

**U.S DEPARTMENT OF ENERGY (DOE)
TRANSPORTATION EXTERNAL COORDINATION (TEC)
WORKING GROUP MEETING**

September 13-14, 2006 Green Bay, WI

Welcome and Meeting Overview

The U.S. Department of Energy (DOE), Transportation External Coordination Working Group (TEC) held its 26th meeting on September 13-14, 2006, in Green Bay, WI. One-hundred thirty-two participants, representing national, State, Tribal, and local government; industry; professional organizations; and other interested parties, met to address a variety of issues related to DOE's radioactive materials transportation activities. The TEC process includes the involvement of these key stakeholders in developing solutions to DOE transportation issues through their actual participation in the work product. These members provide continuing and improved coordination between DOE, other levels of government, and outside organizations with DOE transportation-related responsibilities. These notes do not represent final DOE positions or policy and only summarize discussions that may help inform DOE program activities. Presentations from this meeting as well as the agenda and a listing of participants can be found on the home page of the TEC Website at <http://www.tecworkinggroup.org>

Day 1: September 13, 2006

Plenary I – Program Updates

Office of Civilian Radioactive Waste Management

Gary Lanthrum (Director, OCRWM, Office of Logistics Management) reported to participants that OCRWM Director, Ward Sproat, had to cancel his plans to attend the TEC meeting at the last minute due to invitations from four Congressional committees to testify. Mr. Sproat had met with several stakeholders in Pahrump, NV, and regretted not being able to attend TEC.

Mr. Lanthrum related that the new director came to the program with four strategic objectives. The first strategic objective is to submit a high-quality “docketable” repository License Application to the Nuclear Regulatory Commission (NRC). Mr. Sproat is working aggressively with his management team to make that happen. The second objective is to ensure that the culture of the OCRWM organization is right and up to par for an NRC applicant. As a former senior executive in the nuclear industry, he recognizes the importance of this. A third objective is to address the growing government liability associated with the unmet obligation to move spent fuel from

nuclear power plants. The solution is to open Yucca Mountain. Finally, Mr. Sproat intends to implement a comprehensive national spent fuel transportation plan that accommodates state, local and tribal concerns to the greatest extent possible.

Mr. Sproat brings a great deal of energy to the program and understands the need to move aggressively to meet the repository opening date of 2017, Mr. Lanthrum observed. One indicator of this is the announced date for the initiation of rail line construction in FY 2010 since the rail line linking the repository to the national rail system can support the construction of the repository.

Mr. Lanthrum reviewed the license application schedule, best-achievable program construction schedule and FY 2006 Yucca Mountain Program priorities. The FY 2006 priorities are:

Continue to develop a strong, defensible License Application based on a simplified design, licensing and operations using a clean-canistered approach

Develop a clean-canistered based design

Finalize a critical Decision (CD) – package

Update the Total System Performance Assessment (TSPA)

Improve Yucca Mountain site infrastructure to ensure worker, regulatory and visitor safety

Utilize Sandia National Laboratories to integrate scientific studies

He explained that using a clean-canistered approach -- transportation, aging and disposal canister (TAD) -- will have to be factored into the transportation program and that OCRWM's Waste Management Office will issue a specification for the TAD sometime this fall. The private sector will be engaged to develop the design of the TAD and hardware based on the specification. He explained that improvement of the Yucca Mountain site infrastructure was necessary because some of the facilities at the site were below par.

Mr. Lanthrum reviewed the proposed legislation, S. 2589, the Nuclear Fuel Management and Disposal Act. He acknowledged that some of the provisions were of concern to state and tribal governments. However, if the legislation becomes law, it would provide stability and predictability to the OCRWM Program and would also help remove uncertainty to energy security by maintaining the use of nuclear energy. One of the key components of the legislation is the permanent withdrawal of public land surrounding the repository and putting it under Department of Energy control, as required by NRC regulation. Another important feature is addressing the Nuclear Waste Fund. The legislation would make new receipts available to the Program removing the uncertainty in

financing the program each year. The proposed legislation would also impose deadlines for NRC's review of the License Application.

Comments and Questions

One participant recommended that the Nevada Indian tribes affected by transportation be recognized so that they could obtain financial assistance like the counties surrounding the Yucca Mountain site. It was explained that some tribes because of their size are not given federal recognition by the Bureau of Indian Affairs. Mr. Lanthrum indicated that the Department could raise the issue with the Department of Interior.

Another participant observed that OCRWM needed to address the spent nuclear fuel already in storage. Some of the reactor sites were shut down and did not have pools to transfer fuel into TADs. Mr. Lanthrum explained that OCRWM would try to incentivize use of the TADs by utilities. He noted that Mr. Sproat had been the lead negotiator in the PECO settlement with the Federal government. The Department would be looking at options.

A question was posed about a schedule for acquisition of casks and rolling stock. Mr. Lanthrum explained that these were long lead-time items, but now there was a date of 2017 that dictated when equipment had to be in place.

The legislation did not mention interim storage and a questioner wanted to know if DOE supported this. Mr. Lanthrum replied that interim storage was not in OCRWM's current charter and could not be undertaken without legislation. Mr. Lanthrum explained to another questioner that there were no provisions for "taking title" to nuclear waste at reactor sites. Although his presentation did not address it, the provisions dealing with preemption of state transportation laws was still in the legislation and supported by the Administration.

A question was raised about the impact of three independent reviews on quality assurance (QA), draft of the License Application and engineering processes would have on the Program schedule. These reviews are being done in parallel and would not have an impact on the schedule, Mr. Lanthrum responded. It was noted that interviews were taking place to hire a new QA manager for the Program.

OCRWM Office of Logistics Management

Mr. Lanthrum reported that while the name of his office had changed, their job remained the same. Mr. Sproat was looking at organizational structures to ensure success in the four strategic areas.

He presented the FY 2006 accomplishments of the Office of Logistics Management (OLM) including the completion of a draft Section 180(c) Policy and grant application package. He was hopeful that the *Federal Register* notice would come out soon. A

Transportation Concept of Operations framing larger questions was signed out in June. Off-the-shelf rail car components were modeled to determine their ability to meet the Association of American Railroads' Standard-2043, which has been adopted by the Department. Mr. Lanthrum noted that Mr. Alex Thrower of OLM had been heavily engaged in benchmarking studies. The intent of the project was to identify best practices and eliminate poor ones in developing the transportation system. Working with DOE's Environmental Management program, the *Radioactive Material Transportation Practices Manual* had been updated.

Mr. Lanthrum reviewed the near-term priorities for OLM. Completion of the Nevada Rail Draft Environmental Impact Statement topped the list. He related that the U.S. Court of Appeals had denied several of the State of Nevada's challenges regarding the selection of the Caliente rail corridor. Other contentions were deemed premature. This decision would be helpful in framing the path forward and building a solid approach for the Nevada rail project.

Publishing the 180(c) policy in the *Federal Register*, would allow for broader stakeholder input. Mr. Lanthrum recognized the importance of contributions of TEC members. OLM would work with tribes to develop a tailored approach to meet their assistance needs.

It is challenging to work on details of shipment routing without knowing the order of shipments per the Standard Contract, Mr. Lanthrum observed. However, OLM was proceeding with developing a routing process and criteria. While we cannot predict the state of the transportation infrastructure in 2017, OLM will look at trends, Mr. Lanthrum said. OLM will work to expand outreach efforts to more fully engage the nuclear and transportation industries.

Recognizing the need to work with tribes on a government-to-government basis, Mr. Lanthrum reported that Mr. Jay Jones of OLM was continuing his efforts to engage the tribes and had recently brought on-board an intern to assist him.

While the Naval Nuclear Propulsion Program did have a different security environment, OLM is looking to leverage the Navy's transportation experience.

Referencing the anticipated renaissance of nuclear energy, Mr. Lanthrum acknowledged that the transportation cask acquisition effort would be competing for the same manufacturers of reactor components. There are not many firms that are qualified to fabricate these large items, he explained.

Mr. Lanthrum gave a status report on his office's major projects. He related that OLM had selected the Caliente Corridor because it had fewer land use conflicts. Release of the Nevada Rail Draft EIS and conceptual design for the corridor was planned when the Walker River Paiute Tribe indicated to the Department that they no longer objected to studies of the impact of nuclear waste shipments across their lands. (The "Mina Route" was not considered in the Yucca Mountain EIS because of the tribe's objection.)

Publication of the Draft EIS is now delayed until a path forward is determined on dealing with this in the context of National Environmental Policy Act requirements. Currently, OLM is studying the feasibility of the Mina Route.

Regarding operations planning efforts, Mr. Lanthrum reported that OLM was expanding its benchmarking project, and a report was being readied for release at the end of the month. A multilateral agreement on release of security and safeguards information was being developed between DOE and NRC to support sabotage studies.

TEC members were encouraged to become involved in OLM's efforts to develop routing criteria which would lead to the identification of national and regional suites of routes. OLM is updating its public information materials. A tri-fold brochure on transportation has recently been developed. A pilot effort was proposed to broadly apply the 180(c) program including emergency response exercises. A transportation cask is being acquired to support the Commercial Vehicle Safety Alliance's training efforts.

The Transportation Technology Center, Inc., (TTCI) had conducted modeling studies indicating that off-the-shelf rail car components could meet the requirements of AAR S-2043. A security escort car was being developed in partnership with NNPP.

Mr. Lanthrum concluded that building a national spent fuel transportation system is an OCRWM Program priority, and collaboration with stakeholders was an integral component in building public trust and confidence.

Comments and Questions

In response to a question, Mr. Lanthrum indicated that the Department expanded its studies of alignments within the Caliente Corridor based on information gained from the more than 4,000 comments raised during the scooping hearings. An example of this was further study due to concerns raised about the Cities Sculpture Project. He also responded that the schedule for issuing the draft of the EIS would change if the Mina route is included. It could be issued in May 2007 at the earliest with the final EIS publication in June of 2008. Without the Mina route, January 2007 is an estimate for issuing the draft. Alternative alignments could require additional efforts to withdraw land from Bureau of Land Management control. Mr. Lanthrum noted that the Nevada Rail alignment EIS did not address inter-modal transfer facilities. The appropriate place to address that is the Supplemental EIS.

Providing the cask to the CVSA was dependent on funding and was not a critical path item, Mr. Lanthrum explained in response to a question. He added that purchasing cask and rolling stock maintenance services rather than building these facilities was being considered.

There were several comments on the TAD Canister system. Since TADs would contain 21 pressurized water reactor (PWR) elements, would this indicate that it would weigh less than 100 tons? Mr. Lanthrum explained that the technical specification did not

outline a weight requirement, but that a smaller canister would be desirable. Mr. Lanthrum responded to a question indicating that TADs were for future fuel discharges and that the utilities would have to address issues associated with financing TADs for storage at their sites. DOE was only responsible for using TADs for transportation to the repository and disposal. He was not aware of a procurement notice. Accommodating the fuel already stored in dual purpose casks has not been addressed, and would have to be part of any future negotiations with utilities. A commenter noted that fifteen percent of all spent fuel is already in dry storage. Mr. Lanthrum explained that the goal was to make the TAD available early on, and OCRWM was looking at ways to maximize their use.

A questioner wanted to know when a 2002 handbook on calculating risk would be updated. Mr. Lanthrum indicated that each part of the OCRWM Program had to address risk. OLM's approach has not yet been determined. Mr. Lanthrum referenced the National Academies recommendation on risk.

A tribal representative encouraged OCRWM to engage the tribes on a government to government basis. DOE has a trust responsibility and should not defer to BIA. The participant also expressed concern that the proposed Caliente corridor could cut across cultural lands that were not on the actual reservation. DOE should consider cultural and spiritual rights of tribes. Mr. Lanthrum suggested that the tribe provide comments during the scoping process for the Supplemental EIS. The Department would issue a comment-response document. OCRWM was encouraged to look at the unique needs of tribes regarding 180(c) program implementation. Mr. Lanthrum explained that all views would be considered and that DOE would try to make a reasonable accommodation.

A participant wanted to know why OCRWM was interested in a suite of routes versus a single route and observed that the options are limited for pick-up and delivery of a shipment. Mr. Lanthrum explained that having more than one route would allow OCRWM to adjust routes to accommodate any security threats or for operational benefits such as avoiding bad weather. He encouraged the State of Nevada to engage in the routing process and designate its preferred routes.

Office of Environmental Management (EM) Update

Ella McNeil (Office of Transportation, Office of Environmental Management) provided an update on the EM program. She related that EM is the world's largest cleanup program involving 114 sites in 31 states covering about 2 million acres. EM has made tremendous progress in the disposition of nuclear materials including plutonium metal and enriched uranium packaged for long-term storage. About 107,790 kilograms of plutonium or uranium residues have been packaged, and over 11,000 metric tons of depleted or other uranium have been packaged for disposition. Liquid wastes have been removed from 149 single-shell tanks at Hanford in Washington State. High-level radioactive waste and spent nuclear fuel have been packaged for final disposition. EM has also disposed of considerable amounts of transuranic (27,875 cubic meters) and low-

level and mixed waste (947,006 cubic meters). In 2006, EM is scheduled to have completed as many as nine sites.

EM makes available reports on waste and disposition and plans and strategies for disposal efforts, Ms. McNeil noted. Several projects have been or are nearing completion including the Columbus Project (June 2006) and Fernald (expected October 2006). Fernald Silos 1 and 2 are currently stored at the Waste Control Specialists (WCS) Facility in Texas. WCS is working on a permanent disposal license with state regulators. Completion of the Ashtabula Project is expected by December 2006. Physical completion of the Mound Project was in July 2006 except for Operating Unit 1 which was outside the scope of the contract.

Regarding LLW and MLLW disposition, Ms. McNeil reported that a draft supplemental analysis for selection of disposal sites for DUF6 conversion is going out for public comment. Final treatment/disposal of Rocky Flats wastes is expected to be completed by the end of 2006.

Ms. McNeil indicated that the U.S. District Court ruled in DOE's favor on June 12, 2006, declaring Washington State's Cleanup Priority Act invalid. The state plans to appeal. Off-site waste shipments to Hanford remain suspended per a settlement agreement with the state.

The Waste Isolation Pilot Plant will celebrate its 5000th shipment in September and now averages 22 shipments per week, Ms. McNeil announced. A record of 33 per week was set in February 2006. WIPP has disposed of over 41,000 cubic meters of waste. TRUPACT III will undergo certification testing this fall using two test units under construction. EM expects to submit a certification to NRC for approval in December 2006. The TRUPACT III fleet will ultimately consist of six units.

For Remote Handled TRU waste, Ms. McNeil reported that the Section 311 permit has been modified and is awaiting review and a recommendation by New Mexico Environment Department. The first shipments of RH TRU can begin four to six months after the permit is issued. The Nevada Test site will be characterizing and repackaging large-box TRU. Selection of a contractor is anticipated by the end of FY 2006. Proposals of TRU waste carriers are being awarded, and an award is planned by the end of the calendar year. Existing contracts have been extended on a month-to-month basis.

As required by the Energy Policy Act, a report on Greater than Class C (GTCC) Low-Level Radioactive Waste was due to Congress on August 1, 2006. Ms. McNeil related that EM expects to issue of a notice of intent to prepare an Environmental Impact Statement in January 2007 and hold scoping meetings in January and February 2007. The final EIS is anticipated in October 2008 which will accompany a report to Congress describing GTCC disposal alternatives. A Record of Decision will be issued once Congress acts.

EM has updated the *Radioactive Material Transportation Practices Manual 460.2-1* revising sections on security, TRU waste shipments, and OCRWM shipments, Ms. McNeil reported. Input was provided by the TEC Security Topic Group. The *Manual* will be finalized early January 2007.

Five cross-country shipments and one West Coast shipment of foreign research reactor fuel have been completed, according to Ms. McNeil. About 1,500 assemblies are now in storage at INL. Plans are underway for a fall 2006 shipment. In 2005, EM made a total of 22,103 shipments of all types of materials/waste, and is projected to complete 15,700 in 2006. Although down slightly in 2006, because of anticipated processing and disposition efforts, shipments are expected to rise in 2007. In 2005, there were 17 transportation events and 25 in 2006. All events are reported including those occurring on DOE sites.

The Transportation Emergency Preparedness Program (TEPP) trained over 1200 students in 2006 using the Modular Emergency Response Radiological Transportation Training course. Refresher training through FEMA's Independent Study program is available. The TEPP program has also developed an on-line needs assessment. A report is automatically generated identifying a jurisdiction's strengths and areas of needed improvement. TEPP has several exercises planned before the end of the year. TEPP is also assisting FEMA in revising a hospital training program and is working with the Department of Homeland Security to identify redundancies between MERRTT training and the Homeland Defense Equipment Reuse Program. The HDER program will build off of the MERRTT Modules. Ms. McNeil observed that this recognized the quality of the MERRTT training.

Working with TransCaer, a community outreach project of the hazardous materials transportation industry, TEPP will conduct Whistle Stop Tours in Maryland, Pennsylvania and Ohio. The stops will present one-hour radiological training session to create an awareness of the training and planning tools that are available to response organizations.

Comments and Questions

One participant inquired about references made at an NRC meeting regarding an Initial Handling Facility being proposed at the repository work and wanted to know if this meant that there would be a priority given to DOE waste. The same participant wanted to know about the number of shipments of DOE waste and the number of canisters that would be needed. McNeil indicated that she would have to research those questions.

A participant from Ohio noted that the Mound facility is not complete. Ms. McNeil clarified that Silos 1 and 2 were outside of the contract and not completed.

Part II – Plenary Session (September 13, 2006)

Plenary II – Modular Emergency Response Radiological Transportation Training (MERRTT) – Online Training

“MERRTT Online” is a joint project of Argonne National Laboratory (ANL), the University of Illinois Chicago, Northern Illinois University, and the U.S. DOE. Chief William Ruting, ANL, and Joe DiMatteo, DOE Chicago Field Office, made a joint presentation on the concept (a copy of their slides will be loaded on the TEC Website with the final meeting summary). The first portion of the presentation discussed the advantages and disadvantages of developing an online training module versus a facilitator-based training module. The online training material has been prioritized to cover core competencies online, and developers have considered the impact of slower speed computers used by some trainees. The goal is to provide the training to responders at zero cost to them. An exploratory workshop was held at ANL, in which first responders were asked to rank MERRTT related modules. Feedback received from initial testing of the training program is summarized in the slide presentation. Initial conclusions include:

- Online training concept shows promise.
- Development of the program needs additional time and resources before deployment.
- A project plan that details clear roles and responsibilities needs to be developed.
- Additional partners and resources in the project would be helpful.

The next steps include determining the viability of the online concept; making the training a better “experience;” refining the hands-on component; possible issuance of certificates based on existing MERRTT approvals; obtaining Transportation Emergency Preparedness Program (TEPP) approval; and increasing awareness and visibility of the concept.

Comments and Questions

One audience member stated she has been on both sides of the training issue and that doing training online alone is not feasible. However, she said, MERRTT training is a good combination of training methodologies. She asked if DOE has considered working with the National Labs on this training, to which Mr. DiMatteo replied that identifying additional resources is critical to the success of the program and Mr. Ruting replied the intent is to share program expenses with other DOE assets. The audience also suggested DOE make it possible to turn the voice over off during the training. Another participant asked if this particular training is being done under the auspices of DOE TEPP. The presenters said Ella McNeil (TEPP program manager) is aware of the effort. Other participants noted that customization for states is necessary and suggested that, by partnering with the states, DOE will get a better program.

Plenary III – Part 1: The National Academies Spent Nuclear Fuel Transportation Study

The National Academies

Dr. Kevin Crowley, Director, Nuclear and Radiation Studies Board of the National Academies' National Research Council, presented an overview, contents, and findings of the study, *Going the Distance? The Safe Transport of Spent Nuclear Fuel and High-Level Radioactive Waste in the United States*. Initiated by the National Academies (NAS), the study's original task was to assess the risks of spent nuclear fuel (SNF) and high-level radioactive waste (HLW) transport in the U.S. The study also focused on identifying key technical and societal concerns for SNF/HLW transport, now, and in the future, and was tasked with recommending action to address these concerns. The study was expanded to incorporate a congressionally mandated assessment of how DOE selects routes for shipments of domestic and foreign research reactor SNF and recommend improvements. Several Federal agencies and the Electric Power Research Institute helped to sponsor the study.

Dr. Crowley reported that the committee was composed of individuals with direct as well as indirect technical expertise in SNF transportation. Disciplines represented on the committee included health physics, risk and decision analysis, transport operations, public participation and risk perception, regulatory and nuclear security. The federal sponsors saw the importance of expertise in social sciences, Dr. Crowley noted. Many of the committee's discussions centered on the significance of societal concerns.

After many spirited discussions, the committee arrived at several "bottom line" messages, according to Dr. Crowley. First, the committee could identify no fundamental technical barriers to the safe transport of SNF and HLW in the U.S. However, there are a number of social and institutional challenges to the successful initial implementation of large-quantity shipping programs.

Second, malevolent acts against SNF/HLW shipments are a major technical and societal concern. While safety was a major concern, after September 11, 2001, security also became a major concern of many of the individuals and organizations following this study. However, the committee was unable to address security issues because the information needed to do so was classified. Consequently, the committee recommended that an independent examination of transportation security be carried out prior to the commencement of large-quantity shipments.

Regarding package performance, the committee concluded that current international standards and U.S. regulations are adequate to ensure package containment effectiveness over a wide array of transport conditions. However, there may be a very small number of extreme accident conditions involving very long duration fires that could compromise containment effectiveness. The committee recommended that the Nuclear Regulatory Commission (NRC) undertake additional analyses of very long-duration fire scenarios

that bound expected real-world accident conditions. The committee also recommended that NRC implement operational controls and restrictions as necessary to reduce the chances that such conditions would occur.

Dr. Crowley reported that the committee strongly endorsed full-scale testing to determine how packages will perform under both regulatory and credible extra-regulatory conditions. The study recommended that full-scale testing continue to be used as part of integrated testing programs to validate package performance. Testing of casks to deliberately cause their destruction should not be required.

The committee concluded that the radiological health and safety risks of SNF/HLW transport were well understood and generally low. The only potential exception was releases from extreme accidents involving very long-duration fires. However, the committee noted that likelihood of such extreme accidents appears to be very small, and their occurrence and consequences could be further reduced through relatively simple operational controls and restrictions.

“Social risks” for SNF/HLW transportation pose important challenges to those who implement transportation programs, according to the committee. Dr. Crowley elaborated that social risks influence many decisions, such as where people buy houses (and property values) and send their children to school. While hard to measure, social risks may be more critical than technical issues for transportation programs. The committee recommended that transportation planners take early and proactive steps to collect advice about managing social risks. To this end, the committee recommended that DOE create a risk advisory group to obtain advice on risk characterization, communication and management.

The study also presented information about comparative risks and provides quantitative comparisons of radiological risks for normal and accident conditions of SNF transport, Dr. Crowley reported. The expected fatalities resulting from extreme accidents is several orders of magnitude lower for spent fuel than for other hazardous materials such as chlorine, propane and methanol, according to the study.

As an additional task, the committee examined research reactor SNF routing (to Savannah River and Idaho National Laboratories) and found that DOE’s procedures for selecting routes within the U.S. for shipments appear to be adequate and reasonable. Department of Transportation (DOT) routing regulations are a satisfactory means of ensuring safe transportation, but shippers should actively and systematically consult with states and tribes along potential routes. States should also follow DOT route designation procedures.

The committee’s recommendations focused primarily on transportation of SNF and HLW to Yucca Mountain, but suggested that these could also apply to other large-quantity shipping programs such as Private Fuel Storage and any interim storage facilities. Dr. Crowley noted that the committee did not attempt to undertake a detailed programmatic review of the DOE Yucca Mountain transportation program.

Dr. Crowley reported that the committee made several recommendations on measures to improve transportation of SNF/HLW in the U.S. He related the committee's strong endorsement of DOE's decisions to ship SNF/HLW to the repository by mostly rail using dedicated trains. The committee recommended that DOE fully implement these decisions before commencing large-quantity shipments to the repository. The Department should also look at the feasibility of further reducing the need for cross-country truck shipments.

Other recommendations include making public the preferred highway and rail shipping routes DOE plans to use as soon as practicable to support state, tribal and local planning. In selecting routes, the committee recommended that DOE follow the practices of the research reactor SNF transport program of involving states and tribes. The committee recommended that DOE negotiate with utilities to ship older fuel first to the repository. One approach would be to ship fuel from closed reactors in a pilot effort. Federal agencies should come up with consistent, reasonable criteria for protecting sensitive information about shipments; however, they should commit to the open sharing of information that does not require protection. The committee also addressed options for changing the organizational structure of OCRWM.

Commentary Panel

Office of Logistics Management

Mr. Gary Lanthrum related that he had read the entire report and was encouraged by the major finding that there were "no fundamental technical barriers" to the safe transport of SNF. The study did not find any "red flags," he noted.

The Office of Logistics Management is proactively addressing a number of items in the NAS study as he had described in his earlier presentation such as benchmarking and best practices studies. OLM also is engaging stakeholders to develop route criteria that will lead to identification of suites of routes. Campaign specific routes will be identified later and protected appropriately.

He related that a major priority of OLM, completion of a Nevada rail line, is essential to implement the "mostly rail" decision. Regarding the need to proactively assess and manage "social risks," OLM may establish a risk/risk perception topic group under the aegis of TEC to provide feedback on risk characterization and improved communication.

OLM has proposed a pilot to test implementation of the 180(c) program in the FY 2007 budget. This is planned to be hands-on and include exercises to test the system under normal and accident conditions. Mr. Lanthrum conveyed that OLM is taking the recommendations of the study to heart and asked TEC participants for their feedback.

U.S. Nuclear Regulatory Commission (NRC)

Mr. Earl Easton of NRC's Spent Fuel Project Office explained that his agency is responsible for approving shipping packages. If shipments are undertaken by utilities, NRC will oversee security. When DOE takes title to SNF, the DOE would be responsible for security.

Mr. Easton indicated that it was important to note that current regulations are adequate and described the series of tests that a shipping container must undergo. He also related that NRC periodically assesses the effectiveness of cask approval standards in addressing real world accidents.

NRC is undertaking additional accident case studies to increase their understanding of cask performance in tunnel fires such as the Caldecott (CA) and Baltimore tunnel fires. However, he noted that the risk from severe fire was very low. Based on NRC's preliminary assessment (using National Transportation Safety Board reports) from 1975 through 2005, there were only five accidents during the rail shipment of hazardous materials that involved "severe" fires, and only one of these occurred in a tunnel. He went on to explain that in all of these accidents, a spent fuel cask would not have been in a fully engulfing long-term fire because of the placement of the cask, nature of the combustible material, nature of the rail bed and ground, and actions taken during emergency response. Mr. Easton provided examples of several train derailments and fires and described the results of "what if" scenarios had the trains included a car carrying SNF.

Simple operational controls can make already low risks even lower by using dedicated trains. Mr. Easton also related that the recently issued AAR Circular OT-55, no pass rule in tunnels, would also reduce risk.

Regarding the testing of casks, NRC agrees that full-scale testing has and will continue to be a valuable tool in understanding and demonstrating cask performance. He also related that NRC is committed to going forward with the Package Performance Study.

The focus on security is not a new issue for NRC, Mr. Easton noted. It has been a continual focus since the late 1970s. Comprehensive security assessments of cask performance completed after 9-11, basically confirms earlier work. Additional security measures were imposed after 9-11, to meet today's threat, he added. Robust safety standards result in robust cask designs that perform well in both severe accidents and credible threat environments.

In closing, he reiterated the overall conclusion of the NAS study is that spent fuel is and can be shipped safely with very low risk to the public. The NRC will continue to reassess the effectiveness of its safety standards to reflect changes in package design and accident statistics.

Nuclear Waste Technical Review Board

Dr. Mark Abkowitz reviewed the mission and charter of the Nuclear Waste Technical Review Board (NWTRB) which was established by Congress to evaluate DOE's technical activities related to disposal and management of SNF and HLW. He noted that the Board members are part-time, but supported by professional staff. The Board works in panels to address all pre-closure aspects of repository operations including transportation.

Dr. Abkowitz complimented the NAS committee on "doing their homework." He noted that the Transportation Program has interdependencies with waste acceptance, and some aspects will be beyond the control of transportation. The NWTRB has also engaged in fact-finding and agrees with most of the significant findings of the NAS study. For example, the NWTRB strongly recommends that an external advisory group be formed to assist DOE on waste management design, construction and operation. DOE should engage engineering and design firms, cask manufacturers, and utilities as well as government officials. The NAS study is a good model for engaging stakeholders.

The NWTRB emphasized the need to engage local officials in selecting transportation routes and determining emergency response needs. DOE should not rely only on the State Regional Groups, as a go-between. DOE should deal directly with the local fire chief and tribal officials.

In implementing the 180(c) emergency grant program, DOE should use a systems approach since not all accidents or their locations will be alike. Another challenge for DOE will be verifying the adequacy of emergency response coverage along potential routes.

The NWTRB also agrees with the concept of starting slow and that DOE should "walk before it runs." Starting with a pilot program to ship SNF from shut down reactors and using a phased approach to system operation would be preferred. DOE should discuss this with utilities to look at ways to bundle plants with similar practices into the same acceptance phase.

Dr. Abkowitz related that the NWTRB thought that the decision to use the Caliente Corridor was premature, and that a comparative risk analysis of alternative rail corridors should have been performed. However, it is good to look at the Mina Route now. Contingency plans should be developed by DOE for the use of legal-weight and heavy haul trucking because dependency on rail is not practical, especially in the early years of repository operation.

DOE should conduct site visits to assess existing transportation infrastructure around nuclear plant sites for access as well as the capabilities for loading and unloading. The short-line railroads near plant sites may not be up to the same standards as mainlines. DOE may want to look at the benefits of paying for nuclear plant crane capacity upgrades which would allow for wider use of the heavy train casks.

While the rationale supporting use of the TAD canister—handling SNF only once—is good, it will not be simple to implement. DOE should look at this proposal systematically especially since much SNF is already in dry storage. Dr. Abkowitz noted that the success of TADs will depend on many factors.

Questions and Comments

One participant complimented the NAS on the study. Nevada sees risk differently than the NAS committee. While some might think that SNF transport is riskier than the study indicated, Nevada would settle on the NAS recommendations.

Mr. Earl Easton of NRC responded to a question about endorsing the study indicating that the agency had moved very quickly to address many of the recommendations. Gary Lanthrum indicated that while OLM cannot endorse the study, his office was taking action on many of the recommendations such as taking a more in depth look at social risks. One approach would be to establish a TEC Topic Group.

Dr. Crowley clarified that while the NAS report indicated that risks involving SNF transport were low, it does not define what an acceptable risk level should be. That is a normative judgment that cannot be answered by science.

Plenary III – Part 2: The National Academies Spent Nuclear Fuel Transportation Study

Abbreviated background information on the NAS study: the study was initiated internally, not requested by Congress. The social factors in the transport of SNF were considered as having high importance by the committee in the development of this study. The study resolved that there are no fundamental technical barriers to preclude the shipment of SNF but there are social and institutional challenges to be resolved. Some conclusions of the study are: package performance met adequate standards, transport risks (radiological health and safety risks) are well understood, on social risks the study recommends the creation of a Risk Advisory Group, and in research reactor SNF routing, the DOE's procedures are adequate.

State Regional Groups

Tim Runyon, Council of State Governments-Midwestern Office presented the State Regional Group's (SRGs) perspective of the study, *Going the Distance? The Safe Transport of Spent Nuclear Fuel and High-Level Radioactive Waste in the United States*. An overview of their analysis indicated that the study was well organized and comprehensive. Within the areas of emphasis, the assumptions are valid if viewed within the context of the complete study. Mr. Runyon identified that a principal finding of the study indicated that there were no technical barriers to transporting spent nuclear fuel (SNF) and high-level radioactive waste (HLW).

The study's findings were based on the Nuclear Waste Policy Act and current regulatory structure. Mr. Runyon noted that this study assumes that there will be broad participation and input from States, Tribes, and the local government. He also suggested that the regulatory framework may need to be revised (an evolving document) to include new regulations, e.g. S-2589, a bill to enhance the management and disposal of SNF and HLW, to ensure protection of public health and safety, to ensure the territorial integrity and security of the repository at Yucca Mountain, and for other purposes. New regulations such as these change the regulatory landscape and the assumptions that they are based on.

The SRGs as a whole agree that there needs to be an independent non-government group overseeing the project. The SRGs agree with the routing approach for transportation but were not in agreement on the rail scenario suggested. The SRGs are confused on the terminology of "suite of routes" and are seeking further guidance from the Department of Energy. The SRGs agree that the national suites of routes need to be made public as soon as possible in order for the stakeholders to be involved in developing the regional suites of routes. Mr. Runyon indicated the SRGs were in agreement with the recommendation to use dedicated trains for SNF and HLW shipments.

In regard to Section 180(c), the SRGs thought it may be a bit premature to begin executing emergency response capabilities if the repository is not opening in the near future but agreed that planning for 180(c) should continue. Mr. Runyon noted that he was disappointed that the NAS did not take the opportunity to expand 180(c) to include operations, tracking, and inspections and that individual states have regional-specific issues with the NAS study.

The SRGs provided their own recommendation that the Nuclear Regulatory Commission (NRC) should regulate the shipments of SNF and HLW

Electric Power Research Institute

The Electric Power Research Institute (EPRI) is one of the largest research and development consortia in the world. EPRI develops cost effective technology for the safe and environmentally-friendly generation of electricity.

Dr. John Kessler, EPRI, presented a key industry stakeholder's perspective of the NAS report. A key point that Dr. Kessler addressed is that the cask designs are designed with safety as a major factor. He went on to note that the commercial industry has significant transportation experience and can provide lessons to DOE. In addition, comprehensive and uniform transport regulations build in transport safety.

EPRI co-funded the original NAS study but was not involved in the NAS panel deliberations or the NAS report. EPRI arranged for a number of stakeholders (subject matter experts and regulators) to provide input into the study. EPRI has developed a

summary of the NAS report that includes comments from EPRI which can be downloaded from the internet, <http://www.epriweb.com/public/0000000000010075.pdf>.

EPRI addressed key findings of the NAS report that they agreed with including: There are no technical barriers to the safe transportation of used nuclear fuel – EPRI response - SNF cask designs and operating practices result in the safe transportation of spent fuel.

An independent review of the security of SNF transportation should be executed prior to the commencement of large-quantity shipments - EPRI response – independent spent fuel security studies have already been completed (NRC, DOE, and EPRI have all conducted studies).

Additional testing and/or operational controls for extreme accident scenarios involving fires - EPRI response – the NRC has already addressed this issue. No additional testing or controls are necessary. If additional testing and/or operational controls are considered, the relative importance and probability should be taken into account.

Cask design and testing is adequate for shipment of spent fuel and does not require full scale testing - EPRI response – Agrees.

Ship older fuel first. Radiation is less on older fuel. EPRI response – there is more handling (repackaging) with older fuel with increased potential for incidents for greater worker exposure. The transportation risks for old or new SNF are miniscule but the focus should be on health and safety rather than perceived risks (societal risks), with the difficulty of quantifying those risks.

Begin training emergency responders very early into the process. EPRI response – it is best to wait for shipments due to staff turnover.

There are two types of risks – societal and radiological health and safety - EPRI response – it is best to consider both types of risk.

U.S. Transport Council

Mr. David Bennett, Tri-State Motor Transit Company (currently handles the WIPP shipments), presented a key industry stakeholder’s perspective of the NAS report. A key comment regarding the NAS study that Mr. Bennett noted was that the study documented and reinforced information the industry already knew and were currently implementing in their on-going radiological waste shipment campaigns.

Mr. David Blee, Executive Director, U.S. Transport Council, also presented his thoughts on the NAS Study. He commented that the OCRWM program needs to move forward. He explained the robustness of the shipping package (cask) and the history of the safe transport of SNF fuel. He also suggested that there needs to be more involvement from

stakeholders on emergency response activities. In addition, he noted that transportation needs to become a higher priority within the program.

A key finding from the NAS report that they agreed with was that transportation casks are safe. An area that they disagreed with the NAS report was on truck transportation. He noted that the report was unnecessarily harsh on truck transport. Mr. Blee provided examples of where truck transport has been very successful, including Japan's reliance on heavy haul. In addition, Mr. Blee informed the group that he was not convinced that a security study was needed.

Tribal Perspective, Shoshone-Bannock Tribe

Mr. Willie Preacher presented a Tribe's perspective of the NAS report. A key issue with the study was that the NAS study failed to mention Tribes sufficiently throughout the report. Mr. Preacher noted that the study referenced affected Tribes so he asked what do Tribes do to affect the transportation of nuclear waste? Mr. Preacher suggested NAS develop a report specific to Tribal interactions with DOE transportation. He feels that NAS missed an opportunity to speak directly with the affected Tribes.

Mr. Preacher stressed that DOE should conduct one-on-one discussions with all the tribes impacted by the transport of SNF fuel including those not in attendance at TEC meetings. Mr. Preacher also noted that DOE should recognize the physical and spiritual aboriginal treaty areas, Tribal status, and cultural issues in the movement of SNF through the sovereign nations.

Questions and Comments

One participant provided the comment that the NAS report caused Nevada to assess whether full scale cask testing is necessary. Nevada ultimately changed its position, recommending full cask testing should be mandatory, which coincides with the NAS study. In addition the participant noted that the state of Nevada did not take a position on the NAS study findings.

A participant noted that the NAS study lost an opportunity to better define social risks in the report. How do you balance the societal risks versus the radiological health and safety risks? What are the comparisons and baselines? Mr. Kessler responded by stating that the definition isn't comparable to health risk but the committee agreed that transportation needs to manage the risk.

A participant agreed with comments made by Mr. Runyon and Mr. Kessler that first responders don't need to be trained immediately, that this can occur down the road, closer to actual shipping date. Regarding nuclear materials shipped in Special packaging – only other hazardous materials are shipped in similar containers (i.e., chemical tank cars). Regarding potential accidents and potential radiological exposure, it was recommended that lesson learned from past and current WIPP shipments be employed.

A participant noted that there is a stigma effect on societal risk of transporting SNF. The participant also recommended training early on in the process, that training early is important because first responders can reduce societal risk once they are comfortable and educated on the training. They in turn can relay this information to other stakeholders.

Plenary IV – Routing Discussion

Moderated by Jay Jones, OCRWM/OLM

Transportation Routing Process

Mr. Jones started the routing discussion with an overview of the *Office of Civilian Radioactive Waste Management's Strategic Plan for the Safe Transportation of Spent Nuclear Fuel and High-Level Radioactive Waste to Yucca Mountain; A guide to Stakeholder Interactions*, issued November 2003. The transportation planning process is designed to meet program goals and address stakeholder concerns. Mr. Jones stressed that issues will be addressed and resolved, one of which is the identification of a suite of routes. At this time, it is uncertain how many routes will be identified.

The proposed approach for this routing process will be:

- Issue Route Development Plan
- Establish Routing Topic Group to address the issue
 - Membership for this topic group will be comprised of program stakeholders (i.e., representatives from the TEC Working Group member organizations)
 - Topic group will have monthly conference calls and meetings as needed
 - Topic group will propose near term identification of routing criteria
- Review criteria with topic group and TEC membership
- Review previous shipping campaigns
- Identify cognizant oversight organizations
- Determine Federal/Industry guidance and regulatory requirements
- Explore routing principles
- Conduct routing assessment
- Review SRGs' study projects
- Develop national suite of routes

The routing principles DOE uses for OCRWM shipments include:

- Operational, public and radiological safety
- Regulatory compliance (Federal, state, Tribal and local regulations)
- Security and operational flexibility
- Operational efficiency and utility
- Commercial practicability
- Routing Assessment tools (TRAGIS and RADTRAN)

A proposed schedule for this routing analysis was proposed by Mr. Jones. This schedule is a best achievable case if DOE receives full funding.

The proposed schedule is:

Routing Process Plan	September 2006
Formation of Routing Topic Group	October 2006
Initiate discussions with carriers	November 2006
Establish draft routing criteria	February 2007
Review and revise criteria based on stakeholder input	April 2007
Finalize routing criteria	June 2007
Review and analyze candidate routes	October 2007
Identify national suite of routes	December 2007

Midwestern Route Identification Project

Sarah Wochos, Council of State Governments-Midwest

Sarah Wochos presented an overview of the CSG-MW's Route Identification Project. The CSG/MW has been working on this project for the last two years. The project work was delegated to smaller workgroups in the Midwest region. The approach was regional because the states believed they would have a better indication of which routes could be used during the campaign. The goal was to develop a suite of highway and rail routes throughout the region that the Midwestern states found acceptable as the starting point for the national route selection discussion. Originally, CSG/MW thought all the regions would conduct routes identification projects. However, the Northeast is still in the beginning stages of their route identification project and the West and the South have chosen not to pursue the project and instead will wait for DOE to propose routes.

The methodology for this project was based on primary factors from US DOT's *Guidelines for Selecting Preferred Highway Routes for Highway Controlled Shipments of Radioactive Materials*. The primary factors are divided into three areas: risk to the public during normal transport, risk to the public in the event of an accidental release, and the economic risk to the area in the event of an accidental release. The workgroup for this project decided to weight each of these factors equally in the analysis and use the factors for both highway and rail routes.

Secondary factors were used to evaluate routes if comparison using the primary factors did not distinguish a clear preference. These factors were developed by the workgroup and weighted according to Midwestern policy. These factors included urban areas traversed, accident rates along the route, road or track quality, and traffic density along the route. One of the factors not included was time in transit since this factor was included in each of the primary factors with the use of length and speed variables.

Potential routes were generated using DOE's Transportation Routing Analysis Geographic Information System (TRAGIS). All reasonable routes were included in the analysis. Routes that directed shipments eastward, far to the north or far south were not included. In addition, judgments were made to exclude routes that had excessive carrier changes and therefore seemed operationally undesirable.

The results from this analysis produced a suite of routes that met regional criteria for ensuring the selection of safer routes. These routes are not "accepted" or "preferred" routes, and does not necessarily reflect the routes that DOE will ultimately use for the national route. The CGS/MW hopes that the suite of routes will be a primary input into the development of the national suite of routes, along with other stakeholder input and operational considerations.

For the future, the Midwest would like DOE to conduct routing analyses on a regional basis and then combine the four analyses together for discussion. In addition, actions that the Midwest would like to see DOE support for a successful routing analysis include:

- Complete update of TRAGIS railroad information
- Decide on the number of routes that will be accepted
- Develop decision model
- Check the operational viability with railroad operations representatives
- Use Sandia Logistics Model to see if route suite is logistically viable
- Publish maps and seek public comment

Northeast Task Force Rail Work

Conrad Smith and Cort Richardson- Council of State Governments-Eastern Regional Conference

Mr. Smith and Mr. Richardson presented the Northeast's approach for northeast routing work. Their goal was to present a set of finalists as routes and explain them as understandable choices. The routes shown in their presentation are not the best approved or recommended routes but illustrate possible routes using practical considerations. Over the past two years, the northeast has studied a plan for barge shipment, held task force discussions about routing criteria, and established a committee that has held meetings to discuss possible routes.

In the Northeast, there are seventeen commercial nuclear sites with most of the Northeast spent nuclear fuel being generated in Pennsylvania, New York and New Jersey. All land routes from the Northeast go through New York and Pennsylvania with 57% of the Northeast spent nuclear fuel. Compared to West, Midwest and South, the Northeast is small in area and quite rural. Because of the major metropolitan areas from Boston to Washington DC, there is not much choice for the first part of many routes to avoid populated areas.

Based upon the Task Force discussions and Committee's work, the basic criteria established for Northeast routes include:

- Avoid Eastern metropolitan corridor
- Use good track and minimize travel time
- Use consolidated routes (routes used by two or more sites)

Practical Considerations that were applied for route selection include:

- Railroad company interchanges/crew changes/refueling places
- Bridges
- Run-arounds
- Track class quality/dual-single track
- Clearance, load bearing, etc.
- Dark territory versus signalized

Each possible northeast route for consideration was divided into three "legs." The first leg is from a plant to a railroad. The second leg is from the first leg and then to a consolidated route. The third leg is along a consolidated route to a Northeastern exit. For each of these legs, there is often only one choice due to the difficulty in finding more than one leg that met the basics criteria and all of the practical considerations.

To date, the Northeast Work Group has prepared a Draft Route Document for each Northeast commercial spent nuclear fuel site containing the following:

- 1st leg descriptions with notes on Private , Shortline or Heavy Haul work needed
- 2nd leg descriptions which may be more than one with notes on choices made and railroad conditions
- 3rd leg descriptions which includes at least two possible consolidate routes for both Western and Southern exits

The next steps for the Northeast Routing analysis includes:

- Expand route options to satisfy DOE suite of routes goals
- Consider intermodal issues
- Integrate routing work with barge study results
- Consult with states, tribes, utilities, regions, railroads
- Determine how to most effectively present the characterized routes to aid the eventual selection process
- Final result being to explain northeast routing methodologies, garner feedback, document findings and report results

Routing: A Tribal Perspective

Willie Preacher, Shoshone-Bannock Tribe

Mr. Preacher presented a historical overview of tribes in the United States. Today, the number of tribes in the United States has been greatly reduced and their populations are mainly concentrated west of the Mississippi River.

Independent tribes consist of the following:

- Treaty right tribes
- State recognized tribes
- Bands and colonies
- Reservations
- Aboriginal areas
- Non-Federally recognized tribes

Even though many tribes reside on reservations, their original aboriginal areas outside their reservations are still considered sacred. Areas specific to tribes include land base protection areas, spiritual areas, sacred areas, treaty rights, ecosystem protection areas, and traditional use areas. Mr. Preacher emphasized that all tribes are not the same, however, all tribes protect the environment regardless of their individual tribal beliefs.

Mr. Preacher requested that DOE do the following:

- Identify the Tribes affected by the route corridor
- Inform and educate the tribes regarding the types of shipments anticipated
- Invite tribes to the TEC Working group meetings
- Solicit tribal input

For DOE, Mr. Preacher urged that early and continuous communication be maintained with the tribes and the American Indian Policy be followed. In addition, DOE should respect the tribes' comments and concerns, and understand what the tribes are protecting. Mr. Preacher invited DOE to visit their reservations to gain a better understanding of their culture and beliefs.

Burlington Northern Santa Fe Corporation

John Keigley, Director, Unit Train Operations, BNSF

Patrick Brady, Assistant Director, Hazardous Materials, BNSF

Mr. Keigley gave a brief overview of railroad security in the United States. The Strategic Rail Corridor Network (STRACNET) consists of 30,000 miles of interconnected network. Railroads transported 98% of the ammunition used by the United States in the Iraq War. Seven Class I railroads account for most of the U.S. rail traffic. There are hundreds of Non Class I railroads.

In regards to security, the railroads created a comprehensive security plan immediately after September 11, 2001. This plan is put into action every day throughout the rail network, at every level of operation.

One initiative that the railroads are working on is the standardization and process of alert trains. An alert train carries one loaded car or more of a poison inhalation hazard, spent nuclear fuel, flammable compressed gas, military munitions or other hazardous materials identified in Appendix H. Other railroad tents include limiting the number of carriers and interchanges, limiting the miles (shortest route), and maximizing the use of FRA Track Class 4 through entire route (freight operating at 60 mph).

Mr. Brady presented an overview of the BNSF V-Risk Route Model. This model is still in development and is designed to do the following:

- Analyze factors beyond the railroad's right of way
- Provide analysis of six consequence metrics
- Permit the user to weight the consequence metric outcomes
- Facilitate risk reduction discussions internally and with shippers

Features of the Risk Route Model include:

- Output can be customized
- Output can be weighted
- GIS functionality/graphic representation
- Selection criteria can be used to determine
 - All possible routes
 - Best route based on selected criteria
 - Best route based on weighted multiple variables

Perspectives on Routing

David Blee, United States Transport Council

Mr. Blee provided a brief overview of the US Transport Council's perspective on routing. Mr. Blee stated that the US Transport Council welcomes the focus on routing and believes the routing discussion can be a catalyst for a host of transportation-related initiatives. The US Transport Council agrees with the National Academies' conclusion that DOE's procedures for selecting routes are "adequate and reasonable."

Questions and Comments from Audience

Due to the need to adhere to the agenda timeframe for the remainder of the day, no questions were asked by the audience.

Day 2: September 14, 2006

Tribal Topic Group

The meeting was led by Jay Jones (DOE/OCRWM). Following a brief welcome by Jay, Dan King (Oneida Nation and meeting site host) delivered an opening prayer.

Discussions proceeded as follows:

DOE Headquarters Tribal Activities Update (Jay Jones)

- Kristen Ellis has temporarily replaced Steve Grey as the Director of Indian Affairs in the Office of Congressional and Intergovernmental Affairs. She can be reached by phone at 202-586-5810 or e-mail (kristen.ellis@hq.doe.gov).
- Jozette Booth (phone: 202-586-7292/e-mail: jozette.booth@hq.doe.gov) is the OCRWM representative to the recently formed DOE Tribal Steering Committee, which meets monthly to ensure consistency of Indian-related issues throughout the DOE programs.
- A draft Report to Congress on Energy Policy Act of 2005 Section 1813 has been issued. Tribal Topic Group members were e-mailed a copy of the report and related reading materials prior to the TEC meeting.
- DOE's Office of Environmental Management (EM) has drafted an Implementation Framework document for the DOE "Tribal Government Policy." Willie Preacher (Shoshone-Bannock Tribes and member of this Topic Group) participated in preparation and review of the draft and provided his perspective on the document.
- Michael Richard is the DOE representative on the White House Indian Affairs Executive Working Group.

OCRWM Activities Update (Jay Jones)

- Thirty nine Tribes have been identified along potential transportation routes to Yucca Mountain. A letter introducing the OCRWM program was sent to those Tribes in March 2005, and the letter was followed up with phone calls to each Tribe. Jay Jones has visited seven of the Tribes thus far.
- Jay will be in Albuquerque in November and hopes to be able to meet with some of the Pueblos and the Navajo Nation. Wilda Portner (support contractor) will help coordinate.
- OCRWM is still pursuing a workshop with the 39 Tribes sometime next year to discuss transportation and 180(c) activities.
- OCRWM has a new Tribal intern, who will be helping Jay with Tribal outreach.
- Jay plans to attend the next State and Tribal Government Working Group (STGWG) meeting in November.
- A new TEC Routing Topic Group is being formed; Tribal representatives are encouraged to participate. Tasks for the group will likely include route selection criteria, identification of a national suite of highway and rail routes, and review of routes generated by computer models, including the identification of specific areas to avoid. OCRWM staff will be sending e-mails and making phone calls about this group in the next few weeks.

DOE Nevada Update (Bob Lupton, OCRWM Office of External Affairs, and Vicki Best, support contractor)

- Tribes comprising the Consolidated Group of Tribes and Organizations (CGTO) of the Yucca Mountain Project's Native American Interaction Program, and who are identified by OCRWM Headquarters as part of the 39 Tribes along potential transportation routes to Yucca Mountain are encouraged to continue involvement in transportation issues related to Yucca Mountain.
- The American Indian Writers Subgroup (AIWS) visited Yucca Mountain in April. Areas of interest to the CGTO Tribes represented included cultural resource surveys, plans for the onsite portion of the rail line leading to Yucca Mountain, and proposed site infrastructure upgrades in support of human health and safety.

National Conference of State Legislatures (NCSL) Update (Christina Nelson)

- Andrea Wilkins (NCSL) is the project lead for the State Tribal Relations Project.
- Since 1999, NCSL has had a partnership with the National Congress of American Indians (NCAI) to benefit policy development and understanding between State legislators and Tribal Leaders, known as the State-Tribal Relations Project. The Project Advisory Council includes State and Tribal representatives.
- NCSL has a State legislation database dealing with Tribal issues.
- NCSL and NCAI staff the National Caucus of Native American State Legislators (NCNASL). Comprised of 56 legislators from 13 States, this group is broken into committees. Bob Fry (NCSL) chairs the Environmental Committee. The NCNASL had a kick-off event at the National Museum for the American Indian in Washington, DC, in April 2006.
- NCSL also staffs State and Tribal Government Working Group (STGWG)
- NCSL is a valuable organization that OCRWM can use to assist in coordination with Tribes in its discussion of transportation and other high-level waste and spent nuclear fuel issues.

Questions from Tribal Topic Group on NCSL:

- How is the organization funded? Answer: Through a Kellogg Foundation grant and other funding sources. OCRWM also has a cooperative agreement with NCSL to support a State legislator working group on high-level waste issues. Christina Nelson can be contacted by phone at 303-856-1519 or e-mail at christina.nelson@ncsl.org.

Tribal Updates

Jay opened the floor to the Tribal Representatives for comments and questions.

- One representative asked how sovereign nations can obtain the "affected status." Jay responded that the U.S. Department of Interior (DOI) makes those determinations. He also said that Section 180(c) funds will be provided to Tribes through whose reservation OCRWM makes shipments to Yucca Mountain and that the "affected status" discussed in the Nuclear Waste Policy Act (the Act) is a separate legal issue and does not determine eligibility for Section 180(c). When questioned on the timeframe, Corinne Macaluso (OCRWM) referred the participants to the discussion on 180(c) scheduled later in the Topic Group agenda. Bob Lupton stressed the difference between "affected Tribe" status pursuant to the Act and eligibility for

Section 180(c) funds under the Act. Bob Halstead, State of Nevada, said that because the Tribes are as affected as the Nevada counties, he would pursue a recommendation with his management regarding “affected Tribes” in the upcoming Draft Environmental Impact Statement on Nevada Rail. Another Tribal member reminded the audience that the DOE “Indian Policy” uses the term “affected status,” and questioned how certain Tribes could not be “affected” when adjacent cities, counties and municipalities are included in OCRWM’s outreach efforts. He Stated this will be an issue brought up at the next STGWG meeting.

- Another Tribal representative recommended OCRWM develop a Tribal involvement plan detailing how DOE plans to work with the “39 Tribes” and a regional approach for Tribal meetings. A document or matrix listing resolutions and legal positions would also help gauge the schedule of activities for the next 6 months and assess the success of the Tribal Topic Group. Jay replied that OCRWM does have an internal report that provides a running account of Tribal interactions including individual contacts and meetings.

EM Implementation Framework Document (Jay Jones, OCRWM, and Willie Preacher, Shoshone-Bannock Tribes)

- Brandt Petrasek (DOE/EM) is the point-of-contact for the EM Implementation Framework, which defines how the DOE Indian Policy will be implemented by the EM program. OCRWM may want to develop a similar document based on the framework.
- Willie Preacher has been involved in preparation and review of the document and offered his perspective. He feels DOE is not living up to the spirit of the Indian Policy. They are not meeting with Tribes and failed to communicate/consult with the Shoshone-Bannock Tribes before giving away Tribal lands. Reapproval of the Indian Policy took place in Seattle, WA, in 1992 without Tribal consultation. The Annual Tribal Summit called for in the Policy is not taking place; one was held and, in the eyes of Tribes, it was not effective. A meeting was held last year in Baltimore to work on the Framework Document; STGWG members, including Willie, other Tribal representatives, and DOE staff were involved in that process. Willie suggested DOE put together a “lessons learned” document for Tribal interaction.
- DOE American Indian Policy is available online at <http://www.ci.doe.gov/indianbk.pdf>.

TEPP Model Needs Assessment Demonstration (Tom Clawson, Technical Resources Group, Inc.)

Tom Clawson provided an overview of EM’s Transportation Emergency Preparedness Program (TEPP) Model Needs Assessment and performed an online demonstration. The program is available online at TEPPinfo.com (click on Tools and proceed with obtaining a user id and password). The Assessment looks at response capabilities in each area of a specific jurisdiction to help determine preparedness for emergency response to radioactive transportation incidents, with a goal of determining a jurisdiction’s strengths and identifying areas where improvement is needed. In the past, Tom has worked online with Acoma and Laguna Pueblos in New Mexico to complete the Model Needs Assessment. Sue Loudner, Acoma Pueblo, recommended that users print out a hard copy

of the document and review with their responder staff before completing the Assessment online. Tom Clawson can be reached at 208-528-8895 or by e-mail at tom@trgroupinc.com.

180(c) Discussion (led by Corinne Macaluso, OCRWM)

This discussion took the form of a question and answer period.

Q: Is defense waste included in 180(c)?

A: Any waste shipped by OCRWM will be included.

Q: Is Los Alamos National Laboratory to be included on the Yucca Mountain routes?

A: Shipments from Los Alamos National Laboratory would come under EM's purview, not OCRWM's. Ella McNeil (DOE/EM) is the appropriate point-of-contact for EM-related questions. She can be reached by phone at 301-903-7284 or by e-mail at ella.mcneil@em.doe.gov.

Q: Page 2 of the 180(c) paper mentions "interested Tribes." Option 1 needs an approach.

A: "Eligible" would be a better word.

Q: DOE needs to determine who the "affected Tribes" are.

A: For purposes of 180(c), a Tribe is eligible if the route goes through their reservation.

Q: What about aboriginal and treaty right lands?

A: OCRWM has approached DOE Office of General Counsel about this issue. Their preliminary response is that eligible tribes are those with reservation lands along the routes.

Q: How do you put a dollar figure on the findings of the Model Needs Assessment?

A: There is no definitive answer to that question. The assessment will help applicants determine training needs, number of people to be trained, level of training, etc. This would involve determining the number of resource hours, which would likely assist in determining costs.

Q: What are the criteria for being on the list of "affected Tribes" for Yucca Mountain?

A: Reservation is within ½ mile of proposed routes. Jay agreed to send the list of 39 Tribes to members of the Tribal Topic Group.

A member of the Tribal Topic Group suggested that DOE use Acoma Pueblo as a model for the 180(c) funding process based on the results of their Model Needs Assessment.

Corinne told the group she would like to amend the *Federal Register Notice* based on the 180(c) paper or issue a supplement to the *Notice specific to tribes*. Group members expressed their concern that such an action would not represent comments from all Tribes. Following a short discussion, Corinne said she would forward the language that would constitute the *Draft Federal Register Notice* (or supplement) to members of the

Tribal Topic Group and the 39 Yucca Mountain Tribes for comment. Following that action, OCRWM will hold a workshop with the 39 Tribes to discuss 180(c) and the *Federal Register Notice* (and/or the supplement to the *Notice*) (hope to issue in spring 2007). Publication of the Tribal *Notice* (or supplement) would follow the workshop.

In other discussions, a participant said that the proposed Midwest rail route will have potential impact on a larger area not covered by current OCRWM methodologies. A formal routing criterion for Tribal lands in addition to reservation lands is needed.

Corinne ended the meeting with a summary of the *Federal Register Notice* process discussed above.

ACTION ITEMS FOR TRIBAL TOPIC GROUP

- Forward draft summary of Tribal Topic Group meeting to participants for review (W. Portner, SAIC)
- Provide Group members with listing of 39 Tribes (J. Jones, DOE, and W. Portner, SAIC)
- Consider meeting with BIA to discuss “affected Tribes” status (J. Jones, C. Macaluso, DOE)
- Provide Group members with summary of OCRWM Tribal interactions related to Yucca Mountain (J. Jones, DOE, and W. Portner, SAIC)
- Provide Group members and 39 Tribes with language that would constitute the draft *Federal Register Notice* (or supplement to the *Notice*) on 180(c) for review. Follow up with workshop. Publish *Notice* (or supplement) (C. Macaluso, DOE)
- Provide interested Group members with copy of National Academies Report on Transportation (W. Portner, SAIC)
- Include Website address for DOE Indian Policy in Tribal Topic Group meeting summary (W. Portner, SAIC)
- Follow up on contacts with 39 Tribes and meet with remaining Tribes to provide information on OCRWM program and 180(c) (J. Jones, DOE, and contractor staff)
- Provide information to Tribal Topic Group members and solicit appropriate Tribal participation in new TEC Routing Topic Group (J. Jones, DOE)
- Consider using the Acoma Pueblo as a funding model based on their Model Needs Assessment.(C. Macaluso, DOE)

SECURITY TOPIC GROUP

INTRODUCTION

The Security Topic Group (STG) of the Transportation External Coordination (TEC) Working Group met in the afternoon of September 14, 2006 in Green Bay, Wisconsin. On behalf of the Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM), the Chairman of the STG, Mr. Alexander Thrower of the Office of Logistics Management (RW-10), presided over the meeting. At the outset, Mr. Thrower introduced himself and the STG members

participating. The STG agreed that the meeting agenda would include confirmation of conference notes from August 17, 2006 and discussion of the STG Work Plan.

AUGUST 17, 2006 CONFERENCE CALL

Mr. Thrower requested additional comments on issues raised in the August 17, 2006 conference call. During the call, participants discussed the open charter of the TEC organization relative to remaining STG areas for consideration. It was determined that the STG had discussed issues appropriate for the TEC forum, but consideration must be given in the future to security communication strategies.

STG WORK PLAN

- *Lessons Learned*— Mr. Thrower circulated an updated STG Work Plan and initiated a discussion on the status of items and topic group products. The *Security Related Lessons Learned Report* subsequently posted on the TEC website reflects information from the final STG Work Plan.

Mr. Thrower noted that the lessons learned report encompasses the operational focus of the transportation of spent fuel. He emphasized that security matters were a part of overall operational topics, and that security must be viewed as an integral part of an integrated transportation system.

Comments provided by Bob Fronczak of the Association of American Railroads were incorporated into the Report. Mr. Thrower asked STG participants to provide any remaining comments on the lessons learned report by the end of September.

- *State Security Experience* — In emphasizing that security training was a topic addressed by State Regional Group Task Force, Lisa Janairo (CSG-MW) noted that several security tasks identified STG Work Plan involve gathering information from States and that these might best be assigned to the State Regional Groups. Examples of these security topics are: State experiences in handling classified information; information requirements for transportation of spent fuel; procedures and State capabilities; and resources, roles and responsibilities.
- *State Survey* — Lisa Janairo presented an update to the STG on the status of the ongoing State Survey for assessing security practices for Yucca Mountain shipments. The Survey consisted of 10 questions distributed to each region via “survey monkey,” an online survey tool. Regional groups worked with individual States to collect data and provide ‘blind’ input. By September 14, 2006, there was an 80 percent response rate from three of the four State Regional Groups. Consolidated responses to the Survey were intended to provide a national representation; however, because not all States sent the Survey had responded, there was no complete representation of security practices or preferences for Yucca Mountain shipments to report. October 2006 was the announced deadline for the State Survey completion.

The purpose of the State Survey was to determine DOE expectations from States and to assess whether or not the States are equipped to handle DOE spent fuel shipments. Among the Survey results discussed during the meeting were:

- *Security Training:* Mid-West States polled indicated that their States conduct informal training for local authorities in 30 percent of cases. Several reported that security training was not currently available and suggested that DOE may need to provide or finance training.
- *Safeguards Information Protocols:* Respondents said that they can receive safeguards information; however, classified information would require additional measures. All indicated they have in place active emergency response plans, but need additional information sharing in the event of an emergency. States prefer to receive sensitive information by certified mail.
- *Spent Fuel Shipment Information:* States indicated a strong interest in obtaining transportation plans with an opportunity for review in advance of shipments. Other types of information, such as cask model, were reported of average importance. Generally, States requested more information on who will respond to an event.
- *Protocols for Shipments:* All State respondents indicated they have current hazard plans for accidents.
- *Preference for Inspections:* Forty percent of State respondents prefer inspections at origin sites for rail shipments, and 60 percent prefer origin site inspections for trucks. Of the States responding, 40 percent would like end-route inspections. States commented that they will honor DOT decals. A few States may inspect rail or truck shipments and suggest that DOE must pay for these services, while some States said that they would charge the shipper. Most States anticipated that they will need more staff and resources planning.
- *Survey Trend and Summary Comments* — States need more developed emergency response plans and information-sharing regimes. It was emphasized that DOE and Tribes interactions must become more consistent. It was suggested that a Yucca Mountain Project Overview presentation should be presented in each State capital.
- *Classification Guide and Information Sharing* — Mr. Thrower provided a status report on release of the *Classification Guide for the Transportation of Spent Nuclear Fuel and High Level Nuclear Waste* and discussed plans for developing an information-sharing protocol between DOE and external organizations based on the approved Guide. It was noted that final comments from Federal agencies involved in drafting the Guide were incorporated and that the document would soon be circulated for approval by senior agency officials. The agencies included are: the Department of Energy; the Department of Homeland Security; the Department of Transportation;

the Nuclear Regulatory Commission; and the Naval Nuclear Propulsion Program of the Department of the Navy.

As part of the STG information-sharing, Mr. Thrower discussed the future availability of spent fuel transportation related information through the Bibliography of Publicly Available Documents being assembled through TREX at the University of New Mexico. Mr. Thrower announced that the final compilation of documents is expected to be made available on a compact disk (CD) and distributed in a traceable format to STG members. Mr. Thrower noted that he would accept documents for inclusion in the bibliography from the STG.

- *Shipment Inspection Interfaces* — STG participants discussed CVSA inspection of spent fuel shipments. One member proposed that inspection issues might be addressed by the Rail Topic Group (RTG). Questions were posed about whether Federal Railroad Administration (FRA) certified inspectors can operate in more than one State and about their span of control. While the STG acknowledged that safety inspections will occur at utilities, there was interest in knowing how inspections would be handled when shipments stop en route. The STG agreed that shipment inspection regimes must be well understood, especially how shipments will be handled when threat levels change during transit. The STG identified this as a high-priority issue.
- *Future Agenda and Sunset of the STG* — Discussion about the future direction of the STG was held at the conclusion of the STG meeting. Mr. Thrower proposed consideration by participants of the future role of the STG and whether remaining STG issues might be appropriately consolidated into a TEC Operations Topic Group (OTG) or the RTG. It was recommended that the scope of activities of the OTG or the RTG could address current security matters. While some STG members expressed the view that the STG should be summarily terminated, others identified issues that while not currently ripe, were deserving of considerable future attention by a dedicated Security Topic Group.

For the near term, it was suggested that the frequency of STG conference calls and meetings could be modified or reduced, and potentially scheduled to coincide Council of State Governments (CSG) programs. Scott Field stated that while security issues would surface again, the STG, as an open forum, might not be the appropriate venue for resolving sensitive issues. He also stressed the importance of compiling a brief report outlining all security-related issues still requiring attention. Another participant commented that most issues of concern to the States are potentially operations related and might best be considered by the OTG.

Mr. Thrower recommended that while some operations discussions may involve STG concerns, the continuity of the STG might best be preserved through a temporary “sunset” with the opportunity to reconvene the STG as necessary. Earl Easton discussed National Academy of Sciences security studies and the need for the STG to review them. STG members stated that they did not want transportation security

matters of concern to be absorbed by other topic groups entirely, because there are distinctly security-pertinent topics which will require future attention and resolution. Examples cited include physical security technologies and enforcement for protecting shipments.

In closing, it was agreed that as soon as active security issues and tasks were concluded and a report was compiled outlining all security-related issues left unresolved, the STG would temporarily sunset.

RAIL TOPIC GROUP

Mr. Jay Jones began the meeting with a welcome and introduction of the topic members, other participants, and support staff. A brief overview was given of the topic group's activities since the last TEC meeting. This meeting focused on the Topic Group's subgroup activities. Key comments and discussions are summarized below.

Status Update of the Rail Topic Group

Mr. Jones mentioned the planned creation of a new topic group to be called the Routing Topic Group. The Rail Topic Group would still exist as a topic group. However, since the emphasis would be in developing routing criteria and ultimately a national suite of routes over the next year or so, this separate Routing Topic Group would be created to address these areas. Mr. Jones stressed the importance that the new members of the Routing Topic Group should be prepared for a more intensive time commitment. Mr. Jones anticipates sending an e-mail in the next two weeks to all TEC members soliciting their interest and participation in this topic group. Membership may be limited to one or two representatives from each TEC member organization in order to have a manageable and productive topic group.

RADTRAN/TRAGIS Update

Dr. Ruth Weiner provided a brief summary of the major improvements RADTRAN has undergone over the past year. Most notably, Dr. Weiner stated that the inhalation dose of radiation in the event of an accident has been corrected. The RADTRAN VI model will be released this year and will be provided on a CD. This model introduces uncertainty parameters which will allow the user to input any variable, select any distribution method, and receive the output in any form.

Interested users can access the RADTRAN website at <https://radtran.sandia.gov/radcat>. Users must submit an online application, and upon approval, have access to the software. A user's guide is e-mailed to approved users to assist them in the downloading process.

For TRAGIS, Mr. Paul Johnson briefly stated that he is working on updates to the main software of TRAGIS. Interested users can access TRAGIS via the website at <https://tragis.ornl.gov>. Users will be prompted to register, and this will allow them to access the software. If a user has previously installed an older version of TRAGIS, it

may be necessary to uninstall the older version prior to downloading the new version, he explained.

Subgroup Updates

Inspections Subgroup

As the subgroup lead, Mr. Tim Runyon of the Illinois Emergency Management Agency presented the results of this subgroup's activities. The purpose of this subgroup is to identify inspection standards and provide uniform criteria for use by the Federal Railroad Administration (FRA) and FRA-certified state inspectors involved in Motive Power & Equipment (MP&E) and hazardous materials inspections.

Currently, fifteen states have rules, regulations, or policies requiring truck inspections. Only six states have rules, regulations or policies requiring rail inspections. FRA conducts point-of-origin inspections in accordance with the Safety Compliance Oversight Plan (SCOP). A 1,000-mile air brake test is conducted as an en-route requirement. There appears to be no common inspection format for use along transportation corridors.

The subgroup produced three forms to provide guidance for staff involved in inspections regarding equipment acceptance, pre-departure condition, and en-route for rail movements of spent nuclear fuel to temporary storage or a repository. These forms are as follows:

- Locomotive Inspection List-includes all items that should be inspected before a locomotive is accepted for use to transport spent nuclear fuel and high level waste.
- Freight Car Point-of-Origin Inspection List-includes all items that should be inspected after a train has been assembled and loaded prior to departure from the shipping facility.
- Freight Car En Route Inspection List-includes all items that are potentially "wear items" that may merit re-inspection at 1,000 mile intervals. All items from the previous list are included even though the majority of them are extra-regulatory.

Discussion and Comments on Inspections

One topic group member commented that carriers are stricter in their inspections. In regards to the 1,000 mile inspections, another topic group member stated that FRA can grant a 1,500-mile inspection interval provided there are no route changes or detours.

FRA HAZMAT inspections include looking at the rail cars, markings and shipping papers. FRA has started to conduct radiological inspections.

New requirements that are being implemented include reflective sheeting and stenciling on the rail cars. These requirements are due in part to grade crossing accidents that have occurred.

One topic member asked if FRA checks tie downs to see if they are fastened and/or have the right tension. Another member responded that FRA does check to ensure that packaging is secure, and that there are no defects.

Another question was asked related to the securement of packaging; specifically, if the NRC covers securement of packaging in their requirements. The response from a topic group member was that HAZMAT inspectors look at securement, but it is really the shipper's responsibility. Railroads are more stringent on inspections than the FRA.

One topic group member raised several issues relating to the legality of the inspection forms and the training needed for radiological inspections. Mr. Runyon responded that these inspections forms are a first draft and will most likely be revised and updated as regulations and requirements change. It was noted that there are still unanswered questions such as when will these forms be considered complete and how these forms will be certified. Mr. Runyon suggested that any additional specific questions be sent to him directly, and he will respond after the TEC meeting.

Tracking and Radiation Monitoring Subgroup

Ms. Sarah Wochos of the Midwestern Office of the Council of State Governments (MW-CSG) gave a brief overview of the tracking survey responses by the states. Many of the questions posed to the states concerned their use and experience of TRANSCOM. A complete set of survey responses from the states can be found on the TEC website.

Other results not related to TRANSCOM included the following:

- Only eight states have a law, regulation, rule, executive order or policy that requires shipment tracking, though many said they have an informal policy to track all shipments.
- Six states indicated that they will review and potentially revise the law, regulation, policy, etc. before spent fuel shipments begin.
- In regards to budgeting for tracking costs, six states charge a fee, one state charges a fee and uses DOE/WIPP agreement money, nine states use DOE/WIPP agreement money, and eight states have no budget for the tracking costs.

The next steps for the Tracking Subgroup will involve gathering the TEC participant surveys from the technology demonstrations. The responses from these surveys will be used to complete the basic recommendations by the subgroup. Additional avenues that the subgroup may pursue include:

- Whether TRANSCOM (or another system) can track shipments through an inter-modal system
- Whether a cask can be tracked or if it is sufficient to track the train only
- How to address locations without proper trajectory for signal transmission

The subgroup will continue to monitor new technologies, TRANSCOM and DOE integration work.

Discussion and Comments on Tracking

One topic group member asked which subgroup will be addressing radiation monitoring since this subgroup appears to be only concentrating on tracking. Ms. Wochos responded that radiation monitoring goes beyond what the Tracking subgroup can do at this time. Radiation Monitoring may be better addressed under the Inspections subgroup. The same topic group member emphasized that there is a need to address the radiological aspect as there are satellite systems capable of providing a dose rate which would help minimize the need for inspections.

Rail Planning Subgroup

Ms. Lisa Janairo (MW-CSG) briefly reviewed the Rail Planning Timeline document that this subgroup produced. The timeline had been sent to each Rail Topic Group member prior to the TEC meeting for review and comment. Comments were received from approximately six individuals. One comment suggested that an introduction be included. The subgroup reviewed each comment and made changes to the timeline as appropriate. The yellow highlights in the latest version of the timeline show the changes that were made based on the comments received by the subgroup.

At the end of the timeline, there is a separate page titled, “Issues for Further Discussion.” This is a list of topics that came up in the subgroup’s timeline discussions that the subgroup decided were not appropriate for the timeline. These issues include escorts, inspections and monitoring, equipment planning and accident data. The subgroup would like DOE to review this list and provide guidance on how to address these issues in the future.

Ms. Janairo stated that the subgroup is finished with their task and recommends that this timeline document be reviewed once every six months to incorporate any changes necessary.

Discussions and Comments on Rail Planning

There were no questions or comments from the topic group members.

Lessons Learned Subgroup

Ms. Jane Beetem of the Missouri Department of Natural Resources reviewed the subgroup’s lessons learned document. Ms. Beetem explained that this document was a compilation of many existing documents and databases most applicable for rail transport of radioactive waste. During the document production process, comments from these documents were shortened to maintain conciseness and readability. She requested that editorial comments be e-mailed to her directly. The subgroup anticipates having a conference call in the next two weeks to address any additional comments.

Discussion and Comments on Lessons Learned

One topic group member asked if the subgroup was able to obtain any current information from utilities in regards to shipping spent nuclear fuel. Jane responded that the subgroup was unable to include any information from the utilities concerning their shipping of spent nuclear waste. One topic group member asked to be added as a member of the subgroup. One member suggested contacting Chandler van Orman of the Nuclear Energy Institute about lessons learned from utilities regarding shipping spent nuclear fuel.

Action Items

- Jay Jones will send an e-mail to TEC members soliciting their participation for the new Routing Topic Group
- Jay Jones will provide the routing process plan to TEC members in the next two weeks
- A conference call will be scheduled for the Routing Topic Group after the topic group membership has been decided

Meeting Summary

In closing, Ms. Judith Holm thanked participants for their attendance and highlighted some of the upcoming changes within the TEC Working Group. Ms. Holm emphasized that Tribal Topic Group activity would increase, the Security Topic Group would temporarily sunset, and the Rail Topic Group would enter a transitional period due to the creation of a Routing Topic Group.

The meeting adjourned.