

<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
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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	ENCORE	JUN 2, 2016
1113. Product Expiration Dates and Solid Waste Determinations (Reverse Distribution)	ENCORE	JUN 9, 2016
1114. Satellite Accumulation Areas and Incompatible Wastes		JUN 16, 2016
1115. Satellite Accumulation Areas and Ignitable Wastes		JUN 22, 2016
1116. Universal Waste, Incandescent Bulbs and Nonhazardous Bulbs	ENCORE	JUN 30, 2016
1117. The Domestic Sewage Exclusion and Sewer Sludge Removal		JUL 7, 2016
1118. The Domestic Sewage Exclusion and Sewer Sludge Transport		JUL 14, 2016
1119. RCRA Empty Acutely Hazardous Waste Containers	ENCORE	JUL 20, 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: RCRA EMPTY ACUTELY HAZARDOUS WASTE CONTAINERS

DATE: JULY 20, 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 Dean Nester Dave Richards Phil Sheely Connie Simiele Jennie Stults Michael Waters Jeff Westcott 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 Anthony Nagel Linda Petersen Fred Ruck Ray Swenson Wayne Toebe Daniel Turlington Dave Watson Joel Williams	Jerry Cammann Jeff Ehlis Garin Erickson Panfilo Gonzales Jr. Dashia Huff Mark Kamberg Edwin Lamm Candice Marple Saul Martinez Jon Perry Christina Robison 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 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 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: RCRA Empty Acutely Hazardous Waste Containers

Q: When is a container of acutely hazardous waste considered RCRA empty?

A: Per [WAC 173-303-160\(2\)\(b\)](#) [*40 CFR Part 261.7(b)(3)*] a container that held an acutely hazardous waste (or WA State extremely hazardous waste [EHW] or a WA pesticide bearing the danger or warning label) is empty if the container has been:

- Triple rinsed using an appropriate volume of solvent;
- Cleaned by another method proven to be effective, or;
- In the case of a container with an intact inner liner, once the inner liner has been removed.
- If rinsing might damage the container (e.g., fiber or cardboard containers without inner liners), an empty container may be vacuum cleaned, struck, with the open end of the container up, three times to remove or loosen particles from the inner walls and corners, and vacuum cleaned again.

Triple rinsing is key to meeting the acutely hazardous waste empty definition. Even if an acutely hazardous waste container appears empty, if not properly cleaned, the residue remaining in the container is an acutely hazardous waste.

Also note that acutely hazardous wastes are not limited to just the “P” listed wastes in [WAC 173-303-9903](#) [*40 CFR 261.33(e)*], or EHW wastes in WAC 173-303-100. [WAC 173-303-040](#) [*40 CFR 261.7(b)(3)*] states that acutely hazardous wastes are also listed in [WAC 173-303-9904](#) [*40 CFR 261.31*] (“F” listed wastes). The “F” listed acutely hazardous wastes include F020 through F023, F026 and F027 (the Dioxin codes).

Per WAC 173-303-9904, [*40 CFR 261.31*], an acutely hazardous “F” listed waste is noted with the letter "H" under the column "Hazard Code". All “P” listed wastes are acutely hazardous. Concerning “U” and “K” listed wastes and the characteristic waste codes D001 through D043, none are acutely hazardous wastes. These codes do not require triple rinsing.

And finally, the rinsate generated from the rinsing of acutely hazardous waste containers (P and the dioxin F listed wastes) must be managed as acutely hazardous waste. As an example, if a "bone dry" but not RCRA empty F027 container is triple rinsed, the RCRA empty container is unregulated, but the rinsate continues to carry the F027 hazardous waste code. Note that rinsate from WA EHW containers must designate as EHW to remain EHW, i.e., there is no mixtures or derived from rule for WA State Only EHW.

SUMMARY:

- Acutely hazardous waste or EHW containers are RCRA empty if:
 - ▶ Triple rinsed;
 - ▶ Cleaned by another proven method;
 - ▶ The inner liner is removed, or;
 - ▶ If rinsing will damage the container, cleaned by vacuuming then struck three times to remove loose particles and vacuumed again.
- Acutely hazardous waste includes all the “P” listed waste codes, Washington State EHW, the dioxin related “F” waste codes and none of the “U”, “K” or characteristic waste "D" codes.
- Rinsate from P and the dioxin F listed acutely hazardous waste containers are acutely hazardous waste.

Excerpts from WAC 173-303-160, 173-303-040 and 40 CFR 261.7 are 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: 7/20/16

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TWO MINUTE TRAINING - ATTACHMENT

SUBJECT: RCRA Empty Acutely Hazardous Waste Containers

WAC 173-303-160 Containers.

- (2) A container or inner liner is "empty" when:
- (a) All wastes in it have been taken out that can be removed using practices commonly employed to remove materials from that type of container or inner liner (e.g., pouring, pumping, aspirating, etc.) and, no more than one inch of waste remains at the bottom of the container or inner liner, or the volume of waste remaining in the container or inner liner is equal to three percent or less of the container's total capacity, or, if the container's total capacity is greater than one hundred ten gallons, the volume of waste remaining in the container or inner liner is no more than 0.3 percent of the container's total capacity. A container which held compressed gas is empty when the pressure inside the container equals or nearly equals atmospheric pressure; and
 - (b) If the container or inner liner held acutely hazardous waste, as defined in WAC 173-303-040, toxic EHW as defined in WAC 173-303-100 or pesticides bearing the danger or warning label, the container or inner liner has been rinsed at least three times with an appropriate cleaner or solvent. The volume of cleaner or solvent used for each rinsing must be ten percent or more of the container's or inner liner's capacity or of sufficient quantity to thoroughly decontaminate the container. In lieu of rinsing for containers that might be damaged or made unusable by rinsing with liquids (e.g., fiber or cardboard containers without inner liners), an empty container may be vacuum cleaned, struck, with the open end of the container up, three times (e.g., on the ground, with a hammer or hand) to remove or loosen particles from the inner walls and corners, and vacuum cleaned again. Equipment used for the vacuum cleaning of residues from containers or inner liners must be decontaminated before discarding, in accordance with procedures approved by the department. A container or inner liner is also considered "empty" if the container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal.
- Any rinsate or vacuumed residue which results from the cleaning of containers or inner liners must, whenever possible, be reused in a manner consistent with the original intended purpose of the substance in the container or inner liner. In the case of a farmer, if the rinsate is a pesticide residue then the rinsate must be managed or reused in a manner consistent with the instructions on the pesticide label, provided that when the label instructions specify disposal or burial, such disposal or burial must be on the farmer's own (including rented, leased or tenanted) property. Otherwise, the rinsate must be checked against the designation requirements (WAC 173-303-070 through 173-303-100) and, if designated, managed according to the requirements of this chapter.
- (c) In the case of a container, the inner liner, that prevented the container from contact with the commercial chemical product or manufacturing chemical, has been removed.
- (3)
- (a) Any residues remaining in containers or inner liners that are "empty" as described in subsection (2) of this section will not be subject to the requirements of this chapter, and will not be considered as accumulated wastes for calculating waste quantities.
 - (b) Any dangerous waste in either: A container that is not empty, or an inner liner removed from a container that is not empty (as defined in subsection (2) of this section) is subject to the requirements of this chapter.

FROM: Paul W. Martin

DATE: 7/20/16

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TWO MINUTE TRAINING - ATTACHMENT

SUBJECT: RCRA Empty Acutely Hazardous Waste Containers

WAC 173-303-040 Definitions.

"Acute hazardous waste" means dangerous waste sources (listed in WAC 173-303-9904) F020, F021, F022, F023, F026, or F027, and discarded chemical products (listed in WAC 173-303-9903) that are identified with a dangerous waste number beginning with a "P", including those wastes mixed with source, special nuclear, or by-product material subject to the Atomic Energy Act of 1954. The abbreviation "AHW" will be used in this chapter to refer to those dangerous and mixed wastes which are acute hazardous wastes. Note - the terms acute and acutely are used interchangeably.

40 CFR 261.7 Residues of hazardous waste in empty containers.

- (a) (1) Any hazardous waste remaining in either (i) an empty container or (ii) an inner liner removed from an empty container, as defined in paragraph (b) of this section, is not subject to regulation under parts 265, or part 268, 270 or 124 of this chapter or to the notification requirements of section 3010 of RCRA.
- (2) Any hazardous waste in either (i) a container that is not empty or (ii) an inner liner removed from a container that is not empty, as defined in paragraph (b) of this section, is subject to regulation under parts 261 through 265, and parts 268, 270 and 124 of this chapter and to the notification requirements of section 3010 of RCRA.
- (b) (1) A container or an inner liner removed from a container that has held any hazardous waste, except a waste that is a compressed gas or that is identified as an acute hazardous waste listed in §§261.31, .32, or .33(e) of this chapter is empty if:
 - (i) All wastes have been removed that can be removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating, and
 - (ii) No more than 2.5 centimeters (1 inch) of residue remain on the bottom of the container or inner liner, or
 - (iii)
 - (A) No more than 3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is less than or equal to 110 gallons in size, or
 - (B) No more than 0.3 percent by weight of the total capacity of the container remains in the container or inner liner if the container is greater than 110 gallons in size.
- (2) A container that has held a hazardous waste that is a compressed gas is empty when the pressure in the container approaches atmospheric.
- (3) A container or an inner liner removed from a container that has held an acute hazardous waste listed in §§261.31, 261.32, or 261.33(e) is empty if:
 - (i) The container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate;
 - (ii) The container or inner liner has been cleaned by another method that has been shown in the scientific literature, or by tests conducted by the generator, to achieve equivalent removal; or
 - (iii) In the case of a container, the inner liner that prevented contact of the commercial chemical product or manufacturing chemical intermediate with the container, has been removed.

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DATE: 7/20/16

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