U.S. Environmental Protection Agency Land Disposal Restrictions Guidance: RCRA Permits/Waste Analysis Plans/Inspection Sampling



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The United States Environmental Protection Agency ("EPA") issued an April 2022 Resource Conservation Recovery Act ("RCRA") Information Bulletin titled:

Ensuring and Determining Compliance with Land Disposal Restrictions Through RCRA Permits, Waste Analysis Plans and Inspection Sampling Practices ("Guidance")

EPA states that the intent of the *Guidance* is to:

. . . make Resource Conservation and Recovery Act (RCRA) permit writers, inspectors, and the regulated community aware of controls, conditions and sampling practices to ensure and determine compliance with RCRA land disposal restrictions (LDRs).

In 1984 Congress added the Hazardous and Solid Waste Amendments to RCRA. This legislation included a mandate that EPA develop land disposal restrictions ("LDRs") for hazardous wastes.

EPA was required to review all listed and characteristic hazardous wastes to determine which should be prohibited from being land disposed. Consequently, the agency promulgated rules requiring most hazardous wastes to be treated to meet specific standards prior to disposal in RCRA permitted hazardous waste surface impoundments or landfills. The treatment standards were developed based on the performance of available technologies that could minimize the mobility or toxicity of the hazardous constituents.

Three key prohibitions in the LDR rules include:

- Disposal Prohibition
- Dilution Prohibition
- Storage Prohibition

Note that LDRs apply at the point of generation of the hazardous waste. Therefore, a generator has an obligation to determine whether a hazardous waste is listed and/or is a characteristic hazardous waste and determine which LDR requirements are applicable.

The April 2022 *Guidance* states that it was developed following an EPA review which included:

- 57 hazardous waste treatment facility Waste Analysis Plans
- 14 facility LDR inspection sampling results

The agency states that it identified:

- Insufficient LDR treatment verification sampling at facilities
- High LDR failure rates in treatment residues

EPA concludes that the failures were likely caused by one or both of the following:

- Inadequate LDR treatment design and operation in RCRA permit controls
- Insufficient Waste Analysis Plan LDR treatment verification sampling

EPA concludes that "protective waste disposal" is achieved where:

. . . permit writers and facilities incorporate into permits both well-designed and operated LDR treatment permit controls and adequate WAP conditions to ensure LDR compliance, facilities operate their waste treatment and analysis processes accordingly, and inspectors conduct sampling to determine LDR compliance.

The topics addressed by the *Guidance* include:

- Discussion of Waste Analysis Plans
- Findings from Waste Analysis Plan Reviews and Treatment Facility Inspection Results
- Treatment technologies used by Reviewed Facilities
- LDR Treatment Standards and Waste Analysis Plans
- How EPA Sets LDR Treatment Standards
- Sampling Strategy Objectives: Proving the Positive versus Proving the Negative
- Sampling Frequency
- Grab Sampling versus Composite Sampling
- Waste Analysis Plan LDR Verification Sampling Strategies
- Elements to Consider in RCRA LDR Permits, Waste Analysis Plans and Inspections
- Elements of Well-Designed and Operated Facilities
- Effective Stabilization Technology Practices
- Elements of Waste Analysis Plan LDR Verification Sampling
- LDR Sampling Requirements
- Annual Stabilization Report
- Elements for Inspectors' LDR Sampling
- Examples of Improving LDR Elements of Permit Conditions and Waste Analysis Plans
- Examples of How to Improve LDR Elements of Permit Conditions and Waste Analysis Plans
- Cited Additional Relevant References

A copy of the *Guidance* can be downloaded here.