

**The Council of State Governments  
Midwestern High-Level Radioactive Waste Committee**

*Proceedings of the 21st Meeting*

**Minneapolis, Minnesota**

**May 10-11, 2000**

**Welcome and Introductions/Welcome to Minnesota**

Mr. Frank Moussa (Kansas) welcomed everyone to the 21<sup>st</sup> meeting of the Midwestern High-Level Radioactive Waste Committee. He turned the floor over to Mr. John Kerr (Minnesota), the host for the meeting, who welcomed everyone to the Land of 10,000 Lakes. He introduced Mr. Kevin Leuer, who is the Director of the Division of Emergency Management and the Executive Director of the Minnesota Emergency Response Commission. Mr. Leuer welcomed everyone to Minnesota. He applauded the efforts of the committee, and said the states, local jurisdictions, and utilities were all working toward a common goal. He appreciated the committee's role in providing feedback to DOE and in planning for shipments, and said this advance planning was key to the success of this program or any other.

Mr. Leuer explained that the Division of Emergency Management is under the Department of Public Safety. Mr. Leuer reported to the Commissioner of Public Safety on day-to-day operations, and directly to the Governor for emergency activities. Minnesota has a pretty extensive capability in terms of hazardous materials and radiological response, partly because of the presence of nuclear power plants in the state. The state has a good partnership with the utility. There are 14 hazardous materials assessment teams and emergency response teams located throughout the state, plus four regional bomb squads. In addition, two teams provide offsite monitoring at the nuclear plants during emergencies, and are under the direction of the state to be used for other types of activities. All these resources could be centrally contracted through the Division of Emergency Management, which acted as the "911" to the state government system.

**Committee Business Session**

*Chair's Report.* Mr. Moussa thanked Mr. Leuer and Mr. Kerr. After general introductions, Mr. Moussa said a few words about his vision for the committee as the new chair. His principal goal is to be the "best damn chair" the committee has ever had. He hopes to be an advocate for the Midwestern states in obtaining all the assistance they will need to prepare for upcoming shipping campaigns. He noted that the number of shipments will increase over the years, but there is no guarantee that funding and other types of assistance will continue to be available for the states. Second, Mr. Moussa hopes to see the committee act as a liaison between the response community, DOE, and the states. He noted that the states all have different approaches to training, and that DOE is standardizing and cutting back on the training it provides. He wants to make sure the various approaches are effective in preparing responders to handle emergencies involving radioactive materials transportation.

Third, Mr. Moussa would like to see the committee act as a more effective liaison between the Midwestern states and DOE in order to avoid potential controversies such as the state of Missouri's reaction to the use of I-70 for the cross-country shipment of foreign research reactor spent fuel. Such issues, if raised at the level of the committee, could be dealt with satisfactorily without being escalated to the political level.

Fourth, Mr. Moussa would like to resolve the issues pertaining to shipment notification. He would like to standardize and institutionalize the procedures for notifications so that all DOE programs follow the same steps for similar materials. DOE is organizing an ad hoc working group to address electronic notification, and he thought the states' issues could be folded into that group's activities.

Fifth, he noted that the Midwestern states are on the corridor for three impending DOE shipping campaigns. In addition, some of the utilities were likely to start shipping commercial spent fuel to a private storage facility in Utah. For each of these campaigns, Mr. Moussa wants to make sure the shippers work closely with the affected states to guarantee that states have two things: 1) the resources they need, which could include funding as well as training, and 2) input into transportation planning, such as the selection of the route(s) and review of transportation plans.

Another major activity Mr. Moussa hopes to continue is the committee's participation on the Transportation External Coordination Working Group (TEC/WG). The committee has, over the years, been a driving force behind the TEC/WG's activities, including the establishment of the topic groups. Mr. Moussa hopes to see the committee continue to provide input into the development of the DOE protocols, training materials, and the proposed consolidated transportation grants.

Mr. Moussa stressed the importance of maintaining funding for the CSG-MW Transportation Project. He noted that accepting financial assistance from DOE did not compromise the committee's objectivity, and cited recent correspondence as evidence. He said CSG acts as an organizer and a strong advocate for the Midwestern states, which DOE could not do on its own. He said even if DOE decides to implement consolidated grants, the regional cooperative agreements should remain intact. In closing, Mr. Moussa noted that the Midwestern committee was the third region to organize. Nevertheless, the group is running "neck-and-neck" with the other regions in their contributions to radioactive materials transportation planning. He said he welcomed input from all the Midwestern states on future directions for the committee.

*Topic Groups of the TEC/WG.* Mr. Moussa attended the February meeting in Las Vegas, along with Ms. Lisa Sattler, Mr. Tim Runyon (Illinois), Mr. George Johns (Iowa), and Mr. Robert Owen (Ohio).

Mr. Runyon reported on the Consolidated Funding Topic Group. He said there were a number of unresolved issues pertaining to the tribes. The most excitement came during the discussion of fees. Ms. Judith Bradbury and Ms. Judith Holm (DOE) had solicited input from a number of parties regarding the variables that should comprise the formula for determining awards, such as population density, traffic levels, accident rates, etc. Obviously, everyone had different opinions — the Western states thought distance should be a factor, whereas the Northeastern states felt population should be the only factor. There had been a lengthy discussion over the intended outcomes, however everyone eventually agreed that public safety was the intent. Mr. Runyon observed that not all the DOE programs were present at the meeting or aware that they would be participating in the consolidated grant program. He also felt uncomfortable with the speed at which DOE was pushing this initiative, given that the department traditionally took much longer to develop such large-scale activities. The topic group had identified a need for DOE to regroup, ask the Senior Executive Transportation Forum (SETF) if they wanted to continue developing the grants, and work more on the tribal issues.

Mr. Smith said his budget for the state and tribal programs amounts to \$5.15 million per year, whereas the other DOE programs put in about \$200,000. He felt it is inappropriate to take this total and divide it among all the affected states and tribes. He has commitments with organizations such as the Western Governors' Association and other groups, and does not want WIPP's money divided among a greater number of parties.

Mr. Dave Crose (Indiana) asked if DOE planned to solicit comments from all the states on the consolidated grants, and agreed with Mr. Runyon that DOE was moving too quickly with the initiative. Mr. Runyon said he thought the draft proposal, once developed, would be distributed among the states through the regional groups for review and comment. Mr. Carlson added that there was a decision memo circulating through DOE to make sure there was support for the consolidated grants prior to going to the Secretary for his permission to move forward. Mr. Carlson said the memo was not moving as fast as had been portrayed at the TEC/WG meeting. In response to Mr. Crose's question, he said he thought DOE would gather input formally from the affected parties. He said there was a strong advocacy within the department, and many people wanted to see it move very fast. Mr. Carlson felt that something this major could not move as quickly as some folks had hoped.

Mr. Runyon agreed that perhaps DOE had put the cart before the horse in forming a topic group prior to garnering the support of programs. Ms. Sattler asked if the SETF was in support of the program, and Mr. Carlson said to his knowledge it was. He said he did not know if anyone had ever polled the programs on the SETF, but the memo came out of Dave Huizenga's office. Mr. Carlson mentioned that Mr. Dave Huizenga was the chair of the SETF. Mr. Runyon observed that many of the Western states had been funded at a high level, and these states and the tribes had both indicated their intent to fight any programs that would reduce the amount of funding they receive.

Mr. Moussa asked Mr. Crose to report on the Protocols Topic Group, and he deferred to Ms. Sattler. Ms. Sattler said the group reviewed three draft protocols at the February meeting: routing, emergency notification, and emergency response. During the discussion of notifications, the group had decided DOE should investigate the possibility of using e-mail for advance notifications. Mr. Bob Alcock (DOE-HQ) had taken the lead on this matter and would organize an ad hoc working group. Ms. Sattler suggested that Mr. Runyon should be the committee's point of contact on matters related to information technology. Ms. Sattler asked Mr. Smith if he had heard anything regarding this group, and he said he had not.

Ms. Sattler said the topic group had met again on May 3 in Atlanta, where they covered five new protocols: security, inspections, transportation planning, emergency planning, recovery and cleanup. Ms. Sattler had distributed these protocols by fax to the committee on April 21 and April 28. The lead time for reviewing the protocols had been short, but the committee members would have until June 5 to submit written comments. Ms. Sattler highlighted the key issues:

1. If DOE was planning to provide assistance to the states, the department must do so in a timely manner rather than at the last minute.
2. DOE should treat all transuranic waste shipments like WIPP shipments.
3. The emergency planning protocol exaggerated the role of the TEPP program and the TEPP coordinators in DOE's regional offices.
4. DOE should rework the recovery and cleanup protocol to reference the states' and tribes' role under RCRA.
5. It was unclear whether the transportation planning protocol was intended to tie all the other protocols together, or stand as a separate protocol.
6. The group inquired as to DOE's plans for implementing the protocols. The DOE Writing Group was evaluating the different implementation options and would identify its preferred approach this summer.

Ms. Sattler said she would prepare a draft comment letter and would appreciate comments back by May 31 so that she could submit the final letter by June 5. In the early summer, DOE would distribute the remaining draft protocol on public information, with comments due July 7. Also in early July, DOE would release the comments and issues resolution documents for all the protocols, which would be

discussed at the TEC/WG meeting on July 25-27. Following the meeting, DOE would draft the introductory and appendix material, as well as the implementing directive. The complete package of protocols and supporting materials would be released for external comment in mid-December, which would enable the topic group to solicit substantive comments for discussion at the Winter 2001 TEC/WG meeting.

Ms. Sattler said she would like to organize an ad hoc review committee of four to five members to go over all the protocols at the end of the year. There were 15 protocols, plus introductory and appendix materials. Mr. Moussa said he had asked Mr. Thor Strong (Michigan) to join Mr. Crose on the Protocols Topic Group. He volunteered himself and Mr. Runyon to serve on the review committee, and said he welcomed other volunteers.

Mr. Owen reported on the Training Topic Group meeting. He reminded the committee that there were 16 modules in the MERRTT training materials. In addition, the group had discussed the first revision of the "drill-in-a-box" practical exercise, which followed the flow of the MERRTT modules. All these materials will be available on CD-ROM. In addition, the TEPP coordinators in DOE's regional offices would distribute the modules through state points of contact. Unresolved issues related to distribution included the need for smaller agencies to be aware of the modules; ways to piggy-back distribution of the modules onto existing channels; and the ability of small agencies to accommodate the training materials, given limited resources.

On the subject of key medical issues, Mr. Owen said there was support for preparing a pre-hospital module, which would involve emergency medical personnel. The group had decided there was no need for a hospital module. Emergency medical services procedures would be added to the planning tools. Mr. Owen said there was some concern about decontamination procedures, such as how widely known they were among first responders. The group decided to assess the matter, and possibly add the results of the assessment to Module 13. The group also decided a module on emergency operations center was not necessary. Mr. Owen said a resource listing, identifying available training throughout industry/government, would be added to the TEPP website. An informational brochure on MERRTT would also be added to the website and the CD-ROM. Mr. Owen reported that DOE had approached OSHA about the modules. OSHA had assigned an officer to the request, and should have a response within 30 days.

Mr. Owen said the training group had looked at the WIPP medical training. Dr. Roger Lindeman of RAC Inc. (the WIPP contractor) had attended the meeting. Some of the issues discussed included training for transportation versus fixed facilities; a shortage of training relative to radiological contamination; hospital notification; the need to involve hospital administrations; the need for continuing feedback from all corners on the materials.

In response to a question from Mr. Jon Schwarz (Nebraska), Mr. Owen said the modules are organized to cover the awareness, operations, and technician levels of training. Mr. Owen said the group had not made a decision yet as to whether to produce a video to supplement the modules. Mr. Schwarz thought a video would be a good visual aid for the course. Mr. Crose said Indiana had used the modules for awareness and operations level training last fall. One of the national guard RAID teams was trained to the technician level. If states wanted to have their personnel do the training, Mr. Crose recommended sending the trainers to DOE's train-the-trainer course. Indiana had trained over 1,000 responders using the modules, including along the shipping routes for the Fernald low-level waste shipments.

Mr. Moussa read from a letter he received from the International Association of Fire Fighters (IAFF) regarding HAMMER's request to OSHA relative to the MERRTT training. He gave Ms. Sattler the letter and attachments for copying and distributing to the committee members. HAMMER had requested that

OSHA interpret or provide an exception to hazmat training covered under 29 CFR 1910.120(q). The exception would allow responders to enter the "hot zone" to initiate a rescue in the event of an accident involving radioactive materials as the primary hazard. The letter said "IAFF . . . vigorously opposed this suggested change as an unwarranted and inappropriate weakening of key training standards." Mr. Moussa thought the committee should answer the letter as a body. He said that, in Kansas, for life or limb, responders are encouraged to extract the victim, because exposure to the responder would not be an issue for the period of time in question. Mr. Smith said the WIPP STEP training program teaches responders to save life and property in the event of an accident involving a WIPP shipment, but it is up to the individual person to make the decision.

Mr. Strong asked Mr. Moussa to articulate what the standard is now and what HAMMER's request entailed. Mr. Moussa said there were three levels of training in relation to hazardous materials. HAMMER wants to include a radiological element in these. In hazmat, for awareness level, the responder should identify the product but not take offensive action. Mr. Schwarz said awareness meant the responder could only identify the hazard, then turn over the situation to someone at the operations or technician level to go in and do the rescue. For radiological emergencies, HAMMER had suggested that responders trained to the radiological awareness level could go into the hot zone.

Mr. Carlson said he thought HAMMER had withdrawn its request. He said he would confirm that and try to obtain a copy of the letter withdrawing the request. Mr. Moussa reiterated that, although the state of Kansas abided by HAZWOPER requirements, radiological monitors are taught that it is okay to extract victims in a radiological emergency. Mr. Moussa did not believe this to be a violation of 1910.120, because the EPA had protective action guides (PAGs) that indicate responders could extract victims provided the exposure would be less than 25 rems. He agreed that only operations or technical level responders should initiate offensive actions in an emergency.

Mr. Owen said he received a similar letter, and expressed surprise that the IAFF was now making an issue of something that was common practice throughout the states. Mr. Runyon concurred with Mr. Moussa's position, as did Mr. Kerr and Mr. Charles Dixon (Minnesota). Mr. Crose noted that firefighters routinely conduct rescues in a manner that would violate a strict interpretation of the OSHA requirements. Mr. Flater commented on the fact that emergency response to an incident involving radioactive materials could be handled differently because the shipping containers were so robust compared to containers for most hazardous materials.

Mr. Kerr asked if the conflict over HAMMER's request had anything to do with a dispute between professional and volunteer firefighters. Mr. Moussa said he did not know. Ms. Sattler asked Mr. Owen if the IAFF was represented on the TEC/WG Training Topic Group. He said IAFF had participated in the past, but had not attended the last meeting. Mr. Crose added that IAFF had been active in the group early on, but their participation had tapered off. At Ms. Sattler's request, Mr. Carlson said he would try to provide the committee with a copy of HAMMER's original request to OSHA.

In response to a question from Mr. Schwarz, Mr. Owen said DOE was trying to set up the MERRTT modules so that responders could receive continuing education credits.

Ms. Sattler said the Communications Topic Group had met in February, with the original intent to sunset. Instead, the group developed a list of activities to undertake in the coming year. The group will review several public information items, including an upcoming brochure on low-level waste (to be developed by the National Safety Council), a packaging and transportation website, and the National Transportation Program website. In addition, the group was reviewing environmental impact statements to identify possible ways to improve the discussion of transportation impacts. Another project is to review lessons-learned from DOE shipping campaigns that were successful or unsuccessful with regard to public communications. The group would also look at ways for DOE to deliver "positive key messages" in its

public information activities. In addition to these activities, the topic group would continue to review DOE factsheets and other written information products, as necessary.

Ms. Sattler noted that she was the committee's sole representative on the topic group, and asked if any of the state representatives would like to serve on the topic group. There were no volunteers. Mr. Strong indicated he would like to review the National Safety Council brochure on low-level waste.

*Cross-Country Transportation Working Group.* Mr. Moussa asked the Midwestern corridor states to report on the CCTWG's activities. Ms. Sattler said in August 1999 DOE's Savannah River Operations Office (DOE-SR) had completed its first shipment — consisting of five trucks — to the Idaho National Engineering and Environmental Laboratory (INEEL). In the summer of 2000, DOE planned to make another shipment, consisting of a single truck. The 1999 shipment had taken the "black route" through Illinois, Iowa, and Nebraska, whereas the 2000 shipment would take the "blue route" through these three states as well as Missouri. The state of Missouri was not pleased with DOE's decision to use the blue route. Ms. Sattler noted that DOE had considered three routes to be acceptable. In 2001, DOE planned to make another shipment, but the number of containers was not known. Ms. Sattler added that the material to be shipped during the summer would come from the United Kingdom.

Mr. Crose asked why DOE had decided to use a different route if it amounted to a savings of only 65 miles. Mr. Runyon countered that he wondered why DOE had taken a 65-mile longer route the previous year. He said he thought the technical people involved in the foreign fuels program had done a very good job. He noted that the information produced in support of the routing decision in 1999 pointed to the blue route, but DOE chose not to use it because of the difficulty of meeting all the special requests for curfews around certain population areas, given that there were five trucks. DOE had indicated that, with just a single truck, it would be possible to meet these time constraints. Mr. Runyon reiterated that, comparing the routes on distance, population, and risk statistics, the blue route is the best of the three.

Mr. Schwarz said Nebraska's concern was that DOE conducts shipments with more lead time for the states to begin preparations. He suggested that DOE should announce the routes it intends to use one year in advance, which would give the states a chance to conduct training or refresher training well before the shipment arrives. He said Ms. Allison Blackmon with DOE-SR had agreed to consider this point. She had noted, however, that the schedule for shipments depends heavily on the foreign research reactor operators.

Mr. Flater said Iowa did not have any problems with the foreign fuels shipments. He asked Mr. Roland Lickus if the NRC was taking a look at the requirement on shipment escorts. Mr. Lickus said he had not heard anything but would check. Mr. Flater said his office had made a request to reexamine the need for an escort in high-population areas such as Des Moines. He noted that there were many shipments of hazardous materials that posed a great risk, but these shipments were not escorted. Mr. Flater said the state of Iowa was ready for the shipment, regardless of which route was used.

Mr. Moussa said Kansas had replied to DOE's request for input into the routing decision. Kansas was also continuing with its usual radiological training throughout the state. He noted that I-70 was on the "red route" for the cross-country shipments, and said if DOE were to use that route additional training would likely be necessary.

Mr. Moussa noted that Mr. Bobby Sanchez would provide a thorough report on TRANSCOM, therefore there was no need for Mr. Runyon to provide a TRANSCOM Steering Group report.

#### *Roundtable of State and Regional Activities*

Iowa: In December 1999, Gov. Vilsack signed an executive order that removed the Iowa Ammunition Depot in Middleton, Iowa, from sole federal jurisdiction and took it under state jurisdiction. Mr. Flater

said it was a 19,752-acre site, owned by the Army, and listed by EPA as a RCRA site. He said the state knew there was depleted uranium on the site, and expected to find plutonium-contaminated and other wastes, as well. The site had 400 buildings, with over 250,000 tons of high explosives in each building. The state was starting the planning process for cleanup with the DOE offices in Albuquerque and Argonne. Mr. Smith said DOE's Carlsbad Area Office (CAO) would be interested in any plutonium found on the site.

Mr. Blackwell asked why plutonium would be on the site. Mr. Flater said it was related to testing and manufacturing. One problem was that much of the information was classified. He said 22 boxes of information on the site had been shipped to Texas, and only two of these boxes had been returned to Iowa. This activity started in 1997 with a letter to then Gov. Branstad, indicating that the base would like to use state services (e.g., law enforcement, fire protection) but in order to do so would need to remove the site from sole federal jurisdiction. The state issued two radioactive materials licenses to the site, and is now working with the EPA to jointly develop standards for cleanup.

Mr. Smith commented that, in the late 1940s and early 1950s, the government had developed a cannon-fired atomic projectile. He speculated that perhaps the contamination at the Iowa depot stemmed from the use of this weapon. He added that DOE believes there could be 100 small generator sites, but the department has only identified 13 so far. Mr. Flater said his office had not uncovered anything in writing to indicate that there was plutonium on the base, but there was anecdotal evidence from previous employees (including allegations of deaths related to exposure). In response to a question from Mr. Blackwell, Mr. Flater said site characterization was just beginning.

Ohio: Mr. Owen said there were two recent issues in Ohio. One was the routing study for transportation of high-level waste. The Ohio State University had just recently begun the year-long study of potential routes, assessing the risks following the DOT Guidelines. When completed, the report would be filed with the HLRW Task Force. OSR had submitted a preliminary report on their first quarter of effort, and Mr. Owen would soon review that with the steering committee.

The other issue was initiated back in January when the governor's office in Washington asked about Gov. Taft's position on high-level waste, particularly on the use of Yucca Mountain as a repository. The governor had not taken a position until that time, but his office felt it might be appropriate to do so. Mr. Owen's office was asked to draft the position, which Mr. Owen did. The Task Force reviewed the position at its March meeting, and passed it on to the Utility Radiological Safety Board (URSB) of Ohio in April. At that time, the anti-nuclear community organized in opposition to the governor taking a position. In the end, the governor's office decided to defer taking a position pending additional input from various concerned citizens. The Citizens Advisory Council to the URSB would meet June 8, during which time they would take a close look at the governor's proposed policy. Mr. Owen hoped that, following this meeting, the Task Force would be able to resubmit the policy to the URSB at its meeting in July.

Indiana: Mr. Crose said the state of Indiana had trained over 1,500 people along the transportation routes in the state. He added that the Winter 2000 edition of *Energy and Transportation Network News* had included a good write-up of Exercise POPEYE, which took place in Lake County, Indiana, in October 1999. Mr. Crose mentioned that he had reported on this exercise at the committee's November 1999 meeting. Mr. Dean Larson was co-manager of the exercise, and had made several presentations regarding the exercise. DOE is preparing a video of the exercise.

The University of Michigan shipments will affect Indiana in the area around Cincinnati. These four shipments will take place during the summer. Mr. Crose said the state was not concerned about the shipments, but would make sure that responders in the area had received training.

As of July 1, the state will be able to begin collecting fees for high-level waste shipments. The state also will have completed a state-wide transportation plan for all shipments of radioactive materials. Lastly, Indiana would host the TEC/WG meeting on July 25-27, and Mr. Crose encouraged all the members of the committee to attend.

Michigan: Mr. Strong reported on the MOX fuel shipment from New Mexico to Chalk River, Ontario, which the committee had discussed in November 1999. This shipment generated a great deal of controversy in the state of Michigan. Partly at the behest of Michigan's congressional delegation, DOE had decided to treat the shipment like a classified shipment. As a result, the state was left completely out of the loop, in contrast to the state's earlier desire to escort the shipment. The shipment took place in late January, with the state finding out about it the morning after it happened. The shipment crossed the Mackinaw Bridge around 4 a.m. Once the shipment was in Sault Ste. Marie, Ontario, it was loaded onto a helicopter and flown the rest of the way. The mayor of Sault Ste. Marie, Michigan, was very upset that the shipment had been conducted "in the dead of night."

The University of Michigan will make four shipments later this summer, with a weekly turnaround time. Last year, the state designated an alternate route (again, reported at the November meeting). The university can use the same route through Michigan, but must ask the state of Ohio to recertify the Ohio portion of the route for use.

Gov. Engler and the Public Service Commission have been staunch supporters of licensing Yucca Mountain. Mr. Strong wrote a letter to President Clinton on the governor's behalf, encouraging him to sign S. 1287, which had passed both houses. Mr. Strong noted that the President vetoed the legislation.

Lastly, Mr. Strong reported that he had given a presentation before six separate 8<sup>th</sup>-grade science classes at his daughter's school. He showed the students several everyday radiological materials, such as smoke detectors, antique glassware, lantern mantels, etc., to convey that radioactive materials are around us every day. He was surprised at how many students were aware of the MOX fuel shipment controversy. He had taken a plutonium calibration source with him, and demonstrated that the alpha emissions from the source would not penetrate a piece of paper. This demonstration had been eye-opening for the students. His hope was that these students would be able to influence their parents' reactions to future events similar to the MOX fuel shipment.

Mr. Strong also commented on a low-level waste (LLW) issue. At the start of the year, the state of Nevada proposed amendments to the National Governors' Association (NGA) resolution on LLW. In essence, the revised policy statement suggested that LLW shipments be treated like HLW shipments. Mr. Strong had informed Ms. Sattler of the proposal, and she distributed the information to the committee. Mr. Strong and a member of the state's Washington office participated on a conference call to discuss the proposed changes. Eventually, the policy statement was revised, but it did not incorporate any of Nevada's suggested changes with regard to transportation.

Minnesota: Mr. Kerr said the only issue currently of concern in Minnesota was the Private Fuel Storage project involving Northern States Power (NSP) and a consortium of eight utilities. Mr. Scott Northard (NSP) would be at the meeting later to go into more detail on the subject.

Illinois: Mr. Runyon said Illinois had been expecting some shipments from the University of Missouri, but they did not take place. The state was very interested in routing decisions related to the West Valley shipment and the TRU waste shipments.

Nebraska: Mr. Schwarz said DOE had held a public meeting in Lincoln to discuss the draft environmental impact statement (EIS) on Yucca Mountain. Gov. Johanns had sent a letter chastising DOE for not living up to its commitments. Mr. Schwarz had attended the public meeting, and said most of the commenters had been unconcerned. One person had worked in cask manufacturing, and spoke at



length about how the safety of transportation. Mr. Schwarz said Nebraska also hoped that upcoming rail shipments be conducted in dedicated trains, rather than in general commerce.

Kansas: Mr. Moussa asked Rep. Joann Freeborn (Kansas) to review the legislation she had introduced the previous session. She said she had received support from the governor's office legal counsel. She introduced the bill, and two weeks later she was asked to take the bill off the agenda. The bill, if passed, would have allowed the state to collect fees for rail and truck shipments through the state. The governor's office had been quiet on this issue lately.

She noted the disconnect between the body of evidence showing storage and disposal to be safe, and public (particularly anti-nuclear groups') concerns over transportation, and wondered whether public relations within the federal government needed to target this disconnect. She also asked if the committee had taken a position on either the notification of tribes or the use of e-mail for advance notification. Ms. Sattler said the states had indicated e-mail was fine, but it was up to the NRC to decide whether e-mail would be a secure enough means to distribute "safeguards" information. Ms. Sattler also explained that DOE had a policy to notify tribes in the same manner as the states for its spent fuel shipments, but commercial shipments would be subject to NRC requirements, which did not allow for tribal notification. Rep. Freeborn asked about the state of Nevada's petition for rulemaking on the consequences of terrorist attacks, and asked how the petition was being handled.

Mr. Bill Brach noted that the deadline for commenting on the Nevada petition had closed in November 1999. The NRC staff was going through the comments and would recommend to the commission how best to proceed with the petition. Generally, the staff tried to complete reviews within one year after receiving a petition, so Mr. Brach estimated that the staff was half-way done with its review.

Mr. Moussa said he planned to meet with his agency head upon returning to Kansas, because of all the controversy coming out of Missouri on the cross-country shipment. He also thought his office should brief the governor's staff on the matter to keep the state from succumbing to the same media onslaught that characterized the situation in Missouri. He said he had been disappointed that the Kansas legislation did not see the light of day, and wondered if misinformation regarding the impact on the trucking industry might have been the ultimate cause of its demise.

Mr. Moussa said the state used its own existing resources to conduct training. This funding now came down to the state from FEMA as a block grant (Emergency Management Planning Grant), whereas in the past specific funding was available for radiological and hazardous materials training. The state was continuing to train the same number of radiological monitors. May is traditionally the month for radiological training, which involved personnel from local and state transportation departments, emergency medical services, law enforcement agencies, radiological monitors, radiological response teams, and radiological officers. Kansas is buying more radiological equipment as it transitions from the old CDVs to 718s, which are digitalized, modern, and accurate. Mr. Moussa added that this equipment cost \$900 per instrument.

Mr. Moussa said his office had a "Bring Your Kids to Work" day. Parents had asked his office to conduct a segment on radiation, in response to the publicity surrounding the cross-country shipment in the Kansas City area.

Mr. Christopher Wells (SSEB) asked about the fees in the Kansas and Indiana legislation. Ms. Sattler said it was \$1,000 per shipment, and transuranic (TRU) waste was not included. Mr. Crose said the fees would not cover all the costs of training.

Mr. Kevin Blackwell (FRA) asked about the definition of "shipment." Ms. Sattler said originally the Indiana bill specified "per container," but a lobbyist for the industry had managed to change the language

to “per shipment” prior to passage. Mr. Crose said for a dedicated train, e.g., the fee would be just \$1,000.

Mr. Strong asked why the Kansas legislation had not passed. Rep. Freeborn said it was rumored that the utility had opposed it because it would add to the costs of shipping, but she was not sure how much of a role the utility had played. Mr. Strong mentioned that there was draft legislation in Michigan, which would not impose a fee. One of the three nuclear utilities in the state (Consumers Power) was the main proponent of the bill. The state agencies supported the legislation, but were not actively pursuing it. The legislation was not going anywhere at this point, largely because of the impact of the MOX shipment. Mr. Moussa commented that neither he nor Rep. Freeborn would try to resurrect the Kansas legislation in the next two years.

Southern States Energy Board (SSEB): Mr. Wells mentioned the protocols and CCTWG meetings in Atlanta, the latter hosted by SSEB. Other than the media coverage about Missouri, the meeting went very smoothly. In the future, the CCTWG might not need to meet, but would have conference calls instead. Ms. Sattler added that this change was suggested by the state of Iowa.

Mr. Wells said SSEB was also gearing up for the start of TRU waste shipments from Savannah River, beginning in late 2000 or early 2001. SSEB was updating its transportation planning guide, and was trying to update the TRU waste handbook, as well.

Mr. Moussa asked if any other participants wished to report on their activities or if anyone had any questions. Mr. Runyon asked about the letter the committee had written to the Commercial Vehicle Safety Alliance (CVSA), which was included in the briefing materials. He reminded the committee that, at the November 1999 meeting, Mr. Jim Daust had presented information on the CVSA’s final report. Mr. Moussa, Mr. Runyon, and Ms. Sattler had felt that the data in the study did not support two of the recommendations: namely that en-route inspections have no value and that point-of-destination inspections do. Mr. Runyon said he did not think CVSA’s response to the committee’s letter had shed light on the matter. Mr. Rich Swedberg (FMCSA) reported that CVSA was working on the enhanced North American Standard (ENAS) and would hold a training course in Batavia, New York, on May 21-25. He said CVSA was working with the carrier of the cross-country shipment so that the contractor and the drivers would know what the expectations and requirements were for inspection.

He also mentioned that a point-of-destination inspection was standard practice, including a radiological contamination survey, and was in the regulations. He said the committee’s letter included some good comments. Mr. Runyon said the committee supported CVSA and the concept behind the enhanced inspections. He reiterated, though, that the data in the report simply did not support some of the recommendations, particularly for shipments over very long distances. Mr. Swedberg said that Mr. Runyon had a valid point. He said the goal of the CVSA inspection was to do a point-of-origin inspection and have the shipment proceed to its destination without having to stop again for inspection. CVSA would never dictate that states could not conduct an inspection, if they so chose.

Ms. Sattler said the goal was understood, but the final report did not support the two recommendations regarding en-route and point-of-destination inspections. She said she appreciated Mr. Swedberg’s comments about the point-of-destination inspection being standard practice, but noted that the report did not cite this factor as driving the recommendation. Instead, the report claimed the data from the study pointed to a need for point-of-destination inspections. Ms. Sattler agreed with Mr. Runyon that the data from the study did not, in fact, support such a recommendation. The letter to CVSA had been an attempt to uncover the data that supported the recommendations, but the response from CVSA had not done so.

Mr. Swedberg reported that the data issue came up at the CVSA spring workshop. The hope was that the FMCSA could do a better job collecting the type of data necessary, and use a better algorithm with regard to inspections.

*Next Meeting.* Mr. Moussa asked the committee for input on the next meeting. Mr. Blackwell noted that holding the meeting in October would make it difficult for federal employees to attend. Ms. Sattler pointed out the traditional difficulty of scheduling a meeting in November and December, given the number of holidays. The committee agreed to have the meeting on October 23-24 in Madison, Wisconsin.

### **Private Fuel Storage Update**

Mr. Northard presented information on the Private Fuel Storage (PFS) Project. He explained that PFS involved a consortium of eight nuclear utility companies that organized in 1995: Consolidated Edison (New York), Dairyland Power Cooperative (Wisconsin), GPU Nuclear Corporation (New Jersey/Pennsylvania), Illinois Power, Indiana-Michigan Power, Northern States Power (Minnesota), Southern California Edison, and Southern Nuclear Operating Company (Alabama/Georgia). Mr. Northard noted that Illinois Power had sold the Clinton plant to AmerGen, but sold its equity in PFS to Florida Power and Light. The consortium leased land in Utah from the Skull Valley Band of Goshute Indians. The tribe had participated in the original attempt to site the federal monitored retrievable storage facility. The term of the lease was 25 years, with the option to extend the lease for another 25 years.

The facility would house dual-purpose containers in a vertical configuration. The spent fuel would be canistered at the reactor facility, with a double-welded lid. The hope was that the containers would not have to be opened after sealing. All containers would be shipped by rail. The storage area would equal 100 acres, within an 820-acre controlled area. The facility would hold up to 4,000 casks, which could hold 40,000 MTU (around half the expected commercial spent fuel inventory if plants run through their existing lifetimes). There will be monitoring systems throughout the facility for both security and to detect radiation, measure temperature, etc. A retention basin will catch runoff for monitoring purposes, although Mr. Northard said they did not anticipate any contamination. The casks would weigh around 150 tons each.

The plan was to transport the containers by rail. If PFS was not successful in siting a rail spur, the backup plan was to use an intermodal transfer facility and heavy-haul vehicle for the last 26 miles to the facility. Mr. Northard said things were going well with regard to siting the railroad.

Mr. Northard said PFS had been quite active over the last year working on transportation plans. The schedule would have the facility begin operating in late 2003. PFS had been working with the Association of American Railroads (AAR) over the last year to review standards for transporting spent fuel. They were looking at adopting new and better standards for communications protocols (including tracking) and security requirements. PFS was also working with TTCI, which is a subsidiary of AAR located in Pueblo, Colorado. TTCI was looking at rail component design. PFS planned to use all the latest technology, including steerable 3-axle trucks, electropneumatic braking, and stronger cradle design. PFS would test a TTCI prototype later this year. Mr. Northard noted that DOE and other shippers would benefit from the design work conducted by PFS as part of this project. Mr. Northard said PFS had three people who specialized in transportation for the project.

PFS found an existing corridor that the Bureau of Land Management (BLM) had set aside for overhead transmission lines to the west of the PFS site, so there is federal land available for locating the rail line. Mr. Northard reviewed some of the other permitted waste industries located near the proposed site. He noted that, because of the presence of so many hazardous materials facilities in the area, the Toelle

County emergency preparedness community was well prepared, with a nine-member full-time staff to serve the whole county.

PFS submitted an NRC license application in June 1997. The Atomic Safety and Licensing Board, which is an independent 3-judge panel, was named by the NRC in September 1997. NRC held two scoping meetings in Utah to solicit input on the full scope of the environmental impact statement. The Safety Evaluation Report was issued in December 1999. The design and operation would comply with federal regulations. A few areas were not covered, namely cask technology, seismic analysis, and military aircraft. PFS has provided supplemental information to the NRC, and hoped to resolve these issues soon. A public hearing is scheduled June 19 in Salt Lake City to address these areas.

The NRC will issue a draft EIS in June 2000 for public review and comment. The final EIS is scheduled to come out in 2001. PFS expected the NRC to decide whether to grant the license for operation and construction in October-November 2001.

Many of the issues originally raised have either been resolved or dismissed. PFS has agreed to compensate the county for their administrative expenses related to the site. The organization is also willing to pay a per-cask fee to compensate the county on an on-going basis for emergency preparedness, law enforcement, security, etc. The tribe will also benefit from augmented law enforcement. Around 50 full-time positions will be needed at the facility for day-to-day operation. The life cycle cash flow will be around \$3 billion. Mr. Northard said PFS hopes to use local companies for these products and services.

NSP has limited storage at Prairie Island through 2007. Mr. Northard said PFS was paving the way for both storage operations and transportation: the project would demonstrate the safety and technology of transporting and storing spent fuel for large-scale campaigns. Mr. Northard characterized the project as the "bridge to Yucca Mountain."

Mr. Strong noted that the states had gone on record that Section 180(c) assistance should be provided to states regardless of whether shipments go to a federal or private facility. He asked Mr. Northard if PFS anticipated any financial or other technical assistance to the states to help them prepare for overseeing the shipments. Mr. Northard said PFS did understand the importance of working with the corridor states on each of the shipping campaigns. He said PFS would start focusing seriously on transportation this fall, about two years in advance of shipments. The first couple of utilities would work with PFS to determine routes, identify which states would be impacted, and what kind of involvement the corridor states would have in advance to help with planning. He said the Monticello-Morris shipments involved coordination two years in advance with Wisconsin and Illinois. In some instances, there was a need to train hospital staff and other responders along the route. Overall, the states' concerns were all addressed on that campaign.

Mr. Northard noted that the shipping campaigns to PFS will involve more people. Mr. Northard said he could not commit to how much funding would be available. The philosophy up to this point was to compensate the locals for their administrative costs, but Mr. Northard indicated PFS did not have unlimited funds. He also said PFS had three staff members who would be most directly involved in transportation planning. This fall, he speculated that they might organize a working group that would be willing to meet with the interested states. He knew NSP would be one of the first utilities interested in shipments, so they would probably take the lead.

Mr. Strong next asked if there were provisions in the tribal lease and/or the NRC application for taking fuel from other utilities besides just the eight that are signed on. Mr. Northard said there was. Mr. Strong asked if Mr. Northard anticipated accepting spent fuel from virtually any utility throughout the country, and Mr. Northard said the facility would be available to all domestic utilities. He said obviously the

needs of the eight utility partners would have to be met first, but once this was done, there would be additional space available to other utilities. PFS would work with interested utilities one-on-one.

Mr. Flater said, as a regulator, he was concerned about having to negotiate a level of funding to help the state prepare for shipments. He indicated the easiest way to ensure the availability of funding would be to work with legislators such as Sen. John Judge to pass a law imposing a fee on shipments. He did not think this approach would be the most efficient way to do business. Mr. Northard said PFS would have to talk to the states. He noted that some states had enacted per-cask fees, which are allowed, to compensate them for their costs associated with the shipments. He agreed that it would be best to avoid the legislative process as a means of assuring that the states receive the funding they need. He said PFS was willing to work with the states, and he would see about organizing the working group this fall.

Mr. Flater reiterated his concern that the states should have been involved sooner. In his experience, the earlier the states are involved, the more comfortable they are and the less likely they are to experience problems. Mr. Northard indicated that his main purpose in being at the meeting today was to start reaching out to the potentially affected states. He mentioned the typical experience with DOE shipments was that transportation planning required around two years of work, and PFS planned to follow that example. Mr. Flater said the east-west route through Iowa was okay in terms of training, but the I-35 route was not. He said funding for training would be an issue for Iowa.

Mr. Blackwell asked if the timeline took into consideration the construction of the rail line. Mr. Northard said the rail line was being constructed in parallel with the licensing. PFS will use dedicated trains because they are more efficient and less costly. Mr. Blackwell also asked about the June 19 meeting. Mr. Northard said the meeting would discuss site-operational issues, not transportation. In response to another question, Mr. Northard said emergency responders would shadow the shipment.

In response to a question from Mr. Crose, Mr. Northard said not all the issues had been resolved with the governor's office in Utah. PFS was trying to work with the local government and state elected officials from the area. Whether that would give PFS any leverage in the state capitol was questionable. PFS did hope to be a "good corporate citizen," though.

### **U.S. Nuclear Regulatory Commission Activities**

Mr. Brach said the NRC's Spent Fuel Project Office (SFPO) is responsible for all spent fuel storage facility reviews, including away-from-reactor, at-reactor, site-specific license applications, or general storage cask licenses. SFPO is also responsible for all transportation cask (Type B) certifications, and for regulatory programs for safe transport of licensed radioactive materials. The office employs around 70 people, with health physics, engineering, and related backgrounds. DOT is the U.S.'s competent authority on transportation, and the NRC plays a supporting role on technical matters. NRC also works with the International Atomic Energy Agency (IAEA) on international transportation standards. Lastly, SFPO reviews quality assurance programs and performs inspections.

Mr. Brach said there are 15 operating spent fuel storage sites in the U.S. The Morris facility houses the only wet storage facility — all the rest are dry storage. Two of the facilities are operated by DOE: Fort St. Vrain and the facility for TMI-2 fuel debris at INEEL. Both of these facilities are licensed by the NRC.

Mr. Brach noted that spent fuel could be stored under a site-specific or general license. PFS is an example of a facility that is being reviewed for a site-specific license. The general license provision allows a reactor licensee (Part 50 licensee) to store spent fuel on-site under 10 CFR Part 72 as long as the fuel is stored in an NRC-certified cask and the licensee can assure that all the bounding parameters for the cask are met (e.g., loading, fuel-type description, etc.).

Around 22 additional spent-fuel storage facilities are planned for the next few years. Mr. Brach noted that, whereas most of the currently operating facilities have site-specific licenses, most of the planned facilities will operate under a general license. As long as the Part 50 licenses are maintained, the licensees can continue to store spent fuel under a general license. Mr. Brach added that, in the next 15 months, the NRC expected to receive an application for another private storage facility in Owl Creek, Wyoming. Mr. Brach said this project is being sponsored by one of the cask vendors (NAC). A third DOE private facility for TRIGA fuel will be located at the INEEL facility.

Mr. Brach reviewed the NRC review process. When the NRC completes an acceptance review of the application, the staff lays out a schedule to assist both the NRC and the applicant in completing the review. NRC management is committed to not missing any milestones, and in the past 18 months the staff has not missed a single one. On the vendor's side, if the applicant cannot provide a response to requests for additional information within the scheduled timeframe, the application gets bumped back in the queue wherever the NRC can work it in. Before this system was established, the NRC had been justifiably criticized for the amount of time it took to complete some reviews.

Mr. Brach then turned to transportation-specific activities. SFPO is responsible for certifying all transportation packaging designs. DOE has a similar role for reviewing packages for its own shipments. The NRC also reviews quality assurance programs and conducts inspections as necessary. In the past year, the staff had been working to resolve generic issues such as high burnup and taking burnup credit with regard to storage and transportation containers.

Mr. Brach commented that there are many common misperceptions regarding the NRC's role in routing decisions, which is limited to reviewing security arrangements proposed by the licensee for providing physical protection of the shipment in transit. The actual routing is not something NRC is involved in.

With regard to rulemaking, the U.S. is obligated to incorporate the latest revisions of the IAEA transportation standards (ST-1) into U.S. standards. The NRC has identified some topics that might result in changes in the details of Part 71, but not in the overall approach. As an example, the IAEA standards would require the use of metric units of measurement — e.g., sieverts instead of rems, whereas the NRC currently uses both units. Mr. Brach said 11-12 IAEA-related issues are being considered in the Part 71 rulemaking.

The NRC is adding other issues to the rulemaking. Around two years ago, the NRC received a petition questioning the technical basis for the requirement for double containment of plutonium in transport shipments. The initial action was to maintain the regulations as they are. The closeout resolution of that petition will be considered as part of the current rulemaking activity. Also in 1997, NRC issued the fissile exemptions rule. According to Mr. Brach, a fuel fabricator had noted that, in transporting special nuclear material with a moderator such as beryllium that is not identified in the regulations, an inadvertent criticality could result. The NRC had issued an immediately effective emergency rule in response. Some of the comments submitted later disagreed with the technical basis for the emergency rule and pointed to the financial impacts. This issue would also be considered as part of the Part 71 rulemaking.

The NRC is planning to follow the enhanced public participatory process with the Part 71 review, which is a little different from the traditional approach to rulemaking. The staff will meet with the public, industry, and other stakeholders to solicit input on issues that should be addressed prior to writing the draft rule. Meetings are being scheduled for this summer across the country. The NRC is also coordinating with DOT as it changes 49 CFR Parts 171-178 to reflect IAEA standards. DOT has already issued their advance notice of proposed rulemaking. The current timeframe for a final rule from the NRC is March 2001.

Mr. Brach discussed the NRC's four transportation safety studies. In 1977, the NRC published NUREG-0170, the *Final Environmental Statement on Transportation by Air and Other Modes*. This document laid the framework for both the NRC's and the DOT's transportation rules and regulations. Reprocessing had been part of the fuel cycle at the time, so many of the study's assumptions were predicated on reprocessing. In particular, the study assumed a significant number of shipments and a short cooling period for the spent fuel. Mr. Brach also noted that dose modeling and computer analyses are more sophisticated today.

In 1987, the NRC issued what is commonly called the "Modal Study" (*Shipping Container Response to Severe Highway and Railway Accident Conditions*). This study specifically analyzed the response of spent fuel packages to impact and thermal forces. The goal was to relate the tests specified in Part 71 to the actual forces observed in accidents. Mr. Brach added that the study considered "real life" transport accidents. Lawrence Livermore looked at actual severe transportation accidents, and modeled them as if they had been transporting spent nuclear fuel to ascertain what the consequences would have been. The resulting risk estimates from the study were less than one-third of those calculated in NUREG-0170.

In March 2000, the NRC issued the *Reexamination of Spent Fuel Shipment Risk Estimates* (NUREG/CR-6672). What drove this study was the realization that the number of shipments would be increasing due to storage and possible repository activities. Cask designs had also changed, with higher capacities, different closure systems, and different spent fuel characteristics. Modeling capabilities have advanced, also. RADTRAN V is now in use, whereas RADTRAN I had been developed in 1977 to support the original NUREG-0170. In the reexamination study, the NRC estimates the risks to be less than those of the Modal Study, which were already less than the original NUREG-0170 estimates. As a result, the NRC concluded that its current rules and regulations are doing their job to protect public health and safety. The NRC is now working on a plain-English complement to the technical report, which Mr. Brach hoped would be available this summer.

The last of the four studies was the *Package Performance Study*. Mr. Brach said, just as the Part 71 revisions are not a typical approach to rulemaking, so the approach to this study is not typical for the NRC. The commission will have public meetings to solicit input from stakeholders. The purpose of the study is to look at spent fuel storage casks and their ability to withstand severe accidents, as well as to look at the modeling and analysis techniques that the NRC uses to ensure the safety of these casks. One question was the extent to which actual physical testing of containers (either partial or full-scale) was necessary or beneficial. The NRC had contracted with Sandia National Laboratories to conduct the study. The NRC was in the process of conducting a scoping study that will summarize and review the comments received to date, and summarize the results of a literature search and review. In the June 2000, NRC will release an Issues and Resolution Options Report identifying what the NRC has heard and where those comments seem to be pointing.

Mr. Brach noted that, as part of the public involvement that characterized the study, the public could view information on the Internet at [ttd.sandia.gov/nrc/modal.htm](http://ttd.sandia.gov/nrc/modal.htm). He said public workshops had been held in November and December of 1999, in Maryland and Nevada. Additional workshops would be held this summer to discuss both the reexamination report and the issues report. These meetings were tentatively planned for the August or September timeframe.

Mr. Brach then turned to the NRC's physical security requirements contained in 10 CFR 73.37. The objective of these requirements was to minimize the likelihood of sabotage and facilitate location and recovery of nuclear materials. The approach to doing so was to provide detection and assessment of any attempts to access or control shipments, provide notification to response forces, and impede sabotage attempts.

The NRC shares information with several other federal agencies regarding possible threats to the safety of shipments. The NRC surveys the route with regard to the security arrangements, confirms the law enforcement agency contacts, and issues an approval that is valid for two years. The applicant is responsible for complying with DOT highway routing rules, coordinating the route with state and local governments, and complying with physical protection requirements.

Mr. Brach clarified that the NRC had issued its *initial* Safety Evaluation Report for Private Fuel Storage in December 1999. The application from PFS had not included the cask system, plus a few other issues had not been addressed. Mr. Brach anticipated that the final Safety Evaluation Report would be released in September of this year, and PFS was planning to amend its application to include one of the approved casks. From a licensing standpoint, the storage of fuel at PFS must be consistent with the license. For example, if the PFS application includes the Holtec Hi-Star, that cask is suitable for receipt of fuel from a different facility — the license is not pertinent to fuel from Utility A versus Utility B. No license amendment would be required.

Mr. Brach also commented on some potential rulemakings. First, the NRC had received a petition from the State of Nevada regarding changes with regard to physical protection, using dedicated trains, weaponry that modern-day terrorists might use. The NRC received and is reviewing 22 comment letters. A second federal register notice pertained to notification of Indian tribes of spent fuel shipments. Mr. Brach said the NRC rules do not require notification of Indian tribes. The advance notice of proposed rulemaking asked for public comments on whether the NRC should revise its regulations to include tribes, as well as seeking input on the process for doing so. He said the comment period extended through July 5.

On the subject of TRANSCOM, Mr. Brach noted that DOE operated the system. He read from a September 1997 letter from the NRC to the University of Missouri: “The NRC has no requirement for the use of such tracking systems. We do not object to the voluntary use of TRANSCOM; however, as an NRC licensee you are responsible for assuring that your use of TRANSCOM complies with 10 CFR Part 73 including the requirements regarding protection of safeguards information.” He said the NRC’s regulations have a very clear statement with regard to the protection of safeguards information and the type of NRC-approved telecommunications that can be used to transmit that information. Unless specifically approved by the NRC, e-mail, voice, and telephone are not generally approved vehicles for passing on safeguards information. Written communications typically is the norm.

Lastly, Mr. Brach noted that the NRC had provided comments to DOE on the draft environmental impact statement (EIS) on Yucca Mountain. The NRC identified several concerns regarding the incomplete nature of the transportation analyses. Mr. Brach said the NRC felt the final EIS should be done in a more complete, bounding manner than is apparent from the draft.

Mr. Runyon asked if electronic distribution was not likely to be acceptable for transmitting safeguards information. Mr. Brach said he was not aware of any application to the NRC for approval of a secure telecommunications system; however, it was possible the NRC could approve such a system. Mr. Runyon asked how Mr. Brach’s interpretation related to TRANSCOM. Mr. Brach said he had read from the letter to the University of Missouri because it had gone through extensive legal review. The responsibility to comply with NRC regulations is clearly on the licensee. Mr. Runyon said he was sure DOE planned to use TRANSCOM as part of the notification process. Mr. Smith said the WIPP shipments do not fall under NRC regulations, so DOE could treat these shipments differently. Mr. Brach agreed that there are a significant number of DOE shipments that do not fall under NRC rule. Mr. Runyon said DOE had committed to following the NRC regulations for its shipments, and said a number of issues would need to be worked out regarding TRANSCOM.



Mr. Runyon also asked if there was any coordination between the NRC's review of a route for security and DOT. Mr. Brach said the NRC route review was very specifically for physical protection. The NRC becomes involved when the licensee contacts the NRC with a proposed route and identifies the security arrangements. The selection of the route is supposed to follow DOT guidelines, but confirming that is not an NRC role. Mr. Runyon asked if the NRC would evaluate whether the DOT guidelines were followed. Mr. Brach said that would be a DOT and state responsibility. Mr. Brach said, if the staff felt the security arrangements along a proposed route were unacceptable, they would identify the concerns to the carrier rather than suggest a different route.

Mr. Strong said his work on the University of Michigan shipments had led him to believe that the NRC was no longer surveying the routes, but that this was instead the responsibility of the shipper. Mr. Brach said the NRC surveyed routes for physical protection, and they typically approved the route for a two-year window. Mr. Strong asked if the NRC staff would drive over a route to identify safe havens along a "new" route. Mr. Brach said the NRC had physical protection experts in each of the regional offices. Whether there is a need to drive the route would depend on what the staff knows about it.

Mr. Runyon said states typically receive notice of the route after the NRC has already approved it. When the states express a preference for a different route, the carrier or shipper commonly asserts that the NRC approved the route, so it is acceptable. Mr. Brach emphasized that the NRC only reviews the route from the standpoint of physical protection. He said if the licensee approaches the NRC with multiple routes, there's nothing to prevent the approval of multiple routes. Mr. Runyon said his agency might try to work with carriers to have them submit multiple routes. Mr. Brach noted that the NRC is a fee-reimbursable agency, so there would be a cost involved in having the NRC review more than one route.

Mr. Swedberg said both Mr. Brach and Mr. Runyon had made good points. When the state routing agency goes through alternate route selection, the DOT checks to make sure that the process followed the guidelines or something equivalent. DOT does not approve the route, but rather approves what the state routing agency has done in using the Guidelines. The key is that shippers are supposed to use the interstate highway system for routing. Mr. Runyon noted, though, that the whole process was a little cumbersome. He mentioned the thorough job Mr. Strong and Mr. Carlisle Smith had done in connection with the alternate route designations in Michigan and Ohio, respectively, and indicated that it would be impossible to do that amount of work in instances in which the state did not receive adequate forewarning. He said he would like to see the states work with DOE, DOT, the NRC, and the shipper to make common-sense decisions regarding routing, particularly when there are multiple interstate routes available.

Mr. Swedberg said every federal highway office in every state had a routing person, for both radioactive and nonradioactive hazardous materials routing. DOT also recognized the state routing agency. Mr. Swedberg noted that his contractor was updating the list of routing agencies and points of contact in the states. When Mr. Swedberg receives a request to use a different route — such as U.S. 2 in Nebraska instead of I-80 — he simply reviews the selection to make sure the state followed the principles behind the guidelines. Mr. Runyon said perhaps the situation in Illinois was different, due to the number of available interstates. Mr. Swedberg said that small changes can be made easily, given the level of communication between agencies.

### **Federal Motor Carrier Safety Administration Update**

Mr. Swedberg said the Motor Carrier Safety Improvement Act, passed last year, established the FMCSA as of January 1. His agency, therefore, was no longer under the Federal Highway Administration. The new administration was searching for associate administrators within the organization. Around five people are employed in the hazardous material division.

Mr. Swedberg said DOT does, in fact, enforce the routing regulations. Carriers of HRCQ must prepare a very specific route plan. Routing of HRCQ of radioactive materials must follow the interstate highway system. If a state did not want the interstate system to be used, they could designate an alternate route but it had to be within their jurisdiction — a state cannot identify an alternate route that would force shipments into another state. Mr. Swedberg worried that preemption issues would come up if the states chose alternate routes that were inconsistent at state borders or impeded interstate commerce. This issue had come up with regard to shipments from the Trojan reactor in the West. He worried that, as more and more states imposed fee and escort requirements, the aggregate effect would be to strain the interpretation of “reasonable” requirements.

Mr. Swedberg noted that the FMCSA was updating the points of contact for every state routing agency. Letters were going out to all these agencies, although Mr. Swedberg noted that some states had not designated a routing agency. In an upcoming *Federal Register* notice, FMCSA will publish the updated listing.

Mr. Swedberg mentioned the *Federal Register* notice on HM-230, regarding the incorporation of IAEA requirements. He noted that the radiopharmaceutical industry was providing many comments because, under ST-1, everything that is labeled must be placarded. The proposed changes could be viewed on the RSPA website ([www.rspa.dot.gov](http://www.rspa.dot.gov)). In response to a question from Mr. Kerr, Mr. Swedberg said the letters to the routing agencies had requested information on the routing point of contact as well as the hazardous materials routes and radioactive materials routes.

### **DOE Program Updates**

*Office of Civilian Radioactive Waste Management.* Mr. Carlson noted that Bill Lemeschewsky, who was the transportation team leader, had retired. In addition, Dwight Shelor had also retired, and Elmer Naples is moving on to a new position with the Office of Naval Reactors. DOT’s long-awaited letter on inspection of states and tribes arrived late last week. Mr. Carlson would provide Ms. Sattler with a copy, and the letter would soon be available on the Internet.

OCRWM has completed the draft environmental impact statement (EIS), and its next major milestone is the Site Recommendation Consideration Report (late 2000). Mr. Carlson noted that all OCRWM’s resources were focused on getting the site recommendation completed by July 2001. If the program’s budget experiences reduced funding levels, some of the milestones would likely slip.

Mr. Carlson noted that OCRWM’s budget request of \$437.5 million for 2001 marked a significant step up from the level of funding appropriated in FY 2000 (\$351.2 million). Included in the budget request was \$3.8 million for waste acceptance, storage, and transportation. Mr. Carlson added the request of \$3.8 million, if appropriated, would enable OCRWM to resume some of its transportation activities. He noted, however, that OCRWM was expecting to receive less than the request, and probably would not start up much in the way of transportation.

The draft EIS looks at the impacts of constructing and operating a geologic repository at Yucca Mountain. DOE received around 11,000 comments, 2,800 of which were transportation related. The transportation staff was helping OCRWM’s Nevada office address those comments.

The no-action alternative entailed two principal options: leaving spent fuel at reactor sites, both with and without institutional controls. The action alternative considered three different thermal load scenarios (high, low, and intermediate), two national transportation scenarios (mostly rail, mostly truck), two Nevada transportation scenarios for rail, and two packaging scenarios (mostly canistered and mostly uncanistered). In addition, the draft EIS looked at the impacts of disposing of additional waste inventories (more than 70,000 MTUs) at Yucca Mountain. These waste inventories would include Greater-than-Class-C waste and DOE SPAR (Special Performance Assessment Required) waste. The

standard case looked at the 63,000 MTU of commercial spent fuel from 72 commercial nuclear power sites, with the other 7,000 MTU coming from DOE spent fuel and HLW. This scenario also assumed there would be 32 MTU of surplus weapons-usable plutonium converted to mixed oxide nuclear fuel.

The preferred alternative was to proceed with the proposed action to construct, operate, monitor, and eventually close a repository at Yucca Mountain. The public comment process included 21 public hearings throughout the nation, with 10 held in Nevada. Four hearings were held in the Midwest: St. Louis, Lincoln, Cleveland, and Chicago. Mr. Carlson showed maps of the reference routes used for analysis in the draft EIS. The routes satisfied the DOT routing requirements and recognized state designations. OCRWM did not view these as the actual routes to be used. Mr. Carlson said he expected to work with the states and the regional groups to identify the actual routes. He also noted that the final mix of modes will probably be dominantly rail.

In response to a question from Mr. Blackwell, Mr. Carlson said DOE planned to construct only one rail line in Nevada, whereas the draft EIS considered several alternatives for locating rail lines and transfer facilities in the state. In response to another question, Mr. Carlson said the Office of Waste Acceptance, Storage, and Transportation within OCRWM had changed to the Acceptance, Transportation, and Integration division. He also said Mr. Bill Lake and Ms. Corinne Macaluso were the two staff members working on transportation activities. Ms. Sattler asked if either Mr. Lake or Ms. Macaluso had had input into the transportation section of the draft EIS, and Mr. Carlson said Mr. Lake did have some input.

In response to another question from Ms. Sattler, Mr. Carlson said, if OCRWM were to get the full \$3.8 million for Acceptance, Transportation, and Integration, he would like to see OCRWM become more involved with the regional groups. He said the general guidance was not to start up transportation activities until they had a site recommendation. Another activity would be to work on the request for proposals, especially in light of the recent experience with privatization at Hanford. He said there would have to be a great deal of re-learning involved in starting up the transportation program.

*Waste Isolation Pilot Plant.* Mr. Smith said 75 shipments had been received at WIPP: 54 from Rocky Flats Environmental Technology Site (RFETS), 17 from Los Alamos National Laboratory, and four from INEEL. Mr. Smith said DOE was looking at opening the Argonne National Laboratory-East (ANL-E) route. The Midwestern corridor states would soon begin to receive funding for the shipments from ANL-E and Battelle. He said the schedule for ANL-E shipment had been made a priority at DOE.

In May, DOE began to receive the first of the TRUPACTs being manufactured under the contract let last fall. This was an important milestone, because CAO only had 16 packages but needed 65-70 to handle all the planned shipments. In terms of the schedule, Hanford was scheduled to begin shipping on June 14, INEEL would start in June 22 or, more likely, in early July. On June 30, DOE would let the bid for the transportation services contract, since the current contract was near the end of its fifth year. Mr. Smith also expected that, by June 30, DOE would award the contract for manufacturing the remote-handled cask.

It was also possible that Savannah River Site would make a single shipment prior to the end of the calendar year. Next year, the plan was to make one shipment per quarter from SRS, moving to one per month by the end of the year. Nevada Test Site was on schedule to start shipping in late 2000, and DOE had been working on opening that corridor since October 1999. Mr. Smith noted that ANL-E might commence shipping in 2000 or 2001, with the actual date dependent upon developing a schedule that would meet the states' and DOE's needs. Ms. Sattler asked for clarification of the ANL-E shipping date. Mr. Smith said originally the plan was to start shipping in 2001 or by the end of 2002. This morning, however, he had learned that the date had been pushed up. He would be meeting with other folks at DOE on Monday, May 15, to come up with a tentative schedule. He acknowledged that it takes time for the

states to prepare (e.g., to do training). Ms. Sattler expressed her dissatisfaction with the shipping date having moved up without warning.

Mr. Swedberg asked Mr. Smith if he anticipated a change in the transportation contractor this year. Mr. Smith said it was possible DOE would let two different contracts, so that CAO could avoid putting all its eggs in one basket. He said this recommendation had arisen from an external audit of the program. He could not divulge any more information, however.

Mr. Smith mentioned that, 9-10 years ago, CAO began working with WGA to develop the ground rules for shipping TRU waste across the country. The result of that effort was the *WIPP Transportation Safety Program Implementation Guide*, or the PIG, which identifies the protocols and procedures for how the WIPP transportation program would do business. He said this effort took nine years and around \$8 million, and all the other DOE shipping campaigns can now use this document as the basis for starting negotiations on how to ship. His hope was to see DOE adopt a consistent approach to transportation. For the WIPP program, however, there were a number of extraregulatory requirements imposed by law.

The current PIG was written for truck shipments, which would move 95% or more of the waste destined to WIPP. WIPP does have rail access to the site. Mr. Smith said the assumption had been that OCRWM would prepare what would be a rail equivalent to the PIG, since that program was likely to ship most of its waste by rail. Unfortunately, OCRWM did not reach the point of doing so, and so now WIPP was faced with writing a rail transportation planning document. He added that CAO has always known that there is a very small amount of waste that would be too big or too heavy to ship by truck.

As a result, in the next few weeks, an ad hoc working group would start to develop a rail supplement to the PIG. In addition, the current PIG covered only contact-handled waste, which was waste contained in barrels, giving off no more than 200 mrem on the surface. Mr. Smith said 97% of the shipments to WIPP would be contact-handled. There was remote-handled waste, though, which could give off readings as high as 1,000 rem. Clearly, shipping this material would entail different packaging, handling procedures, and training for the states and tribes. Another working group, therefore, would develop a supplement to the PIG to address remote-handled waste.

Mr. Smith noted that the PIG was referenced in a Memorandum of Agreement between the Secretary of Energy and WGA. SSEB had a similar memorandum governing their equivalent of the PIG. When the administration changes next year, these memoranda would be re-signed, and perhaps a new one would be established with the Midwestern region.

Mr. Smith then addressed a potential route change for the ANL-E shipment. The route originally proposed would take I-57 through central Illinois, through the boot of Missouri, Arkansas, and then into Mississippi. Several weeks earlier, Ms. Sattler had asked Mr. Smith to look at using I-80 instead of I-57 for the ANL-E shipments. Mr. Smith commented that, in the last few years, DOE had done quite a bit of training along I-80 in connection with the cross-country shipments. He added that ANL-E is less than a mile from I-55, which would make it easy to get to I-80. In contrast, the route from Argonne to I-57 was much more circuitous.

The proposed I-80 route would meet up with the Western WIPP route in Cheyenne. Mr. Smith added that funding for the states plus training (including hospital training) would be available. Mr. Schwarz indicated that he would not like to see shipments on I-80 during the winter months. Mr. Smith said several sites (Battelle, ANL-E, MURR, Ames, Rock Island, and possibly others) were likely to ship along I-80. In all, less than 50 shipments were expected, and these would take place over 2-3 years. Mr. Smith said CAO did not have the assets to do a large number of shipments, so these shipping campaigns should not be onerous for the states.

Mr. Runyon asked about the Battelle route. Mr. Smith said that decision would fall under Mr. Baillieul's purview. He indicated that a logical route might be I-70, north of Indianapolis on I-74, then to I-80. Mr. Baillieul added that the Battelle waste was remote-handled, but the actual curie content did not make it an HRCQ material. Nevertheless, he said he intended to follow the regulations applicable to HRCQ shipments. Mr. Flater asked for clarification. Mr. Baillieul said DOE had not actually put together one of the packages for the shipment, but the transportation folks did not think the shipment would exceed the limits that would make HRCQ requirements applicable. Mr. Flater indicated that his preference would be not to have to escort the shipment. Ms. Sattler noted that there was no federal requirement to escort transuranic waste shipments — the requirement applied to spent fuel.

Ms. Sattler asked if the I-80 route were used, would the schedule for the Ames and Rock Island shipments be moved up. She noted that past plans had been to open a route, then clean everything out. Mr. Smith said that was a good plan, but he was not sure whether DOE would choose to ship from Ames and Rock Island this early. He did note that the TRU waste from MURR was in the top 5 or 6 in terms of priority.

In response to a question, Mr. Smith said there would be a 90-day transition period for switching carriers. October 1 is the date for putting the contract into place. Mr. Smith also mentioned that the CAO now handles the contract for CVSA training. He said if the states needed any training, they should contact Mr. Jim Daust. He added that the current carrier contract was a subcontract to Westinghouse, whereas the new contract would be a prime contract with DOE.

Ms. Sattler asked Mr. Smith how many TRUPACTs would be dedicated to the ANL-E, Ames, and other shipments. Mr. Smith said one. He noted that DOE had an agreement with INEEL to move 3,100 cubic meters out by 2003. In addition, there is an "incentivized agreement" with RFETS to move all TRU waste offsite by 2006. These two sites could use all the 16 casks available. He added that any route could use 15 TRUPACTs: three en route to the generator site, three at the generator site, three en route to WIPP, three at the WIPP site, plus a few extras. In theory, then, the RFETS and INEEL shipments could use 30, whereas WIPP only had 16 available.

Mr. Smith said loading two containers was the optimum right now. There was also a weight issue: each loaded container weighed around 19,000 lbs., so when factoring in the trailer and tractor weight, shipments could push the 80,000 legal weight limit. Using three containers, then, could result in inefficiency in shipping, since each one might have to be only partially loaded. Mr. Smith said this was one reason for designing the HALFPACK, which was a smaller package. The NRC was currently reviewing the application to certify the HALFPACK.

Ms. Sattler asked why the trailer was designed to carry three containers, if two containers was the optimum. Mr. Smith clarified the two was the optimum right now. He added that, in the West, DOE was working with the states to approve overweight shipments up to 92,000 lbs. That way, DOE could reduce the number of shipments by putting three fully-loaded TRUPACTs on each shipment. Ms. Sattler observed that, if ANL-E shipments truly were a priority, DOE should dedicate more than one container to the shipping campaign. She noted that DOE had objected to having to pay the inspection and escort fee for its shipments in Illinois, yet now DOE was proposing to triple the number of shipments by using just one container. Mr. Runyon indicated that Illinois did allow overweight shipments, provided the shipper obtained a permit.

Mr. Smith reiterated that, given the available number of TRUPACTs and the available funding, it would be difficult to dedicate more containers to the ANL-E and other small quantity site shipments. Ms. Sattler asked, given these limitations, why DOE was proposing to open so many corridors instead of just dedicating all its resources to meeting the Idaho and RFETS agreements. She asked what was the driver for moving up the ANL-E shipments, and Mr. Smith said he did not know. Mr. Crose added that, for years, the states in the South had predicted that politics would drive the scheduling decisions.

Mr. Runyon asked, if remote-handled shipments amounted to such a small number of the total, why had WIPP developed its own container instead of using something commercially available, such as the CNS 10-160 container that DOE was planning to use for the Battelle shipments. Mr. Smith said the waste had to be canistered to mesh with the licensed design of the disposal facility at WIPP. WIPP currently was not equipped to canister waste, and the CNS transport container could not accommodate waste in a canister. Ms. Sattler pointed out that WIPP was not currently licensed to accept remote handled waste.

*TRU Waste Shipments from Battelle-Columbus.* Mr. Baillieul said there are four small quantity generator sites that have an urgent need to move TRU waste to WIPP or some interim facility so that DOE can accelerate closure: Battelle, Mound, ETEC, and MURR. He noted that Battelle's West Jefferson facility is 15 miles due west of Columbus, half a mile south of an interchange with I-70. Battelle ran the world's first privately licensed research reactor and had a large hot-cell facility used for irradiated fuel examination, testing, and development. Under the current cost-sharing contract, all the waste generated by the project will be DOE-owned for the purposes of disposal. The site was part of the congressionally-mandated closure fund, and was listed for closure by 2006. Mr. Baillieul expected closure to occur before that date, if everything goes as planned. The eastern boundary of the site is Big Darby Creek, a national scenic river and state-protected river. Nearby recreational facilities and encroaching residential neighborhoods are among the reasons for DOE wanting to clean up and close the site.

Because irradiated fuel examination was a major activity at Battelle, the hot cells are filled with highly contaminated equipment, all of which have a profile similar to spent fuel. The actual transuranic content is low, but the presence of the various fission products makes this waste remote-handled. Initially, DOE projected around 360 cubic meters of TRU material. Sorting and segregating, as well as other measures, has put the current inventory at approximately 25 cubic meters (100-120 drums).

WIPP will not be ready to take remote-handled waste for some time — 2002 was one projection, however problems with funding for the RH 72B cask might prevent the contract from being let this year as planned. Both MURR and ETEC had waste that would require further characterization or processing prior to disposal at WIPP. Battelle's material was being packaged under an approved "acceptable knowledge" program. Until the characterization quality assurance process is audited for final certification, however, Battelle cannot say its waste is certifiable for disposal. As a result, these sites need to send their waste to another interim facility. SRS had been suggested for Mound because of similarities in the waste types. Battelle, ETEC, and MURR were matched with Hanford both because of similarities in the waste and also because of historical missions linking the sites. Mr. Baillieul said no decisions had been made yet regarding the actual interim destinations.

Mound does not have a facility for reopening the 150 drums and 33 boxes that contain "legacy waste." The boxes are not certified shipping containers, and record-keeping was inadequate. It was possible that some of this material would not even be categorized as TRU waste upon inspection, but this determination could not be made unless Mound were to build a special facility for opening the boxes or shipped it elsewhere for doing so.

Mr. Baillieul noted that, whereas most of the small sites were planning to ship by truck, Mound had proposed shipping by rail in OHOX (formerly ATMX) railcars. Two of the cars are currently being refurbished to meet all the necessary standards for this type of material. If the car itself were to be certified as a shipping container, then Mound could ship its oversized boxes in these containers. With two railcars, the total inventory at Mound could go in 3-6 shipments, with possibly one or two shipments in the future depending on what kind of remediation waste is generated at the site.

In addition to looking at SRS, Carlsbad has been looking at options using commercial facilities that could be approved to take mobile characterization operations, which CAO had funded in previous years. But commercial facilities were not considered in the programmatic EIS or any of the waste records of

decision, so there is a question as to what kind of NEPA evaluation would have to take place to make that an option.

Mr. Flater asked about the definition of "shipment." Mr. Baillieul said two rail cars traveling together would constitute a single shipment. Mr. Baillieul added that there were other DOE sites that were looking at the OHOX cars for use in moving "oddball sized stuff," so funding from other sites to refurbish the cars might be available. Mr. Blackwell clarified that the ATMX cars had been used under a DOT exemption (5948). This exemption had lapsed, and DOE had applied to renew the exemption. The FRA hoped to make a decision on the renewal application in the next few weeks. Mr. Smith added that the railcars were not Type B containers, and Mr. Blackwell said they were modified boxcars. The cars were built in 1960, which is why they had to go through the "88 refurbishment," which is an AAR requirement. The FRA is also verifying the structural integrity of the boxcars. By regulation, a railcar has a lifetime of 50 years, so the cars will only have 10 more years of useful life unless someone asks the FRA to extend that life. Mr. Baillieul added that the railcars had been used historically for hundreds of shipments, many involving the same type of material that Mound has.

Mr. Baillieul noted that there could be other sites around the country that have defense-origin TRU waste. He said the West Valley TRU waste could possibly be reclassified as defense-related. Many sites could, therefore, be added to the list of small quantity sites, and it was not clear that all this material could be shipped in TRUPACTs. Having additional types of packages and carriage systems available, therefore, is an important option.

Mr. Baillieul said that, in April, Chem Nuclear Systems (CNS) had delivered its first 10-160 cask to its customers. Mr. Baillieul believed the Navy had received that cask. The cask DOE would lease for the Battelle shipments would be available in August. Mr. Baillieul added that Battelle would also use the cask for Type B low-level waste shipments. He had suggested to the National Transportation Program office in Albuquerque that DOE purchase at least one CNS cask (or enter into a long-term lease). The capacity and flexibility of the cask would make it feasible for use on many different campaigns involving Type B quantities of material. He said the payback period would be less than one year, however his program could not afford to do it individually.

The RH 72B program was likely to be delayed due to uncertainty over funding. Previously, the integration initiative had been managed out of Idaho. Now, however, the work has been handed over to the National TRU Program, and the CAO had been given responsibility for handling shipments from the small quantity sites. Hanford was still the preferred alternative for taking the Battelle waste, but the final decision had not been made.

Mr. Baillieul mentioned that I-70 to I-74 to I-80 is a proposed route from Battelle to Hanford. Historically, the low-level waste shipments to Hanford and Envirocare had taken I-70 all the way to Denver, then up I-25 to I-80. Mr. Baillieul said he would work with Mr. Smith and the CAO, and Mr. Smith would coordinate with the states regarding the route. Chem Nuclear would be DOE's agent under contract.

Mr. Runyon noted that I-74/I-80 is a pretty common route in Illinois. Mr. Baillieul added that it made sense to use routes that had previously been used. Mr. Crose agreed that I-70/I-74 in Indiana was a good route and had been trained. Ms. Sattler asked what the earliest shipment date would be. Mr. Baillieul said, for TRU waste, it would depend on the site to which DOE would ship. He said it would take several months to coordinate the route selection process and other activities. He said he wouldn't feel comfortable giving the states less than 90 days notice. Mr. Runyon asked if there was a "drop-dead date" on the choice of destination. Mr. Baillieul said that date had passed long ago. Ms. Sattler asked if it was possible a decision would be made prior to mid-November, and Mr. Baillieul said it was. He added that the Secretary of Energy and the Assistant Secretary were meeting with the Washington governor and his

staff over the high-level waste tank program at Hanford. Depending on how those discussions go, a decision could be made in the near future. Another alternative that has not been taken off the table was taking the waste to Oak Ridge.

There were a number of comments regarding the influence that the 2000 elections were having and would continue to have on transportation operations. Mr. Baillieul said the Battelle shipments, once they commenced, could be completed within four months. Waste processing and packaging was going on much ahead of schedule. In fact, the hot cell had no more room for storing the drum liners that were loaded. Those would soon be moved to a shielded area within the facility so that packaging could continue. Mr. Baillieul thought Battelle could finish packaging the waste by the end of this calendar year. The shipping campaign could start anywhere between October and December, but that would be contingent upon identifying a site and giving the states enough advance notice to be ready. Ms. Sattler said some of the Western states had concerns over starting a shipping campaign during the winter months. Mr. Baillieul recognized that concern, but said Battelle had experience making low-level waste shipments in January. He said the specific weather conditions could influence the schedule of shipments. He added that the DOE traffic managers were very sensitive to the states' concerns over the timing of shipments.

### **National Transportation Program and TRANSCOM**

Mr. Sanchez handed out the prospective shipments module, and began his presentation with a brief overview of the National Transportation Program (NTP) activities. DOE is still evaluating the feasibility of implementing consolidated transportation grants. DOE currently provides \$5.6 million annually to the states and tribes for transportation planning and emergency preparedness activities. Since the committee business session earlier in the day had covered much of the TEC/WG activities, Mr. Sanchez moved on to discuss the status of TRANSCOM.

TRANSCOM has tracked 45 shipments in the current calendar year, and there are over 100 users of the system. As new corridors opened, Mr. Sanchez expected these numbers to increase. He reviewed some of the technical issues that users had experienced with the current version of TRANSCOM. The biggest issue was that the current system was configured in such a way that a database had to be updated each time a user accessed the system. As a result, download times could take as long as an hour if users did not access the system on a frequent basis. DOE had streamlined that configuration, so typical login/download times were now 3-5 minutes.

In addition, the modem on the TRANSCOM server side had been causing problems. Software revisions improved the login process, and most users were finding that they logged in on the first or second try. Under "helpful hints," Mr. Sanchez suggested that users who upgrade their own systems to Windows NT should contact him for information on configuring their setup to access TRANSCOM. New passwords went out in April, so users that have trouble accessing TRANSCOM should make sure they are using the current version (1.4) and the correct password.

Mr. Sanchez reported that DOE had tasked the National Academy of Sciences to put together a "blue ribbon panel" to review WIPP operations and make recommendations for improving the system. One of the items that came up was the need for TRANSCOM to be updated. Mr. Sanchez said many of the panel's conclusions were based on data that pre-dated DOE's efforts to upgrade the system. The previous day, he had presented information on TRANSCOM 2000 to members of the panel. He said the discussion went well, and he did not receive many questions from the panel.

Mr. Sanchez reviewed the process for upgrading the system. He said DOE had consulted internal and external users to put together a list of needs and wants. One of the goals of the new system was to use "off-the-shelf" products. The new system will be Internet-based, so that users can access the system through their own Internet service providers and their own browsers. It constituted one application with



one set of data, compared to the current system, which ran on multiple systems using numerous individual databases housed on the users' computers. Qualcomm would continue to provide the communications software. A new product from the company would enable updates to take place every two minutes. In contrast, the original system updated the shipment position every 15 minutes, and the modified current version provided updates every 5-7 minutes.

TRANSCOM 2000 will add schedules to the system, with the information from the bill of lading automatically fed into the schedule. Mr. Sanchez noted that, since the system is on the Internet, there would be direct links to the North American Emergency Response Guide and to other transportation-related websites. In response to a question, Mr. Sanchez said TRANSCOM 2000 had experienced problems converting from curies to becquerels. The preferred solution was to work with the shippers to have them make the conversion prior to entering the data. The more costly alternative would be to make the software do the conversion.

Mr. Sanchez reviewed the security elements in TRANSCOM 2000. To start, DOE was using an Oracle 40-bit data encryption, and was considering using a 128-bit encryption. Users would have to log in with a user name and password, and users will have the ability to change their own passwords (not the user name). There will be a firewall between the Oracle database and the web server. Firewalls can sometimes cause problems running Java applets (part of the maps package) because these are executable programs, which are often used to conceal viruses. DOE will not allow Java applets through the firewall, so the actual information on the shipment will sit on one database server. The web server, which users will access, will be separate and will view just the data. No applets will pass between the web server, which is protected by a firewall, and the database server.

Another security measure is to have distinct user groups. States and tribes will only be able to view shipments that will affect them. In addition, depending on their needs, each user will have only a certain set of options for viewing and/or modifying the data. Mr. Sanchez said TRANSCOM 2000 has four elements: three dealing with the software, and one involving the transition of the system from Oak Ridge to Albuquerque. All the software-related elements were 99% complete. The transition to Albuquerque was 75% complete.

The Independent Validation and Verification Plan is complete, and DOE is negotiating with several companies to do this work. Mr. Sanchez would like to see this activity underway at the same time that DOE sponsors the beta testing, which was scheduled for May 31 and June 1. He mentioned that Mr. Runyon would participate in the beta testing.

Mr. Sanchez noted that the old TRANSCOM system would not move to Albuquerque. Instead, the old system would remain in Oak Ridge until it was replaced by TRANSCOM 2000. In comparing the two systems, Mr. Sanchez noted that the security features, internet-based approach, user friendliness, portability and integration, and Windows-like environment were the primary features that distinguish TRANSCOM 2000 from the current system. Once the beta testing is completed, DOE will demonstrate TRANSCOM 2000 to the NAS panel and the NRC. By the end of summer, Mr. Sanchez hoped to have implementation of the system well underway. On the subject of training, Mr. Sanchez anticipated hands-on classroom training, with a few sessions scheduled in the different regions.

Mr. Runyon asked if TRANSCOM 2000 would fill all the needs identified by the NAS panel. Mr. Sanchez said the panel member who wrote the section on TRANSCOM's deficiencies had not been present at the meeting the previous day. Mr. Sanchez believed the new system addressed 95% of the issues identified in the NAS interim report. He said the only questions he had received focused on the NRC's views on TRANSCOM. The final report of the panel will be out in the spring of 2001.

Mr. Runyon asked if TRANSCOM 2000 would be considered a secure system, and whether it was possible to work out an e-mail notification to alert users to access the system. Mr. Brach noted that, during the break, he had spoken with Mr. Sanchez about meeting with the NRC in the summer to demonstrate the features of TRANSCOM 2000. He reiterated that, under today's operations and guidelines, TRANSCOM does not meet the NRC's requirements for an approved telecommunications system to transmit advance notification. That does not mean that the new system will not.

### **Federal Railroad Administration Update**

Mr. Blackwell announced that the FRA had finally released its letter on state and tribal inspections of rail shipments. The letter responded to DOE's 1995 request for a determination on the rights of states and tribes to stop and inspect shipments. The 14-page legal brief accompanying the letter was heavily steeped in pre-emption issues. States and tribes were addressed separately. Mr. Blackwell was working to put the letter on the FRA website, and he was sure the letter would be the subject of discussion at the TEC/WG meeting in July. He refrained from going into the details of the letter, but noted that there was a mechanism by which states can participate in rail carrier inspections. However, since tribal entities were not specifically addressed in the legislation that enacted the partnership program there is at present no equivalent program for the tribes. The only option open to them is to affiliate in some way with a state entity. Mr. Blackwell anticipated that issue of tribal sovereignty was likely to be raised. Mr. Blackwell asked if the Midwestern High-Level Radioactive Waste Committee wanted a response to its February 15 letter asking about the status of the inspection letter. Mr. Moussa said he would appreciate a written response.

Mr. Blackwell also noted that the Safety Compliance Oversight Plan (SCOP) was undergoing revision. He was waiting to hear from his boss regarding approval of the distribution list for reviewing and commenting on the SCOP. Mr. Blackwell said Ms. Sattler would receive a copy for distributing to the Midwestern states.

DOT had elevated the issue surrounding spent nuclear fuel and HLW to a secretarial level through the "One-DOT Flagship Initiative" process. The intent of the One-DOT process is to consolidate information, improve coordination, and streamline the activities concerning the transportation of high-level radioactive materials within the DOT. It also enables the administration to keep the Secretary of Transportation apprised of ongoing activities and any new developments. Under this initiative, FRA had begun coordinating with FMCSA, the Coast Guard, and the RSPA.

Mr. Ed Pritchard, the Hazardous Materials Division Staff Director, is moving to a different position in FRA. His position has been advertised to all sources of qualified applicants. In the interim, Mr. Pritchard will remain as the Acting Staff Director of the Hazmat Division. Also, the FRA is working on the commonly used routes for shipments used for naval shipments, and was hoping to implement a modified SCOP for these routes. To date, the FRA has not been able to conduct many shipment-specific inspection activities, because they have not been able to resolve the notification issues (since these are National Security shipments). Nevertheless, the FRA continues to have a constructive relationship with DOE on these shipments.

The FRA is also working with DOE's National Transportation Program to develop a rail carrier evaluation program similar to the one DOE currently uses for motor carriers. Lastly, Mr. Blackwell said DOT had not received any comments on its tribal policy order. He noted that the policy was a living document, and had been signed by the Secretary in November 1999 and was now being implemented.

## **West Valley Rail Shipment**

*Introduction.* Mr. Ahmad Al-Daouk noted that DOE has not identified a route for the shipment, largely because the department wants to receive state and tribal input into the decision. DOE is also working with the potential carriers to get feedback on the route. An independent consultant is also taking a look at the Oak Ridge routing study to provide additional feedback on the 12 proposed routes. Once all the feedback is in from these three sources, DOE will make a decision on a preferred route. Mr. Al-Daouk indicated that the handouts included all the draft planning documents, as well as copies of the viewgraphs he and the rest of the speakers would follow.

The high priority in this campaign is to make the shipment in a successful, secure, safe manner. Currently the site stores 125 PWR and BWR spent fuel assemblies in a pool. DOE's mission is to clean up the site and close the facility, so these assemblies have to be removed. The shipment timeframe is April 1, 2001, to October 31, 2001. As part of the settlement agreement between Idaho and DOE, this shipment will go to INEEL after December 31, 2000. Mr. Al-Daouk noted that, with this shipment, DOE was trying to meet its agreements with both NYSERDA (New York State Energy Research and Development Authority) and the state of Idaho.

The 125 assemblies arrived on-site during the 1970s, even as the facility was shut down for modifications. New laws and regulations were enacted while the facility was shut down, and its operator decided not to resume operations. Instead, the operator, under the terms of its contract, turned the responsibility for the site over to the state of New York. In 1980, the West Valley Demonstration Project Act directed DOE to manage the cleanup process. DOE took title to 125 assemblies to ship to Idaho under a project to demonstrate the feasibility of dual-purpose containers. A dual-purpose cask was procured in the 1980s for use in this campaign.

The two goals of the shipping program are to ensure a safe and secure shipment and to minimize the impacts on communities along the way. To do the latter, DOE will involve the states in routing decisions. In addition, DOE will assist the states and tribes in integrating their preparation for all types of radioactive materials shipments, e.g., by providing resources for training, briefing materials for public information meetings, and working with the states to build on already-established programs for emergency preparedness. DOE will also provide assistance through the RAP program in the event of an emergency.

Both West Valley and INEEL are working on the shipment. The draft versions of all planning documents are available. The current planning entailed two shipments, but DOE hoped to reduce it to one. Mr. Al-Daouk explained there were two casks, and two shipments would be necessary using half-loaded casks. DOE recently submitted a revised Safety Analysis Report for these two casks, and was confident that the NRC would allow the department to fully load both casks and ship them on a single train to INEEL. The NRC accepted the application, and is now working on the technical review of the SAR. Mr. Al-Daouk expected to receive NRC approval on the SAR for one cask by the end of November 2000, and by early next year for the other cask. Mr. Al-Daouk noted that DOE is beginning to work in earnest with the states this early in the process to make sure they will have input into the process.

In response to a question, Mr. Weiss explained that there were 85 BWR assemblies and 40 PWR assemblies (identical to the ones at Prairie Island). One cask is designed for the BWR assemblies, the other for the PWR assemblies. The original plan was to ship 20 PWR assemblies in one cask, and 40 BWR assemblies in the other, then make a second shipment to move the rest. Mr. Brach clarified that the NRC had received the revised SARs only 10 days earlier.

In response to a question from Mr. Owen, Mr. Al-Daouk said DOE is not planning to provide financial assistance to the states, but will instead put the states in touch with resources such as the National Transportation Program, and the TEPP program for training. Mr. Al-Daouk reiterated that the goal was to

build on existing programs, and to make these resources available to the states. Mr. Blackwell said there might be parts of the rail corridors that parallel highway routes that have received training. Mr. Owen said Mr. Blackwell's observation would not apply to most of the proposed routes in Ohio. Ms. Traci Taul said she would cover these matters during her presentation. She said DOE does not plan to fund any new training, but within the department there are training resources that are available to the states. Mr. Owen noted that the states already have the TEPP program, but they still bear their own training expenses.

Ms. Sattler said the WIPP program had provided STEP training in connection with the cross-country spent fuel shipment. She asked if this training would be applicable and/or available to help prepare for the West Valley shipment. Ms. Keister mentioned that the regional TEPP coordinators were planning to host workshops — one in Chicago — regarding the TEPP training modules. She said as a follow-up to these workshops, the regional DOE offices planned to offer a TEPP train-the-trainer course in each of the DOE regions. By late August, DOE anticipated having a video available to supplement the TEPP training. Mr. Owen said the assistance Ms. Keister described would not be sufficient to meet the states needs. Mr. Smith said the WIPP trainers had excess capacity right now, and could assist with training for West Valley, if desirable.

*Transportation Operations.* Mr. Mike Tyacke addressed transportation operations activities. The project as originally conceived was to demonstrate the use of a single package for both transport and storage of spent nuclear fuel, which was a novel idea back in the 1980s. The cask licensing and handling were subject to NRC's regulations under 10 CFR 71. The regulations pertaining to cross-country transport were in DOT's regulations at 49 CFR 106-180. In addition, several DOE orders applied: *Packaging and Transportation Safety* (460.1A), *Departmental Materials Transportation and Packaging Management* (460.2), and *Protection of Unclassified Irradiated Reactor Fuel in Transit* (Manual M 5632.1C-1). Mr. Tyacke noted that most of the information he would be presenting was also contained in the draft transportation plan.

Mr. Tyacke said DOE would use a dedicated train. He added that it would be a "key train," which meant that it would have priority in transport. Only Amtrak trains would have a higher priority. There was some question as to the use of the term "key train." Mr. Blackwell said it was not a generic rail term, and suggested DOE check with the particular carriers regarding the meaning of the term. Mr. Tyacke said the goal was to make sure that the spent fuel train had high priority in the carrier's system. He acknowledged, though, that expediting the shipment would depend on the restrictions DOE placed on its carriers, such as slow speed limits. Mr. Blackwell noted that some railroads do not follow the AAR recommended practice of limiting speed to 35 miles per hour.

Mr. Tyacke showed an artist's rendering of the train configuration. Mr. Terry Gilmore asked why there would be two buffer cars between the containers, and Mr. Tyacke said it was not required. The reasons for doing so included having a replacement car available and increasing the distance between the loaded cars. Mr. Tyacke said the BWR fuel consisted of 85 assemblies of four different types coming from the Big Rock Point (BRP) reactor. The PWR fuel was all of the same type, and originated in the Robert E. Ginna (REG) reactor.

Mr. Tyacke said that, prior to delivery, there would be numerous pre-delivery inspections performed by personnel from Bechtel and Westinghouse, as well as the FRA. NYSERDA would oversee all these activities. Activities prior to releasing the shipment would include inspecting the train; radiological surveys; verification of shipping papers, placards, and labels; briefing the train crew; performing a communications system check; pre-notification to the states and tribes; and verification of the condition of the route. DOE will provide a train support crew consisting of 2-3 DOE experts riding on the train. These people will have expertise in TRANSCOM operation, as well as technical expertise related to the

project and the cargo. The train support crew would be responsible for providing emergency response support, alternate communications, and en route radiological checks.

In addition to the initial inspections at West Valley, the shipment would be inspected en route. With each crew change, there would be a walkdown to verify tie-downs, among other things. In addition, there was a requirement to perform an inspection after every 1,000 miles of travel. The DOE train support crew would conduct their own surveys of the casks. Mr. Schwarz asked about the 1,000-mile inspection. Mr. Tyacke said the inspection was a federal requirement. Mr. Schwarz commented that some crews preferred not to ride with this particular type of cargo. Mr. Blackwell said the crews would be briefed as to what the train is carrying. This, in fact, was part of the SCOP. He said a crew member's preference not to ride with this type of cargo would be an issue for discussion between the employer and employee.

The states and tribes also had the option of inspecting the shipment. Mr. Tyacke indicated that he was aware the state of Illinois required an inspection. Lastly, upon receipt of the shipment at INEEL, another set of inspections would be conducted.

BBWI would send the written 7-day notification to the states and tribes. TRANSCOM would be available to the states two hours prior to the shipment entering the state's or tribe's jurisdiction. In addition, shipment delays would be identified through TRANSCOM. BBWI would notify the affected states and tribes of any delays greater than six hours.

The train crew and carrier dispatch would communicate regularly throughout the shipment. The carrier dispatch would communicate with the 24-hour Warning Communications Center (WCC) at INEEL and the states, tribes, and local officials as appropriate. In the event of a TRANSCOM failure, the carrier would call every two hours to the WCC and the shipper would notify the affected states and tribes. The DOE train support crew would report to the DOE Situation Room.

During normal operations, the carrier would track the shipment using its own automatic car tracking system as well as the communication between the train crew and the dispatch office. In addition, the train support crew would communicate regularly with the DOE Situation Room. In the event of an emergency, the railroad carrier would contact the state, tribal, and local response agencies and the WCC. DOE and the carrier would monitor weather conditions prior to and during the shipment. The decision to delay the shipment would be made jointly by DOE and the carrier. Mr. Tyacke said the shipment would not leave West Valley if known weather conditions could adversely affect safety. The DOE Situation Room will be located in Idaho.

In the event of an unscheduled stop, the carrier would notify BBWI, who would then contact the states and tribes as appropriate. If there is a need for an unscheduled stop, the carrier would attempt to avoid high population and residential areas, areas with difficult access or that would be difficult to evacuate, industrial areas, or areas without train crew services.

In instances where a deviation from the established route might be necessary, it would be the carrier's decision whether there is a need to take an alternate route or go to a safe haven. The carrier would identify the best alternate route, then notify the shipper. The shipper would then notify the states and tribes, as appropriate. In response to a question, Mr. Tyacke said once DOE identified the route for the shipment, the department would work with the states to identify safe havens. Mr. Crose asked if there would be armed escorts on the train. Mr. Tyacke said DOE requires its carriers to provide security escorts for the shipment, and some carriers would require an armed guard. Ms. Jamie Stuart said she would address all the security matters later in the session. Mr. Tyacke added that the requirements for this shipment were a little different than the NRC requirements.

In the event recovery, cleanup, and site restoration would be necessary, the carrier would be responsible for all these activities. West Valley and INEEL would monitor workers according to their site

procedures. Mr. Tyacke said special monitoring would not be required on the train, since the maximum dose per crew member would not exceed 7.5 mrem. The carriers would provide ALARA training to their train crews. States and tribes would be responsible for their own monitoring. Mr. Blackwell asked where the 7.5 mrem estimate came from, noting it was rather high. Mr. Tyacke agreed it was high, and said 7.5 mrem was the absolute worst case.

The involvement of the states and tribes included activities such as this meeting. Mr. Tyacke said in addition to the planning process, states would be able to participate in inspections. He said DOE hoped to minimize the number of stops and the time in transit, as well as to ensure the safety of the shipment and the personnel involved in making the shipment. It was important, therefore, for all inspections to be coordinated carefully. States and tribes would also be involved in preparing for security arrangements and emergency response.

Mr. Tyacke said Oak Ridge had used INTERLINE and RADTRAN to identify potential routes, affected states, and possible railroad carriers. DOE was now working with the railroads to see if the routes made sense. In addition, the department had hired ALK Associates to conduct an independent review of the route (the same company was used to evaluate the TMI route). The states and tribes also had an opportunity to review and comment on the potential routes.

The Oak Ridge study identified four factors: distance, rail quality, population, and public risk. In response to a question, Mr. Tyacke said public risk was an indication of both the population and the potential consequences of an accident. In presenting a comparative table from the Oak Ridge study, Mr. Tyacke explained that 100 percent would be the most favorable score.

Mr. Tyacke reiterated that the shipment would take place between April 1, 2001, and October 31, 2001. He said the schedule would be provided only to those with a "need to know." This was an NRC requirement that, although not required by DOE orders, was something the department thought was important to follow to protect the workers, emergency responders, and the public.

Mr. Brach asked for clarification of the shipping window. He said his understanding was that the study of the seals on the casks demonstrated that, in certain temperature ranges, the seal was acceptable. In other ranges, however, it was indeterminate. He said it was his impression that DOE proposed the April-October shipment window, not the NRC. Mr. Weiss disagreed, and asserted that the seals issue was worked out by both agencies a number of years ago.

Mr. Tyacke concluded by saying the shipment would be made safely and securely, with effective coordination between DOE, the carriers, and the states and tribes. Mr. Al-Daouk said DOE would appreciate receiving comments by August 31 on all the draft materials being distributed. The goal was to identify the route sometime in the fall. Ms. Keister asked if the states would coordinate their input through CSG-MW, and Ms. Sattler said that was still the plan. Mr. Tyacke said DOE and BBWI would be happy to participate on one or more conference calls to discuss the draft documents, if the states thought that would be helpful.

Mr. Runyon said the state of Illinois would prefer to have access to TRANSCOM from the point of origin. Ms. Sattler added that this request had come up during the cross-country shipment planning. For the 1999 shipment, states had to make a special request to have access from the point of origin, whereas for the 2000 shipment DOE had agreed to give such access to all affected states and tribes. Mr. Runyon also suggested it might not be prudent for DOE to cite the performance of the cask seal as the reason for the April-October shipping window.

Mr. Flater and Sen. Judge suggested that a southern route through Iowa would be preferred to the proposed route identified in the Oak Ridge study. Mr. Al-Daouk said feedback from the states — such as

suggestions to look at a route not included in the study — would be extremely helpful to DOE in making the routing decision.

*Public Communications/Emergency Preparedness Coordination.* Ms. Taul said the purpose of the public communication plan was to ensure the exchange of accurate, timely, and coordinated information among the involved agencies and stakeholders. The public communication plan would help DOE identify potentially affected stakeholders, provide shipment informational briefings, track and report on the disposition of issues and concerns. In addition, the plan would guide DOE in coordinating requests for information. Ms. Taul emphasized that DOE was not trying to conduct this shipment in secrecy.

The strategy identified in the public communications plan was to develop a dialogue between DOE and stakeholders through the regional meetings with states and tribes. Written comments would be coordinated through CSG-MW. DOE would then follow-up with project status reports to stakeholders, and by tracking and reporting on the disposition of all comments received.

Ms. Taul reviewed the timeline for public communications. She noted that, in May and June, DOE would be making shipment-specific briefings to the regional groups. July-December would be spent communicating with the states and other stakeholders as necessary to exchange information. Between January and February, DOE plans to conduct campaign-specific briefings for state officials, who will then be able to present this information throughout the state, if they so desire. Ms. Taul noted that the draft public communications products contained information on the TEPP program, including the web site. DOE is trying to standardize everything complex wide, so that when a campaign does come through, most of the responders will be trained in the basic knowledge and might just need a campaign-specific packet of information. One month prior to the shipment, DOE will validate preparedness for the shipment with the states.

During the shipment, DOE will staff the Situation Room in Idaho 24 hours per day, and will monitor the progress of the shipment. Ms. Taul emphasized that this room would not be the emergency room, however. In case of an event or accident involving the shipment, the INEEL Public Information Center would be activated.

There was a great deal of discussion concerning a list of individuals and organizations in the public communications plans. Several of the organizations were anti-nuclear activist organizations, and a few of the governors for the Midwestern states were incorrect. Ms. Taul and Ms. Keister emphasized that the list did not identify points of contact for information, but rather groups or individuals whose names had appeared in media coverage of transportation issues. The states still expressed concern over the list.

The public information briefing materials for stakeholders were designed to give both general and specific information to meet the emergency response and public safety needs. They also would help to inform stakeholders and involve them in the planning and preparation of shipments. Lastly, they would provide shipment-specific information for the benefit of the media and the public. Ms. Taul said DOE was putting together a web site for the shipment, which would contain links to information on the cask.

Ms. Taul noted that DOE was interested in receiving the states' input on the public information materials. Comments on these plans, as with the other plans, would be due August 31. After DOE had received input from the states and tribes and revised the draft materials, they would be available for distribution. Ms. Taul indicated that two corridor briefings would take place in the spring. The destinations for those briefings had not been determined, but one would take place in the Eastern U.S. and one would be in the West.

Ms. Taul then discussed the emergency preparedness coordination plan. She said DOE would not write the specific emergency preparedness plan, but rather the "coordination plan" would address the coordination between all the emergency plans that are already in existence. Because this would be a DOE

shipment, if there were an accident, the DOE RAP team in the appropriate region would respond. This response would definitely be coordinated with the state and local response.

As part of the coordination process, DOE would validate that federal, state, and tribal agencies have adequate shipment-specific information to provide for emergency response and public safety. Some of the outcomes DOE was looking for were that adequate coordination would take place along the potential shipping corridors. In addition, DOE hoped the states and tribes would be prepared and have “ownership” of transportation emergency preparedness coordination within their jurisdictions.

Ms. Taul said training was available through the TEPP program, but only after a determination had been made that there was a need for training in the state. The TEPP program would then conduct a train-the-trainer course so that the states could turn around and do the training for local responders. She reiterated that this training would have to be arranged through the regional TEPP coordinators.

Mr. Strong suggested a different paradigm. He said DOE would have done well to visit with each of the corridor state representatives, pitch their ideas, and obtain information directly from the states. If DOE had met with Mr. Flater, for example, they would have learned that the southern rail route through the state would be preferred. Doing this would have helped to avoid potential embarrassments, such as the list of interested parties containing the wrong governors. Ms. Taul agreed, and said that even if one-on-one visits were difficult to arrange due to costs, a conference call might be a good second choice.

Mr. Strong said it would be to DOE’s benefit if the very first news article on this shipment were to quote local and state officials as saying they had been coordinating with DOE on the shipments and were comfortable with the ongoing preparations. Ms. Taul agreed, and noted that local officials had been shown to be the most trusted of government employees among the public.

Ms. Sattler asked for clarification of the corridor briefings. Ms. Taul said that, once the route was determined, DOE would be able to identify the affected states. These states would be able to identify the personnel that they would like to have attend a train-the-trainer course. Included in this training course would be specific information on the West Valley shipment. Ms. Sattler asked about the availability of funding for travel to these courses, and Ms. Taul said the plan was to pay for around four people per state to attend.

There was a great deal of discussion regarding federal assistance for emergency preparedness training, federal requirements under OSHA, the role of the states, and individual state experiences with regard to training (and the associated costs). The Midwestern corridor states emphasized that training first responders along the shipping corridor to the radiological awareness level would very likely involve costs beyond which they were willing or able to bear. They also noted that many of the responders were volunteers, and there was little incentive for them to attend training courses unless their expenses would be fully reimbursed. The DOE representatives acknowledged the states’ concerns and added this to the list of stakeholder issues.

Mr. Runyon noted that a “one-size-fits-all” approach would probably not work. Ms. Keister said her impression from the November meeting was that the states preferred to have DOE work through the regional groups. She asked the states if that was still their preference. The consensus was that working with the regional group was a good idea, but one-on-one contact might be necessary and appropriate in some cases. Mr. Runyon suggested that DOE distribute a questionnaire to the states through CSG-MW, soliciting input on points of contact, specific needs, etc. Mr. Moussa reiterated that DOE should work through the states, not go directly to the local level. Ms. Taul agreed, and said it was DOE’s understanding that the states preferred to filter information down to the local level. Ms. Keister said she had an “official” list of state points of contact, who were identified by Ms. Sattler and the staff in the Western and Northeastern region. She offered to distribute the list to the states to verify that the list



contained the appropriate names. Mr. Moussa said he preferred to see DOE work through CSG-MW on broad issues, such as the planning document review and overall coordination, but work directly with the states on matters such as training.

*Federal Railroad Administration.* Mr. Blackwell said the SCOP would apply, and he had organized a team to work on the shipment. He would be the point of contact at headquarters, and other members of the team included Mr. Craig Bagstad (Region 6), Mr. Tony Schneider (Region 2), Mr. Terry Gilmore (Region 4), Mr. Mike Ziolkowski (Region 1), and Mr. Ken Naylor (Region 8).

Mr. Blackwell noted there were three tiers to the inspection system. First, every day, the railroads conduct their own inspections. The FRA conducts a second level of inspections on a routine basis. The SCOP represented a third level of oversight, which would key on the route, the carrier, and the corridor that would be used.

Mr. Blackwell said there were two separate areas of regulatory inspections. First, there were the hazmat inspections, covered under federal Hazardous Materials regulations (49 CFR 100-180). Second, track, signal, crew, and equipment inspections were covered by the Federal Rail Safety Act regulations (49 CFR Series 200). Hot-box detectors and other automatic mechanisms that the rail companies employ continuously monitor the shipment. Mr. Blackwell emphasized there was a safety-related need to minimize the number of stops. Every 1,000 miles, the train would have to stop for an inspection related to the power brakes. In addition, crew changes and carrier interchanges would also involve inspections. Mr. Blackwell noted that the FRA does not stop trains for inspection, because they did not want to compromise safety. He said if arrangements can be made to do a non-routine inspection, that would be fine if coordinated in advance.

Mr. Schneider asked if it would help the states if, when there is a crew change, the FRA were to invite state inspectors to take all the readings. Mr. Blackwell added that 32 states were already involved in the States Participation Program, including Illinois and Ohio. Under this program, which is available to all the states, state inspectors can be certified as FRA-state inspectors. Mr. Blackwell said the agency's expectation is that state inspectors are expected to spend at least 50% of their time performing inspections.

Once certified, these inspectors are accorded the same rights and privileges as federal inspectors by the rail carriers and offerors. Mr. Blackwell said the FRA relies extensively on the state inspectors to augment their existing staff of field inspectors. The FRA will fund all travel, per diem, and training costs for the state inspectors to participate in all applicable training that is provided to FRA inspection personnel. Salaries and travel related to inspections were the state's responsibility. Mr. Schwarz asked how many hours of training were required. Mr. Blackwell said 49 CFR 212 identified the minimum training requirements. It takes on average 3-7 months to complete the certification process.

Mr. Runyon indicated that Illinois would inspect the shipment. Mr. Blackwell said, with four carrier interchanges and numerous crew changes, he hoped it would be possible to arrange for a suitable inspection point to avoid creating a safety hazard.

*Safeguards and Security.* Ms. Stuart said the security requirements for the shipment would meet applicable requirements contained in DOE orders, which required, among other things, an escort to be provided by the railroads. The security plan, which was still being developed, would address roles and responsibilities, threat monitoring, pre-shipment training, security communications, and operations and logistics. She said the plan would be made available to designated personnel in the security

community, and would need to be treated as DOE sensitive information. As a result, there would be limited distribution, specific storage controls imposed, and specific destruction requirements.

For escorts, DOE will utilize the railroad employees, preferably security police, where available. The escorts will have communication capabilities (e.g., cellular telephone) in addition to the standard railroad communication methods. In the event of an emergency, standard railroad emergency protocols would be followed, with the initial call to the railroad's emergency communications center. DOE's WCC would be contacted, as well as state and local law enforcement personnel. Ms. Stuart said she would conduct pre-shipment readiness reviews with the railroad security personnel to ensure all requirements are being met.

Ms. Stuart said the FBI will conduct informal threat monitoring after the route is determined. INEEL security would also monitor any potential threats to the shipment. She asked states to share any information they might obtain regarding possible threats. She also asked for information on specific security points of contact in the states. Mr. Moussa emphasized that DOE should avoid confusing the security points of contact with the governor's designee for advance notification of the shipment. In response to a question, Mr. Tyacke said there would be emergency responders accompanying the shipment.

## List of Participants

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