Landfilling E & P Waste

Exploration and Production (E&P) Waste Summary

Definition

- From Regulations Pertaining to Solid Waste Sites and Facilities, 6 Code of Colorado Regulations (CCR) 1007-2, Part 1 (Regulations). E&P Waste is defined as wastes that are generated during the drilling of and production from oil and gas wells or during primary field operations and that are exempt from regulation as hazardous wastes under Subtitle C of the Federal Resource Conservation and Recovery Act (RCRA) of 1976, 42 USC, Sections 6901 to 6934, as amended.

E&P Waste Summary

Colorado Department of Public Health and Environment (CDPHE)

- Solid Waste Permitting and Enforcement (Hazardous Materials and Waste Management Division [HMWMD]):
  - Liquid-Containing Soils to E&P Waste Impoundments (Regulation Section 17 – Commercial Exploration & Production Waste Impoundments).

E&P Waste Summary

CDPHE (Continued)

- Solid Waste Permitting and Enforcement (HMWMD):
  - E&P Waste Passing Paint Filter Liquids Test (EPA Method 9095B) to MSW Landfill (Regulation Section 3 – Standards for Solid Waste Disposal Landfill Sites and Facilities).
E&P Waste Summary

CDPHE (Continued)

• Air Pollution Control Division (APCD):
  – No Petroleum-Containing Soils (PCS) to be used as
    Alternative Daily Cover (ADC).
  – 15 Percent Threshold.
  – Solidification.
    o Solidification Basin.
    o De-Watering.

Generator Request

Generation and Storage

• Generation.
• Temporary Storage.

Volatilization of E&P Waste

• Based on a Limited Data Set Provided by APCD:
  – 2 Percent of Total Hydrocarbons Emitted (Volatilized) in One Hour.
  – 5 Percent by End of One Day.
  – 21 Percent by End of Seven Days.
  – 41 Percent by End of 30 Days.
  – 76 Percent by End of 120 Days.

Note: For Discussion Only.

Volatilization of E&P Waste (Continued)

• The Longer the Generator Stores the Material Prior to Disposal, the Better it is for the Landfill's Emission Calculations.
• The Longer the Generator Stores the Material Prior to Disposal, the More Problematic Material Management is for the Generator.
**Generator Request**

**Sampling and Testing**
- Collect Representative Samples.
- Send to Laboratory for Appropriate Testing.

**Generator Request**

**Manifesting**
- Prepare Manifest (including test results) for Landfill Review.

**Generator Request**

**Request to Landfill**
- Manifest Internal Review by Generator.
- Manifest to Landfill for Review.
- Landfill Reviews Request (by Landfill Staff or Consultant).
- Landfill Rejects or Accepts Request.
- If Rejected, Generator Goes to Plan B.
- If Accepted, Generator Schedules Disposal with Landfill.

**Generator Request**

**Transportation and Disposal Concerns**
- Material—Will it Stick to Haul Truck Bed? If so, How to Clean Bed?
- Long-Bed End-Dumps (Tipping Hazard).
- Heavy Traffic.
- Weather (Icy Roads, Wind, etc.).
Landfill Acceptance

Acceptance and Disposal at Landfill
• Loads Accepted at Landfill Gate/Scale.
• Loads Subject to Random Inspection.
• Loads Inspected During Disposal.
• Daily Cover.

Landfill Acceptance

Disposal Concerns
• Material—Will it Stick to Haul Truck Bed?
  If so, How to Clean Bed?
• Long-Bed End-Dumps (Tipping Hazard).
• Weather (Icy Roads, Wind, Snow, etc.).
• Difficulties Working the Material.
• Trucks Coming in Waves and Lined Up at the Gate.

Landfill Acceptance

Possible Solutions
• Side-Dump Trucks.
• Proper Scheduling (when possible).

Documentation

Generation, Transportation, and Disposal
• “Lack of documentation is becoming a problem for acceptance.”
  —Wietse Venema, Dutch Computer Programmer.
• “If it isn’t written down, it didn’t happen.”
  —A CQA Saying.
• “Proper documentation, readily available, demonstrates compliance.”
  —Doug Eagleton.
• Sections 2.4 and 3.4 of Regulations discuss Recordkeeping.
Summary

• E&P Waste Summary.
• Generator Request.
• Landfill Acceptance.
• Documentation.

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