

The Council of State Governments
Midwestern Radioactive Materials Transportation Committee
Proceedings of the Fall Meeting
Milwaukee, Wisconsin ✧ December 7-8, 2010

Committee Business Session

Melanie Rasmusson (Iowa) presided over the meeting as senior co-chair of the committee.

Ms. Rasmusson reported that funding continued to be an issue for the committee and the transportation project. She felt strongly that the committee had talented members and staff with great ideas, and everyone was willing to work. She hoped the committee would be able to identify new sources of funding to carry out ongoing activities as well as new projects. Paul Schmidt (Wisconsin) seconded Ms. Rasmusson's remarks and recalled the committee's invaluable assistance to him when Wisconsin was faced with a set of spent fuel shipments for the first time after over two decades.

Ms. Rasmusson highlighted the successful launch of the new National Transportation Stakeholders Forum (NTSF), whose first meeting was hosted by the Midwest in Chicago in May. She credited Lisa Janairo (CSG Midwest) and the NTSF Planning Committee with setting the bar high for future meetings. Ms. Janairo thanked Kathy Treland (CSG Midwest) with doing the behind-the-scenes work with the hotel to organize the meeting and help make it a success.

With regard to funding, Ms. Janairo said the Midwest had received most of the project funding expected from the DOE Carlsbad Field Office (CBFO) but the continuing resolution had created a delay in receiving the bulk of anticipated funding from the Office of Environmental Management (EM). More pressing, the full amount of CBFO funding for state agreements had not been obligated, which might interfere with the states' ability to prepare for shipments. Ms. Janairo suggested that the delay in state preparedness activities might result in a request to delay the start of shipments from NRD in New York.

Ms. Janairo reported that she would be seeking new gubernatorial and legislative appointees to the committee, starting in January. As in past years, she would copy the current committee member on the letter to his or her governor to facilitate the appointment process.

Ms. Janairo encouraged members to check out the transportation issues archive that she and Melissa Bailey (CSG Midwest) had completed during the summer. The staff was able to prepare the archive with the funding remaining from the old cooperative agreement with DOE's Office of Civilian Radioactive Waste Management (OCRWM). The archive was a large file, with hyperlinks to electronic copies of the reports cited. It was available in electronic format only, and could be accessed on the [CSG Midwest website](#).

Kevin Leuer (Minnesota) reported on the activities of the committee's Nuclear Regulatory Commission (NRC) Rulemaking Review work group. The group had held several conference calls since the spring committee meeting to review and prepare draft comments on two NRC proposed rulemakings. On September 21, 2010, the committee submitted comments on the NRC's Part 37 rulemaking (physical protection of byproduct material). The work group had recently held a call to review the proposed Part 73 rulemaking on physical protection of spent fuel shipments and to prepare for the December 8 workshop on the proposed rule. Generally speaking, the members were pleased with the proposed rule

because it did a good job addressing a number of state issues and concerns that had been raised over the years.

Tim Runyon (Illinois) reported on the activities of the NTSF. The NTSF replaced the old Transportation External Coordination Working Group, a DOE-sponsored group that was active from 1992-2008. In addition to planning the May 2011 meeting, the Planning Committee had approved the formation of four ad hoc working groups: financial guidance for states and tribes receiving funding in connection with Waste Isolation Pilot Plant (WIPP) shipments; improvements to DOE's Prospective Shipments Report (PSR); notification issues for states and tribes; and improving communications. In addition, the NTSF had sponsored a webinar on using radiofrequency identification technology to track packages and enhancements to the TRANSCOM system. The Midwest had organized the webinar for the NTSF. The next NTSF meeting was tentatively planned for Denver on May 10-12. The committee's spring meeting would take place in conjunction with the NTSF meeting, as will TRANSCOM training.

Jane Beetem (Missouri) gave a report on the NTSF Financial Guidance ad hoc working group, which had formed in August. Ms. Beetem was the state lead for the group, with Ms. Bailey and Ms. Janairo providing staff support. The group was working on recommended guidance for DOE to provide to states and tribes that receive funding for WIPP shipments. It was important for the members that the guidance help provide clarity while also preserving flexibility for the states and tribes to carry out activities related to preparing for shipments. Ms. Beetem mentioned that Ms. Janairo had developed a wiki site for the NTSF, which the working group was using to house all the information related to its activities. The group had posted the work plan, member roster, draft recommendations, and several items for background information.

Ms. Janairo reported on her activities leading the NTSF ad hoc working group on PSR Improvements. The idea of improving the PSR dates back to 2005 when Ms. Beetem had contacted Ms. Janairo with some suggestions for positive change. The new NTSF finally provided a forum for convening a group to develop improvements. The group had held three calls: identifying what information states and tribes need and how they use it; learning about DOE's internal reporting requirements to identify opportunities to tap existing reporting; and reviewing the new format for the PSR developed by DOE's Julia Donkin. Ms. Janairo hoped to work with Ms. Donkin to incorporate additional suggestions, then hold one more call to wrap up the working group's activities. She anticipated that this group would be the first one to complete its task, therefore there would be a need to develop a process for seeking feedback and/or approval from the wider NTSF membership. The group had recommended that the NTSF have a webinar on the Waste Information Management System, which is an online data collection tool that enables users to access information on DOE's waste inventories as well as near-term shipment projections. One issue that was proving difficult to resolve was the states' desire to get point-of-contact information from the shipping sites. Ella McNeil (DOE-EM) explained that DOE used contractors and subcontractors, and turnover was significant. The situation created problems for establishing the means for states to communicate directly with site personnel. Ms. Janairo said the group had agreed to follow the new process DOE would set up for obtaining answers to questions about shipments and then, after a few cycles of PSR releases, evaluate how well it was working.

Carlisle Smith (Ohio) reported on the effort to develop a reciprocal rail inspection program similar to what the Commercial Vehicle Safety Alliance (CVSA) had for truck shipments of highway route controlled quantity shipments. He shared copies of the latest version of the inspection forms, which reflected input from the Federal Railroad Administration (FRA), the Midwestern states, and the Northeast. The group had agreed to seek feedback from state rail safety programs on the proposed

forms. Mr. Smith emphasized that one goal of the forms was to document what the inspectors had checked so that states downstream would have a high level of certainty regarding what had happened during previous inspections. The working group was hoping to identify one or more rail shipping campaigns on which to pilot test the procedures. Mr. Runyon questioned whether a pilot test would be worthwhile on a shipping campaign that did not match the weights and configuration anticipated for spent fuel shipments. He agreed it was time to move forward, however, and asked Ms. McNeil if DOE would consider funding the development and pilot testing of the procedures in the same way that the department had funded CVSA's work to develop truck inspection procedures. Ms. McNeil could not comment on the availability of funding. She did caution that requests to pilot test the procedures on DOE shipments such as the Moab mill tailings might not be a good idea because those activities were funded through the American Recovery and Reinvestment Act (ARRA); they were, therefore, on a very tight schedule and might not be able to accommodate special requests.

Jennifer Clark (Kansas) reported on the committee's Information and Communications work group. Last November, the group had an opportunity to review for a second time the "Q&A booklet" that DOE was assisting the Federal Emergency Management Agency (FEMA) in updating. DOE incorporated several of the additional comments that the Midwest submitted. Ms. Clark had not seen the final booklet; Ms. McNeil said she thought FEMA was planning mostly on electronic distribution. Ms. Clark added that the transportation project had updated other information products since the last meeting, including the *Planning Guide for Shipments of Radioactive Material through the Midwestern States* (September) and the fee states flyer (December). The committee e-newsletters were going out every three weeks instead of every two weeks due to Ms. Bailey being on leave. The work group had lost a member with the retirement of Thor Strong from Michigan. With the NTSF ad hoc working group on improving communications starting up in the near future, it would be important to recruit one or two additional committee members or other Midwestern state representatives to join the group and serve on the new NTSF working group.

Ms. Beetem reported on the activities of the Midwest's Fee States Caucus. The group holds conference calls quarterly to bring the states together to share their experiences with regard to fee programs. One outcome of the group's discussions was the decision to add a session on state fees to the meeting agenda and to invite Barbara Englehart from MDS Nordion to speak during the session. Ms. McNeil added that outreach to the DOE programs that ship could also help alleviate some of the concerns that the site personnel might have with regard to the Midwestern states' fees. The Fee States Caucus had also updated its flyer on fee programs in the Midwest.

Mr. Runyon and Ms. Janairo reported on their participation in the November 2 meeting of the Transportation and Storage Subcommittee of the Blue Ribbon Commission on America's Nuclear Future. Mr. Runyon had shared information on Illinois's experience with siting a low-level waste disposal facility. He also worked in a good amount of information on the state's involvement in shipment planning. Ms. Janairo had spoken on a panel that addressed the steps needed to plan and execute a shipping campaign in the near-term (3-5 years). She had walked through the steps that the states would be engaged in, such as route selection, and concluded that 3-5 years would not be sufficient to complete all the tasks. In her assessment, based on DOE's past performance, 9-12 years would be needed to complete all the steps in a manner that would meet the states' expectations. Both Mr. Runyon and Ms. Janairo said they hoped the commissioners heard the message that transportation was manageable but would take time, therefore planning should occur at the same time that an interim storage facility is developed.

The members in attendance elected Mr. Runyon to be the new co-chair of the committee in 2011-2012.

Ms. Rasmusson asked the committee members to report on activities related to radioactive waste transportation.

Minnesota: Mr. Leuer said Minnesota was observing a significant change in the number of highway route controlled quantity (HRCQ) shipments that pass through. In the past, Minnesota would experience 1-2 shipments per year, but now the frequency was reaching 3-4 in a month at times. He surmised that the reason for the change was the decision by shippers to pass through Minnesota in order to avoid the Midwestern states that charged shipment fees. Mr. Leuer said his agency was looking at the impacts of the shipments on the state and what would be the appropriate course of action. The state had two additional Level VI inspectors that were certified, for a total of 5-6 within the state.

On the topic of spent fuel storage, loading of storage casks had begun at the Monticello nuclear power plant. The Prairie Island nuclear plant would put its 36th and final cask out on the storage pad by the end of the year. The utility was in the process of extending its operating license and was planning to amend its storage permit to allow up to 102 storage casks. The state regulatory agencies have approved the license extension on the state side, with the final decision now resting with the federal government. The local jurisdictions went to court over storage, but the suit was recently decided in favor of the utility. Mr. Leuer observed that the default for utilities seemed to be dry cask storage, now that Yucca Mountain was off the table. In Minnesota, the local communities were becoming more anxious about the possibility that the spent fuel would never leave the sites. As a result, the state was seeing growing opposition to on-site storage. Earl Easton (Nuclear Regulatory Commission) suggested the committee members obtain copies of the National Academies study on the security of spent fuel storage installations.

Kansas: Ms. Clark reported that Kansas, like many Midwestern states, had a new governor. In 2010, the state had only one HRCQ shipment. In the next year, the state would be focusing on Amber Waves, a national Tier 2 exercise. The scenario would involve a bridge connecting Missouri and Kansas. Iowa would be involved in the exercise, as well. Kansas had just completed an ingestion pathway exercise.

Missouri: Ms. Beetem said nuclear energy would be on the legislative agenda for Missouri. A bill was expected to be introduced in January, allowing AmerenUE to recoup the costs of obtaining an early site permit from the NRC to build a second unit at the Callaway plant. In the last session, the utility had sought compensation for construction work in progress, but the bill was defeated. Missouri was drafting regulations to clarify some of the issues that had come up with regard to the state's fee law. Ms. Beetem said Missouri had not had a single HRCQ shipment pass through the state since the legislation was enacted. A new online permit application and payment system was being developed for shippers to use when paying Missouri's fee.

Michigan: Sgt. Susan Fries reported that Michigan was experiencing only half as many HRCQ shipments as it had in previous years. The drop in shipments was well timed because the state had lost two of its Level VI inspectors to retirement, including the state's Level VI trainer. In January, the state would send an officer for training as an instructor. Sgt. Fries said the state had traditionally been reluctant to impose fees on shipments, therefore she did not think it likely that the state would see any legislative action to enact a fee. The Department of Transportation had contracted with Battelle to update Michigan's hazardous materials routing in the Detroit area. Sgt. Fries did not think there would be any impact on radioactive material routing. The impetus for the study was the desire of the private owner of the Ambassador Bridge to examine the hazardous material routing for the bridge, which prompted a review of the entire Detroit area.

Illinois: Kelly Horn (Illinois) reported that Illinois had around 70 inspections or escorts, 5-7 of which were spent fuel. The rest were WIPP shipments and private sector HRCQ shipments. Mr. Horn said there had been a situation with an Argonne National Laboratory shipment that had been pushed up to the Thanksgiving holiday. The state was not pleased with the timing. Fortunately, DOE had to change its plan because of loading problems at the site.

On the subject of Level VI inspector training, Mr. Horn said Illinois had hosted training the week before the NTSF meeting in May. Inspectors from Illinois, Iowa, Kentucky, and federal agencies had attended. Mr. Horn would let the committee members know in advance of the next Illinois-hosted Level VI training opportunity. Finally, Illinois had submitted comments on the NRC Part 37 rulemaking and would submit comments on the Part 73 one, as well.

Nebraska: Julia Schmitt (Nebraska) reported that Governor Heineman had determined that Nebraska's fee would not apply to shipments of transuranic waste to WIPP, since the waste was defense-related. She expected this topic to come up on the Midwest's Fee States Caucus call. Ms. Schmitt said the Nebraska Emergency Management Agency's website would have information for any states interested in the eight-hour risk communication training course that the state would host as part of its WIPP preparedness activities.

Ohio: Stephen Helmer (Ohio) commented that there were a number of retirements taking place within his agency, including the retirement of long-time committee member Robert Owen. The retirements would result in a loss of a lot of institutional knowledge. Davis-Besse nuclear plant would be replacing its reactor vessel head in October 2011. The utility would not replace the steam generators at the same time, which would mean cutting into the containment twice. Like other nuclear plants, Perry nuclear plant was putting in dry cask storage. Mr. Helmer was working with Carol O'Claire at the Ohio Emergency Management Agency on state preparations for WIPP shipments coming up in June. OEMA had hosted TRANSCOM Superuser training in October. Mr. Helmer mentioned that, during the training, a WIPP trainer had mentioned a situation in which the TRANSCOM Control Center had been unable to contact a WIPP shipment. He thought this was an example of a system shortcoming that should be of concern for all states. He recommended the states find out more about the situation and its outcome. Ms. Janairo said she had asked William Mackie (DOE/CBFO) to comment on the situation, which had involved the state of Wyoming. Mr. Mackie had agreed to do so during his presentation.

Mr. Smith reported that the rules implementing Ohio's fee law had been approved during the summer and the waiting period had elapsed. Invoices had gone out to the motor carriers that conducted shipments after the fee had gone into effect. There had been some confusion regarding what shipments were exempted and which ones were not. Nordion shipments in the state had dropped significantly.

Wisconsin: Mike Hinman (Wisconsin) reported that the state had a new governor, so there would be some changes in executive agencies. The Adjutant General would not change immediately, however, because his contract would last two more years. Mr. Hinman anticipated that he would be leaving his post as administrator of Wisconsin Emergency Management; the transition to a new administrator would be seamless, however, because Mr. Hinman would return to his position on the federal side of emergency management. He said he would encourage the incoming administrator to attend future committee meetings. Mr. Hinman raised the issue of NRC notification via fax being the only option besides hand delivery for providing advance notification. He asked Mr. Easton whether there were plans to use secure e-mail for advance notices. Mr. Horn said Nordion was preparing a database of state points of contact and he suspected that the company might be planning to start using e-mail for notifications.

Mr. Schmidt reported that, consistent with Minnesota's report, Wisconsin was seeing an increase in HRCQ shipments through the state. In response, the state was beginning to track the shipments that were coming through in order to determine whether this might be a trend. The shipments from the University of Wisconsin research reactor had been completed. Mr. Schmidt commented on the amount of work and effort that went into just two shipments, largely because most of the people with experience had moved on since the last shipments in 1986. Mr. Schmidt found the Midwest's *Planning Guide* to be very useful in helping the state to plan for the shipments.

Iowa: Ms. Rasmusson said Iowa had recently escorted a non-HRCQ shipment through the state. One reason for escorting was the fact that the Department of Public Health collects permit fees and the agency wanted to assure the same level of safety and service as other shipments. Mr. Horn added that the shipment was non-HRCQ but it was radioactive materials in quantities of concern (RAMQC). Ms. Rasmusson said most of the escorted shipments through the state were WIPP shipments. She expressed much appreciation for Mr. Horn and the other Illinois personnel for their great work coordinating with Iowa on the shipments.

Update on DOE's Transuranic Waste Shipments and TRANSCOM Update

Via telephone, Mr. Mackie provided an update on activities involving DOE's Waste Isolation Pilot Plant and the TRANSCOM system used for tracking shipments.

- **WIPP shipments:** As of November 29, WIPP had received a total of 9,207 shipments, 78 of which came from Argonne National Laboratory near Chicago. In terms of upcoming shipments through the Midwest in Federal Fiscal Year 2011, WIPP anticipated making 67 shipments from Argonne to WIPP, plus eight Idaho-bound shipments: four from Argonne and four from NRD in New York.
- **Budget:** The FY11 budget would be incrementally funded due to the continuing resolution, which was expected to be extended at least through February. The regions could expect to receive their funding for October-December sometime in mid-December. For FY12, Mr. Mackie expected to issue the financial guidance in the April-May timeframe. He would give heavy consideration to the recommendations that the NTSF Financial Guidance ad hoc working group would provide. He cautioned that budgets would be tighter next year, and the CBFO would be taking an especially close look at all line items.
- **Transportation plan:** The plan was complete and was undergoing a final review to check for formatting, spelling errors, etc. Mr. Mackie anticipated that the plan would be out by the end of the year.
- **Incidents/Accidents:** There were 22 incidents or accidents involving WIPP shipments from April through October 2010. The incidents involved problems with the trucks or trailers, as well as a situation in which a suspicious person appeared to be surveilling a shipment.
- **West Valley:** The Office of Environmental Compliance was working on the Defense Waste Determination for Federal Fiscal Year 2011. If the waste was determined to be the result of defense activities, then the waste would be eligible for disposal at WIPP.
- **CBFO reorganization:** Dr. David Moody left WIPP to become the manager of the DOE-EM office at Savannah River Site. Ed Ziemianski, formerly of Idaho National Laboratory, was the acting manager of the CBFO. Casey Gadbury had the title of Director, Site Operations, and J.R. Stroble was the new Director of the National TRU Program. Frank Moussa was assigned to be the Director for Emergency Management at WIPP.
- **Training:** No exercises were scheduled in the Midwest. TRANSCOM training would be offered in Carlsbad, NM, in March, June, August, and November of 2011. Additional sessions would be

available in New York and possibly Salt Lake City. The CBFO had not received any requests for MERRTT training in the Midwest, so Mr. Mackie encouraged the states on WIPP routes to schedule training sessions at their earliest convenience.

- Security-related incident: Mr. Mackie reported on the suspected bomb threat in Wyoming, to which Mr. Helmer had alluded earlier. The CBFO security officer was investigating. Early results indicated there was a lack of communication between the state and the Central Monitoring Room (CMR) as well as between the CMR and the truck. Once the investigation was complete, Mr. Mackie would share it with the regional group staff for further distribution.

Commercial Vehicle Safety Alliance Report

Mr. Smith reported on the Commercial Vehicle Safety Alliance's (CVSA) Level VI program activities.

- Training: CVSA usually offered nine training sessions per year. Training in 2011 would take place in Austin, Texas; New Braintree, Massachusetts; Salina, Kansas; and Sacramento, California. The training schedule was available on the [CVSA website](#).
- Annual report: In November, CVSA issued its annual report of the findings from Level VI inspections in 2008 and 2009. The report compared the outcomes of Level VI inspections for WIPP and non-WIPP shipments, as well as Level VI and Federal Motor Carrier Safety Administration hazardous materials inspection data. The report was available on the [CVSA website](#).
- Peer review: In January 2007, CVSA published the findings of its first peer review of the Level VI program. Another peer review would be conducted in 2011. Mr. Horn had participated in the first review and attested to the value of closely examining state programs to identify areas for improvement and operational needs that the Level VI program could help states meet. Mr. Smith requested that, by the end of January, a volunteer from the Midwestern committee be tapped to participate in the 2011 peer review.

DOE/EM Office of Packaging and Transportation

Ms. McNeil reported on the recent activities of the Office of Packaging and Transportation within the DOE-EM.

- Waste disposition: As a result of ARRA funding, EM was seeing increasing volumes of low-level waste (LLW) and mixed low-level waste (MLLW) being dispositioned. The preference was to dispose of waste onsite, if possible, then utilize other DOE sites and finally private disposal facilities. The Nevada National Security Site (NNSS) (formerly Nevada Test Site) had closed its mixed waste disposal unit on November 30. DOE was going through the process of analyzing continued use of the NNSS as a regional disposal facility.
 - Shipments: In Federal Fiscal Year 2010, DOE completed approximately 17,000 off-site shipments of LLW/MLLW. In the previous year, around 8,000 shipments had been completed. With regard to shipments affecting the Midwest, DOE shipped approximately 533 railcars and 270 trucks to the Energy Solutions facility in Clive, Utah, in addition to 988 trucks to NNSS. The origin sites for most of these shipments were Mound and Portsmouth in Ohio, Paducah in Kentucky, and Argonne in Illinois. DOE would be updating its forecast data for future shipments. Information would be available on the [Waste Information Management System](#).
- DUF6 shipments: The DUF6 conversion facilities at Paducah and Portsmouth had been completed and were in the operational testing phase. Portsmouth was due to come on line in the

first quarter of 2011 and Paducah would be shortly behind that. DOE had not yet identified a disposition path for the waste. Ms. McNeil estimated 18-24 months before actual shipments would begin. The affected states would have an opportunity to review the draft transportation plan after a disposition path was selected.

Greater-Than-Class-C (GTCC) waste disposal: DOE was working on a draft of the environmental impact statement, which was expected to be released in early 2011.

Ms. Beetem asked whether Ms. McNeil could provide a list of carriers that DOE used. She wanted to make sure all the shipments through Missouri were properly identified as DOE shipments. Ms. McNeil said it might be difficult to get that information. She added that some of the DOE sites had chosen to go around Missouri because they were unable to comply with the state's requirement that shippers of LLW provide seven-day advance notice. Ms. Beetem said the state had issued waivers of that requirement for LLW shipments when requested.

Ms. Janairo asked about the possibility of spent fuel swaps or transfers between Idaho National Laboratory and the Savannah River Site. Ms. McNeil said the proposal was officially off the table.

An Update on DOE's MERRTT Responder Training

Joe DiMatteo from DOE's Chicago Operations Office provided an update on the DOE Transportation Emergency Preparedness Program (TEPP), particularly the MERRTT training program.

- MERRTT improvements: DOE continued to monitor the MERRTT program, crosschecking it against the NFPA 472 competencies. The MERRTT modules met all but three of the competencies for awareness and operations level requirements, and DOE added those three competencies to the 2010 version of MERRTT. However, MERRTT met only a few of the competencies listed in the Agent Specific and Technician portion of the standard. To address these competencies, DOE was adding specialized training modules.
- Training options: Several TEPP training programs were available: Compressed MERRTT (eight-hour program), Independent Study MERRTT 302 (existing online program, available as refresher), and MERRTT (16-hour program). Specialized training was available through Technician MERRTT (eight-hour program under development), Radiation Specialist Program (40-hour program), and Radiological Training for Hospital Personnel 346 (existing FEMA program). To get into the more specialized courses, participants had to take MERRTT and other courses as prerequisites. Ms. McNeil said she had assisted with updating the course descriptions. Ms. Schmitt commented that radiation control personnel that had received master's degrees in health physics might be interested in the advanced courses but would not be inclined to take the MERRTT prerequisites. Mr. Schmidt added that the time commitment for the advanced courses might be an obstacle, given all the other work state personnel have to do.
- Argonne shipment: As part of Argonne's efforts to reduce its nuclear footprint, the site was shipping radioactive waste and material. One shipment of a test fuel specimen was managed as a "Spent Nuclear Fuel Transport." The affected states had had an opportunity to provide input on the transportation plan, which DOE had approved.
- Training schedule: Mr. DiMatteo encouraged states to contact him or Ms. McNeil if they were in need of TEPP training or would like to conduct an exercise with support from TEPP. He suggested that the Midwestern states consider holding a smaller regional exercise as preparation for the much larger Amber Waves exercise. The MERRTT training schedule was available on the [TEPP website](#).

Radiological Assistance Program Activities

Nick Contos (DOE/RAP) reported on the activities of DOE's Radiological Assistance Program (RAP), including large-scale exercises in the Midwest. He reviewed the capabilities of RAP's Aerial Measuring Systems and their current and future assets/locations. The specific content of the presentation was designated "official use only."

Shortline Railroad Infrastructure Review

Mel Massaro of the Federal Railroad Administration (FRA) provided an overview of his study of shortline railroad infrastructure in the Northeast.

- **Task:** The purpose of the study was to identify and establish contact with shortline railroads serving nuclear power plants, review each railroad's physical and operational infrastructure, and facilitate upgrades to meet safe, acceptable standards. Mr. Massaro contacted 28 shortline railroads, beginning in 2007. In September of that year, he conducted a pilot assessment of the Winchester and Western Railroad, which would service the Hope Creek and Salem 1 & 2 power plants in New Jersey. Mr. Massaro reviewed the findings of the evaluation.
- **Project funding:** DOE had appropriated funding in 2008 to fund the FRA's joint work with the regional groups to conduct similar assessments of all 28 shortlines. After two assessments were completed, DOE's budget for the Yucca Mountain program was cut, which led to the elimination of funding for the shortline project.
- **Conclusions:** Because DOE had terminated the project before it was complete, there was still a need for an in-depth study of shortline railroads servicing nuclear power plants. In addition, it would be important to identify options for transporting spent fuel casks from the power plant site to the nearest Class 1 railroad in the event that the shortline infrastructure, if it existed, was inadequate. Mr. Massaro added that it would be worth analyzing whether Class 2 track should be the minimum acceptable standard for shipping spent fuel casks.

During the question-and-answer period, Kevin Blackwell (FRA) mentioned that the FRA's Safety Compliance Oversight Plan (SCOP) was still undergoing revision. The 1998 version remained in effect. He hoped the states would have an opportunity to comment on the revised SCOP within the next 12-18 months.

Session on Midwestern State Shipment Fees: Presentations and Discussion

Committee members heard presentations from Barbara Englehart of MDS Nordion, a major shipper of radioactive materials, and Kris Phillips from the DOT Federal Motor Carrier Safety Administration. Ms. Englehart provided background information on MDS Nordion's mission and products, as well as the company's options for routing shipments of radioactive materials through the United States. Ms. Phillips addressed the regulatory requirements that apply to state route designations and hazardous materials shipment fees, including fees on radioactive waste and material. The states and the speakers then engaged in a discussion of state fee programs, their impact on shippers' activities, and the unintended consequences of some Midwestern state fee programs.

The discussion led to the following suggestions and action items:

- Mr. Leuer observed that companies appeared to have identified a “short-term fix” to the issue of shipment fees, but that fix might inadvertently bring about the worst-case scenario alluded to in the discussion – namely, in which all states would charge fees.
- Ms. Beetem would look into the possibility of using Missouri’s rulemaking process to address the matter of the HRCQ fee applying “per cask” instead of “per truck.”
- Ms. Phillips would share information with Ms. Janairo regarding two existing models for coordinating on the collection of fees.
- Ms. McNeil volunteered to reach out to DOE sites to get their suggestions for improving the administration and collection of state shipment fees.
- It was suggested the states consider requesting that the NRC require route approval for Category 1 and 2 shipments, similar to what was required for spent fuel shipments.

The states and shippers agreed to continue the dialogue that the meeting had initiated on the subject of state fees and shipper compliance.

Integrated Spent Fuel Management: The NRC’s New Approach

Mr. Easton gave an overview of the NRC’s activities.

- Ongoing rulemakings: The extended comment period for the rulemaking on 10 Part 37, physical protection of byproduct material, would close on January 18. A companion guidance document was also out for comment, also with an extended deadline of January 18. The NRC also was seeking public comment on proposed changes to 10 CFR 73, along with the companion guidance document. The proposed requirements pertained to physical protection of spent fuel in transit. A third rulemaking on the requirement for advance notification of Native American tribes was also out for comment.
- MacArthur Maze study: Mr. Easton reviewed the NRC’s findings regarding the MacArthur Maze fire in California in 2007 and its implications for the safety of spent fuel shipments. A draft report would be available for public comment.
- Waste Confidence Rule: The Waste Confidence Rule had been amended to say that the U.S. will have sufficient capacity for spent fuel disposal “when necessary.” The commission had also issued its determination that spent fuel could be stored safely at reactor sites for at least 60 years beyond the operating life of the power plant, which amounted to a storage period of at least 120 years. The NRC staff was tasked with preparing the next review of the rule, which would look at periods of storage extending to 200-300 years. The states could look forward to the opportunity to comment on the draft environmental impact statement for that rule review.
- Yucca Mountain: DOE had tried to withdraw its license application, but the Atomic Safety Licensing Board had not approved. DOE appealed the decision. In the meantime, the Chair of the NRC had directed the staff to shut down the review of the Yucca Mountain license application, based on the administration’s budget request for Federal Fiscal Year 2011. Mr. Easton said the main part of the application review – Volume 3 of the Safety Evaluation Report – was nearly finished. Because of the NRC program being shut down, however, the staff would not be able to publish the report.
- Long-term storage: Mr. Easton said the NRC was looking into the important question of what would happen to spent fuel storage inside a dry storage cask for extended periods of time – beyond 120 years. Rod McCullum (NEI) added that the NRC was working with the Electric Power Research Institute (EPRI) to conduct a study on this topic and would be holding public

workshops. He encouraged the states to get involved and suggested the NRC might consider holding some of the workshops outside the DC area to facilitate state participation.

Overview of DOE's Used Fuel Disposition Project

Paul McConnell provided committee members with information on DOE's Fuel Cycle Technologies Program within the Office of Nuclear Energy.

- Program objectives: The objectives of the Fuel Cycle Technologies Program were to develop options for used nuclear fuel management to reduce the long-term environmental burden, as well as enhance proliferation resistance, energy security, and the safety and economics of the nuclear fuel cycle. Used Fuel Disposition (UFD) was one of five "campaigns" of the Fuel Cycle Technologies Program.
- UFD campaign: The mission of the UFD campaign was to identify alternatives and conduct scientific research and technology development to enable storage, transportation, and disposal of used nuclear fuel and wastes. The UFD campaign would look at storage, transportation, and ultimately disposal, with DOE and NRC licensed sites considered.
- UFD objectives: Through the UFD campaign, DOE would develop the technical bases for a) demonstrating the safety of long-term storage for up to 300 years; b) fuel retrievability and transportation after long-term storage; and c) transportation of high burnup fuel. The project would also identify security issues associated with long-term storage and options for addressing those issues.
- Research objectives: As part of the research, DOE would identify all potential degradation mechanisms. Issues for further research included the effect of marine environments on casks, the development of advanced cladding materials, and long-term degradation of concrete. To resolve technical issues associated with very long term storage, DOE would conduct research and conduct a demonstration project.
- Plan goals: Within one year, DOE hoped to develop the framework for the project implementation plan. The five-year goal was to have a final plan in place and develop the technical basis. Within 10 years, DOE planned to be conducting a field demonstration.
- Transportation objectives: Mr. McConnell said DOE would identify transportation technical data gaps and inventory the used fuel that would eventually need to be transported. In addition, transportation support would be provided for the storage demonstration project.
- Testing and evaluation project: DOE had several options for conducting a demonstration test: use a national laboratory, build a new demonstration facility, or tap an existing independent spent fuel storage installation (ISFSI) at one or more reactor sites. The first two options would require the transportation of spent fuel. The third option of using existing reactor sites would require the construction of facilities for conducting the required analyses. Regardless of the approach chosen, the program would collaborate with other groups, including industry, the NRC, and international partners.

Nuclear Energy Institute (NEI) Perspectives

Mr. McCullum reported on NEI's ongoing activities.

- Nuclear energy: Public support for nuclear energy was growing, perhaps attributable to the industry's strong record of safety and operational performance. The development of new plants was proceeding at a slower pace than in recent years, consistent with the overall economic

conditions in the U.S. The industry's capacity factor in 2009 was 90.5. New capacity was coming online each year as a result of power uprates. Nuclear energy provided 69.3% of the nation's emission-free electricity in 2009, with hydro-electric power coming in second at 23.2% and solar, wind, and geothermal contributing 7.5%.

- Small modular reactors: There was growing interest in the development of small reactors, with designs ranging from 10 to 350 MWe. Such reactors were modular in design and would be factory built. Seven vendors were working on design certification applications to be submitted to the NRC in 2012.
- Used fuel management: Through 2009, there were 49 operating ISFSIs in the nation, housing over 1,200 casks and an inventory of 14,000 metric tons of uranium (MTU). By 2040, the inventory of spent fuel in dry storage was expected to exceed 70,000 MTU. The nuclear industry supported a three-pronged approach to the long-term management of used fuel: interim storage on-site as well as in one or more centralized locations; research and demonstration of advanced fuel cycles and recycling technologies; and permanent disposal. On the subject of permanent disposal, the industry wanted to see the NRC complete the licensing process for Yucca Mountain to demonstrate how such a regulatory process might work and to gain lessons learned for future activities.
- Program governance: NEI supported the concept of having the waste management program led by an independent "Fed-Corp" that would operate like a private company. Ideally, the Fed-Corp would have effective and stable leadership as well as access to funding that could support a long-term activity. In addition, it would be accountable to industry, ratepayers, and the public. Senator Voinovich of Ohio and Representative Upton of Michigan had introduced legislation to address the need for a new approach for managing civilian radioactive waste management.

Zion Decommissioning

S. Chris Baker of ZionSolutions presented information on the plans for and progress of decommissioning the Zion Nuclear Station in northeastern Illinois.

- Asset sale agreement: EnergySolutions had acquired the assets of Zion Station from Exelon Nuclear, taken possession of the spent fuel, and assumed all liabilities and obligations for decommissioning and site restoration. In addition, Exelon had transferred the NRC license for Zion Station to EnergySolutions. ZionSolutions LLC was the company organized to manage the restoration project. EnergySolutions planned to return the site to Exelon in 10 years. Zion Station was one of five commercial nuclear sites in the Midwest that were either in SAFSTOR or active decommissioning.
- Decommissioning process: The NRC had approved the Post-Shutdown Decommissioning Activities Report for Zion Station. The public living near the plant had had an opportunity to provide input into the plan. The next regulatory step would be for ZionSolutions to submit the License Termination Plan (LTP), which would have to be submitted at least two years before the completion of the project. ZionSolutions expected to submit the plan in 2014. The public would have an opportunity to comment. Once the LTP was approved, ZionSolutions would have to complete the decommissioning project in accordance with the plan. The final end state would be the release of the current land for unrestricted use, except for the land housing the ISFSI that would be built to hold the site's 2,226 spent fuel assemblies. ZionSolutions expected to reach the end state in 2020.
- Project overview: The three major phases of work were moving spent fuel from wet to dry storage, developing the license termination scope and cost estimates, and restoring the site. The

highest anticipated costs would be incurred in the campaign to move the spent fuel into dry storage and the segmentation of the reactor vessel. The decommissioning project would result in significant quantities of low-level radioactive waste ranging from Class A to Greater-than-Class-C. Only Class A waste had a disposal path identified.

Developments with Private Fuel Storage, LLC

John Parkyn of Dairyland Power Cooperative provided a status report on the plans by Private Fuel Storage, LLC (PFS), to construct an interim storage facility for spent fuel in Utah on land owned by the Skull Valley Band of Goshute Indians.

- Project overview: After an eight-year process, PFS had obtained an NRC license for the facility on February 21, 2006. The facility would include a 100-acre storage area for 4,000 casks within an 820-acre controlled area. It would take an estimated 30 months to build the facility. The project required approval from the Bureau of Indian Affairs and the Bureau of Land Management to proceed. Both agencies had disapproved PFS's plans. PFS appealed the decisions and the federal appeals court ruled in favor of the consortium and the Goshute tribe in July 2010. The Obama Administration decided not to appeal the court's ruling, which put the decisions back in the hands of the U.S. Department of Interior for further consideration.
- Steps for completion: Development of the PFS site would require resolution of the Bureau of Indian Affairs lease decision, plus 24-36 months to get through the construction and testing period.
- Shipments: PFS had decided to ship spent fuel by rail because it would reduce interaction with the public, enhance shipment security, and reduce by a factor of 20 to 60 the number of shipments. Developing enhanced rolling stock was a priority for PFS. The consortium had worked with the railroad industry to develop a special rail car for transport. Testing of a prototype railcar would need to be completed. Mr. Parkyn said PFS would determine the best route from each customer's site, then consult with the railroads. States would have input through groups like CSG Midwest. Mr. Parkyn said PFS intended to use the Midwest's input from the 2005 route identification report. The NRC, DOT, and stakeholders would have an opportunity to review and modify the routes, as needed.

Updates from the Other Regions

- Tammy Ottmer (Colorado) gave an update on the Western states' activities. The West would have 11 new governors in 2011. The WGA committee held a meeting in October in San Francisco and was active on the NTSF ad hoc working groups. WGA would host the next NTSF meeting in Denver on May 10-12. The region had organized its own ad hoc working group to look at the implications of the Blue Ribbon Commission's activities, particularly to help determine whether any WGA resolutions would need to be revised. Security was an area of continuing interest for the West, with a new security protocol in the works. Another issue of concern for the West was the return of shipments to their point of origin when the only problem was an administrative procedure. The West had heard from DOE headquarters that, for paperwork-related issues, the return of shipments would be considered on a case-by-case basis. On the subject of bad weather and its impact on shipments, the West hoped to move forward with a study of bad weather affecting specifically WIPP shipments. DOE had declined to fund the study, but the West would approach Mr. Mackie again. The Midwest was supportive of the activity. Ms. Ottmer suggested that, if more than one region had an interest, the topic might be suitable for an NTSF ad hoc

working group to address. The West had scheduled a webinar with the NRC to cover the proposed rulemaking on spent fuel shipment security requirements. The webinar would be open to participants outside the Western states.

- Christopher Wells (Southern States Energy Board) reported on the activities of the Southern States. Georgia and Texas were the only two Southern states that had conducted WIPPTREX exercises. Louisiana would hold its first WIPPTREX in Shreveport. Mr. Wells would help to coordinate WIPP “roadshows” for the TRUPACT III shipping cask. The SSEB transportation committees would hold their meeting in June. It was noted that the four regional groups were also expected to hold a meeting in May in conjunction with the NTSF meeting.
- Cort Richardson (CSG Eastern Regional Conference) reported on activities in the Northeast. Mr. Richardson had spent most of the fall traveling to meetings in the Northeast region. The Northeast task force might hold a meeting in Carlsbad in February in addition to meeting in Denver at the NTSF meeting.

Committee Discussion

The committee resumed its business session with discussion of several topics:

- New project ideas: The members agreed to prepare a new brochure on the Midwestern Radioactive Materials Transportation Project. The last time the region issued a brochure was in 2007. Many changes had taken place since then in both the project and the federal programs with whom the Midwest works. The committee’s Information and Communications work group would help Ms. Janairo develop the brochure, with the goal of distributing the document in the spring.
- Work group assignments: The committee updated the work group assignments for 2011. Ms. Janairo said she would send an updated list of assignments to the committee following the meeting.
- Plans for next meeting: The committee’s next meeting would be held in conjunction with the annual meeting of the NTSF in Denver. The committee meeting was scheduled to take place on May 10 with the NTSF meeting following on May 11-12. More details were expected to come out in early 2011.

Midwestern Regional Workshop on Spent Fuel Transportation Security Requirements

Following the regular committee meeting, the Midwestern states engaged in discussion regarding the NRC’s proposed changes to requirements for the physical protection of spent fuel in transit. Mr. Easton facilitated the discussion. He emphasized that the discussion would not be considered an official comment under the Administrative Procedures Act.

Outcomes of the workshop were as follows:

- The states were in agreement that the proposal to require licensees to conduct advance planning and coordination with state governments was a positive step that would enhance the safety and security of spent fuel shipments.
- As a follow-up to the previous day’s session on state fees, the suggestion was made that the states consider asking the NRC to establish routing guidance for shipments of Category 1 and/or Category 2 material as part of a separate rulemaking.

- The committee weighed the advantages of requesting an extension of the January 11 deadline for commenting and agreed to pursue a 90-day extension.
- Ms. McNeil reported that Mike Wangler with DOE/EM was preparing a DOE order that would mirror the physical protection requirements the NRC was proposing for its licensees. DOE's requirements for its own shipments would be equivalent to the NRC's with four exceptions: there would not be a requirement to report to the NRC; NRC certification of drivers would not be required; route approval would be performed by DOE, not the NRC; and different immobilization requirements would apply.
- The states in attendance raised a number of comments and questions about specific sections of the proposed rule and the guidance document. The committee's NRC Rulemaking Review work group will incorporate into the region's draft comments the feedback the states provided on the rulemaking and the guidance document.
- Members were encouraged to submit their own comments on the rulemaking and the guidance document, referencing the regional comments as appropriate. Copies of all comments should be sent to Ms. Janairo for the purpose of maintaining a complete record of Midwestern state comments.

Summary prepared by Lisa R. Janairo, January 10, 2011.