



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

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

MAR 26 2002

Mr. Stephen A. Browne
Corporate Radiation Safety Officer
Troxler Electronic Laboratories, Inc.
Box 12057
Research Triangle Park, NC 27709

Ref. No. 02-0058

Dear Mr. Browne:


This is in response to your November 13, 2001 letter concerning radioactive packaging requirements under the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). We apologize for the delay in responding to your letter due to mail delivery problems many Federal agencies have been experiencing because of screening and decontamination precautions.

Specifically, you request clarification on whether cracks which penetrate the full depth of the wall (either inner or outer) of a shipping case designed to transport scientific gauges containing special form radioactive material would be in violation of the regulations. You cite § 173.475(b) which states that packaging required to transport these gauges must be "...in unimpaired physical condition, except for superficial marks." You state that these cracks do not meet the requirements in this section.

Your opinion is correct. The cracks in the shipping case described in your letter compromise the physical integrity of the packaging, increasing the chance that the packaging could fail during incidents normal to transportation. Scratches and scuffs are examples of surface marks that would not compromise the physical integrity of the packaging and would be considered "superficial marks."

I hope this satisfies your request.

Sincerely,


Delmer F. Billings
Chief, Standards Development
Office of Hazardous Materials Standards



020058

173.475(b)



Johnsen
§173.475(b)
RAM
02-0058

November 13, 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:

I am writing to request clarification on the quality control requirements in 49 CFR 173.475(b) for packages containing radioactive material. Troxler manufactures and repairs portable moisture-density gauges containing special form radioactive material. The gauges are shipped in reusable shipping cases that meet Type A package requirements. The shipping cases are injection-molded plastic, double-walled construction with an air void between the inner and outer walls (see enclosure 1 for photo of a typical shipping case and gauge).

Customers periodically ship gauges to Troxler for calibration and repair. Before returning a gauge to a customer, the shipping case is inspected in accordance with §173.475. Over time, some shipping cases (5-10%) develop cracks in the inner wall where the weight of the equipment rests most heavily (see enclosure 2 for photo of a typical crack). Troxler considers a shipping case with any cracks to be defective, regardless of whether the crack is on the inner or outer wall, since the body of the case is a single, molded piece. In these situations, we advise the customer that the shipping case must be replaced before we can return their gauge.

Some customers have challenged the need to replace the shipping case, arguing that the package is unimpaired because, based on experience, the cracks do not affect the containment of the radioactive material during shipping.

We agree that loss of radioactive material containment is unlikely, however, according to 173.475(b), the package must be in unimpaired physical condition, except for superficial marks. Our interpretation is that cracks which penetrate the full depth of the wall (either inner or outer) are more than superficial marks, thus the package does not meet the standard.

We want to comply with DOT requirements, but we do not want to force customers to purchase new shipping cases unnecessarily. Therefore, we would like clarification on whether our interpretation of the quality control inspection criteria in §173.475(b) is correct or not in this situation.

Sincerely,

Stephen A. Browne
Corporate Radiation Safety Officer

Enclosures (2)

Troxler Electronic Laboratories, Inc

Box 12057 ♦ 3008 Cornwallis Road ♦ Research Triangle Park, North Carolina 27709
Tel: (919) 549-8661 ♦ Fax: (919) 485-2250 ♦ e-mail: troxrso@troxlerlabs.com