

<u>SUBJECT</u>		<u>DATE</u>
1448.	Definitions of Inactive Portion, Active Portion and Closed Portion of a RCRA TSDF	AUG 12, 2021
1449.	Dangerous Waste Designations and Dangerous Waste Code Determinations	AUG 19, 2021
1450.	Method Detection Limits and Hazardous Waste Determinations	ENCORE AUG 26, 2021
1451.	Method Detection Limits and Hazardous Waste Determinations II	ENCORE SEP 2, 2021
1452.	Totals Analysis vs. TCLP and Dividing by 20	ENCORE SEP 9, 2021
1453.	Decharacterized RCRA Waste - Manifesting and LDR Reporting	ENCORE SEP 16, 2021
1454.	Decharacterized Hazardous Waste Listed Solely for Non-Toxic Characteristics	ENCORE SEP 23, 2021
1455.	Decharacterized Wastes and the LDR Dilution Prohibition	ENCORE SEP 30, 2021
1456.	The "Derived from Rule", the "Mixtures Rule", and the "Contained-In Policy"	ENCORE OCT 7, 2021
1457.	Hazardous Debris and Options to Exclude as a Dangerous Waste	OCT 14, 2021
1458.	Regulatory Status of Characteristic Baghouse Dust Destined for Reclamation	OCT 21, 2021
1459.	RCRA Point of Generation and Baghouse Dust Collection Systems	OCT 28, 2021
1460.	Pumps Containing Liquid Hazardous Wastes and Liquids in Landfill Prohibition	ENCORE NOV 4, 2021
1461.	Pumps Containing Liquid Hazardous Waste and Land Disposal Restrictions	ENCORE NOV 11, 2021
1462.	Pumps Containing Liquid Hazardous Wastes and RCRA Empty Containers	NOV 18, 2021
1463.	Multiple Characteristic Hazardous Waste Codes and Underlying Hazardous Constituents	ENCORE NOV 23, 2021
1464.	LDR Notifications/Certifications and Generator Permitted Treatment, Storage, or Disposal Facility	ENCORE DEC 2, 2021
1465.	Multiple Characteristic and Listed Hazardous Waste Codes and the "in lieu of" LDR Principle	ENCORE DEC 9, 2021

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## TWO MINUTE TRAINING

**TO:** CENTRAL PLATEAU CLEANUP COMPANY

**FROM:** PAUL W. MARTIN, RCRA Subject Matter Expert  
CPCCo Environmental Protection, Hanford, WA

**SUBJECT:** Multiple Characteristic and Listed Hazardous Waste Codes and the “in lieu of” LDR Principle

**DATE:** DECEMBER 9, 2021

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## TWO MINUTE TRAINING

**SUBJECT:** Multiple Characteristic and Listed Hazardous Waste Codes and the “in lieu of” LDR Principle

**Q:** The November 23, 2021, Two Minute Training (2MT) referenced the “in lieu of” principle, which determines when the land disposal restrictions (LDR) treatment standards for listed hazardous waste codes will take precedence over certain characteristic waste codes. Can you please elaborate?

**A:** [40 CFR 268.9](#) basically states that if a hazardous waste is both listed (F, K, U, or P) and characteristic (D001 through D043), the waste must be treated to meet the LDR treatment standard for each applicable hazardous waste code. The exception is when the treatment standard for the listed waste code specifically addresses the treatment standard for the constituent that causes the waste to exhibit the characteristic. Then, the treatment standard for the listed waste code will override, i.e., operate in lieu of, the treatment standard for the characteristic waste code.

As an example, a customer generates a wastewater treatment sludge from chrome electroplating. The applicable listed hazardous waste code is F006. Due to the presence of chrome, the waste also exhibits the characteristic for chromium, D007. Per [40 CFR 268.40](#), the F006 waste code has LDR treatment standards for cadmium, chromium (0.60 mg/l TCLP), lead, nickel, silver, and cyanides. The D007 waste code has LDR treatment standards for chromium (0.60 mg/TCLP). Since the D007 chromium constituent is specifically addressed in the F006 LDR treatment standards, there is no need to include the D007 characteristic waste code. On the other hand, if the F006 sludge exhibited the characteristic of mercury, the D009 characteristic waste code would apply since F006 does not include a specific LDR treatment standard to address a mercury constituent.

Note that if this F006 listed hazardous waste exhibited the characteristic of ignitability (D001), corrosivity (D002) or reactivity (D003), any of these codes could continue to apply since these “ICR” waste codes generally have specified technology treatment standards e.g., CMBST, DEACT, and not specific constituent treatment standards. The only exception is D003 and the “Reactive Cyanides Subcategory” which includes a specific constituent treatment standard for cyanide (590 mg/kg for total cyanides and 30 mg/kg for amenable cyanides). Since F006 also includes the identical LDR treatment standards for cyanides, the F006 would override the D003 waste codes – in that specific case. All other D003 subcategories with LDR treatment standards of “DEACT” or “DEACT and meet 268.48 standards”, are not addressed by the F006 treatment standards and so in those cases where the F006 sludge exhibited a D003 characteristic waste code requiring DEACT, the D003 waste code would also apply.

### SUMMARY:

- The “in lieu of” principle means that in certain cases, the listed hazardous waste code treatment standard will override a characteristic hazardous waste code treatment standard.
- This principle only applies if the treatment standards are specifically addressed in both the listed and characteristic hazardous waste codes, i.e., the LDR constituent treatment standards are identical.
- F006 and D007 both have treatment standards for “chromium” so the F006 hazardous waste code overrides the D007 hazardous waste code.

Excerpts from 40 CFR 268.9 are attached to the e-mail. If you have any questions, please contact me at [Paul.W.Martin@rl.gov](mailto:Paul.W.Martin@rl.gov) or at (509) 376-6620.

**FROM:** Paul W. Martin

**DATE:** 12/9/2021

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## TWO MINUTE TRAINING – ATTACHMENT

**SUBJECT:** Multiple Characteristic and Listed Hazardous Waste Codes and the “in lieu of” LDR Principle

### 40 CFR §268.9 Special rules regarding wastes that exhibit a characteristic

(a) The initial generator of a solid waste must determine each EPA Hazardous Waste Number (waste code) applicable to the waste in order to determine the applicable treatment standards under subpart D of this part. This determination may be made concurrently with the hazardous waste determination required in §262.11 of this chapter. For purposes of part 268, the waste will carry the waste code for any applicable listed waste (40 CFR part 261, subpart D). In addition, where the waste exhibits a characteristic, the waste will carry one or more of the characteristic waste codes (40 CFR part 261, subpart C), except when the treatment standard for the listed waste operates in lieu of the treatment standard for the characteristic waste, as specified in paragraph (b) of this section. If the generator determines that their waste displays a hazardous characteristic (and is not D001 nonwastewaters treated by CMBST, RORGS, OR POLYM of §268.42, Table 1), the generator must determine the underlying hazardous constituents (as defined at §268.2(i)) in the characteristic waste.

(b) Where a prohibited waste is both listed under 40 CFR part 261, subpart D and exhibits a characteristic under 40 CFR part 261, subpart C, the treatment standard for the waste code listed in 40 CFR part 261, subpart D will operate in lieu of the standard for the waste code under 40 CFR part 261, subpart C, provided that the treatment standard for the listed waste includes a treatment standard for the constituent that causes the waste to exhibit the characteristic. Otherwise, the waste must meet the treatment standards for all applicable listed and characteristic waste codes.

(c) In addition to any applicable standards determined from the initial point of generation, no prohibited waste which exhibits a characteristic under 40 CFR part 261, subpart C may be land disposed unless the waste complies with the treatment standards under subpart D of this part.

(d) Wastes that exhibit a characteristic are also subject to §268.7 requirements, except that once the waste is no longer hazardous, a one-time notification and certification must be placed in the generator's or treater's on-site files. The notification and certification must be updated if the process or operation generating the waste changes and/or if the subtitle D facility receiving the waste changes.

(1) The notification must include the following information:

(i) Name and address of the RCRA Subtitle D facility receiving the waste shipment; and

(ii) A description of the waste as initially generated, including the applicable EPA hazardous waste code(s), treatability group(s), and underlying hazardous constituents (as defined in §268.2(i)), unless the waste will be treated and monitored for all underlying hazardous constituents. If all underlying hazardous constituents will be treated and monitored, there is no requirement to list any of the underlying hazardous constituents on the notice.

(2) The certification must be signed by an authorized representative and must state the language found in §268.7(b)(4).

(i) If treatment removes the characteristic but does not meet standards applicable to underlying hazardous constituents, then the certification found in §268.7(b)(4)(iv) applies.

(ii) [Reserved]