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September 28, 2000

Secretary  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Attention: Rulemaking and Adjudications Staff

Dear Secretary:

Enclosed are the comments of the New Mexico Environmental Evaluation Group on the Major Revision to 10 CFR Part 71. Compatibility with ST-1- the IAEA Transportation Safety Standards.

We are only commenting on Issue 17. Double Containment of Plutonium. The comments are being sent via NRC's interactive rulemaking website in order to meet the September 30,2000 deadline and followed by mail along with a relevant report (EEG-33) that we are submitting for the record.

Please call Dr. James K. Channell at (505)828-1003 if there are any questions.

Sincerely,

Matthew K. Silva  
Director

MKS:JKC:pf  
Enclosure

cc: Inés Triay, Manager, DOE/CAO

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SECY-02

## Issue 18 Double Containment of Plutonium

The requirement for Double Containment of plutonium in a package containing more than 20 curies of plutonium has bothered some parties for many years. This led to the Petition for Rulemaking in 1997 cited in the Issues Paper. In the 1980s, DOE argued extensively about the unreasonableness of the requirement for transportation of transuranic waste to the Waste Isolation Pilot Plant (WIPP). The main arguments against the requirement are that it: (1) is unnecessarily restrictive and inconsistent with the Q-value system; (2) results in additional costs and a weight penalty; and (3) increases personnel radiation exposures. We have seen no justification for these statements or any indication that detailed analyses had been performed.

EEG was extensively involved in the double containment debate in the 1983-1986 period when we were evaluating the TRUPACT-I (a single-contained, continuously vented package that DOE intended to use for shipment of transuranic wastes to WIPP). DOE argued that a double contained design was unnecessary, more expensive, and since it would have a smaller payload would result in more vehicle shipments and more accident fatalities. In our enclosed report (EEG-33, June 1986) we evaluated the possible benefits and detriments from double containment. We concluded there would be a lower radiation dose to the population along shipping routes during incident-free travel because of a heavier container and somewhat less radionuclide releases from severe, low-probability accidents, (we agree that the expected benefits of double containment are largely subjective but believe our assumptions were reasonable and are convinced there is some benefit). However, we did estimate that 5-10% more shipments might be necessary (DOE estimated 30% more shipments). The claim that double containment might lead to increased personnel exposure was not raised by DOE or evaluated by EEG. We see no reason why it should.

Actual experience with the double contained, non-vented TRUPACT-II design was more favorable than either DOE's or EEG's prediction. A trailer containing three TRUPACT-IIs was cheaper (\$675,000) and carried more 55-gallon drums (42) than a TRUPACT-I trailer (\$760,000 and 36 drums). The empty weight of three TRUPACT-IIs is slightly greater than an empty TRUPACT-I (35,955 pounds vs 34,600 pounds). So, for volume limited shipments the double contained design will carry 16.7% more payload. For weight limited shipments a single contained package would have a 9.6% greater payload. Of the 89 shipments received at WIPP to date, 21% would have been weight limited (to about 35 drums/trailer).

This actual experience with TRUPACT-II at WIPP indicates there is no operational burden (and perhaps a slight benefit) from requiring double containment. Shipments to WIPP over the next several decades will comprise the overwhelming majority of all shipments affected by this rule. Most of the waste coming to WIPP is the type of material for which 71.63(b) was adopted (i.e. it is not fixed and some drums contain respirable material). The existing rule exempts specific waste forms and has provision for the Commission to exempt other waste forms. EEG believes the existing rule has sufficient flexibility and that those wishing to delete it have not identified a specific need or demonstrated that requiring double containment will be a burden.

EEG recommends that Section 71.63 remain unchanged.