



Radioactive Materials Transportation Committee & the Transuranic Waste Transportation Working Group | Joint Meeting

Hyatt Regency Grand Cypress
Orlando, Florida
December 10-11, 2024

Meeting Summary

The Southern States Energy Board's (SSEB) Radioactive Materials Transportation Committee and the Transuranic Waste Transportation Working Group held a joint meeting on December 10-11, 2024. The Hyatt Regency Grand Cypress in Orlando, Florida, hosted the conference.

Mr. Christopher Wells, Director of Nuclear Programs for the Southern States Energy Board, called the meeting to order. He greeted the attendees, acknowledged his fellow staff, provided logistical remarks, and made a few administrative announcements. Following the brief comments, Mr. Wells turned over moderation duties for the first day to Mr. Mark Wyland (Georgia), Chair of the Transuranic Waste Transportation Working Group who initiated the general introduction of all meeting participants.

The first speaker was Ms. Ellen Edge with the U.S. Department of Energy/Environmental Management (EM) Office of Packaging and Transportation. Ms. Edge told the group she would provide an overview of EM's organizational structure, update of activities at various EM cleanup sites, review of specific activities within her division and conclude with information pertaining to the National Transportation Stakeholders Forum (NTSF) and the Transportation Emergency Preparedness Program (TEPP). Ms. Edge described her office's placement and mission within the Department's management structure. She talked about the location of EM Cleanup Sites before noting significant projects at Savannah River, Portsmouth/Paducah and Oak Ridge which are reducing the Department's footprint. She provided graphs with EM hazmat shipping

data. Ms. Edge explained the Transportation Compliance Assurance Program and Packaging Certification Program as key initiatives undertaken by her division. She talked about planning and management tools such as TRAGIS as well as the role of stakeholder engagement including referencing the DOE Orders. She briefly talked about last year's NTSF held in Denver, Colorado, and the planning for the 2025 event in Las Vegas, Nevada. Ms. Edge reviewed the FY24 national training numbers for TEPP, noting the latter topic would be covered in greater detail by an upcoming speaker who serves as the region's TEPP Contractor.

The next presenter was Mr. Jesse Sloane, Executive Vice President of Engineering, Deep Isolation. Mr. Sloane began by addressing the difficulty many nations have experienced siting and constructing a spent fuel and high-level waste repository. He countered these scenarios with Deep Isolation's preferred borehole drilling techniques. The Deep Isolation method takes advantage of practices used by the oil and gas industry to mine boreholes deeper than repositories to emplace waste. He continued the presentation by incorporating safety calculations of varied geology to display dose rates over time. He followed by providing the Committees with a description of Deep Isolation's Universal Canister System. He discussed Project UPWARDS, a 3-year project involving four workstreams which addresses research applicable to regulatory criteria pertaining to transport, storage, and disposal. Mr. Sloan displayed an artist rendition of the surface operations at a borehole site, complete with the equipment necessary for dry transfer and emplacement. Lastly, he described the company's Deep Borehole Demonstration Center which involves collaboration with other governments and industry on both developing a demonstration program as well as guidance and standardized safety practices.

The third speakers of the event were Jay Thomas (DOE-NE), Steve Maheras (Pacific Northwest National Laboratory) and Miriam Juckett (Pacific Northwest National Laboratory) who combined to talk about the North Anna High Burnup Research Cask Shipment and a site visit to the plant. Mr. Thomas kicked off the collaboration with an overview of the High Burnup project. He described the nature of the endeavor as a comprehensive study to examine the characteristics of high burnup spent nuclear fuel in

storage and during transportation. After detailing the specifications of the cask and the fuel, he noted the data from the project would be invaluable to building public trust as it could be many decades before a U.S. repository is operational. Finally, he displayed a slide of the Atlas Railcar and Rail Escort Vehicle being used for the demonstration run and how DOE will work with states and tribes to enact protocols to illustrate how a shipping campaign can be conducted in a safe manner. Next, Mr. Maheras walked the group through the North Anna Site Evaluation which took place in May 2024. He talked about the design of the plant as well as the inventory of fuel in dry storage including the high burnup fuel. Mr. Maheras provided aerial views of the site identifying the Independent Spent Fuel Storage Installation, rail spurs, transload locations, etc. As he delved into the transportation aspects, the discussion focused on direct rail and heavy-haul to rail. He showed maps, ground level photographs and additional aerial shots of potential locations to be used for transport operations. Ms. Juckett was the last member of the team to address the Committees. She outlined the process for bringing the North Anna Site Evaluation to fruition. DOE led a group of individuals representing the nuclear industry, rail, Virginia state agencies, federal agencies, Southern States Energy Board, and the Tribal Radioactive Materials Transportation Committee to organize the aspects of the 3-day visit. The collective was able to dedicate a day to reviewing the infrastructure on the site, examining off-site transload locations and hosting a local leaders engagement meeting.

Next, Mr. Daniel Witwer (WIPP Lead Trainer) of Salado Isolation Mining Contractors provided the Waste Isolation Pilot Plant (WIPP) update. Mr. Witwer began by informing the group WIPP had received 490 shipments during FY2024 and 14,234 since its opening in 1999 and has exceeded 17 million safe loaded miles of transport. Currently, the facility's receipt rate is approximately 10-12 shipments per week. He described detailed mining activities underway to meet the disposal volume requirements identified in the WIPP Land Withdrawal Act. Additionally, he noted Panel 8 is steadily receiving capacity as Room 5 is nearing completion. He touched on the most significant capital projects, those being the installation of an improved ventilation system, construction of the Salt Reduction Building and Filter Building and the sinking of the utility shaft. All capital projects are on pace to be operational in 2026. Lastly, he talked

about the development of a new concept for hosting WIPPTREX which would involve a station-type training format. The novel approach was evaluated in Nevada and has received positive reviews.

The Transportation Emergency Preparedness Program Review was provided by Dan Mills of TRG Incorporated. He told the Committees he would provide an overview of the TEPP mission, training taken place to date, activities scheduled for the near future, training program revisions, improvement projects and available website resources. He displayed a chart with the FY 2024 training courses in the southern region by individual state. He also provided an estimate of the FY 2025 courses planned to be delivered to SSEB member states pending available funding. He highlighted partnerships with WIPP to co-teach MERRTT as well as with the Office of Secure Transport (OST) to increase the visibility of their agents and have them assist with training on the OST classified shipment module. He overviewed the changes for the 2024 MERRTT revision. He provided an update of the TEPP Improvement Projects including the filming of a Law Enforcement Decontamination Video in Georgia. Lastly, Mr. Mills gave the attendees a website address for TEPP resources with specific reference to the online MERRTT refresher.

Ms. Kristin Garlick, DOE-Savannah River Site (SRS), presented on SRS TRU shipments and spent nuclear fuel receipts. She described how TRU Waste is stored in the E-area on the Site and is categorized as legacy, new generation, or surplus plutonium disposition. She also noted some of the challenges with moving the legacy TRU waste, 50 percent of which is remote handled, such as using overpacks and shielded container assemblies. Nevertheless, SRS anticipates making 42 shipments to WIPP during FY2025. Next, Ms. Garlick detailed the foreign and domestic SNF receipt programs. The foreign return mission involves 34 countries but there are no anticipated shipments for FY2025; however, the domestic mission will yield 16 fuel receipts during the same timeframe from a variety of the five sites associated with the program.

Ms. Sara Hogan of DOE's Office of Nuclear Energy's (DOE-NE) Office of Storage and Transportation was the next speaker to brief the SSEB Committees. Ms. Hogan

highlighted major activities for her office including activities related to a federal consolidated interim storage facility, package performance demonstration and the high burnup research cask project. She informed the Committees of reorganization efforts which took place in April 2024 including hiring Jay Thomas, previous speaker, as Team Leader for Projects & Integration. She informed the attendees of the FY2025 budget being under a continuing resolution and provided the congressional marks for the Used Nuclear Fuel Disposition R&D and the Integrated Waste Management Systems. Next, she gave a brief overview of DOE-NE / NTSF Ad Hoc Working Groups including SNF Rail/Routing, Section 180(c), and SNF Management - Communications and Outreach. Additionally, Ms. Hogan referenced the winter and fall meeting of the Transportation Core Group as another major avenue of state and tribal engagement. She turned her focus to the consent-based siting program and noted the current stage is dedicated to planning and capacity building. She provided a near-term roadmap from April 2025 through March 2026 involving activities such as publishing key documents and expression of interest application requirements. She also talked about webinars, meetings, outreach opportunities and other future steps of the process.

The next portion of the meeting consisted of a cooperative agreement program update to highlight the activities of the state regional groups and the Tribal Radioactive Materials Transportation Committee.

Mr. Jeffrey Moore, Federal Railroad Administration, gave the next update focusing on HM-263 of the Fixing America's Surface Transportation (FAST) Act. HM-263 is a final rule that requires railroads to provide real-time information about hazardous materials on their trains. The train crew is responsible for carrying out this mandate in the form of a physical paper document as a redundant backup to the electronic train consist. He noted the major change of the rulemaking was railroads must provide the electronic train consist information to authorized Federal, State, and local first responders, emergency response officials, and law enforcement personnel along the train route who could be involved in a response scenario. He also covered how the rulemaking differs or provides alternative methods for the railroads based on class.

The final speaker of the first day of the event was Mr. Mark Lewis, Director of Broker and Training Programs for Energy Solutions. He began with an overview of Energy Solutions configuration, customer base, remediation projects and other nuclear services. He displayed a chart which showed their different assets and locations responsible for multiple operations from logistics to decommissioning. He highlighted the low-level radioactive waste disposal facilities in Utah and South Carolina. He listed current decommissioning projects of nuclear power plants across the nation as well as an initiative involving the nuclear-powered merchant vessel (N.S. Savannah). He also touched upon the company's spent fuel management services before addressing the topic of training. He noted Energy Solution has been involved in nuclear transportation compliance training since the 70s and offers a variety of delivery formats. In conclusion, Mr. Lewis listed the some of the individual courses pertaining to motor carriers, regulators, inspectors, emergency management and first responders.

The second day of the meeting began with an administrative business session led by Mr. Christopher Wells. He told committee members to be expeditious in returning their expense reports because the SSEB office would be closing soon for the holidays. Following these remarks, Mr. Wells introduced Mr. David Johnson of Tennessee who was serving as the Chairman of the Radioactive Materials Transportation Committee. Mr. Johnson formally facilitated the final day of the meeting by initiating the introduction of all presenters as identified on the program agenda.

Mr. Steve Maheras (PNNL) returned to the podium to commence the series of presentations. His topic of discussion was the "Maritime Transport of Microreactors." He began with a definition of microreactors and their key attributes as well as the various types proposed for development. He addressed the maritime aspect by indicating many applications for the microreactors would be outside of the continental United States and thus they would have to be transported as cargo. He outlined the mandates of the International Code for the Safe Carriage of Packaged Irradiated Nuclear Fuel, Plutonium and High-Level Radioactive Wastes on Board Ships (INF Code). The INF Code established three classes of ships for transport, and he displayed a chart of vessels currently in service meeting the INF 3 category standards. Furthermore, he

displayed slides with photographs of the vessels, safety features, countries of origin, and crew capabilities. He concluded by stating PNNL has developed a plan for establishing a licensing pathway for the transport of the specific cargo.

The next speaker for the SSEB Radioactive Materials Transportation Committees Meeting was Nicolas Guibert, Project Line Manager for ORANO. He provided the shipment completion update to the intermodal transport from the Crystal River Nuclear Plant in Florida to Waste Control Specialist in Andrews, Texas. He described a process which would include the packaging of four components: reactor vessel closure head; and reactor internals segmented into three components. Mr. Guibert showed a chart with the physical dimensions of the packages used to transport the components. Next, he addressed transportation logistics. He showed a picture and diagram of the extremely large transporter used to move the packages from the mausoleum to the barge slip and used again for heavy haul transport to WCS. Mr. Guibert proceeded to show pictures of the barge transport used for the second phase, which involved a deep-water direct passage from Florida to Texas. He displayed two routes from the port of entry in Texas to WCS. Mr. Guibert also provided a schedule detailing the completed activities for the various phases of the transportation campaign and briefly discussed the security and regulatory preparations applicable to escorting, tracking, response, weight, and code of federal regulation requirements. Lastly, he provided lessons learned and explained how ORANO was able to use the experience from the Vermont Yankee campaign to apply to the Crystal River movement.

Lieutenant Artez Lester of the Florida Highway Patrol provided the Commercial Vehicle Safety Alliance (CVSA) Update in lieu of Mr. Carlisle Smith, Director of the Level VI Program who was unable to attend. He started with an overview explaining how CVSA's origin was linked to safety and uniformity within the regulatory arena. He also described the organizational structure including the various technical committees as well as the Board of Directors. Lieutenant Lester gave a summary of the year in review of the Level VI Program. CVSA is currently in the fourth year of a five-year cooperative agreement (Fiscal Years 2022-2026) with the Carlsbad Field Office to provide the enhanced inspection training. He identified the certification classes which had taken place in the

southern region and reminded those states who needed training to retain their certification standard. Lieutenant Lester also shared the dates and locations of the remaining certification classes for FY2025. Lastly, he provided contact information and a physical address for the CVSA office located in Washington, DC.

The majority of SSEB's member states belong to either region 2 or 3 of DOE's Radiological Assistance Program (RAP); therefore, the Committees had the pleasure of hearing from Mr. Jeff Galan, RAP Region 3 Program Manager. Mr. Galan spoke about the Nuclear Emergency Support Team, provided an overview of RAP, RAP resources and equipment, and a synopsis of RAP responses which occurred in both regions 2 and 3 during the year and upcoming events for 2025. He displayed graphics which showed which states comprised each region and provided the contact information for their RAP Regional Program Manager. Mr. Galan also displayed slides with a list of past, present, and future activities supported by the RAP Teams. For instance, region 2 supports events such as the Kentucky Derby and the upcoming Super Bowl 59 to name a few whereas region 3 also supports similar events such as Super Bowls, the Republican and Democratic National Conventions, The Masters Golf Tournament, and many other major sporting events, conventions, exercises and other special occurrences.

The next portion of the meeting consisted of a round table discussion to highlight the activities of all states in attendance. After all participants had provided an update, Mr. Wells reported on the status of activities at SSEB.

The final order of business at the meeting was the announcement of the location and date of the next meeting of the Radioactive Materials Transportation Committee and the Transuranic Waste Transportation Working Group. Since the group continues to meet in conjunction with the NTSF for their Spring meeting, it was reported that they would gather again on May 19-22, 2025, during the Annual Meeting in Las Vegas, Nevada.