing it to be hazardous.

EPA HW No. ¹	Contaminant	CAS No. ²	Regulatory Level (mg/L)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D018	Benzene	71-43-2	0.5
D006	Cadmium	7440-43-9	1.0
D019	Carbon tetrachloride	56-23-5	0.5
D020	Chlordane	57-74-9	0.03
D021	Chlorobenzene	108-90-7	100.0
D022	Chloroform	67-66-3	5.0
D007	Chromium	7440-47-3	5.0
D023	o-Cresol	95-48-7	4200.0
D024	m-Cresol	109-39-4	4200.0
D025	p-Cresol	106-44-5	4200.0
D026	Cresol		4200.0
D016	2,4-D	94-75-7	10.0
D027	1,4-Dichlorobenzene	106-46-7	7.5
D028	1,2-Dichloroethane	107-06-2	0.5
D029	1,1-Dichloroethylene	75-35-4	0.7
D030	2,4-Dinitrochloruene	121-14-2	30.13
D012	Endrin	72-20-8	0.02
D031	Heptachlor (and its epoxide)	76-44-8	0.008
D032	Hexachlorobenzene	118-74-1	30.13
D033	Hexachlorobutadiene	87-68-3	0.5
D034	Hexachloroethane	67-72-1	3.0
D008	Lead	7439-92-1	5.0
D013	Lindane	58-89-9	0.4
D009	Mercury	7439-97-6	0.2
D014	Methoxychlor	72-43-5	10.0
D035	Methyl ethyl ketone	78-93-3	200.0
D036	Nitrobenzene	98-95-3	2.0
D037	Pentachlorophenol	87-86-5	100.0
D038	Pyridine	110-86-1	35.0
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0
D039	Tetrachloroethylene	127-18-4	0.7
D015	Toxaphene	8001-35-2	0.5
D040	Trichloroethylene	79-01-6	0.5
D041	2,4,5-Trichlorophenol	95-95-4	400.0
D042	2,4,6-Trichlorophenol	88-06-2	2.0
D017	2,4,5-TP (Silvex)	93-72-1	1.0
D043	Vinyl chloride	75-01-4	0.2

Generator Status



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CESQG

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LQG

- Three Classes of Generators
- Waste Must Be Counted Monthly
- Episodic Generators

Conditionally Exempt Small Quantity Generators (CESQG)

- No more than 100 kg (220 lbs) of non acute waste
- No more than 100 kg of acute spill clean-up residue
- No more than 1 kg (2.2 lbs) of other acute hazardous waste

Small Quantity Generator (SQG)

- Generate between 100 kg (220 lbs) and 1,000 (2,200 lbs) of non acute waste
- No more than 1 kg (2.2 lbs) of acute hazardous waste

SQG Hazardous Waste Storage

- 180 day storage
- 270 day storage if waste is transported over 200 miles
- Storage limit of 6,000 kg (13,200 lbs) for on-site accumulation
- EPA or states with delegated programs can grant a 30 day extension

Large Quantity Generator (LQG)

- Generate at least 1,000 kg (2,200 lbs) of non acute waste
- Or more than 1 kg (2.2 lbs) of acute hazardous waste

LQG Hazardous Waste Storage

- 90 day storage
- 30 day extension
- No limit for on-site accumulation

F006 Waste Exceptions (261.31)

- Sulfuric acid anodizing of aluminum
- Tin plating of carbon steel
- Zinc plating on carbon steel
- Aluminum or zinc-aluminum plating on carbon steel
- Cleaning/stripping associated with tin, zinc, and aluminum plating on carbon steel
- Chemical etching and milling of aluminum

F006 Storage

[262.34(g)]



- 180 days (LQG)
- 270 days if F006 waste will be shipped over 200 miles to a metal recovery facility

More F006



- Implement pollution prevention practices
- Send F006 waste to on-site or off-site metals recovery
- Accumulate no more than 20,000 kg of waste on-site at one time
- Keep documents at facility [provisions in 262.34(g)]

Episodic

- An entity that normally is a CESQG, SQG or a non-generator, but once or twice a year generates enough hazardous waste to push them into LQG status.

What Counts?



- All hazardous waste that is generated during each calendar month
 - Accumulated on-site in a RCRA regulated unit for any period of time prior to treatment, recycling, or disposal
 - Packaged and transported off-site
 - Placed directly in an on-site RCRA regulated treatment or disposal unit

Exemptions

- Several exemptions located in 261.5(c)
 - Wastes managed immediately upon generation only in on-site elementary neutralization units, wastewater treatment units, or totally enclosed treatment facilities.
 - Used oil manage under 40 CFR 261.6(a)(4) and 40 CFR part 279

- Wastes recycled, without prior storage or accumulation, only in an on-site process [subject to regulation under 261.6(c)(2)]
- Spent lead-acid batteries managed under 40 CFR part 266, subpart G
- Universal waste managed under 40 CFR 261.9 and 40 CFR part 273

Questions?

