

DEC 12 1989

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Mr. Alan I. Roberts, Director
Office of Hazardous Materials
Transportation
U.S. Department of Transportation
400 Seventh Street, S.W.
Washington, D.C. 20590

Dear Mr. Roberts:

I am responding to the letter dated September 26, 1989 from the Radioactive Materials Branch of your office requesting comments on the International Atomic Energy Agency's (IAEA) regulatory provisions for the safe transportation of large quantities of radioactive materials by air.

As a general comment, we support the view that the proposed mode-related regulatory provisions should apply to all radioactive materials. As you know, a proposed rule published on June 8, 1988 would codify the qualification criteria for plutonium air transport packaging (contained in NUREG-0360) in 10 CFR Part 71. In this regard, it should be understood by the IAEA and others that requirements similar to those in NUREG-0360 apply to air shipments of plutonium entering the U.S. Our specific comments on the IAEA provisions are enclosed.

We appreciate this opportunity to comment on proposed IAEA regulatory provisions affecting the transportation of radioactive materials. We will be pleased to work toward presenting a clear picture of the U.S. regulatory position on these matters to IAEA.



Robert F. Burnett, Director
Division of Safeguards
and Transportation, NMSS

Enclosure:
As stated

cc: Mr. Michael E. Wangler
Department of Transportation

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*See previous concurrence.

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NRC Comments on IAEA Transportation Regulatory Provisions

Encl to ltr dtd: DEC 12 1989

Concerning the items identified by IAEA on which consensus does not exist, our comments are as follows:

- a) the need for and design of a fireball test;

We can not identify a technical justification for this test. The sustained fire test already required has been shown in rail mode studies to provide a greater heat load to the package than would a fireball test.

- b) the need for and design of a puncture and tearing test and its position in the test sequence;

Puncture and tearing can occur in aircraft crashes. Specific tests would be helpful. The tests would precede the burn phase.

- c) the need for and design of a crush test;

Crush forces are a factor in aircraft crashes and need to be considered. However, the design for an appropriate test is difficult due to variations in aircraft and nature of other cargo. An administrative control that requires no heavy cargo be placed behind the package or a dynamic impact and crush test should be developed.

- d) the need for and design of a burial test;

With the advent of higher package payloads and resulting heat loads, a burial test may need to be considered.

Our comments with regard to the items for consideration at the Advisory Group Meeting scheduled for 1990:

- a) defining allowable external radiation levels after tests;

We could support use of criteria that are acceptable for Type A packages.

- b) including an impact test at package terminal velocity in place of the 85 m/s test;

We would not object to an impact test at terminal velocity on a hard surface. However, the test would only be required as an individual test when the terminal velocity of the package is greater than the required impact test. The issue of use of drag enhancement devices to reduce terminal velocity should be considered.

- c) including the immersion test currently used for water-borne shipments and whether an immersion test should follow the impact test at 85 m/s;

Use of an immersion test is appropriate. This should be an individual test. We do not believe this test should follow the impact test since impact with a hard surface is unlikely to be followed by deep immersion.

- d) reviewing the proposals concerning criticality safety as detailed in the Chairman's Report of the Seventh Meeting of SAGSTRAM;

We do not believe the proposals warrant further consideration. Established criticality controls are acceptable.

- e) whether there is a reason to incorporate a "non-dispersible" form definition in the the Regulations or whether this feature can be handled within the measurement verification of the release limit for the A_2 /week;

A "non-dispersible" form alternative definition and test might be useful. The definition and test conditions should be similar to the test conditions required for the package.

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