

<u>SUBJECT</u>		<u>DATE</u>
1394. RCRA Empty vs. DOT Empty	ENCORE	JUL 30, 2020
1395. RCRA Empty vs. DOT Empty II	ENCORE	AUG 6, 2020
1396. Empty Containers and the "Empty" Label	ENCORE	AUG 13, 2020
1397. Exceptions to Free Liquids in Landfills Prohibition	ENCORE	AUG 20, 2020
1398. Dust Suppression in Landfills with Nonhazardous Liquids	ENCORE	AUG 27, 2020
1399. Treated Hazardous Wastes Used as Dust Suppressant	ENCORE	SEP 3, 2020
1400. Regulatory Status of Used Oil Mixed with Diesel Fuel	ENCORE	SEP 10, 2020
1401. RCRA Liquids, Free Liquids, and Releasable Liquids	ENCORE	SEP 17, 2020
1402. Available Regulatory Relief from Underlying Hazardous Constituent (UHC) Requirements	ENCORE	SEP 24, 2020
1403. Smoke Detector Disposal and the NRC	ENCORE	OCT 1, 2020
1404. DOT Shipping of Damaged, Defective, or Recalled Lithium Batteries	ENCORE	OCT 8, 2020

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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: DOT SHIPPING OF DAMAGED, DEFECTIVE, OR RECALLED LITHIUM BATTERIES

DATE: OCTOBER 8, 2020

<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 Tania Bates Rene Catlow Richard Clinton Larry Cole Laura Cusack Stuart Hildreth Stephanie Johansen Sasa Kosjerina Melvin Lakes Richard Lipinski Stuart Mortensen Dave Richards Dave Shea Phil Sheely Connie Simiele Jeff Westcott	Jeff Bramson Bob Bullock Frank Carleo Danielle Collins Bill Cox Jeanne Elkins Ryan Fisher Jonathan Fullmer Barry Lawrence Diane Leist Mitch Marrott Stewart McMahand Brian Mitcheltree Anthony Nagel Linda Petersen Sean Sexton Kat Thompson Wayne Toebe Daniel Turlington	Brett Barnes Michael Carlson Mike Demiter Kip George Jerry Cammann Jeff Ehlis Garin Erickson Panfilo Gonzalez Jr. Dashia Huff Mark Kamberg Jon McKibben Saul Martinez Matt Mills Carly Nelson Michelle Oates Eric Pennala Jon Perry Christina Robison Christian Seavoy David Shaw John Skoglie Lana Strickling Greg Sullivan	(TBD) <u>DOE RL, ORP, WIPP</u> Mary Beth Burandt Duane Carter Al Farabee Tony McKarns	Bill Bachmann Dean Baker Scott Baker Lucinda Borneman Paul Crane Tina Crane Ron Del Mar John Dorian Mark Ellefson Darrin Faulk Rob Gregory James Hamilton Andy Hobbs Ryan Johnson Megan Lerchen Mike Lowery Michael Madison Terri Mars Cary Martin Grant McCalmant Steve Metzger Tony Miskho Tom Moon Chuck Mulkey Kirk Peterson	Dan Saueressig Joelle Moss Glen Triner Greg Varljen Julie Waddoups Jay Warwick Ted Wooley

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TWO MINUTE TRAINING

SUBJECT: DOT Shipping of Damaged, Defective, or Recalled Lithium Batteries

Q: What are the current DOT shipping requirements for damaged, defective or recalled lithium batteries and what is the history of the voluntary and delayed compliance dates for implementation of these DOT requirements?

A: On [August 6, 2014](#), DOT promulgated new rules for the shipment of damaged, defective or recalled lithium batteries. At that time, the voluntary compliance date was August 6, 2014, with a delayed compliance date of February 6, 2015. However, on [January 8, 2015](#), DOT amended the voluntary compliance date to January 1, 2015, and the delayed compliance date to January 1, 2016.

Due to fire and smoke incidents on aircraft, possibly due to lithium batteries, DOT promulgated new rules on shipping of damaged, defective and recalled lithium batteries. At [49 CFR 173.185\(f\)](#) it states that damaged, defective or recalled lithium batteries must be:

- Packaged individually in a non-metallic inner container;
- Placed inside a Packing Group I container;
- Surrounded by a cushioning material that is non-combustible, non-conductive and absorbent;
- Marked as “Damaged/Defective Lithium Ion Battery” and/or “Damaged/Defective Lithium Metal Battery” as appropriate, and;
- Transported by highway, rail or vessel. Transportation by air is prohibited.

If lithium batteries are suspected of being damaged or defective and destined for recycling, the battery recycler should be contacted to help determine if the lithium batteries meet the criteria of damaged or defective prior to placing the lithium batteries in transportation. If the lithium batteries are subject to a recall, a determination by the battery manufacturer should have already been made whether or not 49 CFR 173.185(f) applies.

SUMMARY:

- Due to aircraft incidents suspected of involving lithium batteries, DOT promulgated new rules.
- Damaged, defective or recalled lithium batteries must be packaged per 49 CFR 173.185(f).
- The new rules originally had a voluntary compliance date of August 6, 2014 with a delayed compliance date of February 6, 2015, which was later amended to January 1, 2016.

49 CFR 173.185(f) is attached. 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: 10/8/2020

FILE: 2MT\2020\100820.rtf

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TWO MINUTE TRAINING – ATTACHMENT

SUBJECT: DOT Shipping of Damaged, Defective, or Recalled Lithium Batteries

§173.185 Lithium cells and batteries

As used in this section, *consignment* means one or more packages of hazardous materials accepted by an operator from one shipper at one time and at one address, receipted for in one lot and moving to one consignee at one destination address. *Equipment* means the device or apparatus for which the lithium cells or batteries will provide electrical power for its operation. *Lithium cell(s) or battery(ies) includes both lithium metal and lithium ion chemistries.* *Medical device* means an instrument, apparatus, implement, machine, contrivance, implant, or in vitro reagent, including any component, part, or accessory thereof, which is intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, of a person.

(f) *Damaged, defective, or recalled cells or batteries.* Lithium cells or batteries, that have been damaged or identified by the manufacturer as being defective for safety reasons, that have the potential of producing a dangerous evolution of heat, fire, or short circuit (e.g., those being returned to the manufacturer for safety reasons) may be transported by highway, rail or vessel only, and must be packaged as follows:

- (1) Each cell or battery must be placed in individual, non-metallic inner packaging that completely encloses the cell or battery;
- (2) The inner packaging must be surrounded by cushioning material that is non-combustible, non-conductive, and absorbent; and
- (3) Each inner packaging must be individually placed in one of the following packagings meeting the applicable requirements of part 178, subparts L, M, P and Q of this subchapter at the Packing Group I level:
 - (i) Metal (4A, 4B, 4N), wooden (4C1, 4C2, 4D, 4F), or solid plastic (4H2) box;
 - (ii) Metal (1A2, 1B2, 1N2), plywood (1D), or plastic (1H2) drum; or
 - (iii) For a single battery or for a single battery contained in equipment, the following rigid large packagings are authorized:
 - (A) Metal (50A, 50B, 50N);
 - (B) Rigid plastic (50H);
 - (C) Plywood (50D); and
- (4) The outer package must be marked with an indication that the package contains a “Damaged/defective lithium ion battery” and/or “Damaged/defective lithium metal battery” as appropriate. The marking required by this paragraph (f)(4) must be in characters at least 12 mm (0.47 inches) high.