

| <u>SUBJECT</u> | | <u>DATE</u> |
|--|--------|--------------|
| 1188. RCRA Empty Containers vs. TSCA PCB Decontaminated Containers - Scenario II | ENCORE | AUG 11, 2016 |
| 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 |

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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 WASTE "F" LISTINGS AND TRACE CONTAMINATION – AGAIN!

DATE: SEPTEMBER 29, 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: Hazardous Waste "F" Listings and Trace Contamination – Again!

Q: A customer extracts a product from water using methylene chloride that is <2% soluble in water. Following extraction the product is then separated from the methylene chloride and the waste methylene chloride is managed as an F002 listed hazardous waste. Since the methylene chloride is <2% soluble in water, a trace amount of methylene chloride remains in the wastewater. Is the wastewater that is contaminated with trace amounts of methylene chloride, also an F002 listed hazardous waste?

A: Per an EPA memo dated December 6, 1988, ([RO 11384](#)), it states:

"... process wastes that become contaminated with small amounts of solvents during processing are not within the scope of the spent solvent listings. An example of this is an aqueous effluent from a liquid-liquid extraction step, in which a solvent has been used to extract a product from the water and the water becomes contaminated with small amounts of solvent. In this example, the solvent is removed with the product and the solvent-contaminated water is not a spent solvent."

Therefore, the customer's wastewater containing trace amounts of methylene chloride is considered a process waste, not a spent solvent, and not an F002 listed hazardous waste. Other hazardous or dangerous waste listings, characteristics or state criteria might apply, but the F002 hazardous waste listing will not apply.

SUMMARY:

- Methylene chloride when used for its solvent properties, e.g., to extract product from water, can meet the definition of an F002 listed hazardous wastes.
- Trace amounts of methylene chloride can remain in the water that formerly held the product.
- This trace amount of solvent is not a spent solvent and therefore cannot meet the definition of an F002 listed hazardous waste.

The December 6, 1988, 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: 9/29/16

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TWO MINUTE TRAINING - ATTACHMENT

SUBJECT: Hazardous Waste "F" Listings and Trace Contamination – Again

Faxback 11384

9441.1988(49)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DEC 6 1988

MEMORANDUM

SUBJECT: Regulatory Status of Solvent-Contaminated Wastestreams from a Pharmaceutical Manufacturer

FROM: Devereaux Barnes, Director Characterization and Assessment Division (OS-330)

TO: Arthur Moretta, UIC Control Program Water Division, Region V (5WD-TUB-9)

This memorandum is in response to your request for determination of the regulatory status of aqueous wastestreams generated at an Upjohn Company pharmaceutical facility in Kalamazoo, MI. All answers are based on our best understanding of the process flow sheets, which you sent and the information, which you provided over the telephone to my staff.

The spent solvent listings cover those streams that are used to solubilize or mobilize other constituents (e.g., for degreasing or fabric scouring, as diluents, extractants, reaction and synthesis media, and similar uses) and through such use, have become contaminated to the extent that they must be reclaimed prior to further use or reuse. See 50 FR 53315, December 31, 1985.

Use as a reactant or an ingredient in the manufacture or formulation of a commercial chemical product is not classified as a solvent use for the purpose of the RCRA hazardous waste listings F001 - F005. Therefore, spent materials from these "non-solvent" uses do not meet the listing descriptions for spent solvents. Also, process wastes that become contaminated with small amounts of solvents during processing are not within the scope of the spent solvent listings. An example of this is an aqueous effluent from a liquid-liquid extraction step, in which a solvent has been used to extract a product from the water and the water becomes contaminated with small amounts of solvent. In this example, the solvent is removed with the product and the solvent-contaminated water is not a spent solvent.

Based on our review of the data submitted, we have made the following determinations:

All streams being sent to disposal wells from the acetone, methanol, and methylene chloride recovery processes (pp. A, B, C, and D) either meet the listing description for spent solvents or are residuals derived from the treatment of spent solvents and therefore should be designated as an EPA hazardous waste (F001 - F005).

FROM: Paul W. Martin

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TWO MINUTE TRAINING - ATTACHMENT

SUBJECT: Hazardous Waste "F" Listings and Trace Contamination – Again

Page 2

Those aqueous streams which result from liquid-liquid extraction steps involving solvents are considered process wastestreams and as such, do not meet the listing description for spent solvent streams (see above).

Filter press effluents such as the one exiting the unit designated "ST-110" (p. 2-1) are considered spent solvent streams because they consist of a solvent that was used as a carrier for the product in the filtration step. However, filter press effluents, such as the one exiting the filter designated "VF-" (p. 4-2) are process wastewater streams, not spent solvent streams, because water was introduced into the production process as the carrier for the product in filtration. In this configuration, the solvent was removed prior to filtration; the small quantity of solvent remaining in the system does not render the wastewater filter press effluent a spent solvent.

Rinse wastewaters, such as those from product or equipment rinsing steps (pp. 1-3, 2-1) are not considered spent solvents because they are process streams, which may have become contaminated with organic solvents.

Although a particular waste stream may not meet the listing description for spent solvents, it may be hazardous if exhibits one or more of the hazardous characteristics described in 40 CFR 261.20-261.24. Certain states may also have special restrictions on the disposal of solvent-contaminated wastestreams.

Thank you for your inquiry. If you have any further questions, please contact Ron Josephson at FTS 475-6715.

Attachments

cc: Eric Callisto, OW/ODW (WH-550)

FROM: Paul W. Martin

DATE: 9/29/16

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