

# **BATTELLE**

*2019 Sediments Conference*

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Regulatory Maze for  
Dredged Material Disposal

February 13, 2019



# *Passes Paint Filter*

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- Not the Ultimate Criteria
- Sediments *“release”* water in transportation.
- Amendments must be used.
- Never organic; always inorganic amendments.
- Landfills have *“Compressive Strength”* requirements.
- Landfills **NEVER** permitted to accept *“free liquids”*
  - Some may have “Solidification” capabilities – Extra Cost
- Cannot ship “Free Liquid” in open-top containers!

# *14 Mile Trip*

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# *TSCA Regulated*

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- PCB testing “In-situ” – Regulatory requirement
- Secure an EPA approved work plan 40 CFR 761.61(c)
  - RCRA Subtitle C landfill use for  $\geq 50$  mg/kg.
  - Subtitle D landfill use for  $< 50$  mg/kg.
- Are the sediments also **RCRA hazardous**?
- Site investigation data very useful.

# *RCRA Hazardous*

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- Land Disposal Restrictions – LDR
- Underlying Hazardous Constituents – UHC's
- Generator Knowledge – (Improvement Rules)
  - Applicable for waste classification (Listed waste or not)
  - Not applicable for characterization or most LDR compliance
- 40 CFR 268.49 – Alternative treatment standards
  - 10X LDR for soil / sediment
  - Universal Treatment Standards – UTS - 40 CFR 268.48
  - Soil definition includes silt – 40 CFR 268.2

# UHC's – 226 Chemicals

<u>Regulated Constituent Common Name</u>	<u>CAS Number</u>	<u>Wastewater Standard (mg/kg)</u>	<u>Non-Wastewater Standard (mg/kg)</u>
Acenaphthylene	208-96-8	0.059	3.4
Acetone	67-64-1	0.28	160
Acetonitrile	75-05-8	5.6	38
Aldrin	309-00-2	0.021	0.066
Anthracene	120-12-7	0.059	3.4
<b>Benzene</b>	71-43-2	0.14	<b>10</b>
Chlordane	57-74-9	0.0033	0.26
1,2-Dichloroethane	75-34-3	0.059	6.0
Dieldrin	60-57-1	0.017	0.13
Endosulfan I	959-98-8	0.023	0.066
Heptachlor	76-44-8	0.0012	0.066
<b>Lead</b>	7439-92-1	0.69	<b>0.75 mg/L TCLP</b>
Methyl ethyl ketone	78-93-3	0.28	36
Methylene chloride	75-09-2	0.089	30
OCDD	3268-87-9	0.000063	0.005
<b>Total PCBs</b>	1336-36-3	0.10	<b>10</b>
<b>Tetrachloroethylene</b>	127-18-4	0.056	<b>6.0</b>
Toluene	108-88-3	0.080	10

# *Disposal Approvals*

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- Subtitle D Disposal:
  - Usually full RCRA waste characterization
  - pH, Ignitability, Reactivity (cyanide & sulfide)
  - TCLP Metals (RCRA 8)
  - TCLP VOCs, SVOCs, Herbicides & Pesticides
  - Total PCBs
  - Varies by facility:
    - % Solids, TPH, Oil & Grease, etc.
- Don't typically want to see totals – Ask them!

# *Disposal Approvals*

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- RCRA Subtitle C or TSCA Landfills:
  - pH, Ignitability, Reactivity (cyanide & sulfide)
  - TCLP Metals (RCRA 8)
  - Total VOCs, SVOCs, Herbicides & Pesticides (**LDR**)
  - Use 20X Rule for Organics
  - Total PCBs
- Lab detection limits are **KEY** due to **LDR** levels
- Sample Frequency:
  - Not usually a permit condition
  - Usually a function of what is in the data



# *RCRA Hazardous – Avoid LDR?*

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- Treating In-Situ avoids LDR
- Not feasible with sediments
- Work with regulators
  - AOC / CD under CERCLA or RCRA Corrective Action for site
  - **Treatment and Storage CAMU?** (40 CFR 264.552)
    - Limited time
    - Standards similar to Staging Piles (40 CFR 264.554)
    - Allows for temporary storage & **treatment**
- Disposal of waste off-site to landfill

# *RCRA Hazardous – Avoid LDR?*

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- **CAMU** – Off-site Disposal at RCRA Subtitle C landfill
  - 40 CFR 264.555
  - Contaminant levels & volume are key
  - May be able to send directly to landfill without treatment
  - Principal hazardous constituents may require treatment
  - Receiving state regulators must approve disposal
- **“Contained Out”** determination may avoid LDR
  - Determined by applicable state
  - Based on contaminant levels compared to Health Standards

# *Avoiding the Whirlpool!*

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- Generators **Certify** their waste
  - Meets LDR or doesn't
  - Exceeds 10X LDR or doesn't
  - Is non-RCRA hazardous
  - Regulated under TSCA
- TSDF's **Verify** the generators information

# *Avoiding the Whirlpool!*

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- Contaminants of Concern – Reduce testing costs
- Contaminants of Concern – Cause approval delays
- Involve TSDF personnel early –
  - Evaluate data
  - Identify data gaps for approvals

# *Avoiding the Whirlpool!*

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- RCRA disposal does not have to be “Traditional”
- Disposal options
  - Begin evaluating when you have data
  - Explore all options
- CAMU decisions take time & require analytical
- RCRA & TSCA do **NOT** preempt each other
- Early involvement by TSD personnel

# Questions?

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*Thank you for your time!*