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1189. RCRA Empty Containers vs. TSCA PCB Decontaminated Containers - Scenario III	ENCORE	AUG 18, 2016
1190. Product Spills and Waste Determinations	ENCORE	AUG 25, 2016
1191. Product Spills, Waste Determinations, and LDR	ENCORE	SEP 1, 2016
1192. Regulatory Status of Caustic Rinse Waters Contaminated with Trace Solvents	ENCORE	SEP 8, 2016
1193. Regulatory Status of Sand Blast Grit Contaminated with Trace Listed Solvents	ENCORE	SEP 15, 2016
1194. Hazardous Waste "F" Listings and Trace Contamination	ENCORE	SEP 22, 2016
1195. Hazardous Waste "F" Listings and Trace Contamination – Again!	ENCORE	SEP 29, 2016
1196. Hazardous Waste Determinations and Phase Separation		OCT 6, 2016
1197. Asbestos and DOT Relief	ENCORE	OCT 13, 2016
1198. PCB Containers and Concentration of PCBs	ENCORE	OCT 20, 2016
1199. PCB Analytical Waste Disposal Requirements	ENCORE	OCT 27, 2016
1200. PCB Analytical Waste Disposal Requirements – Water vs. Organic Liquids and Non-aqueous Inorganic Liquids		NOV 3, 2016
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1202. Purpose of the ≤90-day Hazardous Waste Accumulation Exemption		NOV 17, 2016
1203. Used Oil Eligibility for Turkey and Ham Oils	ENCORE	NOV 23, 2016
1204. PCB Reporting and Recordkeeping Relief	ENCORE	DEC 1, 2016
1205. Defining Criteria for Household Waste Exclusion	ENCORE	DEC 8, 2016
1206. The Household Waste Exclusion and Renovation Debris	ENCORE	DEC 15, 2016
1207. 'Twas the Night before Christmas – The Twenty-Fourth Annual Edition		DEC 24, 2016
1208. The Household Waste Exclusion and Renovation Debris – Part II	ENCORE	DEC 29, 2016
1209. Absorbent Additions and Treatment		JAN 5, 2017
1210. Frozen RCRA Wastewater - DOT Liquid or Solid When Manifested?	ENCORE	JAN 12, 2017
1211. DOT Marking Specifications for the "UN", "NA" and "ID" Markings		JAN 19, 2017
1212. Satellite Accumulation within a ≤90-day Accumulation Area	ENCORE	JAN 26, 2017
1213. Washington State-Only Dangerous Waste Markings – Accumulation vs. Pre-Transport	ENCORE	FEB 2, 2017
1214. RCRA Empty Tanker Trailers and Listed Waste Codes	ENCORE	FEB 9, 2017
1215. RCRA Empty vs. DOT Empty	ENCORE	FEB 16, 2017
1216. RCRA Empty vs. DOT Empty II	ENCORE	FEB 23, 2017
1217. Multiple Characteristic Hazardous Waste Codes and Underlying Hazardous Constituents	ENCORE	MAR 2, 2017
1218. Multiple Characteristic and Listed Hazardous Waste Codes and the "in lieu of" LDR Principle	ENCORE	MAR 9, 2017
1219. LDR Storage Prohibitions and the One-Year Rule	ENCORE	MAR 16, 2017
1220. LDR Storage Prohibitions and Treated Wastes	ENCORE	MAR 23, 2017
1221. LDR Storage Prohibitions and Treated Hazardous Debris or Contaminated Soil		MAR 30, 2017
1222. LDR Requirements for Universal Wastes		APR 6, 2017
1223. LDR Requirements for Spent Lead-Acid Batteries Being Reclaimed		APR 13, 2017
1224. When is When Defined for the RCRA Phrase "When Reclaimed"?	ENCORE	APR 20, 2017
1225. RCRA Characteristic of Ignitability and DOT Oxidizers	ENCORE	APR 27, 2017
1226. Safety Data Sheets (SDSs) and Hazardous Wastes	ENCORE	MAY 4, 2017
1227. Containers and Tanks – RCRA Wastes vs. TSCA PCB Wastes	ENCORE	MAY 11, 2017
1228. Universal Waste Lamps and Prohibition on Crushing	ENCORE	MAY 18, 2017
1229. Operating Record vs. Operating Log		MAY 25, 2017
1230. Operating Records Not Referenced in "Facility Recordkeeping"		JUN 1, 2017
1231. Used Oil and Weekly Inspections	ENCORE	JUN 8, 2017
1232. Used Oil, Secondary Containment and Response to Spills	ENCORE	JUN 15, 2017
1233. Used Oil and Keeping Containers Closed – Washington State vs. The Feds	ENCORE	JUN 21, 2017
1234. DOT Shipping of Damaged, Defective or Recalled Lithium Batteries	ENCORE	JUN 29, 2017
1235. Conditioned Exclusion for Listed Hazardous Waste Debris Treated via Extraction/Destruction	ENCORE	JUL 6, 2017
1236. Conditioned Exclusion for Characteristic Debris Treated via Immobilization	ENCORE	JUL 13, 2017
1237. Office Waste and RCRA Regulatory Status	ENCORE	JUL 20, 2017
1238. Office Waste Management	ENCORE	JUL 27, 2017
1239. RCRA EPA Identification Numbers – Site Specifics	ENCORE	AUG 3, 2017
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1241. Laboratory Standards and Applicability of the "U" or "P" Hazardous Waste Listings	ENCORE	AUG 17, 2017
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1243. Paint Wastes and The Applicability of the F001-F005 Listings to Ingredients	ENCORE	AUG 31, 2017
1244. F Listings and Ingredients in Commercial Chemical Product Formulations		SEP 7, 2017
1245. LDR Waste That is Both Listed and Characteristic Hazardous Wastes	ENCORE	SEP 14, 2017
1246. Mercury Wet Cell Batteries - Debris or Not Debris?	ENCORE	SEP 21, 2017
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1248. Elementary Neutralization and RCRA Requirements	ENCORE	OCT 5, 2017
1249. LDR Treatment Standards – Waste-Specific vs. Alternative		OCT 12, 2017
1250. Hazardous Debris and Non-Intact Lead-Acid Batteries	ENCORE	OCT 19, 2017

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TWO MINUTE TRAINING

TO: CH2M HILL PLATEAU REMEDIATION COMPANY

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

SUBJECT: HAZARDOUS DEBRIS AND NON-INTACT LEAD-ACID BATTERIES

DATE: OCTOBER 19, 2017

<u>CHPRC Projects</u>	<u>CH PRC - Env. Protection</u>	<u>MSA</u>	<u>Hanford Laboratories</u>	<u>Other Hanford Contractors</u>	<u>Other Hanford Contractors</u>
Richard Austin Roni Ashley Tania Bates Rene Catlow Richard Clinton Larry Cole John Dent Brian Dixon Eric Erpenbeck Stuart Hildreth Mike Jennings Stephanie Johansen Jeanne Kisielnicki Melvin Lakes Jim McGrogan Stuart Mortensen Dean Nester Dave Richards Phil Sheely Connie Simiele Jennie Stults Jeff Westcott Jeff Widney	Ron Brunke Bob Bullock Bill Cox Laura Cusack Lorna Dittmer Ted Hopkins Sasa Kosjerina Jim Leary Anthony Nagel Robert Nielson Linda Petersen Fred Ruck Ray Swenson Wayne Toebe Daniel Turlington Dave Watson Joel Williams	Brett Barnes Jerry Cammann Jeff Ehlis Garin Erickson Panfilo Gonzales Jr. Dashia Huff Mark Kamberg Edwin Lamm Candice Marple Jon McKibben Saul Martinez Jon Perry Christina Robison Lana Strickling Lou Upton	(TBD) <u>DOE RL, ORP, WIPP</u> Mary Beth Burandt Duane Carter Cliff Clark Tony McKarns Ellen Mattlin Scott Stubblebine	Bill Bachmann Dean Baker Scott Baker Lucinda Borneman Paul Crane Tina Crane Jeff DeLine Ron Del Mar John Dorian Mark Ellefson Darrin Faulk Joe Fritts Lori Fritz Tom Gilmore Rob Gregory Gene Grohs James Hamilton Andy Hobbs Ryan Johnson Dan Kimball Megan Lerchen Richard Lipinski Charles (Mike) Lowery Michael Madison Terri Mars Cary Martin Marty Martin Grant McCalmant Steve Metzger Tony Miskho Matt Mills Tom Moon Chuck Mulkey Mandy Pascual Kirk Peterson	Jean Quigley Dan Saueressig Merrie Schilperoort Joelle Moss Glen Triner Greg Varljen Julie Waddoups Jay Warwick Kyle Webster Ted Wooley

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TWO MINUTE TRAINING

SUBJECT: Hazardous Debris and Non-Intact Lead-Acid Batteries

Q: In the [September 21, 2017](#), Two Minute Training (2MT) we learned that if spent mercury wet cell batteries are intact containers, the batteries must be managed per the land disposal restriction (LDR) treatment standards at [40 CFR 268.40](#) of [RMERC](#) (retorting or roasting of mercury for recovery). However, if the mercury wet cell batteries are not considered intact containers, i.e., ruptured or no longer retain at least 75% of their original volume, then the batteries can be managed according to the alternative treatment standards for debris at [40 CFR 268.45](#). Concerning lead acid batteries, if a customer has damaged, spent (nonradioactive) lead acid batteries, e.g., burned and melted during a building fire that are no longer intact containers, can the lead acid batteries be managed as debris per 40 CFR 268.45, or are the lead acid batteries still subject to the 40 CFR 268.40, Table, “Treatment Standards for Hazardous Waste” and the LDR treatment standard of RLEAD (recovery of lead)?

A: [40 CFR 268.2](#), “Definitions applicable to this part” (LDR), paragraph (g) basically defines “debris” as a solid waste material >60 mm (2 in.) that is a manufactured object, plant or animal matter; or natural geologic material.

“However, the following materials are not debris: any material for which a specific treatment standard is provided in Subpart D, Part 268, namely lead acid batteries, cadmium batteries, and radioactive lead solids...”

So in general, spent lead-acid batteries cannot be managed as debris since they have a specific treatment standard in 40 CFR 268.40, which for nonwastewaters is RLEAD. Concerning the burned and melted batteries that are no longer intact containers, their status as intact or non-intact containers does not alter the prohibition that spent lead-acid batteries cannot be managed as debris. As clarified in an [EPA Guidance Memo dated November 10, 1993](#), EPA stated that:

“Such batteries (non-intact containers) would still not be subject to the treatment standards for debris because there is a more specific treatment standard for lead acid or cadmium batteries”.

Therefore, lead acid batteries (and cadmium batteries) cannot be managed as debris, e.g., macroencapsulated, even if the batteries are no longer intact containers. Since the lead acid batteries have a specific treatment standard in 40 CFR 268.40, the definition of debris prohibits management as debris under 40 CFR 268.45.

[Note that the EPA guidance refers to a Footnote 10 in the [August 18, 1992](#), Federal Register on page 37222, has now been incorporated into 40 CFR 268.2(g) with the wording, “...namely lead acid batteries, cadmium batteries, and radioactive lead solids...” Also note that the EPA guidance was specific to mercury batteries as intact containers but the wording on lead acid batteries is applicable to any lead acid batteries subject to LDR.]

SUMMARY:

- Wastes eligible for the alternative treatment standards of debris are defined at 40 CFR 268.2(g).
- The definition of debris specifically states that lead acid batteries are not debris since they have a specific treatment standard in 40 CFR 268.40.
- Even non-intact lead acid batteries cannot be managed under the alternative treatment standards of debris at 40 CFR 268.45 and must meet the specific treatment standard of RLEAD in 40 CFR 268.40.

Excerpts from 40 CFR 268.2, 268.40 and the November 10, 1993, EPA memo are attached. If you have any questions, please contact me at Paul_W_Martin@rl.gov or at (509) 376-6620.

FROM: Paul W. Martin

DATE: 10/19/17

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TWO MINUTE TRAINING - ATTACHMENT

SUBJECT: Hazardous Debris and Non-Intact Lead-Acid Batteries

40 CFR 268.40 Applicability of treatment standards / Treatment Standards for Hazardous Wastes

Regulated hazardous constituent				Wastewaters	Nonwastewaters
Waste Code	Waste Description and treatment/Regulatory Subcategory	Common Name	CAS#	Concentration in mg/L; or Technology Code	Concentration in mg/kg unless noted as "mg/L TCLP" or Technology Code
D008	Wastes that exhibit, or are expected to exhibit, the characteristic of toxicity for lead based on the toxicity characteristic leaching procedure (TCLP) in SW846.	Lead	7439-92-1	0.69 and meet §268.48 standards	0.75 mg/L TCLP and meet §268.48 standards
	Lead Acid Batteries Subcategory (Note: This standard only applies to lead acid batteries that are identified as RCRA hazardous wastes and that are not excluded elsewhere from regulation under the land disposal restrictions of 40 CFR 268 or exempted under other EPA regulations (see 40 CFR 266.80). This subcategory consists of nonwastewaters only.)			NA	RLEAD [Thermal recovery of lead in secondary lead smelters.]

40 CFR §268.2 Definitions applicable in this part

When used in this part the following terms have the meanings given below:

(g) *Debris* means solid material exceeding a 60 mm particle size that is intended for disposal and that is: A manufactured object; or plant or animal matter; or natural geologic material. **However, the following materials are not debris: any material for which a specific treatment standard is provided in Subpart D, Part 268, namely lead acid batteries, cadmium batteries, and radioactive lead solids; process residuals such as smelter slag and residues from the treatment of waste, wastewater, sludges, or air emission residues; and intact containers of hazardous waste that are not ruptured and that retain at least 75% of their original volume. A mixture of debris that has not been treated to the standards provided by §268.45 and other material is subject to regulation as debris if the mixture is comprised primarily of debris, by volume, based on visual inspection.**

FROM: Paul W. Martin

DATE: 10/19/17

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TWO MINUTE TRAINING - ATTACHMENT

SUBJECT: Hazardous Debris and Non-Intact Lead-Acid Batteries

REGULATORY STATUS OF BATTERY CARCASSES

9441.1993(23)

**United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response**

Mr. Christopher L. Freed
Manager - Environmental Regulations
Chemical Waste Management, Inc.
3001 Butterfield Road
Oak Brook, Illinois 60521

November 10, 1993

Dear Mr. Freed:

Thank you for your letter of April 30, 1993 summarizing your meeting of April 29, 1993 with Richard Kinch of my staff. Upon further investigation of this issue since the receipt of your letter, however, it is clear that battery carcasses do not qualify as debris. They are considered to be containers, as explained below.

As discussed in detail in the preamble to the final rule establishing alternate treatment standards for hazardous debris, intact containers are not debris, and hence are not subject to the treatment standards for debris. 57 FR 37225 (August 18, 1992). In addition, in previous rulemakings EPA has stated that battery casings designed to hold free liquids for use other than storage are containers. I refer you specifically to 40 CFR 264.314(d)(3); 265.314(c)(3); and 55 FR 22637/2 (June 1, 1990). Thus, such intact battery casings are not debris.

In your letter, you state that EPA suggested, elsewhere in the preamble to the final debris rule, that batteries could be debris unless they are subject to a specific treatment standard. I believe you have based this statement on the discussion at 57 FR 37222 and footnote 10, which gives "lead acid or cadmium batteries" as an example of a debris subject to a specific treatment standard. Unfortunately, you then draw the inference that because mercury batteries are not mentioned in this footnote, they are therefore debris.

This is an incorrect conclusion. First, please note that the actual regulatory language does not contain the example of the lead acid battery. 57 FR at 37270. More important, as explained above, intact containers are never classified as debris. Consequently, the example in footnote 10 refers only to lead acid or cadmium batteries that are not intact. Such batteries would still not be subject to the treatment standards for debris because there is a more specific treatment standard for lead acid or cadmium batteries. The footnote does not, however, in any way vitiate the general principle that intact containers are not debris and that batteries are types of containers. I hope this response, based on a thorough examination of the issue of concern, is helpful. If you need further information, please contact Richard Kinch, Chief of the Waste Treatment Branch in our Waste Management Division at (703) 308-8434.

Sincerely,

Bruce R. Weddle, Acting Director
Office of Solid Waste

FROM: Paul W. Martin

DATE: 10/19/17

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