

State Regional Group Perspectives on OCRWM's National Route Selection Process

I. PURPOSE AND BACKGROUND

As OCRWM requested, the four state regional groups (SRGs) have discussed their ideas and preferences regarding the steps OCRWM should take to select national routes for shipments to a federal repository for spent nuclear fuel and high-level radioactive waste. Going into this discussion, the Midwest had already completed its project to evaluate potential routes through the Midwest and identify a proposed starting point for national routes that will affect the region. The Northeast is embarking on a similar project. The South and the West are waiting for DOE to propose routes to those regions for consideration.

Despite the difference in regional approaches to route selection, the four SRGs do share common goals for OCRWM's route selection process. The states continue to believe, as stated in our March 3, 1998, joint letter to Energy Secretary Peña, that:

“[R]oute planning can and should be accomplished through a consultative approach involving DOE and its regional cooperative-agreement groups. As state representatives, we have the duty to protect the health and safety of the public from the possibility and consequences of transportation accidents. As a result, we have a responsibility on behalf of our citizens to be involved from the outset in selecting the routes for major movements of radioactive materials....

“Ideally, this approach would achieve three goals. First, it would promote both the safety and public acceptance of the shipping routes by making the federal government, rather than a private carrier, ultimately accountable for route selection. Second, it would permit the most efficient use of federal and state training resources by reducing the total number of routes. Lastly, it would provide states and communities sufficient time to prepare for shipments by identifying national routes well before shipments begin. Early identification of routes would, for example, make it possible for states to evaluate route segments within their jurisdictions and designate alternative routes as appropriate for safety reasons.”

For each SRG, these shared goals underpin the individual perspectives that follow.

II. REGIONAL PERSPECTIVES

Midwest/Northeast Perspective:

Midwest General: The Midwest would like DOE to conduct routing analyses on a regional basis and then combine the four analyses together for discussion. Regions could all agree on universal criteria or develop individual sets of criteria. In addition, regions could all agree on universal assumptions/data limitations or decide on individual assumptions/data limitations (i.e., to use all accidents in an analysis or just truck accidents, etc.). Individual sets of criteria and assumptions increase the likelihood that any routes chosen after analysis meet each region's specific safety criteria. DOE would do any data collection and analysis, but the regions would have to coordinate receiving comments and input from state agencies and committee members. This process has already been done in the Midwest; however, additional analyses would have to be done to find the best way to match entry points from the South and Northeast to routes in the Midwest. Once all analyses are completed, the regions and DOE would make sure all routes are operationally and logistically viable and solicit comments from other interested parties (yet to be defined). Once the regional maps have been put together, DOE would then solicit public comment, if necessary.

Northeast General: The Northeast High-Level Radioactive Waste Transportation Project, in conjunction with its Task Force, is in the process of conducting a routing analysis for the Northeast. The Project believes that it would be helpful for DOE to adopt in the near future a proposed process and schedule for the ultimate selection of routes for the transportation of spent fuel to Yucca Mountain which includes the points listed below.

Midwest/Northeast Specific:

- 1) Complete update of TRAGIS railroad information. Test TRAGIS using representative routes – make any necessary changes to the model. This step could be a good way to spark some discussion on regional or national selection criteria.
- 2) "Suites of routes" pose potentially serious burdens on states, so DOE and the SRGs should work together to explore the ramifications of DOE's apparent decision to utilize "suites of routes" (see the section on questions at the end of this document). Specifically, DOE should clarify the intended purpose of utilizing "suites," analyze whether utilization of "suites" is an effective and efficient method of fulfilling that purpose, and determine the maximum number of routes that would be included in such "suites." The SRGs should have an opportunity to review and comment on the results of OCRWM's analysis.
- 3) Develop criteria
 - a) DOE/stakeholders develop generic set of route criteria. Concurrently, states/tribes/stakeholders develop regional set of criteria for DOE to use in analyzing routes in respective areas or alter generic set of criteria. If the regions don't want to develop a unique set of criteria, the default would be the generic criteria.

- b) At the same time, the regions identify any obvious areas to avoid (i.e. Moffat Tunnel in Colorado). States will have a chance to consult state agencies later on regarding preliminary routes.
- 4) Develop decision model
 - a) Railroads develop list of viable interchange points along the major corridors (again, this would avoid analyzing routes that aren't operationally viable). An alternative to this is to generate the routes and have the railroads look at them before any comparison/analysis is done to suggest better interchanges.
 - b) Railroads/DOE/Stakeholders decide:
 - i) Appropriate heavy-haul or other intermodal transfer locations for plants without direct rail access.
 - ii) Appropriate barge to rail locations, where necessary.
 - iii) Whether or not short lines will be used or whether only Class I to Class I direct transfers will be allowed.
 - iv) What percentage above the shortest route the analysis will consider. In other words if the shortest route out of the region is 500 miles, what is the cut-off point for other routes? 10% longer? 20% longer?
 - v) Each region (and DOE/regions collectively) has to decide on certain data limitations. For example, if accident rate is used, will the calculations consider all accidents or just truck accidents or just hazmat truck accidents (if accidents are even a factor)? Similar decisions need to be made for other data sets.
- 5) Generate candidate routes. Eliminate any that don't meet above criteria.
- 6) Finish collecting any necessary data (some data collection can be done concurrently with criteria and decision model development) and perform calculations and comparison on a regional basis. If regional criteria do not require calculations or comparisons, then all candidate routes are included in the suite for review.
- 7) Regions take maps to committee and any pertinent state agencies for comment. Comments are then discussed (on a regional basis, though with DOE as well) and changes to the maps made, if necessary. Any comments or changes that affect exit points from the regions should be discussed with other affected regions.
- 8) At the same time, DOE checks the operational viability with railroad operations representatives.
- 9) Regions, railroads, DOE, and other stakeholders come together for discussions. Any significant comments and changes made would then cycle the process back to Step 5.
- 10) DOE/regions use Sandia Logistics Model to see if route suite is logistically viable. Any significant comments and changes made would then cycle the process back to Step 5.
- 11) DOE publishes maps and seeks public comment, if necessary.

Southern Perspective: The Southern states have always maintained route planning should be accomplished through a consultative approach involving the Department of Energy and its regional cooperative agreement groups. More specifically, it is DOE's responsibility to propose a set of shipping routes to the affected states for their review and comment. This process

should begin well before the actual start of shipments to accommodate the distribution of Section 180(c) funds and allow states ample opportunity to establish training programs along the transportation corridor.

Western Perspective: The Western states believe that it is DOE's responsibility to identify national shipping routes. As described in the WIEB HLW Committee's *Strategic Plan for Transportation under the NWPA*, DOE would conduct mode and routing analysis, develop a route selection methodology and criteria, and publish a routing proposal. States would then work with DOE to identify problem areas, propose alternate routes where necessary, and resolve any discontinuities so that the final routes can be agreed upon not later than three years before shipments begin.

At the current time, there are a number of major uncertainties in the Yucca Mountain program that have the potential to significantly impact routing decisions. These uncertainties include changes in repository design, ongoing litigation, increased cost estimates, and the possible introduction of reprocessing and/or interim storage to the NWPA program. The Western states feel that until more of these uncertainties are resolved it may not be cost-effective to invest significant time and resources on route selection. However, we remain supportive of DOE determining as early as possible the criteria and process that they will use to select routes.

The HLW Committee has previously provided input as to the route selection criteria that DOE should use. (April 26, 1995 *Comments on DOE draft discussion papers on Highway and Rail Route Selection*, among others.) Once DOE has clarified its timeline for the route selection process, the HLW Committee will decide whether or not it needs to revise those recommended route selection criteria. The HLW Committee will, of course, also respond to other requests for input and comments at any other point in the process.

III. QUESTIONS

Following are questions that the SRGs believe DOE must answer before the national route selection process gets underway. The states will be looking to DOE for answers to these questions either at the March 2006 TEC/WG meeting or at the spring 2006 regional meetings.

- 1) What is DOE's timeline for the national route selection process? The NAS study recommends that "DOE should identify and make public its suite of preferred highway and rail routes ... as soon as practicable." Will DOE follow this recommendation? We estimate it will take at least two years to complete any selection process.
- 2) What analysis has DOE conducted to arrive at the decision to use suites of routes? What exactly is a suite of routes? Will one route be preferred (and therefore be used most of the time) and the others be used as alternates (i.e. in case the primary route is not available)? If security is a reason for OCRWM considering a suite of routes, how will using multiple

routes from each site enhance security given the fact that the shipping and destination sites are fixed and well known? Has DOE done any analysis of how this decision will affect Section 180(c) funding? If sufficient funding is not available to prepare multiple routes, could decreased preparations lead to a lessening of shipment safety? Are there other, more economical, and more effective ways (e.g., protecting information or varying the shipment schedule) to achieve the goal of enhancing shipment security?

- 3) How did DOE come up with 175 shipments per year? At least 23 sites don't have direct rail access, and the amount of truck shipments needed to remove the amount of fuel in the queue would alone far surpass 175 shipments a year. If heavy-haul, intermodal, and barge shipments are the logical solution, how and where does DOE plan to transfer casks from truck to train?
- 4) Is DOE going to wait until the routes are identified to develop its operations plan? Or is the intent of the routing process flowchart to show that the operations plan will be revised to reflect the routes chosen?
- 5) The NAS study also expressed strong reservations about DOE conducting a large-scale truck shipping campaign either cross-country or in Nevada "should DOE fail to complete construction of the Nevada rail spur or procure the necessary rail equipment by the time the federal repository is opened." Will DOE refrain from conducting this type of "truck transportation program"? Given the problems with DOE's selection of a rail corridor in Nevada, ongoing and prospective litigation, and escalating cost estimates, what are DOE's contingency plans in the event rail access to Yucca Mountain is not available?
- 6) How will the 180(c) pilot program be coordinated with the national route selection process?
- 7) What are DOE's plans for compressing the route selection process in the event that Congressional action makes it necessary to ship spent fuel to an interim site? For the purposes of 180(c), DOE has committed to provide states with four years' notice regarding the selected routes. To meet that commitment, therefore, the process must begin at least six years prior to shipment. For shipments to Yucca Mountain, providing this amount of lead time appears to be achievable. For shipments to an interim site, however, DOE will need to work with the states to devise a mutually acceptable approach to compressing this six-year time frame.