



State of Idaho
 DEPARTMENT OF HEALTH AND WELFARE
 INEL Oversight Program • 800/232-INEL

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June 2, 1994

OFFICE OF SECRETARY
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Secretary
 U.S. Nuclear Regulatory Commission
 Attn: Docketing and Service Branch
 Washington, D.C. 20555

The state of Idaho's INEL Oversight Program submits the following comments on the Department of Energy's petition for rulemaking to the Nuclear Regulatory Commission. The Department has requested an exemption from the double container requirement under the transportation regulations for vitrified high-level waste (10 C.F.R. §71.63).

Theoretically, exempting certain high-level materials from the double containment requirement is not, from Idaho's perspective, at cross purposes with the regulations. Protection of human health and the environment during transportation may be accomplished for these wastes through single containers. Idaho is concerned that, while the Department advocates a plausible exemption, the details necessary to demonstrate health and environmental protection is missing.

In support of the exemption, the Department submitted several reports on the fracture properties of glass and ceramics. Each report is designed to illustrate the similarities between spent nuclear fuel and vitrified high-level waste; therefore, establishing the basis for the currently sought exemption. The Commission's initial exemption for spent fuel was based upon the decision to exempt "nonrespirable" forms of plutonium from the double containment requirement. 39 Fed. Reg. 20,960 (1974). The Department reports seek to establish properties of brittleness, impact absorption and fragment production which reproduce the characteristics of spent reactor fuel. The Department concludes in these reports that vitrified waste could react to transportation incidents in the same manner as spent fuel. However, missing from the supporting documentation submitted by the Department were the parameters or performance standards that each high-level waste form must meet in order to be classified as vitrified waste eligible for the exemption.



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Specific criteria for the vitrified waste must be established and subjected to public scrutiny prior to applying the exemption to the broad range of wastes found in the Department of Energy complex. Tests to date focus upon specifications for a range of wastes found at the Savannah River Site. Through characterization efforts, the Department's inventory of high-level waste has been shown to be fairly diverse. Adding complication to this varied inventory is the heterogeneous characteristics of high-level waste forms. The full matrix of high-level waste inventory, which dictate the stability of the vitrified form, has not been explored and subjected to testing. For example, treatment technology for the Idaho National Engineering Laboratory high-level waste will not be selected until June 1, 1995.¹ If generally applicable standards cannot be established at this time, the Department should be seeking individual, *ad hoc* exemptions for those waste streams demonstrated to meet Commission criteria for single containment.² To date, the Department's petition promises to develop the contents of the high-level waste form and the quality assurance procedures for vitrification.³ The definitive specifications for the waste form are not available for review. The conclusion that Idaho has reached, and that Commission staff should reach, is that rulemaking is premature. Instead, the Department, the Commission and other interested parties should continue to develop and discuss in a public forum the appropriate criteria to define the exemption. The Department is, as stated earlier, free to pursue individual exemptions.

The state appreciates the Commission's extension of time to review the technical data provided and submit these comments. In that regard, Idaho requests that the Commission's enhanced

¹R.D. Jones to S.R. Hill, Response to High Level Waste Treatment Technology Letter of Dec. 10, 1993, Jan. 28, 1994.

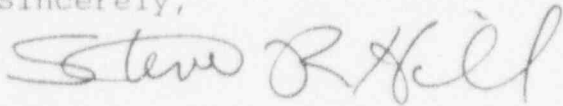
²As stated in the original rulemaking, "The latter category [other plutonium bearing solids that the Commission determines suitable] provides a means for the Commission to evaluate, on a case-by-case basis, requests for exemption of other solid material where the quantity and form of the material permits a determination that double containment is unnecessary." 39 Fed. Reg. 20,960 (1974).

³U.S. DOE, Technical Justification to Support the PRM by DOE to Exempt HLW Canisters from 10 C.F.R. § 71.63(b); Rev. O, p. 15 (Sept. 30, 1993).

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rulemaking procedures, including access to the Internet System, be applied to this petition. Thank you for your consideration of these matters.

Sincerely,

A handwritten signature in cursive script that reads "Steve R. Hill".

STEVE R. HILL
Administrator
INEL Oversight Program
Central Office

SRH/lvh

cc: Craig Halverson, INEL O.P.
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