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

N O T 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

[EP530-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

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
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!