

The Second Joint Meeting of the Regional Radioactive Waste Transportation Committees

December 9-10, 1997
Las Vegas, Nevada

Regions find common ground at Second Joint Meeting State regulators agree they have a role in radioactive materials transportation

Last December, state regulators and lawmakers from over 40 states gathered in Las Vegas to discuss a subject that, in the coming decade, is likely to attract a great deal of attention: the transportation of radioactive waste. Most of the state officials attending the Second Joint Meeting of the Regional Radioactive Waste Committees have worked for several years at the regional level to identify and resolve issues related to radioactive waste transport, specifically radioactive waste shipped by the U.S. Department of Energy (DOE). This work has proceeded largely under the auspices of cooperative agreements between DOE and four regional organizations of states (see back page). In Las Vegas, though, just one hour from the site DOE is currently studying for a possible repository for commercial spent nuclear fuel, the regional groups came to share their perspectives and, where possible, identify common issues which they could work together to resolve.

Referring to the First Joint Meeting, held in 1995 in Chicago, Ken Niles, Co-chair of the WIEB High-Level Radioactive Waste Committee, set the tone for the December meeting in his opening remarks: "My hope is that, during the course of this meeting, we will be able to build upon the work that we began in Chicago by focusing on those areas where all four regions share common positions." The chairs and co-chairs of the other regional committees echoed Niles' statement. Bill Sherman, Co-chair of the Northeastern High-Level Radioactive Waste Transportation Task Force, suggested that, if the states were to decide how they would like to see DOE conduct its ongoing shipping campaigns, then the same principles would most likely apply to future shipping campaigns, for instance the one that will move commercial spent fuel.

To focus the discussion of potential consensus areas, the committees met individually during the first day of the meeting to identify transportation issues

which might be shared by all four regions of the country. On the second day, the committees divided into four breakout groups consisting of random mixes of regional committee members. The groups' mission was to discuss three major policy areas identified during the regional meetings: transportation planning, privatizing transportation services, and route selection.

Following these breakout groups, the committees convened a joint session at which representatives of the groups reported on their progress. Having

reached agreement on all three issues, the committees charged the staff with working together to develop unified positions on the issues.

As a result of these efforts, the committees wrote a "letter of consensus" to Secretary of Energy Federico Peña, co-signed by all the regional

chairs and co-chairs (see page 4). The letter identifies transportation policy elements which the committees believe are necessary to ensure the safe and uneventful transportation of radioactive materials. Looking towards continued cooperation between the committees in the future, the letter concluded by emphasizing the willingness of the regional committees to continue working together to achieve "the shared goal of safe radioactive materials transportation."

"My hope is that, during the course of this meeting, we will be able to build upon the work that we began in Chicago by focusing on those areas where all four regions share common positions."

— Ken Niles, Oregon

Inside

<i>Modal Panels</i>	2
<i>Letter of Consensus</i>	4
<i>DOE Program Updates</i>	6
<i>Accelerating Cleanup, National Transportation Program</i>	8
<i>DOE Training</i>	9
<i>NRC Oversight</i>	9
<i>Route Maps</i>	10

Panels address radioactive waste transportation by rail, highway

State, federal, and industry representatives addressed their experiences with and the differences between requirements for shipments of spent fuel and high-level radioactive waste by rail and by truck.

Federal regulation of rail transport

Mike Calhoun, with the U.S. Department of Transportation (DOT) Federal Railroad Administration (FRA), reported on the FRA's state participation program, in which 32 states currently participate. He said that state inspectors under this program have essentially the same authority as federal inspectors with regard to rail inspections. For any violations discovered, state inspectors can recommend civil penalties to the federal government, which has the authority to prosecute.

Kevin Blackwell, also with the FRA, said that the FRA had over 400 inspectors, a third of which were federally-certified state inspectors. According to Blackwell, the inspection program "did result in a dramatic reduction in the number of rail accidents and related injuries," including a 75-percent reduction in rail-related fatalities and injuries since 1978.

Blackwell also stated that the FRA "remains committed" to maintaining its high-level radioactive waste inspection policy involving the frequency of "enhanced inspections." He described the key elements of this policy:

- the entire track and signal system would be inspected along designated routes prior to the first shipment;
- operating-practices inspectors would conduct "routine inspections" along planned routes to ensure that train crews were complying with the carrier's current operating rules; and
- "prior to the first shipment and every subsequent shipment, motive power and equipment and hazardous materials personnel conduct inspections," including the locomotive, cask cars, buffer cars, and other equipment.

Blackwell noted that "at the present time, FRA inspectors do not ride the train or accompany the shipments unless there are some special circumstances involved." In closing, Blackwell stated that, with regard to high-level radioactive material shipments, "the FRA is currently in the process of

modifying its inspection policy to some degree" in order to "further ensure the safety of these types of shipments."

State programs in Illinois, California

Tim Runyon, from the Illinois Department of Nuclear Safety, discussed rail shipment experiences in Illinois, including inspections conducted on a variety of radioactive material shipments. Runyon suggested that all states should have a program for

federally certifying state rail inspectors. He said that the experience in Illinois was that "if we did not have an FRA-certified inspector with us, we would never have gotten our foot in the door with any of the railroads. They would not have even let us on their property. The

railroad community is a very tight community and . . . they do not care to be regulated by entities other than the FRA."

Vahak Petrossian, from the California Public Utilities Commission (PUC), said that, in California, railroads were charged a user fee. These funds, which raised approximately \$3 million per year, helped to fund PUC railroad oversight activities. On September 3, 1997, the PUC issued a major decision identifying 19 "local safety hazard sites" including the Donner Pass and Feather River Canyon areas. These areas were being considered by DOE for shipments of foreign spent nuclear fuel. Petrossian said that, in California, such local safety hazard sites were subject to mitigation measures as determined by the PUC. He noted, however, that the railroads had recently filed for injunctive relief in federal court, and that the court issued a preliminary injunction stating that the PUC could not regulate in the areas of locomotive maintenance, train securement, two-way end-of-train braking devices, or dynamic brakes. The PUC retained its authority to issue regulations in other areas, however, including track-train dynamics.

Petrossian also discussed California's General Order 161, covering the transportation of hazardous materials. The Order established railroad reporting requirements, required railroads operating in California to have a training program and an emergency response plan, and required railroads to provide shipment information to local emergency response agencies upon request. Railroads also were

"[I]f we did not have an FRA-certified inspector with us, we would never have gotten our foot in the door with any of the railroads."

—Tim Runyon, Illinois

required to provide maps of all rail routes including information on pipelines adjoining those routes.

Rail industry weighs in

Bob Fronczak, with the Association of American Railroads (AAR), stated that the increase in rail traffic density dictated the use of a risk management approach for shipments of high-level radioactive waste. Such an approach, according to Fronczak, should make the use of the following special safety measures self-evident:

- the use of specially designed cask cars that limit the possibility of derailments;
- premium suspension systems on rail cars to account for the extreme weight posed by DOE shipments of spent nuclear fuel and high-level radioactive waste;
- the use of electro-pneumatic braking systems; and
- the use of defect-detection equipment.

Fronczak stated that AAR's recommended practice dated back to 1974. One of its provisions is that shipments of casks containing irradiated spent fuel cores or empty casks previously loaded with such material should move in special trains containing no other freight, not faster than 35 MPH. When a train handling these shipments meets, passes, or is passed by another train, one train should stand while the other moves past not faster than 35 MPH.

However, Fronczak said that, with the projected increase in DOE's high-level radioactive waste shipments, railroads were concerned that these speed and passing requirements would cause serious traffic problems on the nation's rail network. Fronczak stated the industry's position in favor of using dedicated trains for shipments of high-level radioactive waste, saying, "We feel dedicated trains have a lot of efficiency benefits, including providing for higher priority scheduling, bypassing classification yards, and minimizing time in transit." He also noted that, "since such trains would be shorter, they would allow for faster acceleration, quicker stopping, and higher sustained speeds. Armed escorts would be easier to provide [and] inspection and maintenance would be easier to provide as well."

Highway transport

Rich Swedberg, with DOT's Federal Highway Administration, encouraged states to identify any alternative highway routes they would like used for shipping spent fuel. The early identification would allow time to work out any potential conflicts between the states and the federal government. DOT's chief counsel was reviewing federal regulatory preemption issues to identify any conflicts between state and federal responsibilities for hazardous materials routing and enforcement. DOT recently asked the state governors to identify the agencies within their states responsible for routing and to provide information on any state-designated routes. DOT was compiling the responses, and planned to publish them in the *Federal Register* in 1998. DOT had also appointed a federal point of contact for each state to work with on matters involving routing.

Allan Turner, with the Colorado State Patrol, reported that about 240 inspectors in 18 states had

been trained to perform the Commercial Vehicle Safety Alliance's Enhanced North American Standard (NAS) driver/vehicle inspections for shipments of radioactive material. The enhanced inspections provided extra assurance of the safety of such shipments by requiring vehicles to

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— Bob Fronczak, AAR

be "defect-free" prior to leaving the originating facility. The inspections were successfully used on shipping campaigns involving low-specific activity nitric acid and cesium-137. Captain Turner described the program as a "very effective process for assuring safe transportation" and recommended its use in future shipping campaigns.

For the WIPP shipments (see page 6), the inspection requirement was incorporated into the DOE Contract Agreement and was made part of the transportation plan. Moreover, since 1986, Colorado's Nuclear Transportation Act had required the Colorado State Patrol to inspect all highway route-controlled quantity (HRCQ) shipments of radioactive materials and transuranic waste in Colorado, regardless of whether they originated in state or were just passing through.

Continued on page 5

Excerpt from the “Letter of Consensus” from the Regions

At the Second Joint Meeting of the Regional Radioactive Waste Transportation Committees on December 9-10, 1997, in Las Vegas, Nevada, five of DOE’s regional cooperative-agreement groups — representing over 40 states — reached consensus on three key issues related to the Department’s transport of radioactive materials. For such a large number of states, with a great diversity of interests, to come to agreement on major transportation issues underscores the now almost universal recognition of the importance of these principles to the safety of radioactive waste transportation. We are very pleased, therefore, to write on behalf of these groups to express their common policy positions on the subjects of 1) transportation planning, 2) privatizing transportation services, and 3) route selection.

Transportation Planning

The regional cooperative-agreement groups reached consensus with regard to transportation planning on the following points:

- State concerns related to planning, mode and route selection, training, funding, notification, and monitoring are similar for the various transportation programs.
- A consistent method for state/DOE coordination can be applied across all the various transportation programs.
- The *WIPP Transportation Safety Program Implementation Guide* (developed by the Western states working through the Western Governors’ Association) is an excellent framework for transportation planning, and a similar document should be used as a base document for DOE’s various transportation programs.

Privatizing Transportation Services

The Department of Energy’s regional cooperative-agreement groups believe that the privatization of radioactive waste transportation programs must be accomplished without jeopardizing the agreements and relationships which the states and the Department have developed over the past decade. To be successful any plan to privatize shipments of highly radioactive materials must involve a strong DOE commitment to maintain control over transportation institutional programs. These responsibilities *cannot* be delegated to a private contractor.

In addition, states believe that DOE should not delegate to a contractor any of the following responsibilities: 1) interacting with states, tribes, and affected units of local government with regard to potential shipping campaigns; 2) the selection of the

routes to be used for shipping; 3) the preparation of an environmental impact statement addressing transportation impacts; 4) working with states and tribes to develop plans covering transportation issues such as communications, training, and security; and 5) decisions regarding the provision of adequate technical assistance and funding to states and tribes to prepare for shipments. In formulating each of these critical policy decisions, DOE must consult extensively with affected states and tribes.

Routing

The states participating in the Second Joint Meeting agreed that route 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. Several states, in fact, have taken the step of introducing legislation that will strengthen the role of the state government in designating acceptable routes for shipping radioactive materials.

The sheer magnitude of DOE’s planned shipping activities over the next three decades highlights the need for greater cooperation between the Department and the affected state governments. Through the year 2035, DOE shipments of high-level radioactive materials will affect a total of 45 of the contiguous states. The multiplicity of available routes, coupled with the scarcity of resources for training state and local personnel, makes it imperative that the Department adopt a more coordinated approach to selecting the routes for these shipments.

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.

The Department of Energy can achieve these

important goals for all its major transportation programs by following a process similar to that established for the Waste Isolation Pilot Plant program. Under this approach, the Department would work through its regional cooperative-agreement groups 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, particularly if states will be eligible to receive federal assistance for training inspectors and emergency responders along the routes. The end result of the process would be a set of primary and secondary routes from each site of origin to each destination. DOE would require the use of these routes through mandatory contract provisions with any private contractors. We believe

the Department should adhere to this process for all large-scale shipping campaigns involving radioactive materials.

Conclusion

Through its regional cooperative agreements, the Department has supported the development of a vast network of state officials with expertise in radioactive waste transportation. We strongly urge DOE to tap this valuable resource by calling upon the regional groups to do the work they are uniquely qualified to do. In co-signing this letter, we demonstrate not only a willingness but a deep commitment to working together to achieve the shared goal of safe radioactive materials transportation.

Panelists address highway transport

Continued from page 3

Midwestern states consider legislation

Indiana State Senator Beverly Gard described legislation she planned to introduce which established a process for Indiana to identify alternative routes for the transportation of radioactive material and collect fees from carriers. The proposed legislation was an amended version of model state legislation on high-level radioactive waste transportation. Sen. Gard prepared for CSG's Midwestern High-Level Radioactive Waste Committee. Other states in the region, such as Michigan and Kansas, were contemplating similar legislation.

The legislation included provisions for evacuation of the public along the preferred routes and annual review of those routes. It also would ensure that the state would not be liable for changing routes and would allow the State Emergency Management Agency (SEMA) to change the dates and times of shipments. Under this legislation SEMA would have the power to charge the shipper \$1,000 per shipment for either rail or highway shipments, in accordance with existing federal regulations. The fees collected would be placed in a special fund to assist local jurisdictions affected by shipments.

Steve Lesser, Deputy Director of the Public Utilities Commission of Ohio, expressed a desire to work with the state regional groups at the joint meeting in order to "meld" the uniform hazardous materials registration and permitting program with carrier qualification programs at the federal and state level. The uniform program was a congressional compromise enacted in 1990. The states and the transportation industry disagreed over whether the federal

government or the states should be in charge of the program. As a compromise, Congress gave the states the opportunity to make recommendations for the uniform program, with the Federal Highway Administration maintaining responsibility for promulgating the program. A working group of 30 state and local officials, representing 22 states, was formed. The working group made recommendations in 1992 and 1994. Those recommendations were adopted and later tested for two years in pilot programs in Nevada, Ohio, Minnesota, and West Virginia.

Lesser stressed that the users' fees collected by the states under the registration program was a very important source of revenue. The federal act did not limit how much money the states collect as long as the fees were equitable, used for hazardous materials transportation, and apportioned among industry. Lesser identified the permitting provisions of the program as the more controversial area, noting that motor carriers needed the permit to operate. The permit could require a background check on transportation safety, environmental response, and corporate and individual criminal history. The program included provisions to fingerprint key individuals if the initial review identified certain problems, and the ability to suspend or revoke the three-year permit if certain minimum performance standards were not maintained. Illinois had implemented the program and had joined the interstate compact. Implementing state legislation was pending in Tennessee and Michigan, and the State of Missouri had expressed interest.

DOE prepares for shipments of TRU waste, research spent fuel in 1998

For followers of DOE's programs involving radioactive waste, 1998 will be a memorable year – both for what the department will ship and for what it won't.

Research reactor spent fuel continues to move

Chuck Messick, with DOE's Savannah River Operations Office, said the Savannah River Site (SRS) continues to receive domestic-origin spent nuclear fuel at a rate of one to three shipments per month. The primary shippers include national laboratories in Oak Ridge, Tennessee, and Brookhaven, New York, as well as universities in Iowa, Massachusetts, Michigan, Missouri, and Ohio. Shipments are by truck using casks licensed by the Nuclear Regulatory Commission.

At the same time that DOE ships domestic spent fuel, the department also is accepting spent nuclear fuel from foreign research reactors as part of its Spent Nuclear Fuels Receipt Program. The U.S. is accepting this material because it contains highly enriched uranium manufactured in the U.S. and could pose a threat to the nation's nonproliferation goals. According to Messick, both DOE and the Department of State consider the program to be a great success. DOE has completed four shipments in the first 18 months of the 13-year program, with five more shipments planned for both 1998 and 1999. The upcoming shipments will move spent fuel from Europe, Japan, Australia, South America, and Southeast Asia. Rail shipments from the port to SRS will continue about four to five times per year.

Six countries with eligible research reactors are not planning to participate, having decided to manage their own spent fuel. As a result, the estimated total number of shipments has dropped from 135 to around 100. Any of these countries could change their minds, however, and return to the program. Canada, for example, is reviewing its national policy on spent fuel. It will be at least 2000 before the Canadians decide whether they will ship to the U.S.

While the East Coast has some recent experience with shipments of foreign spent fuel, attention has now turned to the first West Coast shipment. DOE is planning one shipment from Southeast Asia, which will arrive at the Concord Naval Weapons Station

and move by rail to the Idaho National Engineering and Environmental Laboratory (INEEL). DOE has begun extensive planning and preparations similar to what the department did with the Southern states for the East Coast shipments through South Carolina.

Foreign fuels to cross the heartland

The movement of foreign spent nuclear fuel will affect not just the coastal states. In the summer of 1999, DOE hopes to make the first "cross-country" shipment of material that will initially arrive at SRS but is destined for INEEL. When possible, spent nuclear fuel destined for INEEL and SRS will be combined to minimize the total number of ship-

ments entering the U.S. Spent fuel destined for INEEL will be forwarded within 72 hours. Messick indicated that the mode of transportation may change at SRS, but that no new routes are likely to be required in South Carolina, other than the one exiting the state. At a yet-to-be-determined point during

the journey, responsibility for the shipment will transfer from SRS to INEEL.

The cross-country planning effort will occur along the same lines as the so-called "urgent relief" shipments and the current SRS shipments, and will involve SRS, INEEL, and the regional groups in the South, Midwest, and West. The first planning meeting will not likely occur until mid-1998.

WIPP shipments ready to roll

While DOE's Spent Nuclear Fuels Receipt Program rolls right along, the department's Carlsbad Area Office (CAO) is patiently if anxiously awaiting its turn. This May, the Waste Isolation Pilot Plant in southeastern New Mexico is slated to open, barring any setbacks. The facility will be the final resting place of the department's transuranic (TRU) waste – mainly tools, protective clothing, and other trash that is contaminated with plutonium and other radioactive elements.

"We're looking at 39,000 shipments . . . over a 35-year period – about 800 to 1,000 shipments per year," estimated CAO's Ralph Smith. Such a vast shipping campaign will affect approximately 30 states as DOE moves TRU waste from 25 or so sites

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— Ralph Smith, CAO

across the country to WIPP. Smith cautioned the audience to “understand that WIPP versus the rest of DOE has a very specific enabling legislation that sets us up a little — in some cases a lot — different . . . than the rest of the Department of Energy as far as how we ship.” As a result, the program has approached transportation planning in a different manner than other DOE programs. For example, CAO selected the highway routes with input from all of the affected corridor states, and it will use contract carriers that are dedicated specifically to the WIPP program.

CAO has worked with the Western Governors’ Association and the Southern States Energy Board to establish protocols for the WIPP transportation program. As part of these efforts, DOE has in place Memoranda of Agreement with both WGA and SSEB for using specific protocols for the WIPP transportation program. “We have used the protocols and procedures from WIPP in other shipping campaigns, specifically cesium, nitric acid, uranium billets,” added Smith. “They’ve been very successful.” Nonetheless, he noted, “We don’t pretend to have all the answers to how to ship.”

Shipments of commercial spent fuel stalled

One DOE program that might soon be in the market for some answers is the Office of Civilian Radioactive Waste Management (OCRWM). Despite strong pressure from utilities, state regulators, and members of Congress to start shipping in 1998, OCRWM’s program plan still places the first shipments far in the future.

Lake Barrett, Acting OCRWM Director, pointed out that the OCRWM program currently does not have a designated waste disposal site, and it will be at least four years — but more likely ten years —

before a site is available. Barrett contended, therefore, that it is too early to begin the transportation planning process advocated by the states, such as route planning and financial assistance programs. He added, however, that “[t]he social and institutional matters involving nuclear waste transportation are extremely important and extremely real.”

While acknowledging that the transportation program will affect nearly every state, Barrett insisted that — unless his office receives different direction

from Congress — it will continue to focus on the scientific studies at the proposed Yucca Mountain repository site in Nevada. The short-term goal of that effort will be to complete the viability assessment by late 1998. The entire program suffered a \$34 million budget cut in 1997, he added, part of which was directed at the regional cooperative-agreement groups. The bottom line, said Barrett, is that no substantial funds will be obligated to transportation activities until OCRWM is closer to shipping commercial spent nuclear fuel.

Just when that will be is anyone’s guess. The current program plan cites 2010 as the starting date for shipments, although Barrett acknowledged that pending legislation and litigation may affect the program’s schedule. Both the House and Senate passed legislation in 1997 mandating interim storage near Yucca Mountain. President Clinton, however, has promised to veto the bills in their current form. Even if the law were to change today, Barrett stated, it would be at least four years before transportation would begin.

Regarding the utility and state lawsuits, Barrett noted that the U.S. Court of Appeals ruled that “the Standard Contract between DOE and the utilities provides a potentially adequate remedy if DOE fails to fulfill its obligations by the [1998] deadline. . . .” OCRWM plans to address this delay pursuant to the contractual delay clause by equitably adjusting charges and schedules to reflect the cost of the delay to the contract holders.

When asked whether the environmental impact statement (EIS) for Yucca Mountain would address transportation issues such as modal mix, the use of dedicated trains, and the consequences of severe transportation accidents or

terrorist activities, Barrett said the EIS “will appropriately address all these issues.”

Market-drive approach moving forward

Despite the reduced budget for the transportation program, OCRWM has been working on two major initiatives, according to Dwight Shelor, Acting Director of OCRWM’s Office of Waste Acceptance, Storage, and Transportation. At the Joint Meeting,

“The social and institutional matters involving nuclear waste transportation are extremely important and extremely real.”

— Lake Barrett, OCRWM

Continued on page 11

Accelerated cleanup, National Transportation Program to involve states

Move over 1998 and 2010 — there's a new date in town: 2006. What will happen in that year? If DOE's latest initiative pans out, 2006 will be the year that DOE completes cleanup at most of its facilities undergoing environmental restoration. The brain-child of Al Alm, former Assistant Secretary of Environmental Management, DOE's *Accelerating Cleanup: Paths to Closure* (formerly the 2006 Plan) is a planning tool for "thinking broadly and corporately about how we might achieve our cleanup more efficiently and do things smarter," said Doug Tonkay, with DOE's Office of Waste Management. If all goes as planned, only five sites will remain with significant contamination after 2006, and DOE will avoid costs of up to \$36 billion over the life of the cleanup program.

According to Gene Schmitt, Deputy Assistant Secretary for Site Operations, if DOE is "going to be integrating, sharing facilities, and optimizing our operations, it's going to require transportation of increased amounts [of radioactive materials] between our sites." As a result, transportation has become a "very pivotal part" of the cleanup plan.

Acknowledging the "fragmented" nature of DOE's past transportation programs, Schmitt described DOE's approach to developing a National Transportation Program. The Department has restructured its operations to divide the management of the program among three sites. DOE headquarters in Washington will still be responsible for developing transportation policies. The Albuquerque Operations Office will handle the "day in, day out" operations of the program, while the Idaho National Environmental and Engineering Laboratory (INEEL) will focus on "a systems engineering approach to transportation." As part of this approach, INEEL is currently compil-

ing data into "baseline disposition maps" for each site, showing current and projected waste inventories as well as waste flows into and out of the site.

What role will states and other stakeholders have in shaping this program? For starters, DOE will seek comments on its draft plan in the spring of 1998 (see below). This draft plan will reflect comments received from stakeholders on the "discussion draft" published in April 1997. Stakeholders also had an opportunity to comment on site-specific plans, from which DOE will derive its national plan.

Of greatest importance to corridor states, however, is the development of transportation plans for moving waste materials between sites. According to Judith Holm, with DOE's Albuquerque Operations Office, DOE's new "three-tier planning approach will be helpful as we think about transportation." Under the first tier, DOE will engage states and other stakeholders in "discussion in a broad sense . . . about future programs." The second tier will involve developing a "national program transportation plan" that looks at "all parties and all pieces of a waste type or a program type, for example the domestic DOE spent fuel program." Describing the plan as providing "the large national view" of DOE transportation "to a broad set of people," Holm indicated that the plan would include "some identification of hypothetical routes."

Concurrent with the second tier, DOE will develop site- and material-specific transportation plans. According to Holm, stakeholders will be involved in each tier, with the regional cooperative-agreement groups having a significant role in reviewing and commenting on both the national plan and the site- and material-specific plans.

Public comment process for DOE's *Paths to Closure*

On February 27, 1998, DOE released its draft *Paths to Closure* document for a 60-day comment period that will close May 1, 1998. Comments focusing on issues related to *Paths to Closure* or comments concerning cross-site or policy issues should be submitted directly to the Office of Environmental Management at the following address:

U.S. Department of Energy
Mr. Gene Schmitt
P.O. Box 44820
Washington, DC 20026-4820
FocusOn2006@em.doe.gov

For copies of the national *Paths to Closure* document, contact the Center for Environmental Management Information at 1-800-736-3282. The draft national plan, site specific plans, and baseline disposition maps are also available at DOE-EM's *Paths to Closure* home page at www.em.doe.gov/closure.

DOE training lands at HAMMER

The nation's most advanced hands-on safety training complex, the HAMMER Volpentest Training and Education Center, opened September 26 at DOE's Hanford Site in Washington state.

According to Jim Price, HAMMER's Emergency Operations Product Line Manager, "there's enough existing training out there to meet the needs of DOE and its stakeholders," such as WIPP training and DOE's popular course on Radiological Emergency Training for Local Responders (RETLR). A designated "Center of Excellence" for DOE's Transportation Emergency Management System (TEMS) Training, the one-of-a-kind 120-acre facility features an expanding line of hands-on training props and simulations. HAMMER training focuses on the areas of emergency operations, fire operations, occupational safety and health, environmental and waste management, transportation, law enforcement, and new technologies.

Since its inception, HAMMER has exercised innovative management and training techniques in

order to accomplish four overall goals — provide lifelike, hands-on training; reduce injuries and health effects; create a training industry; and share resources to reduce costs. An important aspect of this management is the partnerships HAMMER has established with state and federal governments, tribes, academia, industry, local unions, and eight international unions.

The emergency operations product line brokers hands-on performance-based training to meet the needs of the emergency management/preparedness community, the collateral duty emergency responder, and members of the law enforcement community. The product line is designed to leverage HAMMER resources and stakeholder partnerships to present the best training available to its users in the most cost effective manner possible. According to Price, the stakeholder philosophy for the program is one of "maximum involvement": "We believe very strongly . . . in training programs meeting the needs of the user as well as adding value to the process."

Nuclear Regulatory Commission oversees shipments

Susan Shankman, Acting Deputy Director of the U.S. Nuclear Regulatory Commission (NRC) Spent Fuel Project Office, provided a brief overview of the role of the NRC in radioactive materials transportation. She noted that the NRC has a role in package certification, transportation regulation enforcement, physical protection of shipments, and emergency response. The NRC has some overlapping jurisdiction with DOT in certain areas, and the two agencies had signed a Memorandum of Understanding in 1979 delineating their respective functions.

Shankman pointed out that the NRC is the single largest enforcer of DOT radioactive materials regulations, and it has the lead role in investigating accidents involving NRC-certified packages. The objective of the NRC's physical protection regulations is to minimize the theft or diversion of nuclear materials. The NRC is responsible for approving transportation routes for the movement of nuclear materials. To facilitate this process, the NRC conducts route surveys, makes contact with local law enforcement agencies, requires armed escorts, requires compliance with DOT highway routing requirements, and requires advance notification to a governor's designated point of contact. Shankman

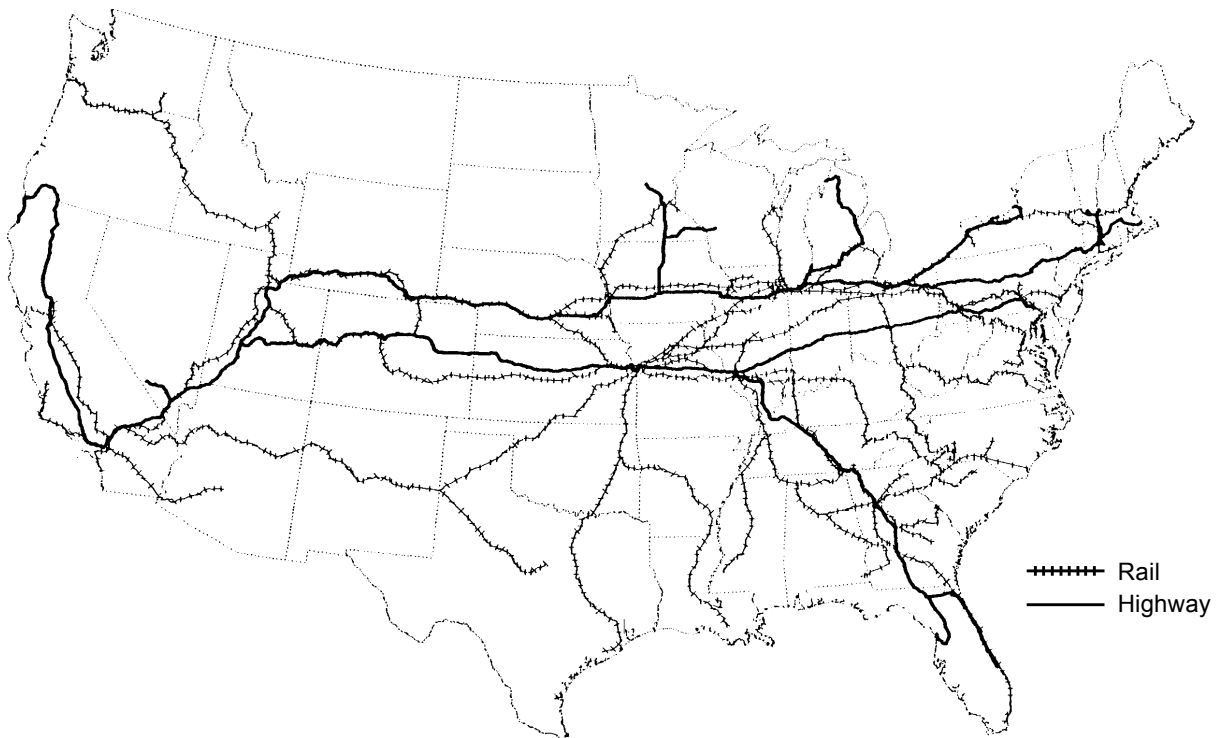
noted that there are no routing regulations for rail transit. She added that routes are approved on a two-year basis.

She provided a map of the transportation routes used since 1979. Since 1986, there have been approximately 25 shipments per year. Rail transportation appears as the most common mode of transit. Shankman offered to work with the states in the transportation planning process for spent nuclear fuel shipments. She designed Earle Easton as the NRC point of contact for all transportation issues.

In response to a question concerning transportation risk assessment, Easton noted that the NRC is not redoing its modal study at the current time. Referring to NUREG-0170, the generic environmental impact statement that supported the NRC's concept of general licensing for transportation, Easton said, "We are now going back and redoing this assessment based on shipments to a repository to see what the risk is under both normal and accident conditions." He added that the reassessment would probably take two years to complete and that the data on accident conditions would still be based on the modal study.



Actual and probable routes for shipments of DOE-owned radioactive materials, not including commercial spent nuclear fuel. Source: A Summary of the Current U.S. Program, Northeast Nuclear Waste Information Conference (December 1997).



Highway and rail routes most likely to be used to transport high-level nuclear waste to Yucca Mountain, Nevada, under a multi-purpose canister base case scenario. Source: Nevada Nuclear Waste Project Office, 1995.

DOE Programs

Continued from page 7

Shelor unveiled OCRWM's revised draft request for proposals (RFP) for acquiring waste acceptance and transportation services, which is the centerpiece of OCRWM's "market-driven approach" to transportation. Shelor noted that OCRWM had modified the RFP substantially in response to comments from the regional cooperative-agreement groups. For example, DOE has decided to maintain its "active and primary role in institutional interactions with states, tribes, and local units of government." In addition, states and tribal representatives may serve as technical advisors regarding certain aspects of the contracting process. Perhaps of greatest significance to the states is OCRWM's decision to "retain final approval on the selection and finalization of proposed transportation routes." Shelor indicated that the revised draft RFP anticipates a role for states and other stakeholders in

the route-selection process.

Another point of interest to the states is the long-awaited policy and procedures for providing states with technical assistance and funds for training inspectors and emergency responders along the shipping routes. According to Shelor, the current plan is to administer this assistance (mandated in Section 180(c) of the Nuclear Waste Policy Act) through an OCRWM grants program. States and tribes will learn of their potential eligibility approximately four years prior to the start of shipments, with one year allotted for the application process. OCRWM will provide a base grant for planning and coordination three years before shipments begin, with an additional, variable amount of funding for training provided in subsequent years.

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For more information or to receive additional copies of this summary, please contact the staff person from your region.

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The Regional Committees and Their Affiliation

Council of State Governments Eastern Regional Conference (CSG/ERC)

Northeastern High-Level Radioactive Waste Transportation Task Force

*Co-chairs: Bill Sherman, Vermont Department of Public Service
Uldis Vanags, Maine State Planning Office*

Council of State Governments Midwestern Office (CSG-MW)

Midwestern High-Level Radioactive Waste Committee

*Chair: Donald Flater, Iowa Department of Public Health
Vice Chair: Frank Moussa, Kansas Division of Emergency Management*

Southern States Energy Board (SSEB)

Advisory Committee on Radioactive Materials Transportation

*Chair: Harlan Keaton, Florida Department of Health and Rehabilitative Services
Vice Chair: Elgan Usrey, Tennessee Emergency Management Agency*

Transuranic Waste Transportation Task Force

*Chair: Roger Mulder, Texas State Energy Conservation Office
Vice Chair: Sandra Threath, South Carolina Department of Health and
Environmental Control*

Western Interstate Energy Board (WIEB)

High-Level Radioactive Waste Committee

*Co-chairs: Ken Niles, Oregon Office of Energy
Captain Allan Turner, Colorado State Patrol*