



Welcome to Management of E&P Wastes Under RCRA

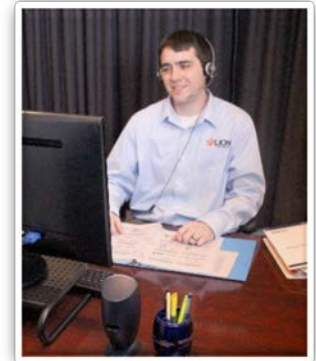




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Your Presenter:

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Objectives

1. Overview of RCRA hazardous waste definition and exclusions
2. Materials covered by the E&P exclusion
3. Management of E&P wastes





Background

- 1978: The EPA proposes reduced requirements for “large volumes of wastes,” including gas and oil drilling muds and oil production brines
- 1980: First RCRA Subtitle C Rules
- 1988: EPA determines control of E&P wastes not warranted under RCRA





EPA's Definition of Hazardous Waste

A “solid waste” is a “hazardous waste” if it:

1. Is described on a hazardous waste list
2. Poses a hazardous waste characteristic
3. Is mixed with a listed waste



[40 CFR 261.3]



Listed Hazardous Wastes

The hazardous waste lists are “descriptive”

- In general, if a material is described on one of the lists, then it is a hazardous waste regardless of its actual properties



[40 CFR 261, Subpart D]



Characteristic Hazardous Wastes

There are four hazardous waste characteristics

- Each has a specific regulatory definition (based on chemical and physical properties)

Generator determines applicability based on analysis or knowledge of raw materials or waste processes



[40 CFR 261, Subpart C]



The Mixture Rule

With limited exceptions, any mixture consisting of a listed hazardous waste and any solid waste is a listed hazardous waste



[40 CFR 261.3(a)(2)(iv)]



Is It Excluded?

- Before determining if a solid waste is a hazardous waste, the generator should look for possible exclusions at 40 CFR 261.4
- Possible exclusions include:
 - Excluded from solid waste definition
 - Excluded from hazardous waste definition
 - Excluded for special reasons (e.g., samples sent for testing)



[40 CFR 262.11]



Exploration and Production Wastes

Certain wastes generated by exploration and production activities (“E&P wastes”) are excluded from the definition of hazardous waste



[40 CFR 261.4(b)(5)]



The E&P Exclusion

The E&P exclusion applies to “drilling fluids, produced waters, and other wastes associated with the exploration, development, or production of crude oil, natural gas or geothermal energy.”

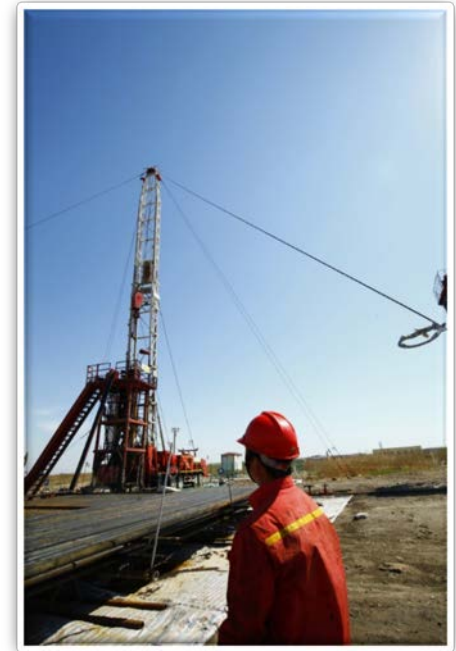


[40 CFR 261.4(b)(5)]



Definition of “Other Wastes Associated With...”

- Waste that are “intrinsically derived” from primary field operations
- Primary field operations include:
 - Exploration, development, production
 - At or near the well-head
 - Before oil is transferred to carrier



NOT from transportation and manufacturing operations

[EPA530-K-01-004, October 2002]



Exempt vs. Non-Exempt (Examples)

Exempt:

- Drill cuttings
- Cooling tower blowdown
- Spent filters, filter media and backwash
- Constituents removed from produced water before injection/disposal
- Produced sand



[EPA530-K-01-004, October 2002]



Exempt vs. Non-Exempt (Examples)

Non-Exempt:

- Painting wastes
- Waste solvents
- Unused fracturing fluids or acids
- Refinery wastes
- Oil and gas service company wastes
- Pesticide wastes



[EPA530-K-01-004, October 2002]



Management of Non-exempt Wastes

Subject to full RCRA Subtitle C regulation if they meet the definition of “hazardous waste”

- Follow appropriate rules based on generator status

May be subject to additional State regulations even if they don't meet the definition of “hazardous waste”



[EPA530-K-01-004, October 2002]



EPA Exempt Waste Management

EPA recommends “sensible waste management” in accordance with State regulation and industry standards



[EPA530-K-01-004, October 2002]



“Sensible” Waste Management Suggestions

Physical Controls

- Size reserve pits properly to avoid overflow
- Reduce excess fluids entering pits
- Keep non-exempt wastes separate
- Design drilling pads to contain stormwater
- Adequate secondary containment



[EPA530-K-01-004, October 2002]



“Sensible” Waste Management Suggestions

Recycling Controls

- Use closed loop mud systems when practical
- Recycle / reuse muds and brines
- Reclaim oily debris / tank bottoms



[EPA530-K-01-004, October 2002]



“Sensible” Waste Management Suggestions Planning / Paperwork Controls

- Minimize waste generation (design smaller systems)
- Perform routine inspections / maintenance
- Personnel training (operations and emergencies)
- Minimize storage volumes



[EPA530-K-01-004, October 2002]



Additional Waste Management Considerations

Suggestions include:

- Keep non-exempt wastes separate
- Design drilling pads to contain stormwater
- Recycle / reuse muds and brines
- Perform routine inspections / maintenance



[EPA530-K-01-004, October 2002]



API Exempt Waste Management Recommendations

API recommends hierarchy:

1. Source Reduction
 - Improve controls
 - Good housekeeping
2. Recycling
 - Reprocessing
3. Treatment
 - In accordance with State and Federal regulations
4. Disposal



[API E5, Second Edition, February 1997]



Additional State Requirements for Exempt Wastes MAY Apply

Example: Texas Railroad Commission (TRCC)

- Statewide Rule 98 adopts E&P exclusion
- Exempt wastes subject to Statewide Rule 8
 - Minor permits
 - Hauler provisions
 - Disposal requirements





Additional State Requirements for Exempt Wastes MAY Apply

Example: Louisiana
Environmental Results
Program

- Field Guide for E&P Operations, April 2012

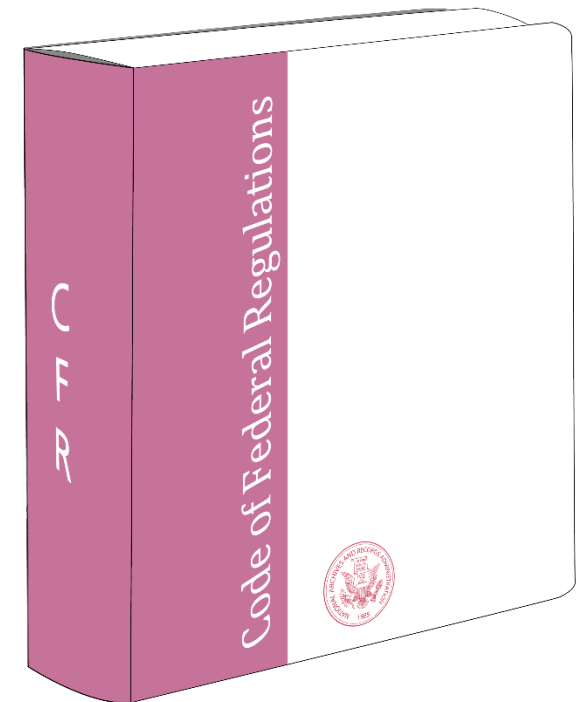




Additional Federal Requirements for Exempt Wastes MAY Apply

May be subject to other Federal regulations, for example:

- Underground Injection Controls (UIC)
 - 40 CFR 141–143
 - Class II (injecting brine after production) permits
- Spill Prevention, Control, Countermeasure (SPCC)
 - 40 CFR 112
 - “Oil of any kind or in any form”





- **Thank You for Attending!**

