

**The Council of State Governments
Midwestern Radioactive Materials Transportation Committee**

Proceedings of the Fall 2003 Meeting

December 9-11, 2003 ❖ Chicago

Tuesday, December 9

Committee Business Session

Tim Runyon (Illinois) called the meeting to order at 1:35 p.m. He reminded everyone that this would be his last meeting as chair, with Thor Strong (Michigan) taking over as chair in January. The committee would elect a new vice chair to succeed Mr. Strong. Mr. Runyon announced that Christine Bacon had retired and would no longer represent Wisconsin on the committee.

Chair's report: Mr. Runyon reviewed several pieces of correspondence generated by the committee since the June 2003 meeting in Lincoln. In all, the committee had written to the U.S. Department of Energy (DOE) eight times on topics related to security, training, rail protocols, the Civilian Radioactive Waste Management System, the Waste Isolation Pilot Plant (WIPP) shipments, and lessons learned from the West Valley Demonstration Project shipment.

Mr. Runyon raised three current issues for the committee. First, the Carlsbad Field Office (CBF) had backed away from its commitment to provide the Midwestern corridor states with their full funding in FY04. Lisa Sattler (CSG Midwest) had written to Patrice Bubar (DOE) on November 26 regarding this issue. Second, Mr. Runyon was concerned about the prospect of the National Transportation Program (NTP) reducing its funding for the Midwestern cooperative agreement. He noted that the committee had been very actively involved in both shipment planning and other NTP-related activities (e.g., the Transportation External Coordination Working Group, or TEC/WG). Mr. Runyon said that level of activity could only continue if DOE were to provide sufficient funding through NTP or other programs.

Third, Mr. Runyon mentioned that representatives of the committee had met with Robert Card, the Under Secretary of Energy, regarding the Office of Civilian Radioactive Waste Management (OCRWM) Transportation Strategic Plan. The four regional groups had written to Mr. Card to thank him for arranging the meeting and to acknowledge some of the issues that had been discussed. Mr. Runyon reviewed a few Midwestern issues not covered in the joint letter: barge shipments, funding for the regional groups, OCRWM's acquisition strategy, and the region's desire to see DOE adhere to NRC regulations and orders on the matter of physical protection.

Mr. Runyon encouraged the committee to review the aforementioned correspondence and to think about key issues that the region should bring to OCRWM's attention.

Project update: Ms. Sattler referred to the written project update, which was included in the briefing packets. She reviewed the CBFO funding issue. The CBFO had committed to providing a full year of funding to the corridor states if shipments through the Midwest would continue past December 31. As of December 9, the states had received half of their funding for the fiscal year, DOE would *not* complete its

shipments by December 31, 2003, and the CBFO had reneged on its commitment. Ms. Sattler sought direction from the corridor states as to how to proceed.

Robert Owen said Ohio had been planning a joint exercise with Indiana for the spring timeframe. Without additional funding, the state would try to follow through with the plan, but it would create a significant burden on state resources. Ms. Bubar asked Ms. Sattler about CSG Midwest's carry-over situation. Ms. Sattler said the transportation project's activities would be covered through the end of the fiscal year (June 30). The new state funding was not approved until mid-September. As a result, at the end of the federal fiscal year (September 30), CSG-MW had not spent any of the new state funding. This gave the appearance that there was significant funding in terms of carryover, but the states only had access to the funding for two weeks before it technically "carried over." Ms. Sattler said three of the four Midwestern states would feel the impact of not receiving the new funding. She said DOE paying the state fees did not seem an adequate substitute for the technical and financial assistance that Congress mandated in the WIPP Land Withdrawal Act.

Ms. Bubar said she was not sure whether Battelle would be shipping in 2004. She noted that Battelle was making other radioactive materials shipments and asked once again why the states felt the need to prepare for WIPP shipments in a manner that was different from other shipments. Mr. Owen explained that his state was planning an exercise, which was an important part of ensuring readiness. The activity was included in Ohio's scope of work, and the CBFO's failure to live up to its commitment would have an impact on the exercise. Ms. Bubar asked if the Battelle route was used for other radioactive materials shipments. Mr. Owen said it was, but he noted that local responders had exhibited a heightened concern about DOE's shipments of transuranic waste and spent fuel.

Mr. Owen also questioned Ms. Bubar's assumption that the commonly used routes were well prepared. Hospital training, for instance, was lacking in many areas. Mr. Owen reminded Ms. Bubar of her earlier encouragement for the states to tap homeland security funding to pay for preparedness activities along shipping routes, and Mr. Owen was attempting to do that in Ohio. The process would take time, however, and there was no guarantee that the training would be in place prior to the resumption of shipments from Battelle. Full funding from DOE would make it possible for the state to complete its training in a timely fashion. Ms. Bubar said she would speak with Ms. Sattler about the funding situation to figure something out for this year. She described what she termed "where we need to be:" DOE would give the states good, complete planning information on a regular basis. The states, in turn, would recognize that those shipments would be on the road and they would be no different from other radioactive materials shipments. She said the Office of Environmental Management (EM) hoped to no longer be the kind of program that provided funding for individual shipping campaigns.

Dave Crose (Indiana) said that, because of all its radioactive materials shipments, DOE should consider a steady funding stream such as was envisioned by the consolidated grant proposal. He thought the states deserved a thorough explanation of how the CBFO made the funding decision before they (the states) started contacting their U.S. senators and representatives. He said DOE had a responsibility to help the states prepare for the WIPP shipments. Ms. Bubar disagreed. Ms. Sattler said it was important to distinguish between the whole universe of EM shipments and the WIPP shipments. She reiterated that the WIPP Land Withdrawal Act required DOE to provide financial and technical assistance to the states on the routes for WIPP shipments. Ms. Bubar said the department would meet the requirements in the Land Withdrawal Act. She also acknowledged that DOE should not change the rules in the middle of the game, which was what the CBFO had done. She said, though, that DOE had met the requirements of the

Land Withdrawal Act in a certain way in the past, and she thought the department had to develop a new model for doing so.

Frank Moussa (Kansas) commented that meeting needs along the routes was one reason why the states had increasingly turned to fees. He said Kansas was reluctant to revisit fee legislation as long as DOE was willing to help his agency prepare for the few shipments that had affected the state. Without funding, however, he speculated that the state might lean toward establishing a fee. Ms. Bubar said she did not advocate the passage of fees, but she commented that they did make planning more predictable. Mr. Runyon reiterated the region's support for the concept of consolidated funding.

TEC/WG Meeting and Topic Group Reports: Mr. Runyon said the TEC/WG meeting in July had consisted of one day devoted to best practices in EM shipments and a second day on OCRWM's Transportation Strategic Plan. Ms. Sattler said a summary of the meeting was in the briefing packet and was also available on the Internet. She said the rail topic group had been active since the last meeting. The group was working on a rail routing paper, a draft of which Ms. Sattler distributed to the committee for comments. She asked the committee to respond with comments by January 31.

Ad Hoc Committees: Mr. Strong reported on the activities of the ad hoc committee on resolutions. The committee had approved two resolutions: one on full-scale cask testing and a second on the OCRWM transportation program. CSG's Midwestern Legislative Conference (MLC) had approved both resolutions.

Mr. Runyon said the ad hoc committee on security had consisted of him, Capt. Tom Sever (Iowa), and Major Bryan Tuma and Capt. Bill Hobbs (Nebraska). In addition to writing to DOE on the subject of escorting, the committee also reviewed and provided comments on DOE's draft security condition response plan.

Jon Schwarz (Nebraska) reported that the training ad hoc committee consisted of Don Flater (Iowa), Dr. Moussa, Mr. Owen, and himself. He noted that the group had provided comments to Ms. Sattler, who pulled everything together into a letter on training directed to Ms. Bubar. Ms. Bubar said she had prepared a single response to all the committee's EM-related correspondence and would shortly provide that letter to Mr. Runyon.

Carol O'Claire (Ohio) asked what DOE would do with shipments in the event of a change in threat levels. Ms. Bubar said DOE would make decisions based on the intelligence it received with regard to shipments. Absent specific intelligence, DOE would follow the procedures identified in its security condition response plan.

TRANSCOM Steering Group: Mr. Runyon said Tony Lucero (DOE) had planned to hold a meeting in December, but had to cancel. New changes to the TRANSCOM system would involve the mapping component. Mr. Runyon said anyone in the Midwest interested in TRANSCOM training could contact either him or Mr. Lucero. Illinois would be willing to send trainers to other states to conduct training. Ms. O'Claire said Mr. Runyon and his staff had trained several Ohio users and had done a fantastic job.

Other Meetings: Mr. Runyon asked Mr. Crose if he had anything to report on the Transportation Emergency Preparedness Program (TEPP) conference in Louisville. Mr. Crose said his initial reaction was to question why the Region V conference would take place in Louisville, but then he realized it was a

multi-region conference. He thought the conference was well done. Ms. Sattler said it was her first TEPP conference and she found it to be useful. She had presented information on the Midwestern cooperative agreement and the committee.

Mr. Strong reported on his presentation at the fall meeting of the Executive Committee of the MLC, which was well received. He said with OCRWM shipment-planning getting under way, he hoped he would have additional opportunities to meet with the MLC Executive Committee to report on the committee's progress.

In October, Mr. Runyon attended a meeting of the National Academies' Committee on Radioactive Waste Transportation in Denver. Although he was not on the agenda for the meeting, he did make some comments on behalf of the Midwest during the public comment period. The group's next meeting would be February 2-4 in Chicago. Ms. Sattler said she thought the NAS would invite the committee to have a representative speak at the meeting. Mr. Runyon said that, at the meeting in Denver, Earl Easton (NRC) had given the best description of the regulatory responsibilities of all the different federal agencies, and how these responsibilities all fit together. Mr. Easton said he had included the slide in the NRC's presentation scheduled for the next day.

Rep. Jeff Elgin (Iowa) reported on the November meeting of the National Conference of State Legislatures' (NCSL) High-Level Waste Committee. The meeting marked the resurrection of a group that had not met for four or five years. Legislators with nuclear facilities in their districts or who had an interest in transportation were invited to participate on the committee. The main purpose was to update legislators on some of the activities that the Midwestern committee regularly deals with. The group then got to work updating NCSL's resolutions. Rep. Elgin had sought input from Ms. Sattler on the original resolutions prior to the meeting. He had provided the NCSL committee with copies of the MLC resolutions. Rep. Elgin commented that the Nevada legislators had made some good points regarding the NCSL resolutions. He expected to receive copies of the revised resolutions in the next month. Those resolutions would go to the NCSL Environmental Protection Committee, then if approved they would go on to the full body for consideration in the summer of 2004. Rep. Elgin had provided Ms. Sattler with his own meeting summary, and said he would forward copies of the resolutions to her when he received them.

Mr. Runyon had previously discussed the meeting with the Under Secretary of Energy. He said much of the substance of that meeting was covered by the Transportation Strategic Plan.

In the ensuing discussion, Mr. Runyon said he had told the NAS committee not to view the WIPP model as entirely transferable to the Civilian Radioactive Waste Management System, given the differences in the material being shipped and the associated requirements. He had suggested the NAS committee obtain copies of DOE transportation plans for successful programs such as the foreign research reactor shipments. It did not appear that DOE had received any requests from the NAS for these documents. Ms. Sattler suggested the committee follow up with the NAS on this recommendation at its February meeting.

Revisions to the Midwestern Planning Guide: According to the guidelines for maintaining the Planning Guide, the committee must complete a lessons-learned review every two years for the purpose of updating the recommended practices. Ms. Sattler said there were three steps to updating the *Planning Guide*. First, she asked the states to provide her with information to update the state sections in the back

of the document. She asked the states to try to complete this task by January 31 so that she could revise the on-line version of the *Planning Guide*.

Second, she wanted feedback from the Midwestern corridor states on lessons-learned from shipments of spent fuel and transuranic waste. She would get in touch with the states after the first of the year to schedule a conference call. Prior to the call, Ms. Sattler would review the recommended practices and identify possible revisions. Third, DOE and the regions were likely to begin working on rail protocols jointly. Ms. Sattler did not want to reprint the *Planning Guide* until the rail protocols were complete and could be incorporated into the document.

Resolution of Appreciation for Mr. Runyon: Mr. Strong read a resolution of appreciation for Mr. Runyon, which the committee passed by unanimous vote.

Election of Vice Chair: Mr. Runyon asked the committee to consider the idea of having co-chairs, which was the practice of some other regional committees. He commented that the workload during his term had increased significantly over the two years. There were also times when, because of his state's unique position on an issue, he found it difficult to sign certain pieces of correspondence that needed to be sent. Also, getting travel approved was becoming more difficult, especially on short notice. The committee discussed the pros and cons of the co-chair system versus the current arrangement. In the end, the committee decided to retain the positions of chair and vice chair.

Mr. Runyon entertained nominations for committee vice chair. Mr. Crose nominated Mr. Owen. Mr. Flater seconded. The committee unanimously elected Mr. Owen to succeed Mr. Strong as vice chair of the committee in 2004.

Next Meeting: Ms. Sattler proposed that the next meeting be held in Lansing, Michigan, the week of June 21. [Note: On Thursday, the committee changed this plan. The next meeting will be in Topeka, Kansas, in conjunction with the Naval Nuclear Propulsion Program/Kansas exercise, on June 15-17.] Ms. Sattler said the next state in the rotation would be Ohio. Mr. Runyon asked why the committee had shifted from a spring/fall schedule to summer/winter. Ms. Sattler explained that, because of legislative schedules, it was almost impossible for the legislators on the committee to attend meetings in April and May. As a result, the spring meeting had gradually moved to June, which put the second meeting of the year in December. Mr. Runyon agreed that it was important to schedule the meetings to accommodate the legislative members.

Regional Roundtable: Mr. Strong reported that the most significant event in **Michigan** over the past six months had been the movement of the steam drum and reactor vessel from the Big Rock Point nuclear power plant, which was undergoing decommissioning. The former had gone to Envirocare in Utah, the latter to Barnwell in South Carolina. Both had involved the use of heavy-haul truck to different rail yards for transfer. On Thursday, the committee would hear a presentation about the shipment of the reactor vessel.

Mr. Flater reported that **Iowa** had been doing a good amount of training for the highway patrol personnel in emergency response. Also, effective December 31st, the fee for low-level waste would increase to \$100 per truck or train. Mr. Flater commented on how a number of radioactive waste shippers had a hard time keeping their schedules, which created significant problems for the state personnel. Mr. Flater said he was considering a rule that would double the shipment fee if the shipper did not ship

within a set window. Kevin Blackwell (FRA) asked whether Mr. Flater had encountered the scheduling problem with rail shipments. Mr. Flater had not.

Rep. Elgin said he had observed the loading of dry storage casks at the Duane Arnold Energy Center. Ten casks would be filled, but the site had room for 80 or 90 casks. The capacity would make it possible for Duane Arnold to operate through 2012-13. Rep. Elgin said the company had done a good job with public relations, and there had not been any controversy surrounding the loading.

Mr. Owen commented that **Ohio** was looking at "getting on the bandwagon" with regard to shipment fees. The impetus had come from a meeting between the Ohio agencies and state Reps. Skindell and Boccieri. The legislators had called the meeting to discuss the state's experience with the West Valley shipment. The fee would be for high-level waste, spent fuel, highway route-controlled quantities, and transuranic waste.

Mr. Owen also reported that his agency (Ohio Department of Public Health, or ODH) had a bioterrorism response plan, which Mr. Owen was revising to add chemical and radiological components. His agency was gearing up for a graded exercise at Beaver Valley and also an exercise at Perry nuclear power plant in September. Lastly, ODH had acquired and was equipping a large truck to be used for response to radiological emergencies. ODH decided to purchase the vehicle to address post-9/11 concerns over the ability to respond to such emergencies.

Mr. Owen mentioned that the Davis-Besse reactor had submitted a comprehensive restart report to the NRC. The utility had requested a meeting with the governor's office, which was attended by the heads of several Ohio agencies. The NRC would also be briefing the governor on the restart plan.

Mr. Owen reminded the states that Ohio had been working with DOE, Kentucky, and Tennessee to get ready for transfers of depleted uranium hexafluoride. He said the transfers were on hold pending the revision of the Ohio Environmental Protection Agency director's final findings and orders.

Ms. O'Claire reported that Ohio Emergency Management Agency had been working with ODH to put together an equipment list and instruments for first responders to address weapons of mass destruction. She added that financial assistance from DOE had made it possible for her agency to buy alpha probes for the Public Utilities Commission (PUCO) to conduct Commercial Vehicle Safety Alliance (CVSA) inspections of the WIPP shipments. In addition, the TRANSCOM capability had been helpful for other NRC-regulated shipments.

Ms. O'Claire said there had been an issue with the Ohio Turnpike Commission not understanding the relative risks of radioactive waste shipments relative to other hazardous materials. As a result, when a commercial shipment was set to travel on the turnpike, the agencies in Ohio had to scramble up to the last minute in order to get the turnpike commission to drop its objection.

Carlisle Smith (Ohio) reported that the PUCO had inspected all the Fernald, Mound, and Battelle radioactive waste shipments. The PUCO had assessed penalties on one of the Battelle shipments, which upset the CBFO staff.

Mr. Crose reported that, in **Indiana**, destruction of the Vx nerve agent could begin as early as January 2004. Thorium nitrate in Hammond would travel to the Nevada Test Site by truck starting in 2005.

Because the shipments would be conducted by the Department of Defense, Mr. Crose did not think the state would be able to apply its new low-level waste fee to the campaign.

Using WIPP funding, Indiana had trained 1,000 responders, including refresher training. The State Emergency Management Agency (SEMA) was using homeland security funding to purchase equipment — including a response vehicle — for the State Board of Health.

Sen. Marvin Riegsecker reported that he had the opportunity to observe the West Valley shipment at the crew-change and inspection point in Peru, Indiana.

Paul Schmidt (Wisconsin) reported on the resumption of transportation emergency preparedness planning in **Wisconsin**. The state group had gone on hiatus for a few years, but it had regrouped for an emergency response exercise in 2003. Mr. Schmidt commented that responders were well prepared near the nuclear power plants, but not elsewhere in the state. Even the general awareness of radiological emergency response was lacking. Noting that Wisconsin would be one of the first states to ship to Yucca Mountain, Mr. Schmidt said the state was very interested in Section 180(c) funding to fund training and planning activities. The state was working on a plan for addressing these training needs. He hoped to see the plan completed in four to six months.

Mr. Schwarz said RMC had gone to **Nebraska** to conduct the WIPP hospital course at 17-19 hospitals in the state. Both the course and the instructors received outstanding feedback. Mr. Schwarz also said 2003 was the first year that the state was collecting a fee for shipments. He said he would contact the Department of Health and Human Services to find out how the collection system was working.

John Kerr reported on the passage of a major energy bill in **Minnesota**. The bill involved expanding the dry storage capacity at the Prairie Island nuclear plant. Mr. Kerr said the expansion could possibly impact the Private Fuel Storage project. Mr. Kerr said he thought Sen. Mark Ourada was working on fee legislation. Because of the strict division between the executive branch and the legislative branch in Minnesota, Mr. Kerr could not comment on the legislation other than to say that it was likely Sen. Ourada would attempt to correct a problem with the existing fee statute — namely, the fact that fees were deposited into the general fund rather than being earmarked for training and other shipment-related activities.

Mr. Kerr said the Private Fuel Storage facility seemed to be moving along without much fanfare. The last he heard the consortium of utilities was looking at 2007 as a target date for starting operations.

Dr. Moussa said **Kansas** was working with DOE's Naval Nuclear Propulsion Program on a joint exercise in Kansas. He and Ray English (DOE) would report on the plans during Thursday's business session.

The state had been conducting emergency operations center training as well as TEPP training. On the subject of potassium iodide (KI), Kansas was one of 12 states that was not interested in stockpiling for the general public. Dr. Moussa's remarks generated a lengthy discussion of the KI issue. He took offense at Sen. Edwin Markey of Connecticut implying that these 12 states were not protecting their people. Dr. Moussa's argument against stockpiling KI was that a) the state would evacuate well before an imminent release, b) a significant number of people were allergic to KI, c) KI was available over the counter, and d) KI protected only one organ (the thyroid).

Mr. Runyon reported that **Illinois** had had a “smorgasbord” of radioactive materials shipments in 2003. He counted 29 different movements of DOE, commercial, and domestic spent fuel, as well as shipments of transuranic waste. In all, Illinois had more materials moving through it this year than since the early 1990s. He commented that the state was seeing a large number of HRCQ shipments coming out of Nordion in Canada.

Mr. Runyon said there had been some marking and labeling violations with the shipments. Also, in one instance, the carrier did not follow the route plan and failed to take the beltway around one city. A shipment from a commercial reactor, which originated in Illinois, wound up having an overweight permit that did not match the carrier’s route plan. Mr. Runyon acknowledged that the state permitting office had made the error in an attempt to avoid certain bridges. His agency had worked with the Department of Transportation and the State Police about the issuance of permits for this type of overweight shipment.

Mike Cash (Alabama) reported that the South was experiencing around six shipments per week to the WIPP site.

Mr. Runyon commented on the *60 Minutes* episode covering transportation to Yucca Mountain. One result of that episode was that the Chicago local emergency planning committee (LEPC) requested a meeting the prior week with Mr. Runyon and John Vincent (NEI). Mr. Runyon presented information to the LEPC regarding a more realistic projection of what would be shipped, when, and how. He also explained the role Illinois and the Midwestern committee had in working with DOE to plan shipments both in the past and looking ahead to repository shipments.

Committee Discussion: Ms. Sattler made a few announcements regarding the joint rail workshop scheduled for December 10. The committee discussed possible paths forward on the topic of the rail protocols. The states agreed to once again try to work together with the other regions to develop a consolidated document. With that direction in mind, Mr. Runyon, Mr. Strong, and Ms. Sattler would attend the Wednesday night session involving the four regions and DOE.

The states also briefly discussed the need to keep the momentum going in the committee’s work with OCRWM. They agreed to resume the discussion on Thursday when Gary Lanthrum from OCRWM would be in attendance.

Wednesday, December 10

Joint Rail Workshop

Mr. Runyon welcomed the attendees to the joint rail workshop. He observed the coincidence of the meeting taking place in Chicago, which CBS’s *60 Minutes* so recently portrayed as the city that would be most heavily impacted by shipments to Yucca Mountain. The Midwest and the Northeast had arranged the joint workshop in an attempt to work cooperatively on recommended practices for rail shipments. Initially, all four regions had tried to work on these practices, but their efforts were unsuccessful. Recently, the four groups had decided to try once again, and so a meeting would take place that night with DOE in order to determine whether a joint effort would be possible. Mr. Runyon turned the floor over to Tom Hughes (Pennsylvania), who reviewed the agenda for the workshop.

Statements from the U.S. Department of Energy

Mr. Hughes introduced Ms. Bubar, who provided some opening remarks. She said she viewed the meeting as an opportunity for everyone to learn about the business practices and the regulatory issues pertaining to rail shipments. She was also interested in hearing about the experiences rail companies have had in shipping spent fuel and other radioactive materials. Ms. Bubar said the EM program was interested in working with the states on protocols for how DOE would do transuranic waste shipments to WIPP by rail. DOE did not anticipate initiating those shipments for one to two years, both because of cask acquisition issues and also operational issues at the sites. DOE and the states would, therefore, have some time to work out the protocols.

Ms. Bubar closed by saying that she hoped the outcome of the joint workshop would be a level playing field, with everyone emerging better educated and with a better understanding of the issues or areas that DOE and the states would need to work on in the future. Ms. Bubar turned the floor over to Mr. Lanthrum.

Mr. Lanthrum reminded everyone that OCRWM was only six years away from shipping, and the environmental impact statement had identified rail as the preferred mode. He said OCRWM's preferred approach to developing rail protocols would be to start with the basic expectations. Consequently, he thought the format of the workshop was a good one.

U.S. Nuclear Regulatory Commission

William Brach of the Nuclear Regulatory Commission (NRC) discussed the Commission's role in regulating shipments by rail. Mr. Brach said the NRC was trying to plan for the increased activity that would be necessary to support shipments to the repository. Mr. Brach acknowledged Earl Easton, Senior Transportation Advisor in the NRC's Spent Fuel Project Office.

Mr. Brach explained that the NRC's certification of Type B casks was independent of mode. Rail casks tended to be very robust. Mr. Brach reviewed the acceptable methods for demonstrating the casks' ability to comply with the NRC's certification tests. Mr. Brach also reviewed the physical protection requirements for shipments, found in 10 CFR 73. In addition to general non-mode specific requirements, Mr. Brach noted that 10 CFR 73.37(d) identified requirements specifically for rail shipments. The NRC had responded to the events of 9/11 by issuing advisories and orders, conducting vulnerability assessments, and reviewing carrier security plans.

Mr. Lanthrum asked about the status of the NRC's Package Performance Study. Mr. Brach said the NRC had issued the draft proposed test protocol in the spring and had held public workshops involving the states and other stakeholders. The NRC had received 250 written comments. The staff had just finished its review and had drafted recommendations for the Commission. Mr. Brach said he anticipated being able to discuss the specific recommendations in the January-March timeframe.

Mr. Runyon commented that the Midwest had recommended that DOE follow the NRC's regulations for advance notifications, safeguards, and physical protection. He asked Mr. Brach if the NRC was interested in enforcing these regulations with regard to DOE's shipments of spent fuel to a repository. Mr. Brach said the Nuclear Waste Policy Act (NWPA) very clearly directed the NRC to certify the packages used for shipping the waste. Whether the NRC "was interested" in regulating shipments in any other way did not

matter — Congress had not given the agency that direction. The matter was subject to legal interpretation to determine whether other NRC regulations would be applicable to the repository shipments. Absent a definite regulatory role, the NRC would have no enforcement authority.

Mr. Lanthrum said the group would talk more about this issue the next day during his OCRWM presentation. He commented that, under the Atomic Energy Act, DOE has its own authority to conduct shipments. NRC Chairman Meserve had written to Senator Richard Durbin (Illinois) to explain that the NRC's role in regulating repository shipments was limited to the specific authority spelled out in the NWSA. Mr. Lanthrum said there were two options for having OCRWM's shipments look exactly like NRC-regulated shipments. First, DOE could work cooperatively with the NRC to make it so. Second, DOE could embed the NRC's regulations into the department's transportation protocols.

Federal Railroad Administration

Mr. Blackwell provided information on the Federal Railroad Administration's regulatory responsibilities pertaining to rail shipments of spent fuel. He said the FRA approached the transport of all hazmat, including radioactive materials, with a systems approach intended to achieve safe and secure transportation. He said the FRA was the second tier of inspections behind the railroad companies themselves. The FRA inspection force included both federal and state inspectors.

The FRA's regulations for hazardous materials are found in the following sections:

- 49 CFR 100-173: Hazard Communication, Training, Security Plans and Authorized Packaging
- 49 CFR 174: Carriage by Rail – Operating Requirements
- 49 CFR 178: Packaging Specifications

On the subject of track class, Mr. Blackwell explained that the lower the track class, the lower the speed.

The FRA maintained a Safety Compliance Oversight Plan (SCOP) specifically for spent fuel and high-level radioactive waste shipments. Mr. Blackwell emphasized that the SCOP was not a regulation per se. There were tasks in the SCOP that were not based on regulations — security was a good example. The SCOP was available on the FRA website at www.fra.dot.gov/downloads/safety/scopfml.pdf. Mr. Blackwell said the FRA was in the process of reviewing the SCOP. He hoped to get the revised SCOP out to stakeholders for review and comment in 2004.

Mr. Blackwell said the full application of the SCOP would present logistical difficulties as shipments increased in frequency. For that reason, it might be necessary to modify the application of the SCOP. The FRA had been asked to consider expanding the application of the SCOP to include WIPP shipments. No decision had been made, but Mr. Blackwell indicated that such application would compound the logistical problem he cited earlier.

Ken Niles (Oregon) asked whether DOE was involved in the FRA's decision to consider applying the SCOP to transuranic waste shipments. Mr. Blackwell said the states had approached the FRA on the matter. He said transuranic waste was a regulated hazardous material, so shipments would be bound by existing regulations. The SCOP went above and beyond those regulations.

Ms. Bubar said she hoped DOE would be able to have some input into the FRA's policy decision on whether to use the SCOP for transuranic waste shipments. She asked, given the status of transuranic waste as a regulated hazardous material, what would cause the FRA to want to apply the SCOP to transuranic waste? Mr. Blackwell said that, under the previous administrator, the FRA had focused its inspection efforts in a manner that addressed public concerns. He speculated that the application of the SCOP might be necessary to increase the level of comfort associated with the shipments.

Ms. Bubar said she envisioned the workshop giving everyone a sense of a) what shipments would look like following *just* the regulations, and b) what level of comfort that picture would give the states. That, she said, was the floor on which we should all firmly stand. Then, recognizing that transuranic waste caused a little concern, what more would the states want to see done for spent fuel and high-level waste shipments? Anything that would go above and beyond the regulations would have to be viewed as policy decisions, which could only be made by policy makers.

Mr. Blackwell mentioned the Safety Assurance and Compliance Program, through which the FRA worked with carriers to identify problem areas and develop correction plans to address those problems.

On the subject of the long-overdue Dedicated Train Study, Mr. Blackwell said the FRA received a draft final report from the Volpe National Transportation Systems Center in late November 2003. The document would undergo one more round of internal review before being forwarded to Congress. The FRA had put a high priority on completing the document. Mr. Blackwell said that, before Congress received the document, it would be vetted with affected federal agencies. He would not comment on how much time would elapse before the document became publicly available. When asked whether anyone outside the federal government could review and comment on the draft, he said no.

Mr. Blackwell said the FRA recognized that the states had a role in regulating rail transport. FRA-certified state inspectors were able to conduct inspections with the same authority as federal inspectors. Mr. Blackwell said pre-emption issues might present themselves if states passed laws regulating the transport of hazardous materials. He also cautioned that different agencies within a single state might have jurisdiction over various aspects of rail transport.

Ms. Bubar asked if, after 9/11, the FRA had made any changes to its regulations or policies. Mr. Blackwell said the FRA did not issue any new regulations, but it did work with the carriers and the Association of American Railroads (AAR) on transportation-security matters. DOT's Research and Special Programs Administration did issue a new regulation requiring the preparation of security plans. That action took place earlier in 2003.

State Rail Safety Participation Program

Thor Strong (Michigan) introduced the panelists. He noted that, of the 22 states represented at the meeting, only 11 were participants in the FRA's State Rail Safety Participation Program. Of those, only four states had inspectors certified in the hazardous materials discipline. With "mostly rail" being the preferred mode for shipments to Yucca Mountain, it was hoped that the session today would spark some interest in the program on the part of the non-participating states.

Mike Calhoun (FRA) said the program was authorized in 1970 in the Federal Rail Safety Act. The program was intended to supplement, not supplant, federal inspection efforts. This partnership between

states and the FRA aimed for the consistent application of uniform regulations. The FRA's regulations covering the program could be found in 49 CFR Part 212, State Safety Participation Regulations.

States entered into the program by agreement with the FRA. Prior to entering into this agreement, the states had to have a few things. First, they had to have jurisdiction over the safety practices of the facilities, equipment, rolling stock, and operations of railroads. If the state were interested in getting involved in the hazardous materials discipline, it must also have jurisdiction over the associated shippers and manufacturers. The states must hire qualified personnel. To make the most of the FRA's training dollars, the administration had recently started requiring that those personnel work at least 40 inspection days per year.

The FRA would bear the cost of providing classroom training, plus on-the-job training. The FRA also certified state inspectors, and coordinated and monitored state inspection activities. Currently, there were 30 states active in the program, with a total of 156 state inspector positions. The number of inspectors has increased steadily since 1975, even though the FRA terminated a grant program in 1988. Mr. Calhoun mentioned that, when the grants program was terminated, a few states left the program — including Kansas and Minnesota.

Of the national inspection force, states made up 27% of the inspectors, with the FRA picking up the balance. FRA Regions 2 and 7 were the largest in terms of the number of state inspectors.

Mr. Calhoun reviewed the five railroad safety inspector disciplines: track, operating practices, signal and train control, hazardous materials, and motive power and equipment. Most of the state inspectors were certified in the track (31) and motive power and equipment (23) disciplines. Approximately 14% of the inspectors were certified in hazardous materials.

Four Midwestern states participated in the program: Illinois, Iowa, Nebraska, and Ohio. Ohio, in fact, had one of the largest programs in the country. In the Northeast, there were six participating states: Maine, Massachusetts, New Hampshire, New Jersey, New York, and Pennsylvania. Ohio was the only one of these states to have inspectors covering all five technical disciplines.

Mr. Calhoun reported that, according to the FRA's data, human factors and track problems caused the majority of train accidents (38.3% and 34.3%, respectively). In 2002, total fatalities, total casualties, and highway-rail incidents were significantly lower than in 1993.

Mr. Calhoun turned the floor over to Robert Marvin with the PUCO. Mr. Marvin said the PUCO had regulatory authority over rail transport in the state. The agency enforced both state and federal regulations, although federal pre-emption of state laws had limited the latter mainly to the area of signal grade crossing.

Throughout the state, the PUCO had 16 specialists trained in hazardous materials, all of which conducted motor vehicle inspections. Twelve of these specialists were trained to conduct CVSA Level VI inspections. Three of them were also certified by the FRA to conduct rail inspections. All specialists were trained to the technician level for hazardous materials, and all were trained by the Ohio Emergency Management Agency (OEMA) at an operations level to respond to emergencies involving radioactive materials. The PUCO had a total of 14 FRA-certified state rail inspectors.

For radioactive materials shipments, the PUCO's policy was to inspect all highway route-controlled quantity (HRCQ) shipments and all high-level or high-profile shipments traveling by rail or truck. Ohio inspected cobalt-60 shipments, as well as shipments from Mound, Battelle, and the University of Michigan. In addition, the PUCO planned to inspect DOE's depleted uranium hexafluoride shipments, once that campaign got underway.

The PUCO also inspected all rail shipments from Fernald. The material was low-level waste, but the shipments did attract quite a bit of attention from the public and from state legislators. Mr. Marvin noted that, for Ohio, the inspection of the West Valley shipment in Pennsylvania went well.

For all rail shipments of radioactive material, the PUCO's goal was to assign at least a hazardous materials inspector and a motive power and equipment inspector. For shipments to Yucca Mountain, Mr. Marvin envisioned assigning inspectors for track, signal and train control, and grade crossings.

On the subject of the FRA's program, Mr. Marvin said the technical resources were very helpful. The PUCO had a good working relationship with the FRA, as well as with the Ohio Department of Health, the PUCO, and OEMA. His agency trained annually with the FRA.

Patrick Edwards discussed Pennsylvania's experience with the FRA program. He said his agency had been working cooperatively with the FRA, but independently of other state agencies. Through the efforts of Mr. Hughes and Phil Paull (CSG/ERC), Mr. Edwards had become more involved with the Pennsylvania Emergency Management Agency and with related agencies in other states.

Mr. Edwards shared some recommendations for states. He suggested that, if a state planned to help shadow a shipment, it was a good idea to pre-register with the state police first. Mr. Edwards also recommended getting to know the FRA regional administrator and State Rail Safety Manager. Mr. Calhoun would be able to provide those names to anyone that was interested.

Mr. Edwards suggested the states get to know the railroads that operate in the area. He cautioned that the railroads might not always cooperate, but they would at least answer questions. Lastly, he said the states should get to know the shippers that transport hazardous materials through their states.

Rick Hand discussed the Illinois Commerce Commission's involvement in the FRA program. The "plusses" for Mr. Hand included FRA certification, training within one's discipline, and the ability to collect fees for violations. Mr. Hand said the training available through the FRA was excellent and it was free. In addition to receiving the 49 CFR volumes, the state trainees also received the DOE transportation practices manual and other publications. Mr. Hand emphasized that it was important to hire people with experience in the field.

On the negative side, Mr. Hand said there was limited computer training available, although he admitted the situation was getting better. He said his authority was only in the state of Illinois — not in other states. He commented that there were differences in the way the FRA and the Illinois inspectors performed their jobs. It was also difficult to satisfy both the state and federal requirements for inspections.

Mr. Hand said the states and the FRA needed to work better on border inspections. In particular, the FRA would need to learn how to listen to the states' input. He said it would be helpful if more

information were circulated in advance of shipments. Lastly, he strongly recommended designating one person to have the task of coordinating all state agency efforts associated with spent fuel shipments. In Illinois, that person was Mr. Runyon, and Mr. Hand said the process worked very well.

Mr. Strong asked how the different state programs were funded. Mr. Marvin said his office was funded by the traditional utilities in Ohio. Mr. Edwards said Pennsylvania assessed fees on utilities, which included the railroads. In Illinois, railroad taxes paid for the majority of the program's costs. Mr. Runyon added that, if Illinois had many shipments, part of the shipment fee would be earmarked to cover the costs of the Illinois Commerce Commission. Currently, such was the practice with the Illinois State Patrol, because Illinois already experienced a significant number of truck shipments.

Ms. Bubar asked Mr. Calhoun if the distribution of inspectors correlated with the transport of hazardous materials shipments. Mr. Calhoun said not really, but the FRA tried not to tell the states where to assign inspectors. Ms. Bubar asked why the states with hazardous materials shipments would not want to participate in the program, and Mr. Blackwell said funding was a factor.

Mr. Calhoun said a bad train wreck was the strongest impetus for a state to being participating in the program. He noted, however, that hazardous materials do not usually cause accidents. Instead, track, human factors, and grade crossings were common causes, therefore the states tended to start programs with these disciplines. Mr. Calhoun said the FRA, if asked, could perform a fairly detailed analysis of what was causing accidents in a particular state.

Rail Topics

The joint workshop included two sessions set up to facilitate a dialog between state representatives and experts from the rail industry and federal government on specific rail transportation topics. The sessions provided a forum for all attendees to talk with rail experts and other participants on areas of significant interest. Edward Wilds (Connecticut) chaired the first session.

Routing: Mr. Runyon provided an introduction and oversight of the topic. Mr. Blackwell provided the perspective from the rail panel.

Mr. Blackwell said the FRA and the rail industry were cognizant of the safety and security concerns surrounding routing of hazardous materials, including radioactive materials. Rail routes are currently selected using risk assessment methodology while taking into account the complexities and operational environment of the national rail transportation system. He noted that railroads were privately owned and operated, and that freight railroads are not used by the public. In addition, multiple rail carriers were often required to move material from origin to destination. The best infrastructure was usually near or in major metropolitan areas, which made it difficult to route around population centers. Lastly, the closed nature of the rail system dictated the need for more operational flexibility than highway shipments, specifically regarding other rail freight movements and alternate routing.

To date, FRA, rail carriers, and other involved parties have successfully utilized the cooperative planning process to address routing issues for rail shipments of radioactive material. The current method provides flexibility, allows all parties involved to provide input into the rail routing selection process, and enables routing decisions to be made with a full understanding of the rail operational environment as well as the needs and concerns of those affected by the routes.

As Mr. Blackwell pointed out, the fact that there were currently no rail routing regulations similar to those for highway did not preclude the development of viable rail routing regulations in the future. Patrick Brady (BNSF) added that it was a good idea to try to keep the shipment on one railroad's tracks for as long as possible, because interchanges took one day to complete. He advocated getting the carriers involved early in routing decisions.

Dedicated Trains: Mr. Crose introduced the topic, and Mr. Fronczak provided the rail industry's perspective.

The use of special or dedicated trains for spent fuel transportation has been the subject of continuing disagreement between railroads and DOE. Beginning in 1974 railroads instituted a recommended practice for the transportation of spent nuclear fuel, which recommended the use of special trains for spent fuel shipments. In 1977 the Interstate Commerce Commission ruled railroads could not require spent fuel shipments to use special trains.

Mr. Fronczak said the AAR believed the use of dedicated trains for spent nuclear fuel was the safest possible method of transporting by rail. Spent fuel rail cars would not have to be switched in and out of trains at rail yards if they traveled by dedicated train. Also, the mixing of heavy spent fuel cars in general freight service increased the potential for an accident due to the extremely heavy weight of the spent fuel cars compared to standard railcars. A fully loaded standard railcar weighs 263,000 compared to spent fuel cars, which fully loaded can weigh over 500,000 pounds. Premium suspensions could be incorporated in all rail cars in dedicated trains, reducing the possibility of derailments.

Dedicated trains were also essential in order to use the newest technology designed to lower the possibility of a derailment. Electro-pneumatic controlled (ECP) brakes could be incorporated into dedicated trains, which allowed for shorter stopping distance and reduced the potential for grade crossing accidents. Defect detection equipment that monitored for specific derailment conditions could also be incorporated into a dedicated train. All of this technology was contained in AAR Standard S-2043: "Performance Specification for Trains Used to Haul High Level Radioactive Material (HLRM)," which was published in April 29, 2003. This performance specification would be required for future shipments of spent fuel and high-level radioactive material.

Mr. Fronczak indicated that Private Fuel Storage (PFS) was the first shipper to build their equipment in conformance to the new specification. They had built the prototype car, and static testing had been completed at AAR's Transportation Technology Center in Pueblo, Colorado. Testing was currently on hold waiting for licensing issues to be clarified. The weight of the PFS car was 476,000 pounds. Other safety initiatives that ensured the safety of spent fuel transportation included AAR's Recommended Railroad Operating Practices for the Transportation of Hazardous Materials, known as OT-55. In addition, FRA's SCOP applied to these shipments. Mr. Fronczak said time in transit would be longer in mixed-freight trains. Lastly, he said it would be easier to provide greater security for dedicated trains.

Mr. Blackwell also discussed the use of dedicated trains. Congress mandated the Dedicated Train Study to determine any safety advantages the use of dedicated trains might provide in transporting spent fuel and high-level radioactive waste. Mr. Blackwell had reported on this study earlier in the day.

Mr. English said he "professionally disagreed" with the AAR's position on dedicated trains. He said there might be logistics reasons to use dedicated trains, but he disagreed that transit would be faster. He

said the use of dedicated trains involved an additional crew in the system, as well as more power. In his experience, adding the crew and additional equipment often caused delays while waiting for these resources to become available. Mr. Brady clarified that comparing dedicated trains to regular trains was an “apples to oranges” comparison, and that dedicated trains would be much faster than regular trains, even factoring crew changes into the equation as Mr. English implied.

Mr. English also said one of the reasons rail was a safe mode was its nature as a closed system. Because it was closed, the railroads could not afford a derailment. Mr. English thought the standards that the railroads and the FRA had in place were sufficient to prevent derailments. He dismissed the idea of rail-yard accidents as a “non-issue.” He thought dedicated trains might have a negative impact on safety by adding more trains to the closed system.

Mr. Crose asked what percentage of the NNPP’s shipments traveled by dedicated trains. Mr. English said he could not answer, but he noted that the railroads insisted on dedicated trains in many cases. He said, every year, the NNPP moves hundreds of other shipments not involving spent fuel. Most of those shipments travel by general freight. He confirmed that the NNPP escorts its spent fuel shipments.

Bill Sherman (Vermont) said PFS was planning to ship 3-10 casks per dedicated train. Mr. English said DOE limited the number to six, in consideration of the needs of the escorts. Mr. Sherman asked if a dedicated train of 20 cars was possible. The answer was yes, but it would be very expensive because of the need to procure enough casks to support such large shipments.

Mr. Owen commented that, in Ohio’s experience with the Mound shipments, it was not uncommon for the train to be held up to get out of the way of faster trains. Brady Lester (DOE) asked if there were design criteria for the buffer cars, and the answer was yes.

Emergency Preparedness / Response: Mr. Hughes introduced the topic of emergency preparedness and response, and Mr. Brady presented the industry perspective.

In his overview, Mr. Hughes explained that state, tribal, and local governments had the primary responsibility and authority to respond to and manage emergencies within their jurisdiction. The incident command was the responsibility of the state, tribal, or local government. As required by federal regulations, the shipper would provide emergency response information on shipping papers. Mr. Hughes said DOE should ensure that the transportation plan covering their shipments included an adequate emergency management plan. In the event of an incident or emergency, the shipper (i.e. DOE) would also provide technical assistance for emergency response should the carrier fail to do so. FEMA provided guidance, policy and program advice, and technical assistance in hazardous materials, chemical, and radiological emergency preparedness activities (including planning, training, and exercising).

From the railroads’ perspective, should an incident occur, the goal was to have a safe, efficient, and environmentally-sound response. In planning for rail emergencies, the rail carriers committed substantial resources to developing, testing, and implementing response plans. They had the greatest understanding of and operating experience with their rail system. The threat of economic loss was at the heart of the industry’s interest in ensuring their response plans provided for a timely and effective resolution to any incident. This was due largely to the fact that the carriers were tasked with taking the

response initiative on their private rights-of-way and track. The railroads needed open communication, trust, teamwork, emergency planning, and drills.

Sandra Covi said Union Pacific shared its emergency response plans with the LEPCs. When asked whether the railroads' personnel had been trained in radiological protection and incident command, Mr. Brady and Ms. Covi both answered in the affirmative. Mr. Brady said BNSF did not conduct community training specifically for radioactive materials incidents. The railroads did not have "canned" press releases to issue in the event of an incident.

Bad Weather and Track Conditions: Mr. Schwarz introduced the topic of bad weather and track conditions. Ms. Covi presented the industry position.

Ms. Covi said the railroads relied on several sources for weather information. The goals for efficient monitoring were to a) prevent derailment, b) issue timely alert information, and 3) keep employees and trains safe. Alerts that the railroads needed to see included wind conditions greater than 51 mph, conditions that produced high winds, flash flood warnings, tornado in a county, tornado moving toward the rail, cold temperatures below 0 degrees, and heat above 110 degrees. The railroads provided additional inspectors for extreme conditions.

Ms. Covi said the railroads used train control and monitoring systems to identify the location of their trains within the rail system. Based on this information, the railroads made decisions to avoid or minimize potential weather-related or track condition risks. The carrier could impose local restrictions on transportation when local conditions made travel hazardous. Adverse operating conditions could be reported to the DOE shipper through several means. The railroads supported safety first. Ms. Covi said the railroads depended on timely critical weather notification and the forecast to plan the next few days of operation.

Mr. Niles asked if six inches of snow would be a problem for a rail shipment. Ms. Covi said it would not. Mr. Niles then suggested that six inches of snow might interfere with an evacuation, or with the ability of emergency responders to reach the scene of an accident. He said many states felt the railroads needed to take these situations into consideration, not just their own internal matters. Ms. Covi agreed to some extent, but she said the states and the railroads would need to look at all the options. For example, people could shelter in place, or the railroads could help transport responders to the scene. Mr. Niles asked if the railroads were willing to work with the states on this issue, and the representatives said they were. Mr. Brady said it would be easier to accommodate the states' wishes in this regard using dedicated trains.

Escorts and Security: Mr. Flater introduced the topic of rail escorts and security. Mr. Fronczak presented the industrial perspective.

Mr. Fronczak described, in general, the Terrorism Risk Analysis and Security Management Plan, prepared by AAR's Railroad Security Task Force. The study grouped primary materials of concern for terrorists into poison inhalation hazards, fire and/or explosion or physical hazard, water consumption or ingestion hazard, and other hazardous materials. The study examined methods of ranking relative hazards, which included DOT Class Hazards, North American Response Guide Evacuation Distances, AAR's Non-Accident Release Index, and the Railroad Infrastructure Hazardous Materials Evaluation Matrix.

Mr. Fronczak said the study identified many countermeasures to reduce risk to various components of the infrastructure. The countermeasures were identified in the areas of people, process, and technology.

High-Quality Crews & Equipment: Mel Massaro, with the state of Pennsylvania, introduced the topic of high-quality crews and equipment. Mr. Blackwell provided the industry position.

Mr. Massaro said that, with respect to train crews, the nature of the rail operating environment required that train crews be well trained in their job functions. Locomotive engineers were required to be certified and operate over the specific territories for which they were certified. Train crew personnel underwent a rigorous qualification regime before being certified to operate trains over their assigned territory. Efficiency testing of crew was performed routinely by the nation's rail carriers, whose efficiency testing programs were monitored by the FRA. The issue of designating individuals for use as train crews for particular commodities was problematic based on the nature of the rail industry and negotiated rail/labor contracts.

With respect to equipment, federal regulations and rail industry standards addressed equipment operating standards intended to ensure the safe operation of rail equipment. Federal regulations and industry interchange rules addressed mandatory inspection and maintenance intervals, wayside hotbox detection systems, and required train brake system checks, for example. In addition to the inspections conducted by the rail carriers, FRA mechanical inspectors conducted focus inspections on rail equipment used to transport high-level nuclear waste and spent nuclear fuel prior to departure from origin. Periodic inspections were also conducted en-route at interchange points or crew change locations. The TEC/WG Rail Topic group produced a matrix in July 1998. The matrix provided an excellent overview of the regulations and industry standards with regard to quality of the train crews and equipment standards.

Advance Notification: Dr. Wilds introduced the topic of advance notification. DOE, its contractors, or its carriers provided advance notification of non-classified shipments of spent fuel and high-level waste in accordance with applicable requirements. In addition to the required formal prenotification, DOE intended that verbal or written notification be provided to state and tribal designated points of contact so that they would be informed at least seven working days prior to actual shipment. The NRC had promulgated regulations providing for timely notification to the governor of any state prior to the transport of nuclear waste, including spent nuclear fuel, to, through, or across the boundaries of such state.

Ms. Williams commented on the experience with the West Valley notifications, which had not always worked as planned. Mr. Lanthrum said he hoped pre-notification would become routine for the OCRWM shipments. Mr. Runyon strongly cautioned against using a system such as the WIPP eight-week rolling schedule for spent fuel notifications. Casey Gadbury (DOE) said WIPP shipments through the Midwest were still considered "special," not "routine." He said he did not think there would be so many complaints with the schedule if the Midwest routinely had shipments. Mr. Flater commented that Iowa was considering a penalty for shippers that did not cancel their notifications in a timely manner.

Shipment Tracking: Mr. Owen introduced the subject. He observed that Ohio had experienced a problem initially with the Mound rail shipments of transuranic waste. Specifically, the "ping" interval was set so that updates occurred only every hour. Ohio received its first update after the shipment had left the state. The lengthy interval did not seem to facilitate emergency response to a potential accident. Mr. Owen added that the problem had been resolved for subsequent shipments from Mound.

Mr. Lanthrum said he thought the technology would improve prior to OCRWM beginning its shipments. Mr. Fronczak said that, given the railroads' automatic equipment identification system, if TRNASCOM was not operational and someone absolutely had to know where a shipment was, the railroads could provide the answer.

Mr. Brady asked how TRANSCOM helped the states with emergency response. Mr. Owen answered that it provided position updates and messages. He also observed that the governors felt more comfortable knowing someone in the state had their eye on the shipment.

Mr. Smith remarked that Ohio had assumed the West Valley shipment was a safeguards shipment. His comment sparked a lengthy discussion of the shipment. Mr. Blackwell, who had sent some shipment-related information via e-mail, explained his actions. He said he had received helpful information via e-mail, which he then forwarded to other FRA points of contact in the field who were involved. This freed DOE-Idaho from the burden of having to call all those people with status reports. Ms. Sattler suggested that the same purpose could be served if the FRA had access to TRANSCOM. Mr. Blackwell did not think that was necessarily a good idea.

Mr. Runyon asked whether there were any differences between a DOE spent fuel shipment and an NRC-regulated one. Ms. Bubar said she hoped not, because DOE had been striving to make them look the same. She admitted there had been a few "blips" on the escorts as far as implementation. But DOE had made a policy decision that, even though it was not a regulated entity, the department would follow the NRC interim compensatory measures. The only area where DOE did not meet that goal was in getting the NRC's approval for the route from a physical protection standpoint. Instead, DOE approved the route itself.

Regarding the Midwest's concern about safeguards information being transmitted via e-mail, Ms. Bubar said she, too, had received e-mail updates. Her perspective was that people with a need to know would have access to the information, but it was not something they could share publicly for 10 days after the shipment arrived. She did not think that meant those with a need to know could not get regular updates via e-mail or telephone. She said if there was confusion, DOE and the states needed to sort that out.

Mr. Fronczak said the issue was not whether certain people who received information actually had a need to know. It was agreed they did. In the process of examining security issues after 9/11, however, the AAR had learned that e-mail is not a very secure means of communication. The AAR's security management plan recommended encrypted e-mail and, if telephone notifications were necessary, STU phones. Ms. Bubar agreed that the method of communications might need to be addressed.

Mr. Brach said instead of looking at the shipment in a critical mode, we should all look at it from a lessons-learned perspective. He recalled one of the first West Valley planning meetings, in connection with a Midwestern regional meeting. At the time, everyone agreed to conduct a lessons-learned review upon the completion of the shipment to determine how the NRC, DOE, shippers, states, and all other involved parties could improve shipping operations in the future — e.g., when shipments to a repository begin. Mr. Brach felt that one lesson to look at would be ways to distribute information of a protected nature. He noted that NRC required that electronic means for transmitting information must first be reviewed and approved by the NRC. Typically, those electronic means do not include e-mail systems over the Internet. He reiterated his belief that everyone should be striving to draw lessons from the West Valley experience.

Referring to the WIPP eight-week rolling schedule, Mr. Runyon wondered whether OCRWM were considering using TRANSCOM as a means of distributing advance notifications. He observed that TRANSCOM currently was one level of encryption too low for transmitting UTNE or safeguards information. If OCRWM did wish to use TRANSCOM for this purpose, the system would need to migrate to the secure socket layer and add a level of encryption. Ms. Holm agreed with Mr. Runyon, but she added that TRANSCOM was a secure system at some level. Mr. Lester added that TRANSCOM was listed as an NRC-approved system. Mr. Runyon clarified that it was approved for tracking, but it would not meet the standards required for seven-day notifications.

State Inspections: Mr. Hand led the session, with the perspective of the rail industry presented by Mr. Blackwell.

Mr. Hand observed that, for the West Valley shipment, Illinois was willing to go into Indiana to conduct the inspection. For repository shipments, however, the state and DOE would need to make other arrangements. Mr. Blackwell said the FRA recognized the states' right to inspect shipments. In fact, 49 CFR Part 212 affirmed the states' right. The question arose, however, as to where inspections would take place. He reiterated that FRA-certified state inspectors had the same authority as FRA inspectors, and the rail industry accepted the authority of those state inspectors. Mr. Blackwell said the states needed to be aware that the nature of the rail operating environment was such that inspections could not always be conducted at the location desired by the states. Mr. Blackwell also worried about the potential for duplication of efforts, given that — in some states — several agencies had regulatory authority over rail transport.

Mr. Runyon said traveling to Indiana for the inspection created a health and safety issue for the Illinois personnel because of the difficulty of keeping up with a train when traveling by car. Mr. Brady asked if the states would allow remote monitoring of shipments at state borders. Mr. Runyon said he was interested in learning more, and added that Illinois inspected both the cask and the motive power and equipment. He said that, with smart technology available for sensing brake and other problems, it might be possible to monitor radiation remotely, as well. He added, though, that even with remote monitoring capability, the states would still be obligated to escort shipments of spent fuel.

Mr. Edwards asked how long the Illinois inspection took. Mr. Runyon said usually 30-45 minutes — an hour at the most. He said, based on his experience, trains carrying spent fuel tended to make a number of stops. Mr. Blackwell worried that, if one state were to inspect a shipment, every one would want to do so. Mr. Runyon disagreed, and said that the CVSA program for truck shipments had reduced the number of state inspections. Mr. Blackwell speculated that a CVSA-type system for rail might be worth pursuing.

Mr. Sherman seconded Mr. Runyon's comments. He said that WIPP was a successful shipping program because of DOE's willingness to negotiate. He felt it was inappropriate for DOE, the FRA, or the railroads to refuse to compromise on inspections. Ms. Covi said Union Pacific was always willing to negotiate, if there was a good reason to do so.

Mr. Blackwell observed that stopping the train would have a ripple effect on operations. Requirements for the crews were very strict with regard to hours of service. Once the crew reached that limit, they could not operate the train. Mr. Brady agreed, and added that, just because there was a siding near the border did not mean it was appropriate for inspections. There were rules and regulations that said if

there were people or equipment within 30 feet of the main track, they would need protection. In the case of the West Valley shipment, that would have meant shutting down the main track to perform the inspection at the point Illinois desired. There were other desirable attributes that made some sidings inappropriate. Mr. Runyon said, for West Valley, Illinois had “done its homework” and thoroughly checked out the siding it proposed. He felt it was a good location. He added that, over the years, Illinois had often had good experiences working with some of the railroads.

Mr. Blackwell said that, even though past history showed that it was possible to work things out, the scale of the upcoming OCRWM shipping campaign would make it more difficult to reach agreement.

Mr. Niles did not think any state was advocating stopping the train in an unsafe location for an inspection near a state border. He agreed with Mr. Blackwell that the inspection issue warranted further discussion between the states, DOE, the FRA, and the carriers. He said another issue that everyone needed to consider was the availability of state inspectors. This issue, in fact, would come up soon, given the possibility of transuranic waste shipments moving by rail to WIPP. Mr. Blackwell agreed, and reiterated the need for inspectors to be knowledgeable, qualified, and well versed in 49 CFR 212.

Mr. Lanthrum said he hoped to see inspections considered as achieving operational goals. He cautioned against creating a requirement for the purpose of “checking off a box,” especially since — in this case — the requirement might actually interfere with the overall goal of safety. If the states did additional inspections, Mr. Lanthrum would want to know, for instance, whether the inspectors were catching things that were safety related. He said that, if it turned out inspections did not uncover safety issues, then it might be possible to develop a program with an agreed-upon standard for origin and destination inspections, with remote monitoring in between. Mr. Runyon agreed with Mr. Lanthrum, but said that what Mr. Lanthrum proposed might not be possible absent changes in legislation.

Mr. Brady asked the audience to understand that the subject of inspections was a difficult topic for the railroads. At the end of the day, they were businesses with shareholders, and they needed to make a profit on the transportation of *all* materials. The railroads had to deal with the states as well as the tribes. The railroads would appreciate the states considering any ways to expedite shipments, including remote monitoring.

Mr. Flater acknowledged that the railroads had a mandate to earn profits. He said the states had a mandate, too: to protect the health and safety of their citizens.

Robert Jeffries (New Hampshire) commented that his state’s statutes required inspections. The statute also had a provision for charging a fee to cover the cost to the state. Mr. Jeffries said New Hampshire would not inspect any shipments from Maine Yankee as long as a point-of-origin inspection had been conducted and the shipment had not subsequently been in an accident.

Mr. Fronczak responded to Mr. Flater’s earlier comment. He said making a profit was a key component of the railroads’ mandate, but safety was also very important to the industry. He observed that the railroads could not make a profit by operating in an unsafe manner. Mr. Flater clarified that his comment was in response to Mr. Brady’s comment about the profit motive. He said protecting the health and safety of the public was the states’ mandate, not the railroads’. Mr. Fronczak disagreed, and said all AAR members would agree that, if they could not conduct shipments *safely*, they should not conduct them at all.

Mr. Blackwell speculated that, once shipments ramped up to three or four per week, some states with inspection laws might decide to repeal them. Mr. Runyon observed that Illinois was near the midpoint of many routes to Yucca Mountain. Mr. Flater added that Iowa would not inspect shipments that had recently been inspected by Illinois, because the state trusted Mr. Runyon and his staff.

DOE Office of Environmental Management Update

Ms. Bubar provided an update on EM transportation activities. The EM headquarters' reorganization was to take effect in December 2003 and was intended to refocus the organization on site closure. Three key elements included Line Management (Operations Oversight), Mission Programs (Logistics/Waste Disposal Enhancements and Environmental Cleanup and Acceleration), and Management Support (Performance Intelligence/Improvement and Business Operations).

With respect to EM's proposed path forward for rail shipments of transuranic waste, an internal DOE working group had been established to develop rail shipment protocols for incorporation into the DOE Manual 460.2-1, Radioactive Material Transportation Practices. The intent was to use the experience base (Naval Reactors, Mound to SRS, Fernald, etc.) to build DOE's rail protocols for transuranic waste, and develop a stand-alone version of the practices manual for rail-to-WIPP shipments.

The conceptual approach for transuranic rail shipments included the use of tenders rather than contracts. Candidate sites were INEEL and Hanford. The TRUPACT-III was expected to be available in FY06. The CBFO would develop a rail program plan consistent with DOE rail protocols. The final decision to implement a rail-to-WIPP program would require additional analysis to validate the merit of the approach. The general development schedule was for DOE and the states to develop a draft document in FY04, with discussions between the regional groups and within the TEC/WG continuing in FY05. In FY06, the agreed-upon set of protocols would be finalized.

EM's security condition response plan served as a guide to EM shipping sites for actions to take when threat levels changed. The plan should be treated as sensitive information with limited access. It incorporated lessons learned when the threat level was raised to Orange in February and March of 2003. The plan identified a graded set of DOE transportation actions for threat conditions (green, yellow, orange, and red) including protective actions, notifications, information gathering and dissemination, and restart of shipments. Regional group comments were requested by December 12, 2003, with a final draft available by January 2004.

Ms. Bubar also discussed EM's development and implementation of an emergency preparedness infrastructure for radioactive materials transportation. As described, the infrastructure consisted of DOE's Comprehensive Emergency Management System (DOE Order 151.1), TEPP, and DOE's Radiological Assistance Program (RAP). The approach used had been in place since 2000. WIPP was included with the merging of STEP and MERRTT training materials. Ms. Bubar mentioned that the MERRTT training materials had received OSHA approval.

Ms. Bubar said EM would work closely with the Department of Homeland Security (DHS) to reduce the duplication of effort. DHS had the lead for security and emergency preparedness, including radiological events. Initial meetings with EM and DHS had been held. EM would integrate, where practicable, existing materials with DHS (FEMA). DHS provided the emergency response framework, and DOE fit

into the framework as a participating agency. MERRTT was listed in the compendium for Counterterrorism and Weapons of Mass Destruction (WMD) training. EM was working with the Office of Defense Programs (ODP) to integrate the TEPP needs assessment with the DHS State Homeland Security Assessments and Strategy Process and to identify grant funds that could be used for MERRTT. The DHS was in the process of filling positions of points of contact. The points of contact would be for a region or individual state, depending on the size of the state.

EM's spent fuel shipments completed in FY 2003 included West Valley to INEEL, Oak Ridge to INEEL, and one FRR cross-country shipment to INEEL. In FY04, DOE anticipated two campaigns: FRR cross-country to INEEL, and Oak Ridge to SRS.

Ms. Bubar summarized by saying the EM reorganization meant leadership changes, but the program's approach to transportation remained steadfast. She said EM would support close state, tribal, and regional group transportation planning efforts. In addition, the program would continue its path of safe, secure, timely, and cost effective shipments to meet its clean-up mission.

Homeland Defense Equipment Reuse Program

Jeff Hall (DHS) presented an overview of the Homeland Defense Equipment Reuse (HDER) Program, which DHS developed in coordination with DOE. The goal was to provide surplus radiological detection instrumentation and other equipment, as well as training and technical support, to emergency responder agencies nationwide to enhance their domestic preparedness capabilities. Mr. Hall said DHS also had a collaborative partnership with the U.S. Navy.

The HDER program provided responder agencies access to a substantial inventory of radiological detection instrumentation and other equipment that was no longer needed by the federal government. This equipment was rehabilitated and provided at no cost to the recipient. In addition, training on the use of the equipment items and long-term support for their maintenance and field checks were available. Additional instrumentation and equipment items would be added as the program matured.

DHS's Domestic Preparedness Equipment Technical Assistance Program's (DPETAP) mobile teams provided on-site equipment operation and maintenance training, as well as detailed technical information on domestic preparedness equipment. Local support for the equipment was available through a partnership with the Health Physics Society (HPS). Volunteers from local HPS chapters were available to perform field checks and basic maintenance for the equipment, provide hands-on refresher training if required, and serve as a local source of expertise for questions regarding the instrumentation.

The HDER Program utilized pre-existing relationships with state administrative agencies (SAAs) to administer the program to responder agencies. State HDER points of contact were provided with a quarterly equipment list of instrumentation and equipment available through the program, as well as a form for requesting the desired items and any associated training and local long-term technical support. ODP coordinated with DOE on the delivery of the equipment, with DPETAP to schedule the requested training, and with HPS regarding technical support. Requests could be made quarterly, and an inventory list of available equipment would be provided at the start of each calendar quarter. The quantity and type of items available through the HDER program would vary. In addition, the specific number of each type of instrumentation available to each selected area per quarter might be limited to ensure equality in

their distribution. All shipments of instrumentation and equipment were made to the designated state agency for distribution.

Mr. Hall described the benefits of the program as immediately enhancing domestic preparedness capabilities, allowing superior stewardship of surplus DOE assets, utilizing existing DHS relationships with state and local emergency responder agencies, allowing states to leverage ODP equipment grant funding, allowing states to coordinate HDER orders with needs identified in their state homeland security strategies, and responding to President Bush's direction for interagency cooperation and volunteerism in the war against terrorism.

The HDER program pilot project was implemented July 1, 2002. It focused on the 10 largest metropolitan areas in the United States. All 10 of the selected metropolitan areas participated. More than 1,600 pieces of equipment were redeployed with an estimated value of \$930,000. The need/demand for equipment was validated. Six metro areas requested training, and three HPS volunteers chapters received training.

The HDER program went nationwide on June 1, 2003. All 56 states and territories had designated a HDER point of contact for their respective state or territory. To date, approximately 3,510 equipment items valued at over \$1 million had been delivered to Alabama, Ohio, Nebraska, New Mexico, Wyoming, Virgin Islands, Iowa, Georgia, Mississippi, Minnesota, and Utah.

Thursday, December 11

U.S. Department of Energy Program Updates and Lessons-Learned Discussion

Mr. Runyon introduced the morning session of DOE program updates.

Waste Isolation Pilot Plant: Mr. Gadbury reported on WIPP activities. As soon as the NRC certified the TRUPACT-III, DOE would begin fabricating. Mr. Gadbury said DOE hoped to begin receiving casks in the spring or summer of 2005. If everything went as planned, in 2005 DOE would receive 16 containers, followed by four more in 2006. Mr. Gadbury said WIPP was striving to reach the point of processing 100 TRUPACT-IIIs every week.

In terms of the schedule for shipments impacting the Midwest and the Northeast, Mr. Gadbury said DOE hoped to complete the remaining 2-4 shipments from Argonne National Laboratory-East (ANL-E) in early 2004. DOE was awaiting EPA certification prior to resuming those shipments. Oak Ridge had dropped off the schedule in 2004 and would instead be on the schedule for 2006. The remaining shipments from Battelle were yet to be scheduled. DOE had completed nine shipments of legacy TRU waste from Mound by rail. The site had recently discovered some additional TRU waste in the form of piping. DOE would determine the best way to ship this newly generated waste.

Mr. Gadbury also reported on the WIPP compliance recertification application project. Recertification was required by the EPA every five years. WIPP received its first shipment of waste on March 26, 1999, so 2004 was the year for seeking recertification. Mr. Gadbury said the CBFO would submit its application package to the Secretary of Energy in December 2003, followed by submittal to the EPA in March. In response to a question, Mr. Gadbury said the EPA was required to hold public hearings before recertifying the WIPP site.

There were 13 generator/storage sites with inventories of remote-handled (RH) waste. The CBFO expected to make its "RH readiness declaration" on December 15, 2005, with the first placement of RH waste scheduled for January 3, 2006. The CBFO would need approval by the EPA and the New Mexico Environment Department prior to accepting RH waste.

As of Monday, December 8, WIPP had received 2,208 shipments. Eleven of those shipments originated at ANL-E and passed through the Midwest. In all, six sites had shipped directly to WIPP. The CBFO had closed Panel 1, and expected to close Panel 2 on November 10, 2004, if the current shipment rate were maintained.

Mr. Gadbury addressed the written requests from the Midwestern states for changes to the eight-week rolling schedule for notifications. Iowa and Illinois had raised concerns on more than one occasion regarding frequent changes to the eight-week schedule. The CBFO agreed that it was good policy to minimize the number of changes to the schedule so that the states could rely on it for planning resources to support TRU waste shipments. Toward this end, Mr. Gadbury had analyzed the changes to the eight-week schedule. Starting September 25, after the CBFO began to enforce its new policy (which had been issued in June), the number of actual changes to the schedule dropped noticeably. The new policy required that, if a shipment could not be made as scheduled, the earliest it could be rescheduled would be in the ninth week. Exceptions would be made for shipments delayed due to reasons beyond the CBFO's control or if the affected states were notified and agreed to the change.

Mr. Runyon restated the reasons for the Midwestern states complaining about the eight-week schedule. He said the states agreed they would rather have two or four weeks notice of a firm shipping date than eight weeks notice for a date that acts as a placeholder. Several participants discussed the problem of scheduling shipments during state or federal holidays. DOE had agreed not to ship on federal holidays, but state holidays could pose equally significant problems in terms of staffing and overtime. Mr. Flater said he had sent Ms. Sattler a list of Iowa state holidays. He thought DOE should strive to avoid shipping on those dates when possible.

Mr. Gadbury reminded the states that ANL-E had not yet received its certification to ship homogenous solids to WIPP. For that reason, the ANL-E shipments did not appear on the eight-week schedule. The CBFO was hoping that, if it posted the shipping dates nine weeks out, the states would agree by conference call to move up the schedule by several weeks. Mr. Flater reminded Mr. Gadbury that Iowa was very seriously standing by the notion of no shipments taking place in January-March because of winter weather concerns. He said DOE would have to negotiate this point with the states. Mr. Gadbury said the CBFO successfully shipped through other states during winter months, but he agreed that the CBFO and the states should discuss this concern further.

Battelle-Columbus: Mr. Runyon expressed appreciation for the efforts of Tom Baillieul (DOE) in planning the Battelle shipments. He said the corridor states appreciated Mr. Baillieul's strong commitment to the regional planning process.

Mr. Baillieul observed that, just one year ago, DOE had made the first shipment of RH transuranic waste in about 13 years. The shipment involved 10 drums in a 10-160B cask, traveling to Hanford. In early February 2003, DOE shipped another two casks containing five drums each. Unfortunately, in March, shipments were suspended in response to a lawsuit by the state of Washington against DOE. The suspension was formalized in May as a court-imposed injunction.

Despite the injunction, DOE still had a project requirement to complete site cleanup by September 2006. In summer 2003, DOE built a staging pad of reinforced concrete with a 12-foot shield wall all around the perimeter. Fifteen weather-proof shield vaults were on the pad, loaded with 106 drums of RH waste grouped in truckload-ready configurations.

Mr. Baillieul said a number of drums could not be shipped in the 10-160B cask because of their plutonium content. In a cooperative venture with the CBFO, Battelle-Columbus had conducted a demonstration to show that it was possible to load DOE's RH-72B cask in the high-bay facility at the site. At this time, there were two RH-72B casks (on loan from the CBFO) sitting on the staging pad, loaded with waste, waiting to be shipped to WIPP. Mr. Baillieul noted that this was the first time a 72-B cask had been loaded with live waste. This feat was just one of the "firsts" accomplished at Battelle in an attempt to find "creative solutions to an intractable problem."

To move the drums to the staging pad, DOE first had to have NRC authorization. In that authorization, the NRC specified that the pad was a *temporary* solution and that the drums needed to be removed from the site by December 31, 2005, in accordance with the approved decommissioning plan. As it turned out, this date was also the planned schedule for the new contractor to complete the final stages of the decontamination and decommissioning. These deadlines put the site in a quandary: DOE could not close the site and Battelle could not terminate its license for the site until the waste is removed. Mr. Baillieul was counting on the CBFO as the leader of the National TRU Program to come up with an alternative.

Mr. Baillieul saw three potential options, none of which seemed promising:

1. Resume shipments to Hanford: all the paperwork was in place, DOE had done all the NEPA reviews; however, the lawsuit would have to be resolved before the court would lift its injunction.
2. DOE could identify another interim storage site: DOE would have to do another ROD amendment to the TRU waste ROD on the programmatic EIS, in addition to establishing the requisite infrastructure at the receiving site.
3. Put the TRU waste drums into lead overpacks and ship them to WIPP as contact-handled waste: this would require permit changes at WIPP as well as on the shipping containers, plus the NRC would have to approve the handling of drums and the transfer of the drums to a different configuration. Even with these changes, this option would not take care of all the drums of waste remaining at the site.

Mr. Baillieul said dealing with this situation would be a real challenge. The responsibilities of the new contractor at Battelle were limited to taking down buildings and cleaning up the rest of the site, not managing TRU waste. Battelle's ongoing role was to monitor the drums in storage. In other words, DOE had taken on the responsibility of solving the transportation problem by itself. Mr. Baillieul would be retiring from DOE in 20 days, after 24 years of service, and would therefore be turning over the situation to an as-yet-unnamed individual. He said that, in his 24 years with the federal government, one of the real high points had been working with the CSG Midwest and WGA regional groups.

Mr. Flater asked whether there was a significant amount of low-level waste resulting from the building demolition. Mr. Baillieul said the amount of waste would be a "drop in the bucket" compared to the

amount of waste leaving Mound or Fernald. The contractor was examining its options for shipping the waste to Utah by truck or train. Mr. Flater also asked whether DOE had constructed the staging pad solely due to its inability to ship the waste to Hanford and, if so, what was the cost to the taxpayers. Mr. Baillieul said Mr. Flater's assumption was correct, and said the staging pad cost around \$500,000 — half for the shield vaults and half for construction of the pad and transferring the drums.

Foreign Research Reactor Program: Alex Thrower presented information on the FRR program, the goal of which was to recover nuclear materials that could otherwise be used in weapons. Through this program, DOE was removing high enriched uranium from worldwide commerce, thereby reducing the threat of nuclear weapons proliferation. Mr. Thrower emphasized that the fuel was coming from research reactors, not power reactors.

In all, 41 countries participated in the program. DOE had agreed to take back up to 20 metric tons in the Environmental Impact Statement (EIS) for the acceptance policy, including five tons of high enriched uranium. Most of the waste was in the form of MTR fuel, which would be stored at DOE's Savannah River Site in South Carolina. The remainder was TRIGA fuel destined for storage in Idaho. Based on discussions with the eligible countries and reactor facilities, DOE anticipated accepting about half of the material identified in the EIS.

DOE had a 10-year acceptance policy, which ran from May 13, 1996, through May 12, 2006. Fuel that was irradiated during this 10-year window would be accepted over a 13-year period (the additional three years giving the fuel time to cool). Mr. Thrower explained the cost-sharing structure, which divided countries into "high-income economy countries" versus "other than-high-income economy countries." The former paid the transportation costs; DOE subsidized these costs for the latter.

DOE had completed 27 shipments to date, representing 5,915 spent fuel assemblies from 27 countries. Four cross-country shipments had taken place, plus one west-coast shipment. Savannah River had received 142 casks, and 13 casks had gone to Idaho. Based on projections, DOE had received 58% of the anticipated MTR fuel and 73% of the TRIGA fuel.

Mr. Thrower discussed the shipment planning process DOE followed in working with the reactor operators, regional groups, and the states. DOE developed transportation and security plans for each shipment. For the high-income economy countries, the safeguards review was conducted in accordance with applicable NRC regulations. For the other shipments, DOE performed an equivalent analysis using its own security plan. Mr. Thrower added that DOE had used the "black" and the "blue" routes for shipments, but not the "red" route. Cross-country shipments had been completed in August 1999, July 2000, July 2001, and October 2003.

Current issues for the program included the need to operate in an environment of heightened security, driven by the NRC interim compensatory measures (ICMs). Mr. Thrower said complying with the ICMs was not a significant operational issue for DOE because the department was already implementing a number of these measures even before 9/11. DOE had been working to better integrate transportation planning for the FRR program with planning other spent fuel shipments. The Savannah River Operations Office had obtained a new railcar to use as a security escort car for shipments.

Mr. Thrower said DOE had received several requests to extend the policy beyond 2006/2009. DOE was estimating another 24 shipments before the current policy would expire. Mr. Thrower said DOE was

working with the reactor community to better understand what the particular issues were with regard to extending the acceptance policy. He emphasized strongly, however, that DOE had no plans at this time to extend the policy beyond the 2006 expiration date. He said the Secretary of Energy had received a petition from 21 of the research reactors and DOE was developing a response.

Regarding near-term plans, Mr. Thrower said it was possible DOE would receive a shipment of MTR and TRIGA fuel from Indonesia in 2004. If that shipment did materialize, DOE would need to work with the corridor states on a compressed schedule to plan a cross-country shipment. Mr. Thrower said DOE would also work with the corridor states to address issues and lessons learned from the last cross-country shipment.

Mr. Blackwell asked if DOE had any plans to use the west coast port of entry for any of the remaining shipments. Mr. Thrower said DOE could use the west coast port because it was identified in the 1996 Record of Decision. However, since 1996, the Concord Naval Weapons Station had reduced its operations and, therefore, was less able to accommodate DOE's needs. DOE was also receiving fewer TRIGA shipments than previously anticipated. Also, it was very costly to charter a ship solely to bring in spent fuel to the west coast. It was more cost-effective to pick up spent fuel from several countries, bring it all into the Charleston port, then truck the TRIGA fuel cross-country to Idaho. Mr. Blackwell also asked about the maintenance schedule for DOE's caboose. Mr. Runyon added that Illinois would be very interested in DOE's decision on a route for the next cross-country shipment.

Oak Ridge: Brady Lester began his presentation by thanking CSG Midwest, SSEB, and WGA for their help and cooperation in working with DOE to plan five shipments of spent fuel from Oak Ridge to Idaho. Mr. Lester said DOE could not have made these shipments without the cooperation of the affected states.

Mr. Lester observed that Oak Ridge did not have any TRU waste shipments scheduled for FY04 or 05. Shipments of contact-handled waste were projected to begin in FY06, along with one shipment of remote-handled waste. The shipping schedule for remote-handled waste would accelerate significantly in FY07 and beyond to over 100 shipments per year. All contact-handled waste would be removed from the site by FY11.

As part of the consolidation of DOE's spent fuel storage activities, Oak Ridge had shipped five trucks of spent fuel to INEEL. Mr. Lester said DOE had done an awful lot of training along the shipping route to prepare for shipments. He said the shipments had been a learning experience for everyone.

Oak Ridge was also dismantling the Tower Shielding Reactor, which was a research reactor dating back to the 1950s. DOE would make two legal weight truck shipments to move the core from Oak Ridge to Savannah River before the end of the year. Mr. Lester said this would not be an HRCQ shipment. Notification would be in accordance with NRC requirements. Security for the shipment would be in accordance either with the NRC interim compensatory measures or DOE's equivalent security plan. DOE would work with SSEB to plan the shipments, since the South was the only affected region.

Oak Ridge had approximately 7,000 cylinders of depleted uranium hexafluoride (DUF_6) that it would ship to Portsmouth, Ohio. Mr. Lester said the DUF_6 posed a low radiation risk, but was also corrosive. Awareness-level training had been conducted along the potential routes. Mr. Lester said DOE had hoped to start the shipments back in February 2003, but for political reasons the shipping program had

“languished.” Of the DOT-compliant cylinders, approximately 1,700 were 48-inch cylinders, with another 1,000 of various sizes, fills, and enrichments.

The remaining cylinders were not compliant with DOT requirements and would therefore need to be shipped in an overpack. Mr. Lester described DUF_6 as a white crystal that would burn skin, lungs, and eyes, and could kill an exposed person. The substance would decompose on heating to produce toxic fumes of hydrogen fluoride. DUF_6 reacts vigorously with water, attacks plastic, rubber, and coatings. The depleted uranium itself would not pose a significant health hazard unless it was taken into the body.

Mr. Lester displayed information on the emergency response procedure for DUF_6 , which was found in ERG Guide #166. In response to a question, Mr. Lester said the training along the spent-fuel route had been based on state requests. In some cases, the training was a joint venture with the TEPP region and the state trainers.

Packaging and Transportation Services: Ms. Holm began by discussing the TEC/WG, which was formed in 1992. The group was co-sponsored by both EM and OCRWM. The group’s most recent meeting took place on July 16 and 17 in Alexandria, Virginia. The focus of that meeting was best practices and lessons learned in transportation, emerging security requirements and their impact on DOE, and planning for the OCRWM transportation program.

Ms. Holm noted that the July 2003 meeting marked the return of OCRWM as a “full partner” in the working group. She thought a great deal of the discussion at the meeting fed into OCRWM’s strategic plan on transportation, which was recently issued. Ms. Holm noted that the topic groups continued to work during the interim between meetings. The Rail Topic Group was developing a paper on rail routing. The Training Topic Group was completing training modules and videos. Ms. Holm credited this topic group with building the base for the MERRTT training program. Finally, the Tribal Topic Group had produced a Resource Booklet that contained information on the availability of technical resources and funding for the tribes. State and regional group contacts were listed in the Resource Booklet, which was available on the internet (www.ntp.doe.gov/tec).

Ms. Holm reviewed three main recommendations that had come out of the TEC/WG meeting. First, it had been recommended that the TEC/WG establish a topic group to address “Best Practices” in radioactive materials shipments. The group would also review DOE’s existing transportation protocols. The end goal the group would be to determine how best to incorporate effective practices into future campaigns.

A second recommendation was for DOE to keep an open dialogue with the Department of Homeland Security with regard to its rules and regulations, and how they could affect the entire planning process for DOE’s shipments. A third recommendation was for DOE to improve the timeliness and accuracy of the information it received and transmitted during planning. Specifically, Ms. Holm mentioned some problems with out-of-date information on points of contact.

Ms. Holm said DOE was continuing to upgrade TRANSCOM. The system was fully funded, and DOE was always interested in feedback from users on ways to improve the system. Ms. Holm said the TEC/WG would have a meeting coming up. She would coordinate with Gary Lanthrum and Alice Williams, the co-chairs of the working group on plans for the meeting. She added that DOE hoped to

hold two TEC/WG meetings in FY04. She encouraged the states to submit their ideas for or comments on the TEC/WG to DOE through the regional groups.

The Prospective Shipment Module (PSM) would be updated in the next month. This update would cover the timeframe from October 2003 through September 2004. Ms. Holm noted that the handouts had included a corrected version of the September update to the PSM. Ms. Holm observed that, between WIPP and Oak Ridge, it was possible DOE would make 4,000 shipments per year. She considered this rate as demonstrating a ramp-up in shipment numbers following a few years of declining shipment numbers. In response to a question, Ms. Holm said DOE had decided not to post the PSM on the internet due to post-9/11 security concerns. DOE was still considering the possibility of posting the PSM on TRANSCOM, but right now the issue was one of resources.

In the area of general activities, DOE was updating its fact sheets and other information materials. DOE had moved to a "paperless" system, sending CDs to people that request information products. Ms. Holm said DOE was interested in finding out how its customers felt about the new format, so the department would conduct a customer survey later this year.

Transportation Emergency Preparedness Program: Noelle Kostecki (DOE) explained that the mission of TEPP was training, not emergency response. TEPP focused on getting state, tribal, and local responders training materials they could use to prepare for transportation emergencies involving radioactive materials.

The new TEPP website would be up in early 2004. Similar to the old site, the new one featured a MERRTT schedule, a newsletter, and case histories. The TEPP Planning Tools included a needs assessment; five model initial response procedures; tabletop, drill, and exercise program manual (called the "Drills-in-a-Box"); and model annex planning for response. Ms. Kostecki reviewed some of the pages available on the new website. She mentioned that the TEPP had conducted exercises in several states over the past few years.

Ms. Kostecki also reviewed the MERRTT training modules. Continuing education credits were now available for the modules through the Continuing Education Coordination Board for Emergency Medical Services. Each module had been awarded 0.5 continuing education credit hours. The minimum fees for the credits were \$1.50 per student up to a maximum of \$15 for the entire class.

In 2004, DOE would release a revised version of the MERRTT modules. Based on feedback received, the MERRTT would maintain its modular design. Two new modules would be added: one on safeguarded shipments and the other on rail shipments. In addition, six of the existing modules were being combined into three because of redundancies in the material covered. This consolidation would save 1.5 hours in the delivery schedule. DOE was adding two videos: Emergency Response to a Transportation Accident Involving Radioactive Materials and Pre-Hospital Practices for Handling a Radiologically Contaminated Patient. The videos were being produced jointly with FEMA and were available at 1-800-480-2520 (videos VT-320.2 and VT-321).

An additional planning tool being developed was the Model Procedures for Recovery Planning. Other future activities for DOE included posting the MERRTT modules on the FEMA self-study website and assisting FEMA with revising the existing hospital training program. DOE also participated in the review and comment on the 2004 revision of DOT's *Emergency Response Guidebook*. DOE would also be working

with Oklahoma State University to develop information for an addition to the Hazardous Materials Training Handbook for firefighters.

Ms. Kostecki said the TEPP would continue to work with the FRPCC to update the compendium of federal radiological training resources. DOE would also be working with DHS to identify areas of redundancy in training and planning in the two agencies' programs. Lastly, DOE would participate in the review and revision of NFPA standards related to hazardous materials response.

Ms. Kostecki reported on a new DOE project, the National TEPP Training Database. Designated state officials would have access to the database, into which they could input the MERRTT student data and immediately print out certificates. Each state official would receive a user ID and password that would allow them to access the system. The database should be available in early 2004. In addition, DOE would soon post the 24-hour state points of contact on the TEPP website. The sources for the information would include the CRCPD director, CSG Midwest *Planning Guide*, the TEPP's own listing, and the state agencies' websites.

Mr. Hughes asked what would happen if he entered a student's name in the database, printed a certificate, and the student did not show up for the class. Mr. Lester confirmed that DOE had the ability to remove no-shows from the database. Mr. Runyon said the training tools were very well developed. He said he would like to customize the modules to incorporate state-specific information. The files were in PDF format, however, which made it impossible to edit them. Ms. Kostecki said Idaho had done just that, but she was not sure how. Mr. Lester agreed, and said DOE had asked Idaho for information on how they managed to customize the files.

Rail-to-WIPP Update

Mr. Runyon asked Ms. Williams to report out on the evening meeting of the four regions on rail protocols. Ms. Williams said on February 20, the regions and DOE would have a conference call to discuss the path forward that the regions were to identify in the meantime. The identified approach to shipping to WIPP by rail would be based on the WGA "expectations" document, the current WIPP Program Implementation Guide, the TEC/WG WIPP-Rail Comparison, the WIPP Transportation Plan, and Mike Conroy's presentation on the draft preliminary DOE protocols. On the conference call, DOE would report back to the four regions on the department's requirements for rail shipments of TRU waste, including regulatory requirements and infrastructure upgrades. DOE would also identify the inventories of waste that the department would likely target for rail shipments.

Office of Civilian Radioactive Waste Management Update

Mr. Runyon turned the floor over to Ted Garrish, OCRWM Deputy Director, who made a few remarks. Mr. Garrish expressed his appreciation to the regional representatives that went to Washington in November to meet with him, the Under Secretary, Dr. Margaret Chu, Mr. Lanthrum, and other DOE staff. He explained that OCRWM had issued the national strategic plan shortly before that meeting. He acknowledged that OCRWM had received some criticism for the report lacking specificity. He said the specifics were not in the plan because OCRWM wanted to work out those specifics with the states through the regional groups. He envisioned this process taking one-two years.

Second, he acknowledged the great deal of experience the states had with shipments, and said his hope was not to reinvent the wheel. Instead, he hoped to build on past successes; he said, however, that OCRWM was still very early in the process of transportation planning, and had the flexibility to accommodate whatever the states felt worked best.

Third, Mr. Garrish was interested in finding out how the states wanted to interact with the OCRWM program. He observed that funding was a big concern for DOE and the states. Mr. Garrish urged the states to “pick up the phone” and call him, Mr. Lanthrum, or the other OCRWM staff to discuss any issues or ideas related to the transportation program.

Mr. Lanthrum provided the update on OCRWM activities. He said the transportation program had been on hold while OCRWM focused on the site recommendation and license application. He thought the significance of the Transportation Strategic Plan and the November meeting with the regional groups was to demonstrate the commitment, at a very high level within DOE, to move forward with the transportation program.

Mr. Lanthrum said OCRWM had a transportation organization but had not yet identified all the staff that would be filling those positions. He said OCRWM had received full funding for the first time in a long time. OCRWM would be shifting from just a planning stage — which it was in now — to the development of the infrastructure. Planning would continue through this phase and into the operations phase.

In FY04, in addition to issuing the Transportation Strategic Plan, OCRWM would continue to work with the state regional groups. Mr. Lanthrum emphasized DOE’s desire to see the groups perform work in the context of projects. OCRWM would also be assessing cask requirements and refining its acquisition strategy. Mr. Lanthrum described some of the challenges OCRWM faced, such as planning for receipt of waste given the provisions of the standard disposal contracts, the utilities’ on-site infrastructure and capabilities, and the specific receipt requirements at the repository. OCRWM would strive to move forward with planning while at the same time maintaining flexibility.

Mr. Lanthrum said his office would develop a strategy for the acquisition of rail rolling stock. He said no existing cars met the new standard set by the AAR for carrying high-level waste and spent fuel. Private Fuel Storage was pursuing a car that would meet this standard, but whether it would continue was questionable now that the storage license application was stalled. In response to a question from Mr. Blackwell, Mr. Lanthrum said OCRWM had not decided whether it would lease or own its rolling stock. DOE would, however, buy the casks.

Mr. Lanthrum again urged the groups to identify specific projects to work on in the coming fiscal year. In 2004, OCRWM would initiate consultation with the tribes. According to Mr. Lanthrum, there were about 40 federally recognized tribes that could be affected by OCRWM shipments.

Mr. Lanthrum reiterated that OCRWM had structured itself as a “projectized organization.” The major projects were the Fleet Acquisition Project, Fleet Management Facility Project, Operational Infrastructure, Institutional, and Nevada Infrastructure Project. With regard to the operational infrastructure project, Mr. Lanthrum said one subtle difference between EM and OCRWM was that EM had provided the training for first responders, whereas OCRWM would provide grants to states, who would then conduct their own training.

On the subject of the institutional program, Mr. Lanthrum reminded everyone that the industry was a significant stakeholder. OCRWM would be reaching out to industry entities separately from the states and other stakeholders. As part of this outreach, OCRWM would sponsor a workshop with the industry in the near term. He said the transportation program for OCRWM in many cases might be a “make or break” activity for some companies out there, because there were not a lot of spent fuel shipments going on. In reference to the utilities, Mr. Lanthrum added the OCRWM would be revisiting the transportation infrastructure and facility capability studies that had been completed almost a decade ago. Mr. Lanthrum added that OCRWM faced a huge project in constructing a rail line within Nevada. Even the shortest route proposed in the EIS would result in a significant project.

Mr. Lanthrum compared two tables from OCRWM’s EIS, depicting shipment and cask numbers for the “mostly rail” and “mostly truck” scenarios. The shipment numbers were based on an estimated three casks per train.

One of the things that would help OCRWM was the past experience DOE gained in shipping spent fuel and transuranic waste. Mr. Lanthrum said, though, that DOE did not feel bound by what came before — the department was open to opportunities to improve interactions with states or the shipping process. Mr. Lanthrum cited the possibility of a concerted inspection program, which had come up the day before, as a new idea that might be worth pursuing. Mr. Lanthrum also noted that, even though transportation would not be a licensed activity per se, the OCRWM program as a whole was working towards becoming an NRC licensee for the repository. The result was an organizational culture focused on quality and procedures, which would definitely influence the transportation program.

Mr. Lanthrum reviewed the goals for near-term transportation operations, interactions with states and tribes, and the institutional transportation program activities. He said OCRWM regarded the state regional groups as the anchors in the program’s collaborative discussions with the states. He planned to meet with the regional groups at least twice each year, with more frequent interactions on specific projects. Regarding the institutional program, OCRWM would build on the established regional planning process and would support the TEC/WG. In addition, OCRWM would develop an approach to implementing Section 180(c) and would identify and summarize the existing emergency response capabilities and available training.

Mr. Lanthrum acknowledged that the states were very interested in finalizing the approach to 180(c) funding. He welcomed feedback from the state regional groups regarding whether 180(c) was one of the priorities on which they would like to focus their resources in FY04. He identified other priorities for collaboration: route selection, emergency response planning and training, operational practices, and communications and information access. He again urged everyone to communicate with OCRWM early and often.

Near term decisions would include a statement of OCRWM’s preference for the Nevada transportation corridor, which would be followed soon thereafter with records of decision on both the mode of national transportation and the Nevada corridor, if “mostly rail” were chosen as the preferred mode.

In response to a question from Mr. Jeffries, Mr. Lanthrum said Corinne Macaluso was the person on his staff with responsibility for Section 180(c). Peggy Baer (Iowa) asked if the proposed rail routes in the EIS were selected with a mind to their ability to support the weight of the casks. Mr. Lanthrum said all the track shown in the EIS was deemed adequate to support shipments. Ms. O’Claire asked how OCRWM

intended to interface with the nuclear utilities. The Office of Strategy within OCRWM would be responsible for maintaining delivery commitment schedules and would be the primary interface. The transportation interface would involve simply collecting information on site capabilities. Mr. Garrish commented that OCRWM faced the challenge of figuring out how to work with the utilities who were DOE's customers but were also suing the department. He cautioned that, although OCRWM wanted to work with the utilities, it might be difficult to do so until some of the litigation were settled.

Mr. Brach was encouraged by Mr. Lanthrum's presentation. He asked whether the meeting Mr. Lanthrum had mentioned, involving the vendors, would be a public meeting. Mr. Lanthrum said there would probably be a series of meetings, starting with a meeting solely with vendors to get their input. He said OCRWM would be open to expanding the meeting if that would be beneficial.

Mr. Runyon observed that the regional groups had existing scopes of work. He asked whether the existing scopes would be modified or completely scrapped, in light of OCRWM's desire for the groups to undertake specific projects. Mr. Lanthrum said he viewed the existing scopes of work as the baseline, and he had no qualms about adding to those scopes through a change-control process.

Mr. Crose asked for an update on the proposal by three Nevada counties for a shipping corridor that would by-pass Las Vegas. Mr. Lanthrum said there was a cooperative agreement in place with Nye, Lincoln, and Esmeralda counties in Nevada, the purpose of which was to advise DOE on regional issues related to the various transportation options. DOE had not yet decided on a rail corridor in Nevada.

Brian O'Connell (NARUC) asked about rail capability being available in 2010 and what contingencies DOE had. Mr. Lanthrum said OCRWM had not removed any options from the table. He said that, using an estimate of one mile per day, he was confident that DOE had sufficient time to build even the longest rail line before 2010.

Mr. Vincent commented that the PFS rail car was not, in fact, developed out of whole cloth. PFS had issued a request for proposals to develop the car to three vendors. Each one took a design off the shelf and modified it. PFS ultimately selected Trinity, which explained why only that one company was working on a design. The car was 87½ feet long.

Mr. Kerr asked whether OCRWM had a list of the potentially affected tribes. Mr. Lanthrum said he would provide the regional groups with such a list.

Commercial Vehicle Safety Alliance Activities and Interim Report

Larry Stern provided the update on CVSA's activities, including its interim report. He began with a brief review of CVSA's history. In 1986, OCRWM and CVSA entered into a cooperative agreement for developing enhanced inspection procedures for shipments of spent nuclear fuel. As part of the agreement, CVSA conducted a pilot study, then in 1997 CVSA membership overwhelmingly endorsed the Enhanced North American Standard inspection procedures, which are now known as the Level VI inspection. In July 1999, the membership approved the use of Level VI for all HRCQ shipments of radioactive materials as well as transuranic waste.

CVSA published an initial final report on the cooperative agreement in October 1999. Three years later, CVSA published an interim report on the continuing agreement, which included an update on inspection data. Copies of both reports were available on the CVSA web site (www.cvsa.org).

To maintain their certification, inspectors could do one of two things: 1) successfully complete the CVSA Level VI refresher course within a 24-month period after completing the basic Level VI course, or 2) demonstrate proficiency by performing a minimum of eight CVSA Level VI inspections per year. As of November 15, 2003, there were 556 certified inspectors in 35 states.

Mr. Stern reviewed the latest CVSA Level VI inspection data, collected since September 30, 2002. Compared with FMCSA data on Level I inspections for all industries, the WIPP shipments scored much better even though these shipments had to undergo the more stringent Level VI inspection. Overall, Mr. Stern concluded, the CVSA Level VI inspection program continued to be viable and valuable, and it had strong support from the enforcement community. States were encouraged to honor the Level VI decal when it was placed at the point of origin for a shipment. Mr. Stern acknowledged that some states required inspections even if the shipment had been inspected at the point of origin. Illinois was one such example.

The pilot study and subsequent Level VI inspections had indicated that, if a shipment was defect free at the point of origin, it would generally arrive at the point of destination free of any major defect. Nevertheless, several groups — including CSG Midwest — had written to CVSA disagreeing with the report's conclusion that en route inspections were not necessary from a safety standpoint. Mr. Stern said he understood the reason for the letters, because violations *were* being found en route. However, the conclusion in the CVSA's interim report was based on the comparison of WIPP shipments to the FMCSA roadside inspection data.

To settle the disagreement, CVSA and the Idaho State Police had hired a contractor to establish a complete Level VI inspection database. The database would allow CVSA to further analyze the data to determine, for example, whether mileage affects the number and severity of violations. CVSA would report back to the states on its findings regarding the type and severity of violations found en route.

Mr. Stern concluded by reviewing the training schedule for 2004. CVSA would also be reviewing the basic training class and adding a security module to the training in 2004.

Mr. Runyon expressed Illinois' appreciation for the CVSA inspection program. He stated, though, that the Midwestern committee did not see how the conclusion drawn in the interim report was supported by CVSA's data. In fact, the data seemed to support the opposite conclusion.

At this point, the joint meeting adjourned, and the regional groups resumed their separate meetings.

Midwestern Radioactive Materials Transportation Committee Meeting, resumed

Transporting the Big Rock Point Reactor Vessel: Mr. Strong introduced Mick Papp with BNFL, who provided an account of the movement of the Big Rock Point reactor vessel from Michigan to Barnwell, South Carolina. Big Rock Point was a boiling water reactor in far northern Michigan. The plant ceased operation on August 29th, 1997, after operating for 35 years. BNFL won the contract for the major component removal in December 1998.

The project involved shipping and disposing of one reactor vessel and shipping cradle. The reactor vessel traveled on a road transporter from the nuclear plant to a rail siding at Gaylord, 52 miles from the plant. The reactor vessel was then transferred onto a railcar and transported to Barnwell, where it was unloaded within five days of arriving.

Mr. Papp provided a detailed description of the project and its significant challenges. The reactor vessel was classified as Class C waste, low radioactivity content. In all, the package contained 13,000 Curies, most of which was fixed in activated metal. The exterior dose rates were around 10 mR/hour at the surface, and approximately 1 mR/hour at 2 meters.

The shipping container was a Type B package that met all the applicable safety standards in 10 CFR 71. The NRC approved the Safety Analysis Report on April 8, 2002. BNFL held the certificate of compliance. Both a Transportation Safety Plan and Security Plan were approved for the shipment. Mr. Papp said that, despite the container's size, it was built "like a Swiss watch."

The reactor vessel arrived at Gaylord, Michigan, on October 8. The railroad had put restrictions on the shipment, including travel only during the day. In addition, significant issues arose in Toledo between CSXT and Norfolk Southern. The latter initially refused to accept the shipment because they had not realized it would involve radiological materials. Mr. Papp commented that the shipment also encountered some protesters in Toledo.

When the shipment arrived at Barnwell, it was emplaced in a trench near to the Maine Yankee reactor vessel. In terms of lessons learned, Mr. Papp observed that it was important to establish early on the requirements that were mandatory, and ensure that they were met without losing sight of the practical limitations or constraints in achieving them. Also, he said it was important to identify and communicate with all stakeholders throughout the project. Furthermore, in recognition that changes would occur through the project, he said it was important to ensure that the design and licensing were developed with as much flexibility as possible without putting the mandatory requirements in jeopardy. Mr. Papp also advised keeping good, detailed documentation.

Update on the Kansas/DOE NNPP Joint Exercise: Mr. English reported that the NNPP and the state of Kansas were coordinating a naval spent fuel shipment accident exercise in June 2004 in Topeka. The NNPP has conducted similar exercises in states in the East and the West, dating back to 1996. The NNPP had concentrated on those states because they represented the origin and destination for the program's shipments.

The scenario would be a road-crossing accident. Mr. English said the exercises had become a little more sophisticated over the years. In Idaho in 2000, for instance, the exercise activated all the remote communications involving the shipper, NNPP, carrier, and the civilian authorities. Mr. English said activating those communications had been a learning experience of tremendous benefit for all involved parties.

The idea of conducting an exercise in a more central location came from the June 2001 meeting of the Midwestern Radioactive Materials Transportation Committee. Rep. Joann Freeborn of Kansas had suggested the NNPP come to Kansas for an exercise. Mr. English said Kansas presented a real challenge because, in contrast to the other exercises, there was no controlled facility in which to conduct the exercise. The Adjutant General from Kansas wrote to the NNPP to formally invite DOE to conduct an

exercise. After several months of discussions, Mr. Moussa and Mr. English agreed to a full-scale exercise involving a mock-up of one of the shipping containers and with no real media involvement. The exercise would be treated as a Midwest regional event, with representatives of the other Midwestern corridor states invited to observe.

The first planning meeting took place in October. Future plans included another meeting in February, a tabletop in April, and then the exercise itself in June. Mr. English said he hoped the Midwestern state representatives would put the event on their calendars. There would be a briefing in the morning, followed by the exercise (lasting a few hours), ending with a "hot scrub" and lessons-learned review. DOE and the state had settled on the conference center they would use, and they were working very closely with Union Pacific railroad to identify a good rail siding. Mr. English described the event as a prime opportunity for people to come find out about the NNPP, whose shipments were classified and therefore not subject to the regular planning protocols.

Mr. Moussa welcomed the opportunity to conduct the exercise with NNPP. He said the state had a great deal of experience exercising with the nuclear power plant, but such was not the case with other nuclear-related activities such as transportation. He appreciated Mr. English's willingness to go beyond just a tabletop to a full-fledged exercise.

To demonstrate how good the relationship was between the state and the industry, Wolf Creek had decided to observe the exercise. Approximately 15 state agencies would be involved, and the state would activate its emergency operations center. The affected county — Shoshone — would also activate its emergency operations center.

Mr. Crose asked about the exact date. He said Indiana had a C-SEP exercise planned with Illinois in June, and a WIPP exercise was being planned with Ohio for the same month. After much discussion, the committee agreed to hold its spring meeting in conjunction with the exercise so that the Midwestern states would be able to observe. Mr. English said he thought it was important to get as much state involvement as possible. Mr. Runyon asked if Mr. English could provide the states with a formal invitation, which would facilitate getting approval for out-of-state travel requests. Mr. English said he would prepare a letter.

Committee Discussion: Mr. Moussa said he did not feel the group had gotten satisfactory closure on the issue of DOE funding. Mr. Runyon asked Mr. Lanthrum to comment. Mr. Lanthrum said he viewed the current funding for the cooperative agreement as the base. He hoped to see the new scope of work include additional projects, which would result in a higher level of funding from DOE. As examples, Mr. Lanthrum mentioned route selection and developing policies as projects the states and DOE could work on cooperatively. He also commented that, although this meeting was good for information exchange, he did not think it provided an environment in which he could move anything forward. He thought some parallel or additional effort would be necessary to tackle substantive issues and make progress on them. He suggested a smaller working group format might work best.

Mr. Flater raised the issue of Section 180(c). He said Iowa had 11,000 people that would need training along the possible rail and highway routes. But 40 percent of those individuals turn over every year, which translated into a need for new training. He worried that waiting until 2007 would make it difficult for the states to complete their training by 2010. Mr. Flater said Iowa had been conducting training along the I-80 corridor for WIPP shipments, but the funding was drying up and therefore training would cease.

In other words, Iowa would start losing ground without a source of funding from DOE between now and 2007, when the Section 180(c) grants would kick in. He said Iowa could get some funding through the fee process; he cautioned, though, that DOE's estimates of shipment numbers did not always prove reliable, so it was difficult to budget based on those estimates.

Mr. Lanthrum said he would be happy to participate in discussions with the states and the DOE program offices that were currently conducting shipments. These discussions could focus on making sure there was some continuity from the training activities taking place now to the future training to be sponsored by OCRWM. He said, though, that with a 40-percent turnover rate, there was little incentive for OCRWM to get involved early in actually funding training, since most of the responders trained would be gone before shipments to Yucca Mountain would commence. Mr. Lanthrum said that one project of interest to OCRWM was the identification of what was currently "out there" in terms of available resources, and whether there were needs that were not being met.

Mr. Strong commented on the emergency response training currently sponsored by the Department of Homeland Security. He said transportation now would have to be worked in, as well. Mr. Lanthrum agreed that training would require a great deal of coordination both in terms of funding and logistics. He said OCRWM wanted to make sure that what it asked for and what it supported did not become a burden.

Mr. Runyon asked whether OCRWM was going to assume some of DOE's shipping activities as sort of a "dress rehearsal." Mr. Lanthrum said that, since the EM mission was changing significantly, DOE was looking at moving activities out of that program. OCRWM was being viewed as a possible home for some of those activities.

Mr. Flater supported Ms. Sattler's earlier suggestion of reaching out more to the state legislators, and he suggested Rep. Elgin of Iowa would also agree. He said Rep. Elgin had shared his own summary of the NCSL meeting with the legislative leaders and the chairs of the legislative committees that had jurisdiction over issues related to radioactive waste shipments. On the funding issue, Mr. Flater said that if DOE could not commit funding to the states, then he suspected the powers that be in Iowa would direct him to start raising the state's fees on shipments.

Mr. Flater cautioned that each state might have a different situation with regard to training and the receipt of homeland security funding. He said his agency had not yet received any of the funding from the Justice Department. Mr. Strong clarified his early comments by saying that radiological training should be similar, regardless of which agency in the state conducted it. Mr. Flater disagreed, and said different agencies might have different philosophies. For example, his agency did not feel it was appropriate to train local responders beyond the awareness level, simply because they did not respond to radiological emergencies often enough to retain the training. For training with regard to other hazards — for example chemical hazards — the situation was different, because incidents were more common. Mr. Runyon agreed.

Mr. Strong said coordination would be necessary. Dr. Moussa cited the example of a fender bender in Kansas involving a reactor head shipment. The sheriff did not follow the proper procedures and released the shipment without contacting the state. Mr. Moussa said that Kansas, like Iowa, preferred to train the responders only to the awareness level — in other words, train first responders to recognize a radiological hazard and contact the appropriate state agency for response.

Referring back to Mr. Lanthrum's earlier comment about the regional groups possibly holding more than two meetings, Ms. Sattler asked whether the TEC/WG might be able to change its meeting schedule so as to hold one of its meetings in the interim between the spring and fall meetings of the regional committees. If the TEC/WG were to meet in March, the Midwestern states could hold a small meeting in conjunction with the TEC/WG, which would kill two birds with one stone. Ms. Sattler said this third meeting would be an opportunity to work on projects, with the other two meetings retaining their current format. In this way, it would still be easy for the legislative members to attend the committee's two regular meetings each year. Ms. Holm said the TEC/WG usually met in January and July, but a delay in receiving funding had prompted the decision to hold the next meeting in March. She did not rule out a permanent change in the schedule.

Mr. Schwarz said he thought it would be a good idea to bring the utilities into the regional group meetings to coordinate better on schedules and plans for shipping. Mr. Lanthrum agreed that coordinating with the utilities would be a great idea eventually. For now, however, given the pending lawsuits, he worried that he would not be permitted to speak in great detail about OCRWM's plans if there were a number of utility representatives formally invited to attend the regional meetings. Mr. Vincent said oral arguments would begin next November in the utilities' consolidated lawsuits seeking damages from DOE.

Mr. Runyon said that, with regard to the funding issue, it appeared that if the states were in need of funding, they would need to work with EM. Mr. Lanthrum said that OCRWM's desire for a "map" of necessary activities and available funding sources might actually help the states make an argument that what was currently available was not sufficient to meet their needs. Mr. Runyon said that sounded like a good project idea. Several people speculated that this would be a good project for all four regions to undertake jointly.

Mr. Runyon suggested smaller working groups from this committee to work with Ms. Sattler to identify target projects or goals that address the issues OCRWM has raised in its Transportation Strategic Plan. Perhaps this could be a research project, one that would involve collecting data from all of the regions, and would result in a deliverable of value to both OCRWM and the states.

Resuming the discussion of the WIPP funding, Ms. Sattler suggested the states have a conference call the first week of January to discuss the matter. Ms. Holm said the states might want to look at ways to meet some of their needs as Mr. Strong had suggested, namely by using other available sources of funding. Ms. Sattler said that was a good idea for the upcoming fiscal year, but the issue right now was the CBFO's failure to live up to commitments made in the current fiscal year. She said she saw the situation as a major equity issue. Although she was pleased Nebraska would be receiving its full year of funding through the WGA, Ms. Sattler could not see how the CBFO justified giving one Midwestern corridor state a full year's funding while cutting the rest off after half a year. She likewise could not understand how the CBFO could justify funding Tennessee for Oak Ridge shipments, which were not scheduled until 2006, while at the same time refusing to fund the Midwestern states because of a delay in completing the Battelle shipments. Ms. Holm understood Ms. Sattler's concerns.

Mr. Crose asked what the situation was in the South. Mr. Cash said the Southern states were continuing to receive their full funding from the CBFO. Mr. Crose said he wanted DOE to act before January 31, or else Indiana, for one, would go to Congress. His complaint was the way the CBFO handled the issue. He added that the only reason Indiana had a fee was because the state anticipated situations like this coming

up. Mr. Crose objected to DOE's assertion that the states should use their homeland security funds to prepare for DOE's shipments. He viewed those preparations as DOE's responsibility. The homeland security funds were intended for other purposes.

Mr. Crose asked for a quick report on what took place the previous night at the rail meeting. Mr. Runyon said the group had come up with a list of action items. Among those, all four regions would receive a combination of documents, including the rail WIPP PIG and the WIPP transportation plan. The regions would look at ways to integrate those documents into a rail application within the documents. He said he thought all four regions would be successful in working together.

Ms. Sattler added that she thought the meeting took the four regions right back to where they had been after the meeting in June — namely, the four regions were going to determine whether they could work together to develop rail safety practices. The only difference was that DOE had leveled the playing field by a) introducing the possibility of transuranic waste shipments through the Northeast and the Midwest, and b) suggesting that the South and the West might not experience rail shipments of transuranic waste. She said the groups had a deadline of February 20 for reporting back to Alice Williams on their progress.

Tammy Ottmer (Colorado) observed that the path of working separately, which the regions had been on, was not a good one. She acknowledged the Western region's role in setting everyone on that path, and said for this reason the West had to open itself up to a new process. She hoped the new process would rebuild the relationships that had become so strained. She agreed that DOE had leveled the playing field significantly the night before, and she expressed appreciation for Ms. Bubar and Ms. Williams having accomplished this feat. Mr. Cash said he thought the meeting had been very productive, and he felt like all four regions and DOE were on the same page.

There being no further discussion, Mr. Runyon adjourned the meeting.

Prepared by Lisa R. Sattler, with assistance from Phil Paull.

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