U.S. Department
of Transportation
**Research and
Special Programs
Administration**

400 Seventh St., S.W.
Washington, D.C. 20590

AUG 30 2001

Mr. David Bunzow, CET; CHMM; REM
SCP Operations Risk Manager
SCP Global Technologies
255 Steelhead Way
Boise, ID 83704

Ref. No. 01-0151

Dear Mr. Bunzow:

This responds to your June 11, 2001 letter requesting clarification of the classification of materials under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). Specifically, you ask for assistance in determining the proper shipping name for machinery containing residual hazardous materials, and classing machinery containing hazardous materials embedded in the material of construction. Your questions are paraphrased and answered as follows:

Q1. Would a proper shipping name for machinery or equipment components that contain residual hazardous materials be either "Dangerous Goods in Machinery" or Dangerous Goods in Apparatus"? And if so, how should these materials be labeled?

A1. The proper shipping names "Dangerous Goods in Machinery" or "Dangerous Goods in Apparatus" may be used for components of equipment or machinery that contain hazardous materials as an integral element. They may not be used to describe machinery or an apparatus for which a proper shipping name exists in the § 172.101 Table. Further, you may only use the proper shipping names "Dangerous Goods in Machinery" or "Dangerous Goods in Apparatus" for machinery or apparatus that contain hazardous materials for which exceptions are referenced in Column 8 of the § 172.101 Table and are provided in Part 173, Subpart D, of the HMR.

"Dangerous Goods in Machinery" or "Dangerous Goods in Apparatus" are excepted from the labeling requirements unless offered for transportation or transported by aircraft. For transportation by aircraft, the machinery or apparatus must be labeled with a Class 9 label For transportation by aircraft, machinery or apparatus may not contain any material forbidden for transportation by passenger aircraft.

Q2. For shipments by air, the International Civil Aviation Organization's Technical Instructions (ICAO TI) special provision A107 specifically mentions hazardous materials contained in machinery or apparatus as "residues." Section 172.102 special provision 136 does not mention "residues." Does this mean that "Dangerous Goods in Machinery" or "Dangerous Goods in Apparatus" are not adequate shipping names for US ground shipment? Can you explain why SP136 does not include a reference to residues?

A2. The proper shipping names "Dangerous Goods in Machinery" and "Dangerous Goods in Apparatus" are appropriate shipping names for components of machinery or equipment that contain residual hazardous materials. The change to SP A107 was initiated too late to be incorporated into the latest version of the HMR, and will be incorporated in a future rulemaking.

Q3. Is it appropriate to use "Residue last contained" as part of the proper shipping name for a piece of equipment that contains residual hazardous materials in areas that are inaccessible to removal?

A3. No. The statement "Residue last contained" is not required as part of the proper shipping name for materials properly described as either "Dangerous Goods in Machinery" or "Dangerous Goods in Apparatus". However, the phrase "Residue last contained" could be added following the basic description.

Q4. Would a component still be subject to the HMR if all surface chemicals can be removed, but the materials of construction remained embedded with regulated hazardous materials?

A4. The component would be subject to the HMR if the material continues to meet the definition of a hazardous material.

I hope this satisfies your request.

Sincerely,

Diane Lakelle

for John A. Gale
Transportation Regulations Specialist
Office of Hazardous Materials Standards

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LaValle ~~Nelson~~
§172.101
Proper Shipping Names
01-0151

June 11, 2001

Mr. Edward T. Mazzullo
Director, Office of Hazardous Materials Standards
U.S. DOT/RSPA (DHM-10)
400 7th Street S.W.
Washington, D.C. 20590-0001

Dear Mr. Mazzullo:

SCP Global Technologies would like to obtain a written interpretation of regulatory text found at 49 CFR 171-180 and its applicability to specific situations. We have searched the DOT letters of interpretation regarding the circumstances described in detail below, and find there is nothing directly addressing our issues. We are interested in ensuring that all potential receptors involved in the shipping process have been properly notified and all risks properly identified through appropriate identification and labeling.

Specifically, SCP Global Technologies manufactures several types of chemical process equipment that are constructed using various polymer plastics and metals configured to use and contain hazardous materials. As a part of the services SCP offers its customers, various components of the equipment can be replaced or repaired when they no longer function properly and then returned to normal service, depending on the extent of damage or degradation and financial considerations. Our customers ship the components back to SCP for these repairs after performing some degree of chemical decontamination prior to shipment.

Some chemicals used in our customers' processes include sulfuric acid, hydrogen peroxide, hydrochloric acid, hydrofluoric acid, ammonium hydroxide, and ethylene glycol. Use of these and other hazardous materials typically presents one or both of two situations:

1/ Once the hazardous chemicals have come into contact with the materials of construction in the components, the chemicals can become embedded in their structure of the component materials themselves and cannot be completely removed. These chemicals are known and have been demonstrated to leach out from materials of construction over time (from hours to days to weeks or months, depending on factors such as temperature and humidity).
2/ Some components areas cannot be accessed by the decontamination process due to limitations imposed by design and construction. This allows the possibility of residual hazardous materials being present in the component that can migrate over time to regions of the component that have previously been decontaminated.

For these reasons, we have some degree of uncertainty regarding the proper classification of these items from a hazardous materials identification and transportation perspective, both when they are shipped to us, as well as when we ship them back to our customers. SCP wants to ensure that we have taken all reasonable steps to meet the intent and purpose of the hazardous materials regulations.

In this regard, SCP has several questions on which we would like your interpretations and response:

1] For those components that contain residuals of regulated hazardous materials in inaccessible areas, can our customers rely on the proper shipping names "Dangerous Goods in Machinery" or "Dangerous Goods in Apparatus", along with labeling identification of the appropriate hazard classification found in DOT definitions? We believe these shipping names can be used for these components when shipping via air using IATA/ICAO, since ICAO special provision A107 specifically indicates applicability to "residues". However, shipments are also transported by ground, and the equivalent DOT special provision 136 does not cite applicability to residues. If "Dangerous Goods in Apparatus" is not appropriate for U.S. ground shipments of this type, could DOT explain why SP136 does not include similar applicability to residues?

2] Under 49 CFR 171.8 (Definitions), "Package" means the packaging plus its contents, and "Packaging" means a receptacle and any other components or materials necessary for the receptacle to perform its containment function. Would it be appropriate to use "Residue Last Contained" for a piece of process equipment that is not designed to transport hazardous materials, but which contains residual hazardous material in an area inaccessible for decontamination? For example, a chemical pump that has been used to move hazardous materials in the equipment could still contain residual hazardous materials.

3] Assuming that either "Dangerous Goods in Apparatus/Machinery" or "Residue Last Contained" can be considered as a proper shipping name, does it make a difference which is utilized, as long as the shipping name accurately describes the conditions and situation under which it is being transported?

4] Would the component still be regulated in transportation if all surface chemicals could be removed, but the materials of construction still contained imbedded regulated hazardous materials? In other words, if regulated hazardous materials are imbedded in materials of construction of a component or apparatus, would the hazardous material be considered an "integral element of the apparatus"? If not, could DOT provide some examples of what they intended to be considered "integral to the apparatus" to help clarify this point?

SCP Global Technologies thanks you for your prompt consideration of and response to these inquiries. If you need more information to make a full and complete response, please do not hesitate to contact me as indicated below.

Sincerely,

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