

<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
1196. Hazardous Waste Determinations and Phase Separation		OCT 6, 2016
1197. Asbestos and DOT Relief	ENCORE	OCT 13, 2016
1198. PCB Containers and Concentration of PCBs	ENCORE	OCT 20, 2016
1199. PCB Analytical Waste Disposal Requirements	ENCORE	OCT 27, 2016
1200. PCB Analytical Waste Disposal Requirements – Water vs. Organic Liquids and Non-aqueous Inorganic Liquids		NOV 3, 2016
1201. Listed Waste Codes and Pre-RCRA Wastes	ENCORE	NOV 10, 2016
1202. Purpose of the <90-day Hazardous Waste Accumulation Exemption		NOV 17, 2016
1203. Used Oil Eligibility for Turkey and Ham Oils	ENCORE	NOV 23, 2016
1204. PCB Reporting and Recordkeeping Relief	ENCORE	DEC 1, 2016
1205. Defining Criteria for Household Waste Exclusion	ENCORE	DEC 8, 2016
1206. The Household Waste Exclusion and Renovation Debris	ENCORE	DEC 15, 2016
1207. 'Twas the Night before Christmas – The Twenty-Fourth Annual Edition		DEC 24, 2016
1208. The Household Waste Exclusion and Renovation Debris – Part II	ENCORE	DEC 29, 2016
1209. Absorbent Additions and Treatment		JAN 5, 2017
1210. Frozen RCRA Wastewater - DOT Liquid or Solid When Manifested?	ENCORE	JAN 12, 2017

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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: FROZEN RCRA WASTEWATER - DOT LIQUID OR SOLID WHEN MANIFESTED?

DATE: JANUARY 12, 2017

<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 Rene Catlow Richard Clinton Larry Cole John Dent Brian Dixon Eric Erpenbeck Stuart Hildreth Mike Jennings Stephanie Johansen Jeanne Kisielnicki Melvin Lakes Jim McGrogan Stuart Mortensen Dean Nester Dave Richards Phil Sheely Connie Simiele Jennie Stults Jeff Westcott Jeff Widney	Ron Brunke Bill Cox Laura Cusack Lorna Dittmer Ted Hopkins Sasa Kosjerina Jim Leary Rick Oldham Anthony Nagel Linda Petersen Fred Ruck Ray Swenson Wayne Toebe Daniel Turlington Dave Watson Joel Williams	Brett Barnes Jerry Cammann Jeff Ehlis Garin Erickson Panfilo Gonzales Jr. Dashia Huff Mark Kamberg Edwin Lamm Candice Marple Jon McKibben Saul Martinez Jon Perry Christina Robison Lana Strickling Lou Upton	(TBD) <u>DOE RL, ORP, WIPP</u> Mary Beth Burandt Duane Carter Cliff Clark 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 Marty 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: Frozen RCRA Wastewater - DOT Liquid or Solid When Manifested?

Q: Since it is mid-January and below freezing, how about a nice cold 2MT?

OK!

A customer in [Humptulips, Washington](#), has a RCRA wastewater consisting of mostly water with hazardous waste contamination. The wastewater has been prepared for shipment off-site for disposal. Upon arrival at the customer's shipping facility, shippers discover that the wastewater - which was to be manifested with the proper shipping name "Hazardous Waste, Liquid, N.O.S." - is frozen solid. Which DOT descriptor, liquid or solid, must be in the DOT proper shipping name for this frozen hazardous waste?

A: Per [49 CFR 171.8](#) the DOT definition of "liquid" basically means a material with a melting point of 68°F or lower at standard pressure, i.e., standard room temperature and pressure. The DOT definition of "solid" means a material that is not a liquid or gas.

Since the customer's wastewater is predominantly water with a melting point less than 68°F, (the melting point of water ice is 32°F), the wastewater would meet the definition of a DOT liquid. Therefore the DOT proper shipping name would require the word "liquid" as opposed to "solid".

In other words, a DOT hazardous material's physical state is not defined by the temperature and pressure at the time of shipment but rather by the physical state the hazardous material would have at room temperature (68°F) and standard pressure (14.7 lbs/in²).

SUMMARY:

- A DOT liquid is a material with a melting point less than or equal to 68°F at standard pressure.
- A DOT solid is not a liquid or gas.
- In terms of a DOT proper shipping name, liquid or solid is determined by the material's physical state at basically room temperature and normal pressure.

The complete DOT definitions of liquid and solid 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.

49 CFR 171.8

Definitions and abbreviations

Liquid means a material, other than an elevated temperature material, with a melting point or initial melting point of 20 °C (68 °F) or lower at a standard pressure of 101.3 kPa (14.7 psia). A viscous material for which a specific melting point cannot be determined must be subjected to the procedures specified in ASTM D 4359 "Standard Test Method for Determining Whether a Material is Liquid or Solid" (IBR, see §171.7).

Solid means a material which is not a gas or a liquid.

FROM: Paul W. Martin

DATE: 1/12/17

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