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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:** F003 LISTED HAZARDOUS WASTE AND THE 10% RULE

**DATE:** JUNE 11, 2015

Richard Austin Tania Bates Ty Blackford Brett Barnes Ron Brunke Blil Cox Rene Catlow Rene Catlow Richard Clinton Larry Cole John Dent Brian Dixon Brian Brixon John Kekneney John McKibben Alike Jennings Stephanie Johansen Jeanne Kisielnicki Melvin Lakes Dave Richards Phalf Sheely Connie Simiele Roni Swan Michael Waters Jeff Widney  Teff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Widney  Thomas Pysto Connie Simiele Roni Swan Michael Waters Jeff Westcott Ted Wooley  Thomas Pysto Connie Simiele Roni Swan Lama Strickling Lou Upton  Thomas Pysto Connie Simiele Roni Swan Lama Strickling Lou Upton  Thomas Pysto Connie Michael Waters Jeff Westcott Ted Wooley  Thomas Pysto Connie Simiele Ron Den Rianer Cliff Clark Mark Kamberg Ellen Mattlin Cigr Sinton Scott Subblebine  Tima Crane T	CHPRC Projects	CH PRC - Env.	MSA	Hanford Laboratories	Other Hanford	Other Hanford
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Stuart Hildreth Mike Jennings Stephanie Johansen Jeanne Kisielnicki Melvin Lakes Jim McGrogan Stuart Mortensen Anthony Nagel Dean Nester Dave Richards Phil Sheely Connie Simile Roni Swan Michael Waters Jeff Widney  Scott Stubblebine  Jon Dorian Mark Ellefson Darrin Faulk Joe Fritts Tom Gilmore Rob Gregory Gene Grohs James Hamilton Dan Rimball Megan Lerchen Richard Lipinski Charles (Mike) Lowery Michael Madison Terri Mars Cary Martin Grant McCalmant Steve Metzger Tomy Miskho Matt Mills Tom Moon Chuck Mulkey Mandy Pascual Kirk Peterson	Brian Dixon	Jim Leary	Candice Marple		Jeff DeLine	Jeff Westcott
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Jean Quigley						

#### TWO MINUTE TRAINING

### **SUBJECT:** F003 Listed Hazardous Waste and the 10% Rule

Q: A customer has a solvent wastestream that contained, before use, 50% xylene and 50% acetone. Is this wastestream an F003 listed hazardous waste?

**A:** Per <u>WAC 173-303-9904</u>, "Dangerous waste sources list" [40 CFR 261.31] an F003 waste is basically:

- A spent solvent that contained before use, only F003 constituents, or;
- A spent solvent that is a mixture and contained, before use, any F003 constituents <u>and</u>, 10% or more of one or more of any solvent constituents listed in F001, F002, F004, and F005.

Since the customer's waste contained before use, only F003 constituents (50% xylene and 50% acetone) the waste solvent would be an F003 listed hazardous waste. However, if the waste solvent had contained before use, 50% xylene and 50% mineral spirits (a non F-listed ignitable waste), the resultant waste would not meet the F003 listing and would most likely designate as a D001 characteristic waste for ignitability. Even though the xylene percentage in this xylene/ mineral spirits mixture would be well over 10%, the F003 definition only applies the 10% rule to the F001, F002, F004, and F005 constituents. If a spent solvent is <u>not</u> comprised of 100% F003 constituents; OR if a spent solvent contains any amount of F003 constituents <u>but less than</u> 10% of one or more F001, F002, F004, or F005 constituents, the wastestream cannot meet the F003 listing description. The wastestream may exhibit one or more characteristics of hazardous waste, but it cannot be an F003 listed hazardous waste.

A variation of the above wastestream that contained before use, 50% xylene (F003 constituent), 40% mineral spirits (ignitable characteristic), and 10% toluene (F005 constituent), would meet the definition of an F003 and an F005 listed hazardous waste. This material would have contained before use, any amount of an F003 constituent (xylene) and contained 10% or more of an F005 constituent (toluene). Hence the F003/F005 listing would apply along with the D001 characteristic code to address the mineral spirits.

In order to properly characterize waste solvents per the F001 through F005 listings, it must be understood that the 10% rule for F003 is different from the 10% rule for F001, F002, F004 and F005. F003 basically states that a material must be 100% F003 constituents; OR contain any amount of F003 constituents and also include 10% or more of one or more F001, F002, F004, or F005 constituents. On the other hand, the F001, F002, F004 and F005 listings state that the material must contain, before use, 10% or more of F001, F002, F004 and/or F005 listed constituents. There is no reference to F003.

## **SUMMARY:**

- An F003 listed hazardous waste is a spent solvent that contained before use:
  - → Only the F003 constituents xylene, acetone, ethyl acetate, ethyl benzene, ethyl ether, methyl isobutyl ketone, n-butyl alcohol, cyclohexanone, and methanol; or
  - → Any amount of F003 constituents and 10% or more of one or more F001, F002, F004, or F005 constituents.

A table of examples of F003 listed waste variations 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: 6/11/15 FILE: c:\...\2MT\2015\061115.rtf PG: 1

# TWO MINUTE TRAINING - ATTACHMENT

**SUBJECT:** F003 Listed Hazardous Waste and the 10% Rule

Exampl e	WASTE SOLVENT CONSTITUENTS AND % "BEFORE USE"	POTENTIAL WASTE CODE LISTING or CHARACTERISTIC	F003 %	F001, F002, F004, F005 % TOTALS	Designated F Codes
1	100% XYLENE	F003	100%	0%	F003
2	25% ACETONE 75% XYLENE	F003 F003	100%	0%	F003
3	25% ACETONE 25% METHANOL 50% XYLENE	F003 F003 F003	100%	0%	F003
4	10% XYLENE 90% MINERAL SPIRITS	F003 D001	10%	0%	N/A*
5	4% ACETONE 5% TETRACHLOROETHYLENE (DEGREASER) 91% MINERAL SPIRITS	F003 F001 D001	4%	5%	N/A*
6	1% ACETONE 11% METHYLENE CHLORIDE 88% NAPHTHALENE	F003 F002 D001	1%	11%	F002 F003
7	1% CARBON TETRACHLORIDE (DEGREASER) 1% CRESOLS 1% CARBON DISULFIDE 8% XYLENE 89% DIESEL	F001 F004 F005 F003 D001	8%	3%	N/A*
8	10% DIESEL 90% BENZENE	D001 F005	0%	90%	F005
9	40% METHYLENE CHLORIDE 9% CRESYLIC ACID 51% TOLUENE	F002 F004 F005	0%	100%	F002 F004 F005
10	1% CARBON TETRACHLORIDE (DEGREASER) 1% CRESOLS 7% CARBON DISULFIDE 91% DIESEL	F001 F004 F005 D001	0%	9%	N/A*

<sup>\*</sup> Characteristic codes may apply but will not be identified in this table.

CONSTITUENT PERCENTAGES		Applicable F Code(s)	
F003%	F001, F002, F004, F005%		
100%	0%	F003	
> 90%	< 10%	Not Applicable	
$> 0\%$ and $\leq 90\%$	≥ 10%	F003 and other applicable F001, F003, F004 and/or F005	

**FROM:** Paul W. Martin **DATE:** 6/11/15 **FILE:** c:\...\2MT\2015\061115.rtf **PG:** 2