Hazardous Wastes and Oil & Gas Operations

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Environmental Law in Oil & Gas

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Review

- Endangered Species Act concepts:
  
  - Section 4 – listing, endangered v. threatened, includes critical habitat delineation, candidate conservation agreements
  
  - Section 7 – consultation by federal agencies. Biological opinions, “jeopardy” findings, mitigation requirements, incidental take permits.
  
  - Section 9 – takings of protected species. Applies to everyone; includes destruction of habitat that directly injures a protected species; low knowledge requirement for criminal liability.
Key questions for hazardous waste and E&P operations
Let's start at the beginning --

How are hazardous wastes regulated outside of the oilpatch?
Resource Conservation and Recovery Act

- Very complex, but boils down to a few key questions:
  - Is it *solid waste*? (must first be discarded)
  - When does recycling equal discarding?

- If it’s solid waste, is it hazardous?
  - Characteristics
  - Listings

- If it’s hazardous, is it exempt or excluded? And how?
  - E&P exclusion
  - Generator storage requirements
Is it Solid Waste?

- Extraordinarily broad statutory definition in RCRA – 42 USC 6903(27)

  “any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities….”

- Note – includes gas and liquids (except for domestic sewage)
Is it Solid Waste? Discarding by Recycling

Extremely complicated and tricky

Can “discard” via burning, accumulating, using in a manner constituting disposal

And discard by recycling…
Is it’s Solid Waste, is it Hazardous Waste?

- Two pathways: characteristic and listed hazardous wastes

- Characteristics include *ignitability, corrosivity, reactivity, and toxicity*
  - ICR tests determined by specific laboratory tests (eg, Pensky open-cup test)
  - Toxicity: list of hazardous constituents + TCLP test

- Mixing and Derived-From rules

- Lots of exemptions: eg, household hazardous wastes, commercial chemical substitutes
RCRA’s Exploration and Production Waste Exclusion

• 42 U.S.C. Section 6921(b)(2)(A) (1980):

Notwithstanding the provisions of paragraph(1) of this subsection, drilling fluids, produced waters, and other wastes associated with the exploration, development or production of crude oil or natural gas or geothermal energy shall (not be classified as hazardous).

• NOTE: U.S.C. versus C.F.R. (code of federal regs)
So what’s included in E&P activities?

• Think about it chronologically…
So what’s included in E&P activities?

• Seismic testing and exploratory drilling
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- Seismic testing and exploratory drilling
- Storage tanks and batteries
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- Onsite treatment and conditioning
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- Seismic testing and exploratory drilling
- Storage tanks and batteries
- Onsite treatment and conditioning
- Flow lines, gathering lines (not pipelines)
But not . . .

- Refineries

- Crude oil pipelines with transfer of ownership and custody

- Trucks, railcars
So what’s the test?

EPA’s “rule of thumb” –

1. Has the waste come from down-hole, i.e., was it brought to the surface during oil and gas E&P operations?

2. Has the waste otherwise been generated by contact with the oil and gas production stream during the removal of produced water or other contaminants from the product?

Core concept – *uniquely* associated with oil and gas E&P operations.
So what if it’s hazardous?

- RCRA imposes management obligations, and liabilities, on generators of hazardous waste
  
  - Also on transporters, and on persons who run treatment, storage, disposal facilities – not as likely with E&P

  - Liability is strict and goes with the waste, wherever it ends up

- One practical question – who owns the waste when it’s generated? (Contractors vs. site owners)
Partial List of Exempted Wastes

1. Produced water (98%)*
2. Drilling fluids (mud)
3. Drill cuttings (rock chips)
4. Rig wash
5. Well completion and stimulation fluids (frac)
6. Accumulated materials (oil, sand, soil, etc) *
7. Pit sludges and contaminated bottoms from exempt waste *
8. Workover wastes
9. Production gasses (hydrogen sulfide, CO$_2$, benzene?) *
10. Pipe scale and gunk from equipment *
11. Produced sand
12. Pigging waste of gathering lines *
13. Constituents removed from produced water (NORM?) *
14. BS&W and exempt-waste tank bottoms *
For next class --

- Review NRDC petition for rulemaking on website

- Think about how you draw the line on particular wastes, including mixtures of exempt E&P wastes with other solid (and hazardous) wastes

- NOTE: check website for class changes with guest speakers next week.
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