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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JUN 20 1979

MEMORANDUM FOR: Commissioner Bradford
THRU: Lee V. Gossick (Signed) T. A. Behm
Executive Director for Operations
FROM: Robert B. Minogue, Director
Office of Standards Development
SUBJECT: SECY-79-192 - PROPOSED REVISION OF 10 CFR PART 71 "PACKAGING
OF RADIOACTIVE MATERIAL FOR TRANSPORT AND TRANSPORTATION OF
RADIOACTIVE MATERIAL UNDER CERTAIN CONDITIONS"

This is in response to your comments on the subject paper forwarded on May 14, 1979 to the Secretary of the Commission.

Your first comment was "I would delete the general license for materials in DOT approved containers because I do not think DOT has a meaningful licensing program". You are correct that current DOT package reviews are limited to a brief examination of package designs already approved by another regulatory agency. As such, the DOT review by itself would not be sufficient to support the general licenses in 10 CFR 71.12. The NRC general license in Section 71.12(a), however, authorizes only the use of DOT specification containers which, under the terms of our Memorandum of Understanding with DOT, must receive NRC approval before publication in DOT regulations. The NRC general license in Section 71.12(c) authorizes only the use of packages which have been approved by a foreign national competent authority prior to its DOT review. The general license limits its authority in this case to import and export shipments. In each of these cases, since the primary safety review is completed by a separate regulatory body, with the DOT function primarily that of administration, we believe the NRC general licenses in 10 CFR 71.12 are justified.

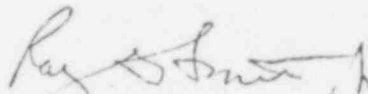
Your second comment was "Any individuals occupying areas (p. 74, 71.54. 6.2 iv) where radiation exceeds 2mrem/hr should be trained in accordance with 10 CFR 19.12". As with our own regulations in 10 CFR Part 20, the basic goal for limits on radiation levels produced from transportation are intended to prevent members of the general public from receiving radiation exposures in excess of 500 mrem/yr. In the cited reference, the 2 mrem/hr limit is applied for those cases of sole-use vehicle transport where the radiologically-competent shipper is in a position to control the conditions of shipment, including radiation levels. In nonsole-use vehicle transport, the truck crew is normally not expected to be associated with radioactive material shipments for large fractions of their working hours, so that regulatory separation distances and the shielding effects of other cargo are expected to provide adequate protection. In nonsole-use vehicle transport, there is normally no radiologically trained person available to measure radiation levels when trucks are loaded. We have worked on the premise that our goal

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is to provide reasonable assurance that transport worker whole body exposure is in most cases held below 500 mrem/yr, with further reductions as possible under the ALARA principle, and that the 2 mrem/hr secondary limit need not be applied to all aspects of transportation.

Surveys of radiation exposures to persons in the transportation system over the past few years have confirmed that exposures to passengers, attendants, and crew in passenger aircraft are low, and exposures to cargo handlers in airports are also low. A few instances have been found where exposures to handlers and drivers in road carriage would exceed 500 mrem/yr where large numbers of radiopharmaceutical packages are funneled through one carrier location. Where these instances resulted from noncompliance they have been corrected. In other cases a competent health physicist was already employed to control exposures and instruct personnel. To counter those situations where exposures to transport workers exceed general public guidelines even when DOT rules are followed, we are working with DOT staff to devise a system for better identification and control.

Since a large fraction of packages in normal transportation create radiation levels in excess of 2 mrem/hr, it would not be practical to radiologically train the large number of people who might enter such a radiation field for a short period of time. Our surveys provide reasonable assurance that radiation doses in such cases are very small because of the short times involved. We have in the past years studied the impacts of reducing package radiation levels in transportation and made recommendations for reductions where justified. Because of practical considerations in transportation, however, increased package shielding to reduce external radiation levels has an indirect financial impact on a large segment of the population who undergo radiological diagnosis and treatments. Consideration of this and other factors will be included in our efforts to apply ALARA to transportation standards, an effort scheduled to begin in FY 1981.



Robert B. Minogue, Director
Office of Standards Development

cc:
Chairman Hendrie
Commissioner Gilinsky
Commissioner Kennedy
Commissioner Ahearne