

<u>SUBJECT</u>		<u>DATE</u>
1056. Hazardous Waste Tanks and the Less than 90-Day Accumulation Time Limit	ENCORE	APR 23, 2015
1057. Decharacterized RCRA Waste - Manifesting and LDR Reporting	ENCORE	APR 30, 2015
1058. Decharacterized Hazardous Waste Listed Solely for Non-Toxic Characteristics	ENCORE	MAY 7, 2015
1059. Decharacterized Wastes, <90-Day Accumulation Time Limits and LDR Storage Prohibition	ENCORE	MAY 14, 2015
1060. Decharacterized Wastes and the LDR Dilution Prohibition	ENCORE	MAY 21, 2015
1061. Hazardous Debris Macroencapsulation and Size Reduction	ENCORE	MAY 28, 2015
1062. Universal Waste Lamps and Prohibition on Crushing		JUN 4, 2015
1063. F003 Listed Hazardous Waste and the 10% Rule	ENCORE	JUN 11, 2015
1064. F001 - F005 Listed Hazardous Waste and the 10% Rule	ENCORE	JUN 18, 2015
1065. Macroencapsulation of Hazardous Debris and Presence of Free Liquids	ENCORE	JUN 25, 2015
1066. DOT Shipping of Damaged, Defective or Recalled Lithium Batteries		JUL 1, 2015
1067. Used Oil Eligibility for Animal and Vegetable Oils	ENCORE	JUL 9, 2015
1068. Used Oil Eligibility for Petroleum Oils Mixed with Animal or Vegetable Oils		JUL 16, 2015
1069. Conditioned Exclusion for Listed Hazardous Waste Debris Treated via Extraction/Destruction	ENCORE	JUL 23, 2015
1070. Conditioned Exclusion for Characteristic Debris Treated via Immobilization		JUL 30, 2015
1071. RCRA Personnel Training and Classroom Training vs. Online Training		AUG 6, 2015
1072. PCB Decontamination Standards with No Decontamination Performed		AUG 13, 2015
1073. PCB Manifest Exceptions a.k.a. When is a PCB Manifest Not Required	ENCORE	AUG 19, 2015
1074. PCB Manifest Relief a.k.a. When is a PCB Manifest Not Required – The Sequel		AUG 27, 2015
1075. Hazardous Debris and Radioactively Contaminated Cadmium Batteries	ENCORE	SEP 3, 2015
1076. Hazardous Debris and Radioactively Contaminated Lead Acid Batteries	ENCORE	SEP 10, 2015
1077. Mercury Wet Cell Batteries - Debris or Not Debris	ENCORE	SEP 17, 2015
1078. Hazardous Debris and Non-Radioactive Lead Acid Batteries		SEP 24, 2015
1079. Unused Paraformaldehyde - U Listed Hazardous Waste or Not?	ENCORE	OCT 1, 2015
1080. CAS Numbers and the Hazardous Waste "U" and "P" Listings	ENCORE	OCT 8, 2015
1081. Universal Waste One Year Accumulation and Multiple Handlers	ENCORE	OCT 15, 2015
1082. LDR Notifications and F001-F005 Constituents of Concern	ENCORE	OCT 29, 2015
1083. LDR Notifications and F001-F005 Constituents of Concern – Again	ENCORE	NOV 5, 2015
1084. LDR Notifications and F001-F005 Constituents of Concern - One Last Time	ENCORE	NOV 12, 2015
1085. DOT and Terminal Protection of Alkaline Batteries	ENCORE	NOV 19, 2015
1086. Used Oil and Keeping Containers Closed – WAC 173-303 vs. 40 CFR 279		NOV 24, 2015
1087. PCB Weight Determinations	ENCORE	DEC 3, 2015
1088. Satellite Accumulation Requirements and Container Inspections	ENCORE	DEC 10, 2015
1089. 'Twas The Night Before Christmas - The Twenty-Third Annual Edition	ENCORE	DEC 24, 2015
1090. Satellite Accumulation and 85-Gallon Containers	ENCORE	DEC 31, 2015
1091. PCB Date Removed From Service Notations – On the Item or In a Log	ENCORE	JAN 7, 2016
1092. The Date Removed From Service Marking on the PCB Mark	ENCORE	JAN 14, 2016
1093. Generator Weekly Inspection Log Documentation – Federal vs. WA State	ENCORE	JAN 21, 2016
1094. Used Oil and Weekly Inspections	ENCORE	JAN 28, 2016
1095. TSCA/PCB Determinations for Fluorescent Light Ballasts via the Manufacture Date	ENCORE	FEB 4, 2016
1096. PCB Containers and Multiple Removed From Service Dates	ENCORE	FEB 11, 2016
1097. Generator Inspection Logs and Corrective Action Documentation	ENCORE	FEB 18, 2016
1098. PCB Concentrations and Micrograms per Centimeters Squared (µg/cm ²)		FEB 25, 2016
1099. RCRA Empty Containers and Removing as Much Waste as Possible	ENCORE	MAR 3, 2016
1100. PCB Incineration and "Six Nines" Destruction Removal Efficiency Criteria	ENCORE	MAR 10, 2016
1101. RCRA Treatment and The Two-Part Definition		MAR 17, 2016
1102. D002 Waste and Dilution as Adequate LDR Treatment	ENCORE	MAR 24, 2016
1103. Satellite Accumulation of Aerosol Cans and Determining the 55-Gallon Limit		MAR 31, 2016
1104. Satellite Accumulation and Process Location Changes	ENCORE	APR 7, 2016
1105. Satellite Accumulation Prior to and After Recycling		APR 14, 2016
1106. Method Detection Limits and Hazardous Waste Determinations	ENCORE	APR 21, 2016
1107. Method Detection Limits and Hazardous Waste Determinations II	ENCORE	APR 28, 2016
1108. Radioactive Lead Solids vs. Non-radioactive Lead Contaminated Debris	ENCORE	MAY 5, 2016
1109. PCB Bulk Product Wastes and the One Year Disposal Requirement		MAY 12, 2016
1110. PCB Waste Storage Limitations and the One-Year Extension		MAY 19, 2016
1111. PCB Waste Storage Limitations and the PCB Radioactive Waste Exemption		MAY 26, 2016
1112. Separating Hazardous Debris and Hazardous Nondebris		JUN 2, 2016

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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: SEPARATING HAZARDOUS DEBRIS AND HAZARDOUS NONDEBRIS

DATE: JUNE 2, 2016

<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 Bob Cathel Rene Catlow Richard Clinton Larry Cole John Dent Brian Dixon Eric Erpenbeck Stuart Hildreth Mike Jennings Stephanie Johansen Jeanne Kisielnicki Melvin Lakes Marty Martin Jim McGrogan Stuart Mortensen Anthony Nagel Dean Nester Dave Richards Phil Sheely Connie Simiele Jennie Stults Michael Waters Jeff Widney	Brett Barnes Mitch Boyd Ron Brunke Bill Cox Laura Cusack Lorna Dittmer Rick Engelmann Ted Hopkins Sasa Kosjerina Jim Leary Dale McKenney Jon McKibben Rick Oldham Linda Petersen Fred Ruck Ray Swenson Wayne Toebe Lee Tuott Daniel Turlington Dave Watson Joel Williams	Jerry Cammann Jeff Ehlis Garin Erickson Lori Fritz Panfilo Gonzales Jr. Dashia Huff Mark Kamberg Edwin Lamm Candice Marple Saul Martinez Jon Perry Thomas Pysto Christina Robison Don Rokkan Lana Strickling Lou Upton	(TBD) <u>DOE RL, ORP, WIPP</u> Mary Beth Burandt Duane Carter Cliff Clark Mike Collins Tony McKarns Ellen Mattlin Greg Sinton 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 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 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 Jeff Westcott Ted Wooley

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TWO MINUTE TRAINING

SUBJECT: Separating Hazardous Debris and Hazardous Nondebris

Q: A customer has generated a little more than ½ a drum of hazardous debris and a little less than ½ a drum of hazardous nondebris. In terms of the land disposal restrictions (LDR), the debris waste could be macroencapsulated but the nondebris waste would have to be incinerated. With advice from a consultant of questionable character, the customer has decided that mixing the debris and nondebris wastes together would be a great idea since the mixture would then be primarily debris and could then be managed via macroencapsulation, which would be much cheaper than incineration. However, the customer asked for confirmation from the facility's Environmental Manager (EM) if the mixing of debris and nondebris was appropriate. The Facility EM's response was that the intentional mixing of debris and nondebris would be considered impermissible dilution and the entire mixture would have to be managed per the most stringent treatment standard of incineration. Seeing the error in his way, the customer asked the EM if it would be permissible to re-separate the debris from the nondebris and manage each waste accordingly. What could the EM's response be?

A: An EPA memo dated October 3, 1997 addressed a similar question concerning separation of intentionally mixed debris and nondebris. EPA reiterated that intentionally mixing debris and nondebris to avoid an LDR treatment standard is prohibited and that the mixture would remain subject to the most stringent LDR treatment standard of any waste that is part of the mixture. Concerning subsequent separation of the debris and nondebris, EPA stated:

"However, once mixing has occurred, there is no prohibition against re-separating the debris from the waste and treating each according to the appropriate standards."

Therefore the EM's response could be:

"There is no prohibition against re-separating the debris from the nondebris and treating each waste according to the appropriate LDR treatment standards. And next time, talk to me first!"

SUMMARY:

- Intentional mixing of debris and nondebris wastes to avoid LDR treatment standards is prohibited.
- Intentionally mixed debris/nondebris wastes are subject to the most stringent standards.
- Re-separating intentionally mixed debris/nondebris waste is not prohibited.

The October 3, 1997 EPA memo is attached to the e-mail. If you have any questions please contact me at Paul_W_Martin@rl.gov" or at (509) 376-6620.

FROM: Paul W. Martin

DATE: 6/2/16

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TWO MINUTE TRAINING - ATTACHMENT

SUBJECT: Separating Hazardous Debris and Hazardous Nondebris

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460**

OFFICE OF
SOLID WASTE AND
14241
EMERGENCY RESPONSE

OCTOBER 3, 1997
FAXBACK

Catherine Sharp, Assistant Director
Waste Management Division
Department of Environmental Quality
1000 N.E. 10th Street
Oklahoma City, Oklahoma 73117-1212

Dear Ms. Sharp:

This is in response to your letter of June 18, 1997 presenting several questions regarding hazardous waste debris that arose as a result of discussions with a permitted hazardous waste facility, testimony in court, and review of the August 18, 1992 debris rule (57 FR 37194). We have reviewed your questions and include them with our responses below.

1. As indicated in the August 18, 1992 Federal Register (57 FR 37194, 37225), are broken or ruptured containers always hazardous debris when contaminated with hazardous waste, or will the origin and conditions under which the containers are ruptured affect whether the containers may be considered hazardous debris?

The Agency has stated that broken or ruptured containers that are contaminated with prohibited wastes are subject to the land disposal restrictions (LDR) treatment standards for debris. See 57 FR 37225/2 which states, "broken or ruptured containers are always debris if contaminated with prohibited waste." If the contaminating waste is removed from the containers during treatment, the waste itself is subject to the treatment standards for the waste (57 FR 37225/3). EPA intended for the debris standards to apply to cases where the debris and the waste are inseparable, since then the matrix is different from that of a process waste, and it needs treatment by special standards (57 FR 37223 n. 13). Therefore, wastes in a non-intact drum can be left in the drum and the entire matrix treated as debris only if the wastes are not readily separable from the drum. Furthermore, the mixing of hazardous waste or contaminated soil with debris to avoid LDR treatment standards is prohibited (57 FR 37243).

2. Is it permissible for either a TSD facility or a hazardous waste generator to shred hazardous debris prior to macroencapsulation?

FROM: Paul W. Martin

DATE: 6/2/16

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SUBJECT: Separating Hazardous Debris and Hazardous Nondebris

There is no prohibition against shredding the debris prior to macroencapsulation. The Phase I preamble at 57 FR 37235 states it is the Agency's position that material with a particle size less than 60 mm is amenable to conventional treatment for process waste and small particle-sized material and that such material can be reasonably sampled for analysis to document compliance with the concentration-based treatment standards for the waste contaminating the material. Furthermore, 40 CFR 268.45, Table 1(C)(2), footnote 5 also applies to macroencapsulation, and states that if the particle size is reduced so that the material no longer meets the 60 mm minimum particle size limits for debris, then the most stringent treatment standard of any waste contaminating the material applies, unless the debris has been cleaned and separated from the contaminated soil and waste prior to size reduction.

3. If the answer to question 2 above is yes, must the shredder be permitted as a miscellaneous unit, and under what conditions may the shredding be performed i.e., must the conditions at 40 CFR 268.45, Table 1(C)(2), footnote 5 be followed?

Because shredding hazardous waste or debris meets the definition of treatment in 40 CFR 260.10, shredders handling hazardous wastes have been identified as either distinct units or ancillary devices to other units, depending on the specific circumstance. However, we believe that shredders are generally controlled most appropriately when permitted as individual units, either as miscellaneous units or as tanks. Table 1(C)(2), footnote 5 must be followed, especially as it pertains to maintaining proper particle size limits.

4. If hazardous debris has been either intentionally or unintentionally mixed with hazardous waste by a TSD facility, can the resultant mixture be separated and the hazardous debris disposed using the alternative treatment standards found at 40 CFR 268.45 Table 1(C)(1) or would the entire mixture be subject to the most stringent treatment standard of any waste that is part of the mixture?

The Phase I preamble at page 57 FR 37243 states that the intentional mixing of hazardous waste or contaminated soil with debris to avoid the concentration-based treatment standard for the waste or soil is prohibited. Furthermore, on page 57 FR 37224, "such situations where debris is used merely to dilute another prohibited waste, the mixture would remain subject to the most stringent treatment standard of any waste that is part of the mixture." As a practical matter (for example, during cleanup activities) debris and non-debris material may be found in a mixture. However, containers cannot be loaded with debris and hazardous waste in percentages such as 49 percent hazardous waste and 51 percent debris to meet the classification of "primarily debris"; the containerized mixture must be representative of the mixture as found at the excavation site. The Phase I preamble at 57 FR 37243 states that if debris is intentionally mixed with contaminated soil or hazardous waste (e.g., after excavation) and the mixture is regulated as debris by the application of the mixture principle and subsequently immobilized, prohibited sham mixing has occurred.

FROM: Paul W. Martin

DATE: 6/2/16

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TWO MINUTE TRAINING - ATTACHMENT

SUBJECT: Separating Hazardous Debris and Hazardous Nondebris

However, once mixing has occurred, there is no prohibition against re-separating the debris from the waste and treating each according to the appropriate standards.

5. Is designation of a waste by the generator as hazardous debris on the accompanying land disposal restriction form as described at 268.7(a)(1)(iv) the only acceptable or required means of designating a particular waste as hazardous debris?

According to 40 CFR 268.7(a)(1)(iv), a generator must identify on the notification form, for hazardous debris, the contaminants subject to treatment as provided by 40 CFR 268.45(b) and the following statement: "this hazardous debris is subject to the alternative treatment standards of 40 CFR 268.45." If a generator fails to meet the requirements of 40 CFR 268.7(a)(1)(iv), the generator must submit the proper forms to the TSD facility prior to treatment or disposal by the TSD.

6. If a generator does not designate its hazardous waste as hazardous debris as described at 268.7(a)(1)(iv), is it permissible for a TSD facility to designate the hazardous waste as hazardous debris after receipt without prior approval of the generator?

Although the regulations (40 CFR 268.7) do not specifically prohibit a treater from identifying waste or debris differently from the generator's identification of that waste, they require generators and treaters to accurately characterize wastes. This does not change the prohibition on intentional mixing of waste with debris to avoid the treatment standard for the waste itself, so if the treater's characterization differed from the generator's characterization due to sham mixing, the practice would not be allowed, and the treater (as well as a generator who mixes impermissibly) may well be in violation of Resource Conservation and Recovery Act (RCRA) requirements. Therefore, the Agency certainly expects that in cases of disagreement, the treater will contact the generator to resolve the discrepancy.

7. How must a TSD's hazardous debris management practices, i.e., bulking or mixing from different sources; be described in its hazardous waste permit?

Practices such as bulking and mixing of wastes must be included in the TSD's hazardous waste permit. The Phase I preamble at 57 FR 37241-242 addresses permit requirements for the treatment of hazardous debris, and states that treatment is "currently subject to the applicable interim status and permit standards of 40 CFR parts 264, 265, 266 and 270 that ensure protection of human health and the environment." Furthermore, the preamble goes on to say that debris treatment standards "do not affect those existing facility standards."

FROM: Paul W. Martin

DATE: 6/2/16

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SUBJECT: Separating Hazardous Debris and Hazardous Nondebris

Therefore, descriptions used for hazardous debris management practices would be similar to descriptions for other waste treatment activities and incorporate either the technology specific standards of 40 CFR Part 264, or the environmental performance standards of part 264, subpart X. Also, please note 40 CFR Part 270, subpart C which addresses permit conditions for all RCRA hazardous waste permits.

We appreciate the opportunity to respond to your questions. Because of the complexity of some of these hazardous debris issues, we welcome the opportunity to provide any further clarification on this response, and respond to any case-specific questions you may have. For questions regarding the debris rule, please contact Peggy Vyas of my staff at (703) 308-5477. Questions regarding the miscellaneous unit standards of subpart X should be directed to Jeff Gaines of my staff at (703) 308-8655.

Sincerely,

Elizabeth A. Cotsworth, Acting Director
Office of Solid Waste

FROM: Paul W. Martin

DATE: 6/2/16

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