

January 6, 2000

MEMORANDUM TO: Donald A. Cool, Director
 Division of Industrial and
 Medical Nuclear Safety, NMSS

FROM: E. William Brach, Director ORIGINAL SIGNED BY /s/
 Spent Fuel Project Office, NMSS

SUBJECT: STANDARD N13.49 BALLOT, "PERFORMANCE AND
 DOCUMENTATION OF RADIOLOGICAL SURVEYS"

Thank you for the opportunity to review the proposed standard N13.49, "Performance and Documentation of Radiological Survey." Spent Fuel Project Office (SFPO) staff reviewed the document, and request a revision of Section 3.1.4, "Radioactive Materials Transportation and Packages Surveys." The current revision of this standard provides only a cursory discussion of non-exclusive use transportation limits, with no mention of exclusive use transportation limits. Additionally, the Department of Transportation regulatory reference used in the section is outdated. The SFPO is providing a complete list of survey requirements for both the shipper and receiver (see attachment). We recommend that the N13.49 committee revise Section 3.1.4, using the information provided.

If you have any questions regarding this recommendation, please contact Julia Myers of my staff at (301) 415-8512.

Attachment: Suggested Revision to Proposed Standard N13.49, "Performance and Documentation of Radiological Surveys"

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Suggested Revision to Proposed Standard N13.49, "Performance and Documentation of Radiological Surveys"

3.1.4 Radioactive Materials Transportation and Packages Surveys

It is the responsibility of both the radiation package shipper and receiver to maintain regulatory requirements by performing radiation level surveys.

3.1.4.1 SHIPPER Requirements

External Radiation Limits - for transportation packages are found in DOT regulations, 49 CFR 173.441, and also in NRC regulations, 10 CFR 71.47:

Normal conditions of transport - non-exclusive use:

Package Surface	200 mrem/hr
1 Meter from the Package	10 mrem/hr

Normal conditions of transport - exclusive use:

Package Surface	1000 mrem/hr (package must be secured inside a closed vehicle, no loading or unloading during shipment)
Vehicle Outer Surface	200 mrem/hr
2 Meters from Vehicle Outer Surface	10 mrem/hr
Normally Occupied Positions inside the Vehicle	2 mrem/hr

NRC Information Notice No. 80-32 and 80-32 (Rev.1), "Clarification of Certain Requirements for Exclusive-Use Shipments of Radioactive Materials" may serve as a reference tool. This information notice can be found in the "Reference Library" at www.nrc.gov.

Contamination Limits - limits for transportation packages are found in DOT regulations, 49 CFR 173.443. The level of removable surface radioactive contamination on a package must not exceed the limits set forth in Table 11 of 49 CFR 173.443. Contamination limits for empty

packages are found in 49 CFR 173.428. NRC Information Notice No. 85-46, "Clarification of Several Aspects of Removable Surface Contamination Limits for Transportation Packages" may serve as a reference tool. This information notice can be found in the "Reference Library" at www.nrc.gov.

Detailed carrier requirements for radiation surveys are found as follows:

Rail - 49 CFR 174, Subpart K

Aircraft - 49 CFR 175.700-706

Vessel - 49 CFR 176, Subpart M

Public highway - 49 CFR 177.842, 843, and 861.

3.1.4.2 RECEIVER Requirements

Procedures for receiving and opening packages are found in NRC regulation 10 CFR 20.1906. This section requires that an NRC licensee who receives a radioactive package monitor the package as follows:

- ▶ Any package bearing either of the three categories of RADIOACTIVE labels (except for gaseous or special form radioactive material packages) must be monitored for surface contamination.
- ▶ Any package containing a Type B quantity must be monitored for external radiation levels.
- ▶ Any package exhibiting evidence of degradation of package integrity must be monitored for both surface contamination and external radiation levels.