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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: THE ALCOHOL EXCLUSION FOR IGNITABLE HAZARDOUS WASTES

DATE: *MAY 28, 2020*

CHPRC Projects	CH PRC - Env.	MSA	<u>Hanford</u>	Other Hanford	Other Hanford
	Protection		Laboratories	Contractors	Contractors
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TWO MINUTE TRAINING

SUBJECT: The Alcohol Exclusion for Ignitable Hazardous Wastes

- Q: Due to COVID-19, a customer has been telecommuting from home for over 10 weeks. As a distraction, the customer decides to have some wine and change the décor in their living room with a gallon of latex paint. As the paint dried and the wine bottled emptied, the customer pondered if a latex paint, or the seventy-two bottles of wine in the basement, would designate as a D001 ignitable hazardous waste due to alcohol content. The customer is, was, or will be... aware of some type of alcohol exclusion in the regulations. However, having now started on bottle number two, the customer is pondering again the original intent of the alcohol exclusion for D001 ignitable hazardous waste as found at <u>WAC 173-303-090</u>(5)(a)(i) and at <u>40 CFR 261.21</u>(a)(1), and to what wastestreams does it apply?
- A: Per the May 19, 1980, Federal Register (<u>FR-1980-05-19</u>) on page 33108:

"A number of commenters argued that the 140 degree flashpoint for liquids improperly included any liquid wastes such as wine and some latex paints which exhibit low flashpoints because of their alcohol content but do not sustain combustion because of the high percentage of water present.

EPA agrees that such wastes should not be designated as hazardous, but unfortunately has no data on hand which identifies the correlation between the concentration of alcohol in such wastes and the established flashpoint of 140 degrees Fahrenheit. Accordingly, it has for the time opted to follow the Department of Transportation's lead and exclude from its ignitable liquids category aqueous solutions containing less than 24 percent of alcohol by volume. This exclusion will remove from the ignitability characteristic liquid wastes which the Agency knows may flash but not sustain combustion."

Therefore, the original intent of the alcohol exclusion was to exclude alcoholic beverages and some latex paints that might flash but not sustain combustion. The key parameters of the exclusion are that the materials be aqueous solutions (i.e. >50% water) and contain less than 24 percent alcohol.

Later EPA clarified in the June 1, 1990, Federal Register (<u>FR-1990-06-01</u>) on page 22543 that the term alcohol referred to "any alcohol or combination of alcohols". Therefore, the exclusion is not limited to alcoholic beverages and can include any alcohol wastestreams. The customer needs to be aware that if an alcohol is used for its solvent properties and is one of the alcohols listed in F003 or F005, then those alcohol wastes must be coded as F003 or F005 as appropriate. The D001 alcohol exclusion does not negate the applicability of other characteristic or listed waste codes; or in Washington State, the applicability of state dangerous waste codes.

SUMMARY:

- The original intent of the alcohol exclusion was to exclude alcoholic beverages and some latex paints, which might flash but not sustain combustion.
- Key parameters are that the materials contain greater than 50% water and less than 24% alcohol.
- The D001 alcohol exclusion is not limited to alcoholic beverages and can include any alcohols.

A RCRA Hotline Monthly Report Question dated July 1992 (<u>RO 13548</u>) and excerpts from 40 CFR 261.21 and WAC 173-303-090 are attached to the e-mail. If you have any questions, contact me at <u>Paul W_Martin@rl.gov</u> or at (509) 376-6620.

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TWO MINUTE TRAINING – ATTACHMENT

SUBJECT: The Alcohol Exclusion for Ignitable Hazardous Wastes

9443.1992(03)

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RCRA/Superfund/OUST Hotline Monthly Report Question

July 1992

3. Alcohol-Content Exclusion for the Ignitability Characteristic

A generator produces a wastestream with a flash point of 54 degrees Celsius that contains the following three components: water (77 percent), alcohol (13 percent), and a non-alcoholic liquid component (10 percent). According to the "alcohol exclusion" in 40 CFR §261.21(a)(1), the characteristic of ignitability will not apply to an aqueous solution that contains less than 24 percent alcohol and which has a flash point less than 60 degrees Celsius. Does the presence of a non-alcoholic component cause the aqueous solution to be regulated as an ignitable waste (D001)?

No, the additional non-alcoholic liquid component will not cause the wastestream to be regulated as a D001 waste. Despite the presence of the nonalcoholic liquid component, the wastestream continues to qualify for the alcohol exclusion in 40 CFR §261.21(a)(1). According to the May 19, 1980, Federal Register (45 FR 33108), EPA originally intended for the alcohol exclusion to exempt alcoholic beverages and some types of latex paints, which exhibit low flash points due to the alcohol content, but do not sustain combustion because of the high water content. The alcohol exclusion in 40 CFR §261.21(a)(1), however, is not limited to those wastes mentioned in the May 19, 1980, Federal Register. It applies to all aqueous solutions containing less than 24 percent alcohol, even if additional non-alcoholic components are present. EPA clarified in the June 1, 1990, Federal Register (55 FR 22543) that the term "alcohol" in §261.21(a)(1) refers to any alcohol or combination of alcohols. The Agency notes, however, that if the alcohol is one of those alcohols specified in EPA hazardous waste codes F001-F005 and has been used for its solvent properties, the waste must be evaluated to determine if it should be classified as an F listed spent solvent waste.

The alcohol exclusion for the ignitability characteristic was adopted from the Department of Transportation's (DOT) definition of "combustible liquids" in 49 CFR §173.115(b). The alcohol exclusion in 49 CFR §173.115(b)(2)(ii) applies to aqueous solutions containing 24 percent or less alcohol by volume which contain no less than 50 percent water. Since EPA originally intended to be consistent with DOT regulations when promulgating the alcohol exclusion in §261.21(a)(1), the 50 percent water stipulation may be applied to the ignitability characteristic. Therefore, as clarified in an internal EPA memorandum, for the purpose of the ignitability characteristic in §261.21(a)(1), "aqueous" means a solution continuing at least 50 percent water by weight.

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TWO MINUTE TRAINING – ATTACHMENT

SUBJECT: The Alcohol Exclusion for Ignitable Hazardous Wastes

40 CFR §261.21 Characteristic of ignitability

(a) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

(1) It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume and has flash point less than 60 °C (140 °F), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D 93-79 or D 93-80 (incorporated by reference, see §260.11), or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D 3278-78 (incorporated by reference, see §260.11).

WAC 173-303-090 Dangerous waste characteristics.

(5) Characteristic of ignitability.

(a) A solid waste exhibits the characteristic of ignitability if a representative sample of the waste has any of the following properties:

(i) It is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, and has a flash point less than 60 degrees C (140 degrees F), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in ASTM Standard D93-06, or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D3278-96 (2004)e1 as incorporated by reference at WAC 173-303-110 (3)(h)(v) and (vi);

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