

**Comments of the
High-Level Radioactive Waste Committee
on the
*Preliminary Draft
Strategy for Development of a Route Selection Guidance
Document for DOE Unclassified HRCQ Shipments
June 7, 1994***

The High-Level Radioactive Waste Committee (Committee) supports the Department of Energy's initiative to develop a strategy for route selection guidance for highway route controlled quantity shipments. This effort is long-overdue in order to meet overall waste disposal program goals and represents a major step forward in building a partnership with state, local and tribal governments for the safe, routine shipment of such material. DOE is also proposing an appropriate step in the creation of a working group focusing on rail routing. Rail is increasingly being viewed as the primary mode of transport for spent nuclear fuel and high-level waste shipments under the Nuclear Waste Policy Act. There are features of rail transportation which are not shared by highway transportation. Thus, it is appropriate to focus more attention on the rail option.

Western Governors have urged the Department to develop and implement a route selection policy.¹ In its work on the development of a transportation program for shipments

¹ In 1993, western governors stated that: "In order to expedite development of a system for accepting commercial spent nuclear fuel and high-level radioactive waste, the federal government must expand its focus beyond siting and develop, in coordination with the states, a logical, timely transportation program. This involves DOE policy commitments to:

< develop responsible routing criteria;

under the Nuclear Waste Policy Act, the Committee has urged DOE to develop and implement a route selection methodology.^{2 3} An appropriate process for selecting routes is viewed as a vital component of a complete transportation safety program.

The Committee believes the steps outlined in the *Strategy* are appropriate and provide a solid foundation for securing stakeholder input.

The Committee has three primary concerns with the *Strategy*: (1) opportunities for public review may not be adequate and the time allotted for comment may not be sufficient; (2) the scope of shipments to which the policy would apply needs to be clarified; and (3) the appropriate amount of time between the selection of routes and the commencement of shipments needs to be identified.

Regarding the Committee's **first concern**, our understanding, based on discussions by Larry Blaylock (DOE) during the July meeting of the Technical External Communications Working Group (TEC/WG), is that the next version of the *Strategy* will expand the opportunities for public review and increase the time available for review. Thus, we will comment on timing and opportunities for public input when the next version of the *Strategy* is available.

Regarding our **second concern**, the Committee has serious reservations about the wisdom of establishing a uniform Department-wide procedure on the routing of DOE's HRCQ

< develop a sound methodology for evaluating optional mixes of routes and transportation modes..."

In 1991, western governors urged Congress to give guidance to "...DOE to initiate as a first step in cooperative efforts for NWPA shipments, the identification of national nuclear waste transportation corridors, as proposed by the Western Interstate Energy Board in its March 1988 resolution."

² In 1988, the Western Interstate Energy Board adopted a resolution stating that "...the Department of Energy should immediately assume responsibility for identifying routes to be used for shipments of spent fuel and high-level waste to a repository through the process developed by the Board's High-Level Waste Committee..."

³ See *WIEB Route Selection for Shipments to a High-Level Radioactive Waste Repository Discussion Paper and Draft Recommendation*, March 1988.

shipments. Our concerns are rooted in the fact that HRCQ shipments vary widely, from one-time, emergency-type shipments to 30-year duration, massive shipping campaigns of the type this nation has never experienced. To adopt uniform procedures to cover this vast range of shipping needs may not be wise. It may lead to developing a procedure based on the least demanding requirements applicable to each type of shipment. For example, a thorough assessment and mitigation of risks associated with a one-time, emergency-type shipment may not be justifiable because of cost and the need for immediate action. In such cases, extraordinary precautions, such as origin to destination state escorts, special rail inspections, highly restrictive times for travel, etc., may be warranted. Indeed, such extraordinary measures may be the only tools available to ensure the safe transport in emergency conditions. At the other extreme, the Office of Civilian Radioactive Waste Management will be conducting a shipping campaign in excess of 30 years in duration and transporting 70,000 metric tons or more of HRCQ waste. Communities along shipping routes could see as many as 18 trucks per day, every day of the year for more than 30 years. Clearly, such a massive shipping campaign requires extremely careful routing analysis and implementation of risk mitigation measures.

A Department-wide routing strategy encompassing this range of shipping campaigns will require very general procedure, which may provide little guidance for specific shipping campaigns, or a specific uniform procedure, the elements of which will not be appropriate to most conditions. If the development of a specific uniform procedure is pursued, we are concerned that a lowest common denominator approach will evolve. That is, those parts of DOE required to deal with one-time emergency-type shipments will resist any extensive routing analysis and mitigation measures as not cost-effective and too time-consuming. Those responsible for massive, long-term shipments will resist any commitment to the extraordinary measures which are justifiable and required in emergency-type situations on the basis that they are not required by DOE procedure, as evidenced by other campaigns. The net result would be a Department-wide procedure which provides no detailed routing analysis, no mitigation and no extraordinary measures.

Citizens in shipment corridor states will not agree with such an approach. They may be willing to accept a shipment under emergency conditions, provided that extraordinary precautions are taken. They may be convinced that they are on the least risk route for a major long-term shipping campaign and that all risk mitigation measures have been taken. They will not, however, accept a long-term shipping campaign which is not supported by the type of analysis and mitigation which the Committee believes is essential for NWPA shipments.

The *Strategy* seems to recognize that a "one-size-fits-all" approach may not be appropriate. Page one of the *Strategy* states that: "Even after implementation, Program or Operations offices may wish to enhance the guidelines developed through this process in order to meet specific programmatic needs."

The Committee recommends that DOE specify in the next version of the *Strategy* that the policy applies only to shipping campaigns (not single shipments) and is designed to focus primarily on campaigns where there are multiple origins for shipments. The Committee also

recommends that the *Strategy* provide guidance to Program or Operations offices on the appropriate rigor of routing analysis and mitigation of risks that are appropriate for differing intensities of shipping campaigns.

Regarding the **third concern** about the time between route selection and commencement of shipments, the Committee recommends that the *Strategy* identify the appropriate time period prior to shipment when DOE's route selection process will be completed. The Committee believes that NRC requirements (i.e., notification of shipments seven days in advance of their commencement) are unworkable. Enclosed is a paper, *Transportation Implications for Various NWPA Program Options*, March 1993, prepared by the Committee which examines the critical path for NWPA shipments and the sequencing and timing of activities, including route identification. We believe this report will be of use as DOE develops the next version of the *Strategy*.

The Committee has addressed the routing issue many times in the past in the form of papers, studies, and letters. It is suggested that these documents be incorporated into the DOE Department-wide routing effort. The Committee documents which will be of assistance as DOE develops the *Strategy* include:

< *Route Selection for Shipments to a High-Level Radioactive Waste Repository Discussion Paper and Draft Recommendation*, March 1988;

This paper : (1) examines the advantages and disadvantages of the existing route selection system and its application to shipments to a repository; and (2) discusses options for resolving specific route selection issues.

< A June 10, 1992, letter to Mr. Gary Watros (DOT) on the agency's dedicated train study;

The High-Level Radioactive Waste Committee suggested to DOT that it evaluate, as part of the dedicated train study required by the HMTUSA, factors such as cask transit times, security and safeguards for rail shipments, actual and perceived risk of dedicated trains, risk perception of other shippers, and emergency preparedness for rail shipments.

< A February 28, 1994 letter to DOT Research and Special Programs Administration commenting on the draft report titled *Identification of Factors for Selecting Modes and Routes for Shipping High-Level Radioactive Waste and Spent Nuclear Fuel*;

The first section of comments includes a discussion of how the draft report fails to answer many of the key questions about how modes and routes should be selected to enhance safety. The second section discusses aspects of the report that will contribute to a better understanding of how shippers and carriers should select modes and routes to enhance safety. A third section addresses certain weaknesses

in the analytical methods used in the report.

< A paper titled *High Hazard Features Associated with the Transportation of Spent Nuclear Fuel and High-Level Radioactive Waste Under the NWPA Through the West*.

This paper describes the types of potential high hazards with regard to the transportation of spent nuclear fuel along western routes. The identification of high hazards can help in the planning of full-scale cask testing and the development of related modeling capabilities to address route-specific concerns.

Finally, the Committee believes that the establishment of External Modal Working Groups is a necessary step in the evolution of the *Strategy*. We request that members of the Committee be appointed to the Working Groups.