U.S. Department
of Transportation

Pipeline and Hazardous Materials Safety Administration

1200 New Jersey Avenue, SE
Washington, D.C. 20590

SEP 1 3 2012

Mr. Ed Vinson
Director of Technology
Chemplex Advance Materials, LLC
P.O. Box 1071
506 CR 137
Snyder, TX 79550

Ref. No.: 12-0197

Dear Mr. Vinson:

This responds to your August 27, 2012 letter requesting clarification of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you seek clarification of the definition of a hazardous substance in § 171.8. You provide an example of a liquid mixture, containing 4 percent (40,000 ppm) concentration by weight of copper chloride, with one gallon of the mixture containing 0.36 pound of copper chloride. You offer two scenarios, one with the mixture shipped in 5-gallon pails and one with the mixture shipped in 55-gallon drums.

Under § 171.8, a hazardous substance (other than radionuclides) is defined as a material, including its mixtures and solutions, that: (1) is listed in the Appendix A to § 172.101 of the HMR; (2) is in a quantity, in one package, which equals or exceeds its RQ listed in the Appendix A to § 172.101 of the HMR; and (3) when in a mixture or solution, is in a concentration by weight which equals or exceeds the concentration corresponding to the RQ of the material, as shown in the table in § 171.8. A material must meet all of these requirements in order to be a hazardous substance. For example, if a material contained in a mixture or solution meets or exceeds the RQ, but the concentration by weight is less than the percentage specified, then it is not a hazardous substance. Likewise, if a material is contained in a mixture at a concentration by weight equal to or greater than the percentage specified, but does not meet or exceed the RQ in a single package (or in a transport vehicle, if not packaged), then it is not a hazardous substance.

Copper chloride has a reportable quantity (RQ) of 10 pounds. To meet the definition of a hazardous substance, the quantity of copper chloride in each package must equal or exceed 10 pounds, and the concentration by weight must be equal to or greater than 0.02 percent (200 ppm). Therefore, when packaged in 5-gallon pails, the copper chloride mixture does not meet the definition of a hazardous substance as the weight of the copper chloride in each pail is 1.8 pounds, even though the percent (4 percent) and concentration (40,000 ppm) exceed the 0.02% (200 ppm) shown in § 171.8. However, when the mixture is shipped in 55-gallon drums it would

be considered a hazardous substance, as the weight of the copper chloride in each drum would be 19.8 pounds, which exceeds the 10-pound RQ.

I hope this information is helpful. If you have further questions, please do not hesitate to contact this office.

Sincerely,

Robert Benedict
Chief, Standards Development
Standards and Rulemaking Division

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Winter
§171.8
§172.203(c)
Hazardous Substances
12-0197

27 August 2012

Mr. Charles E. Betts
Director, Standards and Rulemaking Division
US DOT/PHMSA (PHH-10)
1200 New Jersey Ave. SE
East Building 2nd Floor
Washington, DC 20590

Dear Mr. Betts:

I am writing to attempt to resolve which is correct of two conflicting things I have been told about the calculation of RQ (reportable quantity) values for mixtures containing Hazardous Substances as defined in 49 CFR 171.8. Our company ships several products that are subject to the requirements of 172.203(c), and we very much would like to be using the correct method to comply fully with the rules.

If I may, I will give an example that closely resembles one product that we produce and ship. For the purpose of this example, we will say that the product is a liquid with a density of 9.0 pounds per gallon, and that it contains 4.0% by weight copper chloride, RQ = 10 lb. Under the CERCLA "mixture rule," as I understand it, I would be required to report spills of this material of sufficient volume to contain 10 pounds of copper chloride. I calculate this quantity to be 27.8 gallons of product, as one gallon would contain 0.36 pound of copper chloride.

That calculation would imply that if I ship several five-gallon pails of the product, I need not have "RQ" on the shipping paper, but that I must enter "RQ" if I ship a 55-gallon drum.

The alternate calculation, explained to one of our employees by a state environmental official, seems to be based on the idea that a little hazardous substance poisons the whole barrel. The 4% copper chloride in our product obviously exceeds the 0.02% noted in the table within the definition of "hazardous substance" in 171.8. Our understanding from this gentleman is that the RQ for our product is then 10 pounds, or 1.11 gallons, of product. This would require us to enter "RQ" even for a 2-gallon container.

Could you clarify which is correct? The language defining "hazardous substance" in 171.8 is just vague enough that I don't trust my own judgment in deciding. Your assistance would be greatly appreciated.

Regards,

Ed Vinson
Director of Technology