

Key Points on Point of Generation

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Hazardous Waste POG

POG involves two issues:

- WHEN is a haz waste generated?
- WHERE does it become subject to RCRA regs?



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When is a Hazardous Waste Generated?

A solid waste becomes a haz waste:

- When it meets the 40 CFR 261 Subpart D listing

Listed Wastes have the waste codes that begin with F, K, P or U (e.g. F018, U008, etc)

-40 CFR 261.3(b)

Industry and EPA hazardous waste No.	Hazardous waste	Hazard code
Generic:		
F001	The following spent halogenated solvents used in degreasing: Tetrachloroethylene, trichloroethylene, methylene chloride, 1,1,1-trichloroethane, carbon tetrachloride, and chlorinated fluorocarbons; all spent solvent mixtures/blends used in degreasing containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those solvents listed in F002, F004, and F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	(T)
F002	The following spent halogenated solvents: Tetrachloroethylene, methylene chloride, trichloroethylene, 1,1,1-trichloroethane, chlorobenzene, 1,1,2-trichloro-1,2,2-trifluoroethane, ortho-dichlorobenzene, trichlorofluoromethane, and 1,1,2-trichloroethane; all spent solvent mixtures/blends containing, before use, a total of ten percent or more (by volume) of one or more of the above halogenated solvents or those listed in F001, F004, or F005; and still bottoms from the recovery of these spent solvents and spent solvent mixtures	(T)
F003	The following spent non-halogenated solvents: Xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; all spent solvent mixtures/blends containing, before use, only the above spent non-halogenated solvents; and all spent solvent mixtures/blends containing, before use, one 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	(I)*

When is a Hazardous Waste Generated?

A solid waste becomes a haz waste when:

- When it meets the 40 CFR 261 Subpart D listing (F, K, P, U)
- When listed waste is first added to a solid waste

... (sort of, see 40 CFR 261.3(g))

-40 CFR 261.3(b)

When is a Hazardous Waste Generated?

A solid waste becomes a haz waste when:

- When it meets the 40 CFR 261 Subpart D listing (F, K, P, U)
- When listed waste is first added to a solid waste ... (sort of, see 40 CFR 261.3(g))
- When the waste exhibits a characteristic (Ignitability, Corrosivity, Reactivity, Toxicity)

Characteristic Wastes have the waste codes that begin with D (e.g. D001, D002...)

-40 CFR 261.3(b)

When is a
Hazardous
Waste
Generated?

NOV ASAP Print Shop

- Well mixed, homogeneous washwater
- The solvent is not a listed waste when spent
- Resulting mixture is not characteristic

When is a
Hazardous
Waste
Generated?

NOV ASAP Print Shop

- Well mixed, homogeneous washwater
- The solvent is not a listed waste when spent
- Resulting mixture is not characteristic

- Solvent phase is ignitable

- Does the drum now contain hazardous waste?

D001

When is a Hazardous Waste Generated?

Who is the generator?

The hazardous waste determination for each solid waste must be made at the point of waste generation, before any dilution, mixing, or other alteration of the waste occurs, and at any time in the course of its management that it 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.

-40 CFR 262.11(a)

A solid waste becomes a haz waste when:

- When it meets the 40 CFR 261 Subpart D listing (F, K, P, U)
- When listed waste is first added to a solid waste ... (sort of, see 40 CFR 261.3(g))
- When the waste exhibits a characteristic (Ignitability, Corrosivity, Reactivity, Toxicity)

-40 CFR 261.3(b)

Key Points

1. Watch out for multiphasic wastes

When is a Hazardous Waste Generated?

Bonus Question:

Can the print shop drain the solvent layer from the drum so there is less haz waste to dispose of?

- they are not a RCRA permitted TSD

Hint: decanting meets the definition of "treatment"

Hazardous Waste POG

POG involves two issues:

- WHEN is a haz waste generated?

When a solid waste meets a listing, is mixed with a listed waste, or exhibits a characteristic
(40 CFR 261.3(b))

Hazardous Waste POG

POG involves two issues:

- WHEN is a haz waste generated?
When a solid waste meets a listing, is mixed with a listed waste, or exhibits a characteristic
(40 CFR 261.3(b))
- WHERE does it become subject to RCRA regs?

WHERE does
it become
subject to
RCRA regs?

A hazardous waste which is generated in a product or raw material...

storage tank

transport vehicle

vessel (vessel=ship, not container)

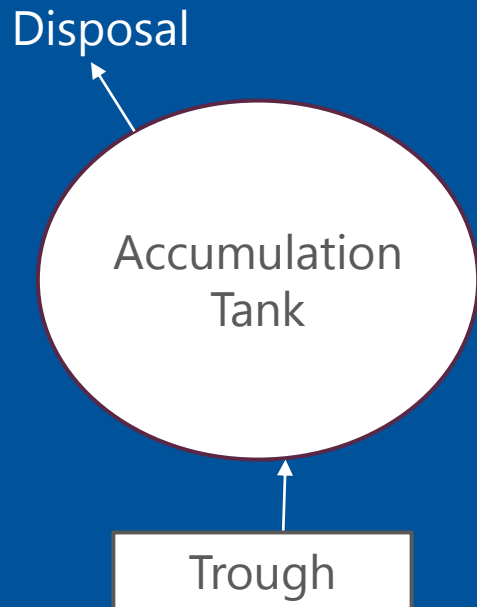
pipeline

manufacturing process unit...

not subject to regulation...until it exits
the unit...

- 40 CFR 261.4(c)

WHERE does
it become
subject to
RCRA regs?



Peter Piper's Picklin' and Platin' Plant

- Operator determines pickle liquor is spent
- Spent liquor is haz for corrosivity (D002)
- Spent mixture is piped to a accumulation tank awaiting transport to a disposal facility

WHEN did it become a hazardous waste?

WHERE does
it become
subject to
RCRA regs?

Peter Piper's Picklin' and Platin' Plant

- Operator determines pickle liquor is spent
- Spent liquor is haz for corrosivity (D002)

Spent mixture is piped to a
accumulation tank awaiting transport to
a disposal facility

Tanker Truck

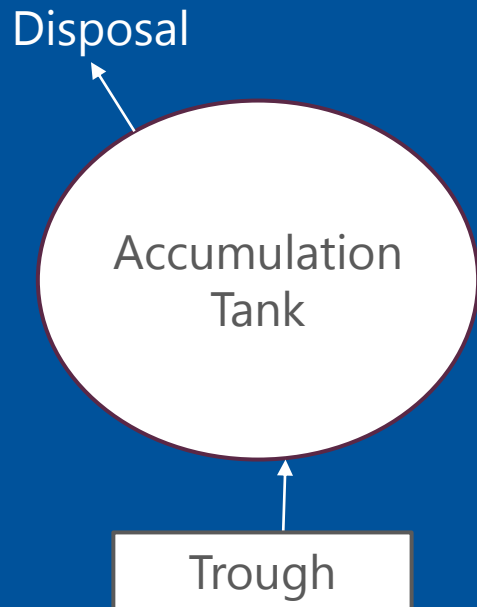
Disposal Facility

Trick Question!
None of these!

Trough

WHERE is the Point of Generation?

WHERE does
it become
subject to
RCRA regs?



A hazardous waste which is generated in a product or raw material...

storage tank

transport vehicle

Vessel (vessel=ship, not container)

pipeline

manufacturing process unit...

not subject to regulation...until it exits
the unit...

- 40 CFR 261.4(c)

Key Points

1. Watch out for multiphasic wastes
2. Piping connecting manufacturing units and hazardous waste units must meet 40 CFR 262.34 requirements (or TSD permitting requirements), too

WHERE does it become subject to RCRA regs?

When did the liquor
become a haz waste?

When the operator
decides it is spent?

Is the trough now a haz
waste storage tank?

Peter Piper's Picklin' and Platin' Plant

- Liquor sits in trough for 3 months
- Operator decides pickle liquor is spent
- Liquor is haz for corrosivity (D002)

Key Points

1. Watch out for multiphasic wastes
2. Piping connecting manufacturing units and hazardous waste units must meet 40 CFR 262.34 requirements (or TSD permitting requirements), too
3. 40 CFR 261.4(c) waste is subject to RCRA once it is left in an inactive unit for more than 90 days

WHERE does it become subject to RCRA regs?

When did the liquor
become a haz waste?
On day 91

Is the trough now a haz
waste storage tank?
Yes

Has it been storing haz
waste for 91 days?
No, only 1 day

Peter Piper's Picklin' and Platin' Plant

- Liquor sits in trough for 3 months
- Operator determines pickle liquor is spent
- Mix is haz for corrosivity (D002)

WHERE does it become subject to RCRA regs?

Neutralization of acid
in trough on day 90

Neutralization of acid
in trough on day 91

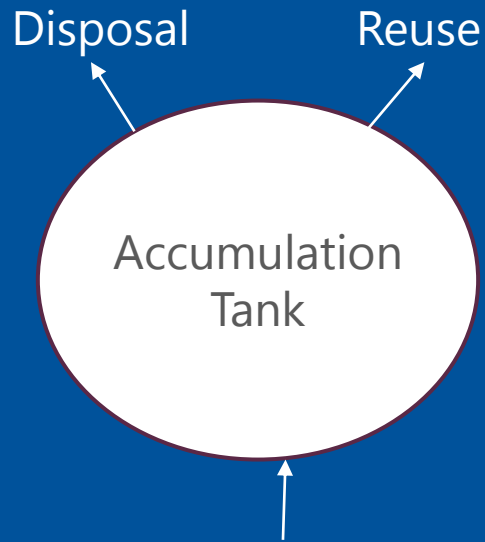
- Trough does not meet
90-day tank standards
- Trough not a RCRA
permitted tank

40 CFR 270.1(c)(2)(v)

Peter Piper's Picklin' and Platin' Plant

- Liquor sits in trough for 90 days
- Operator determines pickle liquor is spent
- Liquor is haz for corrosivity (D002)
- Operator adds lime to neutralize liquor

WHERE does
it become
subject to
RCRA regs?



Peter Piper's Picklin' and Platin' Plant

- Operator determines pickle liquor is spent
- Mix is haz for corrosivity (D002)
- Spent mixture is piped to an accumulation tank

What if some of the acid from the accumulation tank is sometimes sent to condition wastewater (making this acid not a haz waste)?

WHERE does
it become
subject to
RCRA regs?

A hazardous waste which is generated in a product or raw material...

storage tank

transport vehicle

vessel (vessel=ship, not container)

pipeline

manufacturing process unit...

not subject to regulation...until it **exits**
the unit...

- 40 CFR 261.4(c)

WHERE does
it become
subject to
RCRA regs?



Peter Piper's Picklin' and Platin' Plant

- Parts washer

When did the solvent become a Haz
Waste?

Solvent is a hazardous waste when operator makes decision the
solvent is spent

Where is the Point of Generation?

EPA says the drum is not a manufacturing unit

WHERE does
it become
subject to
RCRA regs?

A hazardous waste which is generated in a product or raw material...

storage tank

transport vehicle

vessel (vessel=ship, not container)

pipeline

manufacturing process unit...

not subject to regulation...until it **exits**
the unit...

- 40 CFR 261.4(c)

WHERE does
it become
subject to
RCRA regs?

Peter Piper's Picklin' and Platin' Plant

- Parts washer

When did the solvent become a Haz
Waste?

when the operator decides the solvent is spent

Where is the Point of Generation?

EPA says the drum is not a manufacturing unit
when the cleaning apparatus is removed from
the drum

WHERE does
it become
subject to
RCRA regs?

Peter Piper's Pollution Phiasco

- Spill of virgin chemicals results in contaminated soils and groundwater that fails TCLP
- Virgin chemical is not a listed waste

Where's the POG?

WHERE does
it become
subject to
RCRA regs?

Peter Piper's Pollution Phiasco

- Spill of characteristic hazardous waste results in contaminated soils and groundwater that fails TCLP

Where's the POG?

WHERE does
it become
subject to
RCRA regs?

Peter Piper's Pollution Phiasco

- Spill of characteristic hazardous waste results in contaminated soils and groundwater that **does not** fail TCLP

Is the excavated mixture a hazardous waste?

WHERE does
it become
subject to
RCRA regs?

Peter Piper's Pollution Phiasco

- Listed waste spill results in contaminated soils and groundwater

Is the excavated mixture a hazardous waste? Listed-in, Listed-out, right???

Key Points

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2. Piping connecting manufacturing units and hazardous waste units must meet 40 CFR 262.34 requirements (or TSD permitting requirements), too
3. 40 CFR 261.4(c) exemption only applies if hazardous wastes left in inactive unit for less than 90 days
4. Contaminated environmental media may be hazardous wastes when excavated

WHERE does
it become
subject to
RCRA regs?

Peter Piper's Pollution Phiasco

- a surface impoundment is used in the manufacturing process
- contains sludge that fails TCLP

Is the surface impoundment illegally storing hazardous waste?

POG

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5. POG for sludges in surface impoundments is the moment of their deposition

Hazardous Waste POG

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- WHEN is a haz waste generated?

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(40 CFR 261.3(b))

- WHERE does it become subject to RCRA regs?

When it exits the manufacturing unit

POG

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Un-related Reminder

MSDS do not have all the info you need to do your Tier IIs next year, now is a good time to get your SDS together



You Got Any Questions?