

<u>SUBJECT</u>		<u>DATE</u>
1320. Treated Hazardous Waste Used as Dust Suppressant		FEB 28, 2019
1321. Decharacterized RCRA Waste - Manifesting and LDR Reporting	ENCORE	MAR 7, 2019
1322. Decharacterized Hazardous Waste Listed Solely for Non-Toxic Characteristics	ENCORE	MAR 14, 2019
1323. Decharacterized Wastes, ≤90-Day Accumulation Time Limits and LDR Storage Prohibition	ENCORE	MAR 21, 2019
1324. Decharacterized Wastes and the LDR Dilution Prohibition	ENCORE	MAR 28, 2019
1325. PCB Decontamination Standard with No Decontamination Performed	ENCORE	APR 4, 2019
1326. PCB Manifest Relief a.k.a., When is a PCB Manifest Not Required?	ENCORE	APR 11, 2019
1327. PCB Manifest Relief a.k.a., When is a PCB Manifest Not Required? – The Sequel	ENCORE	APR 18, 2019
1328. PCB Concentrations and Micrograms per Centimeters Squared (µg/cm ²)	ENCORE	APR 25, 2019
1329. Operating Record vs. Operating Log	ENCORE	MAY 2, 2019
1330. Operating Records Not Referenced in the “Operating Record” Regulations	ENCORE	MAY 9, 2019
1331. Washington State Used Oil and Mixtures with Other Materials	ENCORE	MAY 16, 2019
1332. Used Oil Filter Regulation – The Feds vs. Washington State	ENCORE	MAY 23, 2019
1333. Printed Circuit Board Recycling – Shredded vs. Whole	ENCORE	MAY 30, 2019
1334. Universal Waste Alkaline Batteries and Self-Transportation	ENCORE	JUN 6, 2019
1335. Universal Waste Lithium Batteries and Self-Transportation	ENCORE	JUN 13, 2019
1336. RCRA Hazard Labeling – A Random Scenario		JUN 20, 2019
1337. Regulatory Status of Chromated, Copper, Arsenate, (CCA) Wood as Wood Mulch	ENCORE	JUN 27, 2019
1338. Unused Paraformaldehyde - U Listed Hazardous Waste or Not?	ENCORE	JUL 3, 2019

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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: UNUSED PARAFORMALDEHYDE - U LISTED HAZARDOUS WASTE OR NOT?

DATE: JULY 3, 2019

<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 John Dent Lorna Dittmer Eric Erpenbeck Stuart Hildreth Mike Jennings Stephanie Johansen Sasa Kosjerina Melvin Lakes Richard Lipinski Stuart Mortensen Dave Richards Phil Sheely Connie Simiele Jeff Westcott	Jeff Bramson Bob Bullock Frank Carleo Bill Cox Noah Cruz Jeanne Elkins Jonathan Fullmer Ted Hopkins Tad Karschnia Barry Lawrence Jim Leary Diane Leist Mitch Marrott Stewart McMahan Brian Mitcheltree Anthony Nagel Linda Petersen Fred Ruck Sean Sexton Dave Shea Ray Swenson Kat Thompson Wayne Toebe Eric Trotta Daniel Turlington Dave Watson	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 Tom Gilmore Rob Gregory James Hamilton Andy Hobbs Ryan Johnson Megan Lerchen Charles (Mike) Lowery Michael Madison Terri Mars Cary Martin Grant McCalmant Steve Metzger Tony Miskho Tom Moon Chuck Mulkey Kirk Peterson	Jean Quigley Dan Saueressig Merrie Schilperoort Joelle Moss Glen Triner Greg Varljen Julie Waddoups Jay Warwick Ted Wooley

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TWO MINUTE TRAINING

SUBJECT: Unused Paraformaldehyde - U Listed Hazardous Waste or not?

Q: A customer has left a container of product formaldehyde on a laboratory shelf for several years. When a chemist attempted to use the formaldehyde, it was discovered that the material had polymerized to paraformaldehyde. The customer knows that discarded unused formaldehyde (CAS# 50-00-0) is specifically listed in [WAC 173-303-9903](#), "Discarded chemical products list", [[40 CFR 261.33\(f\)](#)], as a U122 listed dangerous waste. The customer also knows that discarded unused paraformaldehyde (CAS# 30525-89-4) is not specifically listed at WAC 173-303-9903. Is this unused paraformaldehyde a U listed waste and if so, what U listing applies?

A: Per [WAC 173-303-081](#), "Discarded chemical products", [[40 CFR 261.33](#)], it basically states that a waste will designate as a U listed dangerous waste if the material is a commercial chemical product or manufacturing chemical intermediate with a generic name listed in the discarded chemical products list at WAC 173-303-9903. Also, a waste will designate as a U listed dangerous waste if the material is an off-specification commercial chemical product or manufacturing chemical intermediate which if the material had met specifications would have the generic name listed in the discarded chemical products list at WAC 173-303-9903.

What this means is that if the off-specification paraformaldehyde had met original specifications, it would have had the generic name formaldehyde, which is specifically listed in WAC 173-303-9903.

As further clarification, an EPA RCRA Hotline Question and Answer memo dated March 1, 1994, ([RO 13658](#)) stated:

"When a commercial chemical product listed in §§261.33(e) or (f) undergoes a chemical change that renders the chemical off-specification, the applicable P- or U-listing for the original chemical applies, even in cases where the chemical composition has changed sufficiently to require assignment of a different CAS Number."

Therefore, the customer's paraformaldehyde (the off-specification chemical of formaldehyde) would designate as a U122 listed dangerous waste - the same U listing as on-specification formaldehyde.

SUMMARY:

- A waste is a U listed dangerous waste if the material is a commercial chemical product or manufacturing chemical intermediate listed in the discarded chemical products list.
- A waste is also a U listed dangerous waste if the material is an off-specification commercial chemical product or manufacturing chemical intermediate which if the material had met specifications would be listed in the discarded chemical products list.
- An off-specification chemical derived from an on-specification chemical is a U (or P) listed dangerous waste, if the on-specification chemical is U (or P) listed.

WAC 173-303-081(1) and the March 1, 1994, EPA memo are attached to the e-mail. If you have any questions, contact me at [Paul W Martin@rl.gov](mailto:Paul_W_Martin@rl.gov) or at (509) 376-6620.

FROM: Paul W. Martin

DATE: 7/3/19

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TWO MINUTE TRAINING – ATTACHMENT

SUBJECT: Unused Paraformaldehyde - U Listed Hazardous Waste or Not?

WAC 173-303-081 Discarded chemical products.

(1) A waste will be designated as a dangerous waste and assigned a "P" or "U" code if it is handled in any of the manners described in (e) of this subsection, and if it is a residue from the management of:

(a) A commercial chemical product or manufacturing chemical intermediate (see definition in WAC 173-303-040) which has the generic name listed in the discarded chemical products list, WAC 173-303-9903;

(b) An off-specification commercial chemical product or manufacturing chemical intermediate which if it had met specifications would have the generic name listed in the discarded chemical products list, WAC 173-303-9903;

(c) Any containers, inner liners, or residue remaining in a container or in an inner liner removed from a container that has held any commercial chemical product or manufacturing chemical intermediate that has, or any off-specification commercial chemical product or manufacturing chemical intermediate which if it had met specifications would have, the generic name listed on the "P" or "U" discarded chemical products list of WAC 173-303-9903, unless the containers or inner liners are empty as described in WAC 173-303-160(2);

(d) Any residue or contaminated soil, water, or other debris resulting from the cleanup of a spill of a commercial chemical product or manufacturing chemical intermediate which has, or of an off-specification commercial chemical product or manufacturing chemical intermediate which if it had met specifications would have, the generic name listed in the discarded chemical products list, WAC 173-303-9903;

(e) The materials or items described in (a), (b), (c), and (d) of this subsection are dangerous wastes when they are:

- (i) Discarded or intended to be discarded as described in WAC 173-303-016 (3)(b)(i);
- (ii) Burned for purposes of energy recovery in lieu of their original intended use;
- (iii) Used to produce fuels in lieu of their original intended use;
- (iv) Applied to the land in lieu of their original intended use; or
- (v) Contained in products that are applied to the land in lieu of their original intended use.

TWO MINUTE TRAINING – ATTACHMENT

SUBJECT: Unused Paraformaldehyde - U Listed Hazardous Waste or Not?

PPC: 9442.1994(03)

EPA: 540-R-94-005c

NTIS: PB94-922 403

RO 13658

March 1, 1994

"Off-Specification Paraformaldehyde Meets Commercial Chemical Product Listing"

Key Words: Commercial chemical product; U122

QUESTION:

A manufacturer stores product formaldehyde (CAS No. 50-00-0) in containers before use in a manufacturing process. While in storage, some of the pure formaldehyde polymerizes to form paraformaldehyde (CAS No. 30525-89-4), which is unusable in the manufacturing process because it does not meet required specifications. The manufacturer separates the paraformaldehyde from the usable formaldehyde and sends the off-specification chemical for disposal. Unused commercial chemical products containing formaldehyde are listed as U122 when discarded (40 CFR §261.33(f)). Paraformaldehyde is not found on the P- or U-list (40 CFR §§261.33 (e) or (f)). When discarded, is the off-specification paraformaldehyde a listed hazardous waste?

ANSWER:

In the above scenario, paraformaldehyde is an off-specification form of formaldehyde and meets the U122 listing (40 CFR §261.33(b)). When a commercial chemical product listed in §§261.33(e) or (f) undergoes a chemical change that renders the chemical off-specification, the applicable P- or U-listing for the original chemical applies, even in cases where the chemical composition has changed sufficiently to require assignment of a different CAS Number. (March 1994 Monthly Hotline Report)

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