Midwestern Radioactive Materials Transportation Committee (MRMTC)
Fall 2022 Meeting Summary

Rapid City, South Dakota
October 12 – 13, 2022

AGENDA ITEMS

Wednesday, October 12

1. Welcome and Introductions

a. Committee Co-Chair Michael Snee (Ohio) welcomed everyone to the meeting and Rapid City. He announced that some last-minute changes needed to be made to the agenda so the agendas in attendee's briefing folders are incorrect. The revised agendas were on the handout table. Mr. Snee gave the tribal land acknowledgement at this time.

b. Tribal Nation and Land Acknowledgement: Before we get started today, we would like to begin with a tribal nation and land acknowledgement. This meeting is taking place on the ancestral, traditional, and contemporary lands of the Oceti Sakowin, meaning Seven Council Fires, which is the proper name for the people referred to as Sioux. We acknowledge that before Rapid City was established, the area was called home by people of American Indian Nations indigenous to this region. The tribal alliance made up of individual bands of the Seven Council Fires is based on kinship, location, and dialects: Santee-Dakota, Yankton-Nakota, and Teton-Ladota. We acknowledge the sovereignty of the nine federally recognized Native Nations in South Dakota: Cheyenne River, Crow Creek, Flandreau Santee, Lower Brule, Oglala, Rosebud, Sisseton-Wahpeton, Standing Rock, and Yankton Sioux Tribes.

c. Mr. Snee went around the room and had attendees introduce themselves and he extended a welcome to all first-time attendees. He acknowledged the presenters and thanked them in advance for coming to our meeting and making their presentations. Mr. Snee mentioned that there was an attendance list circulating for attendees to review and correct if necessary, and initial. Finally, he noted that his fellow Co-Chair Rodney Pitchford (Illinois) would be running the meeting with him for the next day and a half. Mr. Snee let attendees know that the committee will be electing a new junior Co-Chair towards the end of the meeting.

2. U.S. Department of Energy (DOE) Program Reports and Committee Discussion

a. Mr. Snee reminded the members and attendees that the committee exists to help the states engage with DOE on shipments. Funding for the committee and its activities comes from DOE through cooperative agreements with the Council of State Governments (CSG) Midwest, who staffs the committee. He expressed his appreciation for the ongoing support that the region receives from DOE and noted that representatives from the Office of Environmental Management, the Office of Nuclear Energy, and the Carlsbad Field Office were in attendance.

b. Office of Environmental Management (EM)

i) Mr. Snee introduced Ellen Edge from the Office of Packaging and Transportation (OPT) within DOE-EM and asked her to provide an update on DOE-EM-related activities. Ellen is the Transportation Emergency Preparedness Program (TEPP) Manager.

ii) Ms. Edge indicated that DOE-OPT and the Office of Legacy Management (LM) are under the same undersecretary and the mission is safe and secure transport. She outlined key programs and responsibilities of the office, including; compliance and safety, packaging certification program, transportation planning and management tools, field support, and policy and regulatory support. Ms. Edge indicated that DOE shipments in financial year (FY) 2021 included 43.5% from the National Nuclear Security Administration (NNSA), 34.8% from DOE-EM, 18.5% from DOE Office of Science (SC), and 3.2% from the Office of Nuclear Energy (NE). DOE-SC shipments are usually

small individual lab samples. 47.5% of these shipments were low-level radioactive waste (LLW) and 34.5% were other.

She indicated accomplishments from FY22 included the revision of DOE Order 460.2B. Ms. Edge also spoke about the National Transportation Stakeholders Forum (NTSF) being DOE's primary vehicle for communication with states and Tribes. DOE-OPT provides funding for the NTSF and DOE-NE also participates in the forum. Next, she stated that the Motor Carrier Evaluation Program (MCEP) performed 13 valuations in FY22 and promotes safe and responsible transport of DOE shipments. The MCEP provides transparency and informs stakeholders where drivers come from, who they are employed by, whether they drive the same routes, or if they drive all over. There are 34 total active MCEP drivers.

iii) Ms. Edge then discussed the Prospective Shipment Report (PSR). This report is a bi-annual, six-month projection of what will be shipped where. Greg Gothard (Michigan) asked about the requirements for EM drivers. She answered by saying drivers aren't required to have absolutely zero tickets. Ron Johnson (Prairie Island Indian Community) asked if certain endorsements are needed? "FBI background checks and similar" was Ms. Edge's answer. Tad Rumas (Ohio) asked whether DOE-OPT works in conjunction with the U.S. Department of Transportation (DOT) and the Federal Motor Carrier Safety Administration (FMCSA)? She answered yes, Joe Martinez (DOE-OPT) has access to DOT measurements and inspections.

iv) Click here for Ms. Edge's presentation.

c. Office of Nuclear Energy (NE)

i) Mr. Snee introduced Erica Bickford and Sara Hogan from the Office of Integrated Waste Management (IWM) within DOE-NE and asked them to provide an update on DOE-NE-related activities. Erica is the Acting Director of DOE-IWM and Sara is the Transportation Program Manager.

ii) Ms. Bickford spoke on behalf of DOE-NE about the Integrated Waste Management System. She indicated there are two teams: Consent-Based Siting (CBS) & Cross-Cutting Initiatives. DOE-IWM has hired several new staff including Sara Hogan, Sam Brinton, Natalia Saraeva, etc. Of particular note is the hiring of several social scientists. The CBS process has congressional direction now as opposed to administrative direction in the mid-2010s. DOE-IWM's request for information (RFI) on using consent-based siting to identify sites for interim storage of spent nuclear fuel (SNF) received about 225 comments from 132 private citizens. The common themes from this feedback included removing barriers for participation, environmental justice, the development of interim storage, and a transportation disposal pathway. The team is committed to community engagement and is doing so in part through a CBS funding opportunity announcement (FOA) and incorporating public feedback into the next steps. Ms. Bickford indicated that President Biden's FY23 budget request for $15 million in additional funding and would be used to develop a waste management system, continue state and Tribal funding, and conduct full-scale rail-sized package testing. Christopher Wells (Southern States Energy Board (SSEB) asked if FOA applicants needed to include possible subcontractors in their initial application. Ms. Bickford said the more details, the better and that the FOA will be open to consortiums. Mr. Johnson asked about how the lesson's learned from the 2012 Blue Ribbon Commission on America's Nuclear Future would be used. Ms. Bickford responded that both this and the comments on the 2017 CSG initiative will be incorporated into this initiative.

iii) Ms. Hogan gave updates on behalf of the transportation and rail-car development projects. The development of the 12-axle Atlas rail car is continuing. She also discussed nuclear power plant infrastructure site evaluations in 2022 (Dresden and Morris in IL, Indian Point in NY, and Palisades in MI) and 2023 (Three Mile Island in PA and Duane Arnold in IA). Ms. Hogan indicated that virtual training for the Stakeholder Tool for Assessing Radioactive Transportation (START) will be available beginning December 2022. Finally, she mentioned work on package performance studies including regulatory and non-regulatory demonstrations. Mel Massaro (Federal Railroad

Administration (FRA) asked if curvatures and turn-outs will be tested for Atlas. Ms. Hogan said there will be off-site testing of 12-degree curves, a 660-mile loop around Pueblo, CO, and that next steps include a revenue service run. Mr. Rumas asked about the timing of full-scale testing, and she responded that they need funding first, but hopefully in the next 5-6 years.

iv) Click here for Ms. Bickford and Ms. Hogan's presentation.

d. Carlsbad Field Office (CBFO) and Waste Isolation Pilot Plant (WIPP)

i) Mr. Snee introduced James Mason and Bobby St. John from DOE-CBFO and asked them to provide an update on WIPP-related activities. James is an Institutional Affairs Manager and Bobby is a Deputy Manager of Communications.

ii) Mr. Mason and Mr. St. John addressed the question "where are we now?" They anticipate being out of Panel 7 by month's end and Panel 8 has been approved by the State of NM. The advantages of moving to Panel 8 later this year include no requirements for personal protective equipment (PPE) and improved ground conditions. Currently, WIPP is in the process of mining three main drifts, S-700, S-850, and S-1000. FY22 saw progress on the Safety Significant Confinement Ventilation System (SSCVS) and the Salt Reduction Building (SRB). The Utility Shaft (US) is 65% complete and will be a 2,150-foot vertical air intake shaft, which is integral to airflow in the underground.

iii) Mr. Johnson asked how WIPP minimizes corrosion in the SRB, the answer to which is that the units and ducts are coated in polymers. Richard Arnold (Pahrump Paiute Tribe and Tribal Radioactive Material Transportation Committee (TRMTC)) asked about the political and local support for WIPP. Mr. Mason and Mr. St. John indicated that there is a clear divide between Northern and Southern NM on support for WIPP. Mr. Arnold then asked about the true-life span of the WIPP. The speakers indicated that 2024 was an arbitrary closure date, but that the facility must close when 6.2 million cubic feet of transuranic (TRU) waste is stored. The lifespan goal, therefore, is 2080. There are currently 10 shipments per week with Idaho National Laboratory (INL) and Los Alamos being the main shippers; however, this will increase to 14 shipments per week in Q2 of 2023. Additionally, Argonne National Laboratory (ANL) has approximately one shipment of waste that may be moved by end of 2022. Speaker mentioned that a WIPP Transportation Exercise (WIPPTREX) may be held in the Midwest at the Iowa-Illinois state line but there are difficulties associated with finding a new trainer. An audience member asked about feasibility of having a WIPPTREX during a future MRMTC meeting and was told it requires a year of planning and as hospitals are just wrapping up their radiation control updates there is significant interest in having a WIPPTREX.

iv) Click here for Mr. Mason and Mr. St. John's presentation.

e. National Transportation Stakeholders Forum (NTSF) Ad Hoc Working Group (AHWG) Reports

i) Mr. Snee reminded attendees that the Midwest is very active in the NTSF, which is DOE's primary mechanism for engaging and communicating with states and Tribes about shipments of radioactive waste and materials.

ii) *Planning Committee*: Mr. Snee asked Mr. Pitchford to give a report on the NTSF Planning Committee. Mr. Pitchford mentioned that since the 2022 Annual Meeting of the NTSF in Philadelphia, PA, this past June, the committee has turned its attention to the 2023 Annual Meeting of the NTSF in St. Louis, MO, which will be hosted by the MRMTC on May 22 – 25. He reported that so far, the Midwest had secured a hotel contract with the Hyatt Regency St. Louis at the Arch, sent out a save the date to the NTSF community, adjusted the usual order of days for the meeting, and begun working on the preliminary agenda. New for 2023, the state regional group (SRG) and NTSF AHWG meetings will take place on the last day of the meeting, allowing for more control over who attends the SRG and AHWG meetings and allows for non-group members to return home earlier in the week. In other Planning Committee news, the NTSF will host a webinar on October 19 at 10 AM Central Time. During this webinar, DOE-OPT will lead a

presentation and discussion on the DOE Order 460.2B, Departmental Materials Transportation Management. The revised Order was published in June 2022 and includes important clarifications on topics including advance shipment notifications, public engagement, emergency response, and shipment security.

iii) *Section 180(c) AHWG*: Mr. Snee asked Swapan Saha (Kansas) to give a report on the NTSF Section 180(c) AHWG. Mr. Saha said that the purpose of the NTSF Section 180(c) AHWG is to continue to evaluate the DOE's proposed policy for implementing Section 180(c) of the Nuclear Waste Policy Act of 1982, as amended. Section 180(c) requires the department to provide technical and financial assistance to States and Tribes for the training of public safety officials to prepare for DOE-led SNF shipments. The group's first meeting was at the 2022 Annual Meeting of the NTSF in Philadelphia, PA, in June. Since then, the group met virtually on September 22. During that meeting, the group continued to discuss the lessons learned from the 2014 – 2016 Section 180(c) Policy Implementation Exercise. Notably, this exercise showed that the capabilities of states and Tribes to apply for grants and create programs to use these funds varied greatly. In part, this underscored the need for federal grant application guidance and help setting programs up. Mr. Gothard, Mr. Saha, Ryan Seabaugh (Missouri), and Mr. Arvidson represent the Midwest on the AHWG. Ms. Hogan leads the ad hoc working group for DOE. Several ideas were discussed in the September 22 meeting including developing long-term and short-term tasks, developing guidance within a certain timeframe, or funding regional groups to develop the guidance, review and finalization of the grant template that was used for the mock exercise, etc. Finally, it was concluded that the AHWG will identify outstanding issues/activities necessary for successful implementation of the policy including, but not limited to, allocation of funds, allowable activities, development of grant guidance documents, and a technical assistance plan. The goal of the group is to help DOE consider issues of importance to State, Tribal, and other government entities to effectively conduct planning and training for emergency response in support of a national SNF shipping program, document work done through white papers, also known as issue papers, and make that work available to the NTSF community.

iv) *SNF Rail/Routing AHWG*: Mr. Snee asked Mr. Rumas to give a report on the NTSF SNF Rail/Routing AHWG. Mr. Rumas stated that the purpose of the AHWG is three-fold. First, to facilitate dialogue between federal staff from DOE, the FRA, Tribes and states, and other transportation stakeholders. Second, to develop a common understanding of how future rail shipments of SNF will operate. Third, to identify outstanding issues or questions to resolve in advance of commencing rail-based spent nuclear fuel shipping campaigns. The goal of the working group is to identify key issues relating to rail transport from the NTSF community, address those issues and document work done through white papers or summary reports and make that work available to the NTSF community. Since the 2022 Annual Meeting of the NTSF, this AHWG met virtually on September 20. During that meeting the group discussed and updated a matrix of truck shipment out-of-service criteria based on Commercial Vehicle Safety Alliance (CVSA) Level VI inspections compared to rail shipment out-of-service criteria based on applicable federal regulation, American Association of Railroads (AAR) standards, and industry recommended practices. Additionally, this group has been busy reviewing the proposed SNF Railcar Inspection Protocol that is being produced by DOE-NE. The group is also awaiting a revised version of the FRA's Safety Compliance and Coordination Oversight Plan (SCCOP). When this document is released, the AHWG will review and provide comments. The purpose of the SCCOP is to establish a comprehensive task plan that can be used as a planning document for coordination of activities associated with rail shipments of spent nuclear fuel and high-level radioactive waste. Edward Engle (Iowa), Kelly Horn (Illinois), Jamie Reyes (Nebraska), Mr. Rumas, Waylon Sanford (Michigan), Brian Vercruysse (Illinois), and Mr. Arvidson represent the Midwest on the AHWG. Ms. Hogan leads the group for DOE.

v) *Spent Fuel Transportation Materials AHWG*: Mr. Snee asked Mr. Arvidson to give a report on the NTSF Spent Fuel Transportation Materials AHWG. Mr. Arvidson reported that the goal of this

AHWG is to help DOE effectively and accurately communicate about planned DOE SNF transportation and associated SNF management activities, including federal interim storage. The AHWG will provide input to DOE-NE on developing messaging, strategies, and products to communicate effectively with Tribes, States, the general public, and other stakeholders on SNF transportation and management activities and issues. The AHWG's first meeting was at the 2022 Annual Meeting of the NTSF. Based on feedback at this meeting, the group's name was changed from "Spent Fuel Transportation Materials AHWG" to "SNF Management – Communications and Outreach AHWG." The AHWG also provided productive comments on DOE's consent-based siting flyer, website, and CURIE interface. The group will next meet in late October or early November. Mr. Arvidson is currently the Midwest's only representative on the AHWG.

3. Conceptual Interim Storage Facility Designs

a. Mr. Snee introduced Joe Carter, who is an Advisor to the Pacific Northwest National Laboratory (PNNL). Mr. Snee invited Joe to give a presentation on the conceptual designs for DOE's future SNF interim consolidated interim storage facility or facilities (CISF). He noted that this presentation was first given during the DOE-NE Transportation Core Group Meeting in Cincinnati in August and thanked Mr. Carter for joining the MRMTC Meeting.

b. Mr. Carter discussed the reference design concept and purpose of the CISF. The concept provides a starting point for discussion topics such as the pros and cons of vertical or horizontal cask orientation. The reference concept utilizes casks on a pad, for which licensing strategies are simplified. However, the potential host site may have other preferences. The site plan includes an owner-controlled area of 5.5 square miles, an operations area of 1.9 sq. miles, and protected areas. The site would include security and inspection structures, cask handling and transfer facility, dry storage pad, and a protected area railyard. At completion, the owner-controlled area would store 70,000 metric tons of uranium (MTU). Discussion continued with a detailed view of the cask handling building plan. The seminal details of the plan include two operating lines with dual railcars unloading north and south, two 230-ton cranes, cells providing shielding and natural hazard protection, and seismic and natural hazard qualified buildings. The vertical cask handling concept includes security inspections upon entry into the protected area and receipt inspection activities conducted upon entering the cask handling building. At that point, the transportation cask is up-righted and moved to its storage cell. For horizontal cask transfers, the railcar would be unloaded in the cask handling building, placed on a horizontal transporter, and then transferred to storage pad. The dry storage pad will be built to withstand natural hazards and seismic events. Further discussion of the dry storage pad indicated its size at 125 acres, slightly larger than Disneyworld's Magic Kingdom.

c. The Inspection and Remediation Facility (IRF) concept is not required for initial operations. The CISF will have 6,000 – 12,000 dual purpose canisters (DPC) in storage under aging management plans and continued in-situ canister inspections are not practical. The IRF provides capabilities to receive a cask from storage and reorient the DPC. In the Packaging Facility plan, the reorientation (hot) cell can be accessed from both sides and the fuel handling gallery connects the cells. The facility's capacity will be defined by the number of cells and the size of the loaded canisters.

d. The total estimated cost for the facility is $623.8 – 864.3 million. Total project costs are estimated at $734 – 1,000 million. Staffing will include about 190 full-time employees with a receipt rate of 1,500 MTUs per year. Melanie Snyder (Western Interstate Energy Board (WIEB)) asked if the conceptual CISF could handle two locomotives at the same time? Mr. Carter will check but he believes so. Mr. Johnson asked if there would be a spent fuel pool or any kind of wet storage. Mr. Carter said they don't intend to do this level of handling of the waste. Mr. Johnson also asked about the shipping queue and the receipt order for waste. Mr. Carter said that was unknown at this time. Finally, Ms. Snyder asked how these designs fit into the consent-based siting process? Mr. Carter replied that it depends. If communities want to receive this presentation, he will certainly do so and DOE-NE and PNNL want the process to be community-led through and through.

e. Click here for Mr. Carter's presentation.

4. Non-Compliant Railcar Transportation of Class 7 Low-Level Radioactive Waste

a. Mr. Snee introduced Jeff Moore, who is a Hazardous Materials Specialist with the FRA and Mr. Horn, who is a Health Physicist with the Illinois Emergency Management Agency (IEMA). Mr. Snee invited Jeff and Kelly to give a presentation on an example of a non-compliant railcar transportation of Class 7 LLW.

b. The presenters provided a background on the LLW generator site, a former site of a carnotite ore extraction facility at which elemental radium (Ra-220) was extracted in the early 20th century. The City of Chicago acquired the property in support of its bid for the 2016 Summer Olympics. Site characterization data found that the items of concern were total U, Th-230, and Ra-226. Approximately 17,000 cubic yards of waste were generated and were to be sent to Waste Control Specialists (WCS) in west Texas.

c. The presenters then provided a background on the Covered Hopper Investigation. FRA was informed of two rail cars that were bad ordered in Salem, IL. Railcars are put into bad order status when the car requires any repair to running gear or safety appliances. FRA made several inquiries to the Class I rail carrier, Union Pacific, for details of the damage. The railcars had three of their five structural brace supports removed to accommodate loading of the waste bags. At that point, RFA had not determined how many cars were modified, but it was determined that no approval was obtained from the car owner or the AAR. The shipper/transportation contractor involved was the City of Chicago's prime contractor and a subcontractor at a truck to rail transload location was found to be cutting the braces. This triggered an NRC Report #1346116. It was determined that the contractor had leased 25 cars and all 25 were modified. Currently, all cars are stopped in various locations between Chicago, Arkansas, and Texas. The licensee is listed as the City of Chicago. The car owner and AAR never knew of, or approved, modifications. This places the majority of the blame with the contractor.

d. Click here for Mr. Moore and Mr. Horn's presentation.

5. Iowa Virtual Reality Demonstration

a. Before breaking for lunch, Christopher Boswell (Iowa) demonstrated Iowa's CVSA Level VI virtual reality training program while Angela Leek (Iowa) described the process of developing the program.

6. Edgemont, South Dakota, Disposal Site Presentation

a. After lunch, Mr. Snee called the meeting back to order and introduced Nicole Keller, who is the Edgemont Site Manager for DOE-LM. He let attendees know that the Edgemont site is a former uranium mill located about 84 miles southwest of Rapid City. The MRMTC is so focused on the process of removing and transporting radioactive materials away from DOE-owned sites around the region, that it might be interesting to take a look at a site that has completed that mission and learned what happens after the cleanup. He invited Ms. Keller to give a presentation on the Edgemont, South Dakota, disposal site.

b. Ms. Keller gave a snapshot of the Edgemont remediation process. Over 500,000 hauling miles were recorded. Mill tailings, contaminated soil, building equipment, materials, and debris were moved 2 miles to the disposal site. The disposal site occupies 360 acres, and the disposal cell occupies about 100 acres. The processing site occupies 254 acres and is bisected by Cottonwood Creek.

c. Next, Ms. Keller described the Edgemont disposal and processing site's timeline. In 1956, the mill was constructed by Mines Development, Inc. In 1972, milling operations ceased. In 1974, the Tennessee Valley Authority (TVA) acquired the mill but never operated the mill. From 1983-1984, the original disposal site closure design was completed and revised. In 1986, the NRC required TVA to begin decommissioning activities, which were completed in 1989. In 1996, the site title was transferred from TVA to DOE.

d. Ms. Keller then discussed the remedial actions in the Edgemont vicinity. Thoroughfares were traversed by a mobile gamma-ray scanning van operated by Oak Ridge National Laboratory. Vicinity property clean-up was completed in 1988. 29 of the 41 acres of the Pine Hills were cleared and revegetated.

e. The Edgemont disposal haul road was constructed from the processing site to the disposal site in 1983. It was designed to accommodate 35-ton payload off-highway haul vehicles. As part of the site's long-term surveillance and maintenance program, DOE-LM observed that the Indian Canyon Fire burned across the

site in 2016. Afterwards a fire break was dredged across the site and surveillance revealed that the fire did not appear to cause harm to any of the engineered features of the disposal site and cell.

f. Today, the Edgemont Disposal Site has boundary monuments, site markers, fencing, and perimeter signs. The future of the site involves system operation and analysis at remote sites (SOARS) and will involve the National Weather Services.

g. Mr. Johnson asked whether any testing of local cattle or wildlife had been completed. The answer was negative, though water testing had been completed. Mr. Arvidson inquired about the transition process from DOE-EM management to DOE-LM management. The answer explained that it is a three-year process of records and data transfer once all tests show the site is non-radioactive. Mr. Arnold inquired about tribal involvement and was told the NRC's federal action leads to NRC's consulting with Tribes.

h. Click here for Ms. Keller's presentation.

7. Community Preparedness and Planning Pilot Framework

a. Mr. Snee introduced Miriam Juckett and Amy Minor. Ms. Juckett is a Senior Program Manager and Mr. Minor is a Senior Research Scientist, both at the Southwest Research Institute (SwRI). He let attendees know that CSG Midwest has come to an agreement with SwRI for them to analyze several Midwestern communities on their preparedness for dealing with future SNF shipments. SwRI will deliver a preliminary report and a final report to the MRMTC in the next several months and they came to Rapid City to introduce the project to the committee. Mr. Snee invited Ms. Juckett and Ms. Minor to give a presentation on SwRI's community preparedness and planning pilot framework.

b. The presenters began by describing their group, the Center for Nuclear Waste Regulatory Analyses, which was established in 1987 as an NRC Federally Funded Research and Development Center (FFRDC). The department works on the nuclear "cradle to grave" with a SNF focus, environmental impacts, and stakeholder engagement. This SNF transportation and stakeholder focus led to the creation of SwRI's project with WIEB, funded through WIEB's DOE-NE cooperative agreement. With an initial focus on Western states, that project started mid-August 2021. The WEIB case study was completed in March 2022.

c. SwRI's project goal is to create a community-focused decision-framework regarding the transportation of SNF. Community characteristics, preparedness, and vulnerability are the main framework indicators. The project makes four major assumptions. 1) DOE ships the SNF, 2) communities have access to Nuclear Waste Policy Act (NWPA) Section 180(c) funds, 3) SNF shipped via rail, and 4) shipments occur under a non-radiological release scenario.

d. The indicator categories include emergency services, transportation, socioeconomic position, minority status and languages, etc. The analysis considers both qualitative (air quality) and quantitative (poverty level) indicators. How can you consider qualitative and quantitative indicators at the same time? The answer is to scale all indicators from 1 – 5 with 5 being the most prepared/least vulnerable. Then, indicators need to be weighted 1 – 5 to indicate relative influence on community preparedness or vulnerability. Put all together, the framework is built in Excel and gives an overall framework score of 0 – 100.

e. Next, the presenters discussed the case study of Salt Lake City, UT.

f. Then, they described the current state of the Pilot Framework. This framework compiles community characteristics from various data sources to disclose and highlight preparedness factors and vulnerabilities relevant to an SNF transportation campaign. Factors contributing most to overall score are highlighted. Overall score provides information and comparison capability, and the case study demonstrates applicability and validity.

g. The presenters then discussed the next phase of development. Part I of the next phase is benchmarking in Midwest. The minimum 10 cities chosen should balance big vs. small, rural vs. urban, and near vs. away from reactor. Part II is a targeted ground-truthing exercise in which SwRI works with CSG Midwest to determine a city and discuss the indicators/scaling with that city. Part III will be benchmarking outside the

Midwest and ground-truthing adjustments. The planned outcomes are a draft and final report and presentation(s) at future MRMTC meetings.

h. Mr. Johnson asked if one can trust the outcomes based on a changing economy. The presenters responded that yes, because economic factors should affect all indicators and outcomes, i.e., "a rising tide lifts all boats." Wade DeHaas (Pennsylvania) asked how SwRI tests the numbers given. The presenters responded that they don't and that the numbers are more to give ideas for communications and action. Aaron Kallunki (Minnesota) asked if the framework is public and if attendees could see the inputs. The presenters responded that yes, the inputs will be part of the draft and final reports. Mr. Rumas asked what the maximum distance is away from a known rail route that a community can be to be analyzed. The presenters responded that that is still to be decided and communities don't have to be near a route to be benchmarked. They added that they don't have a specific number for what is considered close and what is considered far.

i. Click here for Ms. Juckett and Ms. Minor's presentation.

8. Prairie Island Dose Assessment

a. Mr. Snee introduced Steve Maheras, who is a Nuclear Engineer with PNNL. He invited Mr. Maheras to give a presentation on his trip to the Prairie Island Indian Community in Minnesota earlier this year to complete radiation dose predictions for future rail shipments through the community.

b. No notes were taken during Mr. Mahera's presentation, but you can find the slides below.

c. Mr. Arnold asked how long Mr. Maheras was in the field and was told it was half day on the first day, all day the second day, and he met with the Tribal Council at the end of the second day. Mr. DeHaas asked about the statistical probability of rail accidents and Ms. Bickford answered by referencing the rail corridor risk management system. Finally, Mr. Rumas asked about isotropic analyses and was told that just gamma measurements were taken.

d. Click here for Mr. Maheras' presentation.

9. Ukraine Nuclear Sites Presentation

a. Mr. Snee introduced Ken Keaton, who is a TEPP Regional Coordinator with Technical Resources Group (TRG), which is the company contracted by DOE to run the TEPP program. Mr. Snee let attendees know that Ken, along with Tom Clawson (TRG), have been involved with volunteering efforts in Ukraine for years. He then invited Mr. Keaton to give a presentation on the Ukraine nuclear sites.

b. By way of introduction, Mr. Keaton said he had worked as Chief of Savannah River Site Fire Department for 25 years before moving to TEPP.

c. Mr. Keaton started off by giving a little bit of background information. After the Chernobyl accident, there were considerable quantities of airborne contamination for nine days, mostly wafting into Belarus. Approximately 150,000 square km were contaminated, and firefighters were decontaminating cars at the German border. He is often asked, why visit Chernobyl? Mr. Keaton said that it represents an unparalleled place to view widespread environmental contamination and cited the appeal of the Ukrainian people, culture, and cuisine. Additionally, he has developed working relationships there over time. He stayed in the city of Slavutych, Ukraine, a city built for the purpose of running Chernobyl. Everyone in town takes the 30-mile train into the facility. The background radiation levels are above 200 microrems on the train in. In 2021, more than half (55.5%) of Ukraine's power was generated by nuclear technology. Mr. Rumas asked whether speaker was able to see the Red Forest and was told, yes, they drove through it. Mr. Gothard asked about speaker's total exposure and was told that a full body reading was not taken. Someone asked whether anyone "got popped" on decontamination and was told no one in the group had.

10. Adjourn for the Day

Wednesday, October 12

1. Regional Roundtable

a. Mr. Snee welcomed everyone back to the meeting and let attendees know that today would only be a half-day and the meeting would end right at noon. He noted that there was 60 minutes for the states and Tribes to give their brief updates and reminded them to focus on transportation, nuclear power plants in their states, and anything else they think is of interest to the committee.

b. Illinois: Mr. Pitchford delivered Illinois' report. In the last year, Illinois experienced 1,001 LLW shipments through September, primarily from the Carnotite site. There were also 12 non-highway route controlled quantity (HRCQ) shipments, 2 SNF shipments, and no WIPP shipments. There have been no violations. The Honeywell Metropolis Works Facility was the only uranium hexafluoride conversion facility in the U.S. It was shut down in 2017 but it is looking to become fully operational again in 2023.

c. Indiana: Kaci Studer delivered Indiana's report. Indiana experienced 40 LLW shipments and 40 HRCQ shipments in the last year. Additionally, the state held no trainings and had significant staff changes.

d. Iowa: Ms. Leek and Mr. Boswell delivered Iowa's report. Training has been a focus for the state. The Iowa Department of Public Health (IDPH) and the Iowa Department of Human Services (DHS) will become one, single department called the Iowa Department of Health and Human Services (IDHHS). Additionally, Duane Arnold moved all SNF onto the site's independent spent fuel storage installation (ISFSI) in April and is moving into SAFSTOR decommissioning. There were a few HRCQ shipments and no WIPP shipments. The state expects more shipments if Duane Arnold leaves SAFSTOR. Finally, they reported that there will be a full Modular Emergency Response Radiological Transportation Training (MERRTT) Class in Ankeny, IA, at the end of October.

e. Kansas: Mr. Saha delivered Kansas' report. The state has had a few LLW and medical isotope shipments. There have been no trainings, but the state is teaming up with local stakeholders to see what is needed.

f. Michigan: Mr. Gothard delivered Michigan's report. Palisades is fully shut down and defueled. Holtec has taken over the license but retained a lot of Entergy staff. They will consolidate two ISFSIs into one. Finally, he reported that Niowave Inc. is a company in Lansing looking to make Molybdenum-99 (Mo-99).

g. Minnesota: Mr. Kallunki delivered Minnesota's report. This year, the state only had one non-HRCQ shipment. He asked why shippers were avoiding Minnesota and routing around the state and saw shipments dropped afterwards. However, he also noted that all shipments across the Midwest have dropped. Mr. Kallunki would like to talk with other committee members about that drop.

h. Missouri: Mr. Seabaugh delivered Missouri's report. The state has experienced 212 total shipments, six of which were HRCQ.

i. North Dakota: David Stradinger delivered North Dakota's report. North Dakota has experienced eight HRCQ shipments from sealed sources for irradiators and medical uses. Highway patrol picks and chooses which ones to inspect, usually those coming from Canada. Mr. Stradinger told the audience that 51,000 tons of Technologically Enhanced Naturally Occurring Radioactive Material (TENORM) went out of state last year. Currently, the state has one permitted waste site and a landfill waiting for a TENORM license. Finally, he described the state's HLW legislative group.

j. Ohio: Mr. Rumas delivered Ohio's report. The state had two HRCQ point of origin shipments. Ohio had a two-day TEPP class in June and one-day classes held in Cleveland and Youngstown. Additionally, a dry run exercise was completed at the Perry Nuclear Power Plant. Finally, Mr. Rumas reported that Ohio is seeing a steady stream of LLW coming from the Vermont Yankee decommissioning.

k. South Dakota: Nick Emme delivered South Dakota's report. The state is seeing similar numbers as North Dakota. There were five HRCQ and three non-HRCQ Category 1 shipments going through the eastern side of the state down I-29.

l. Wisconsin: Mark Paulson delivered Wisconsin's report. Kewaunee Nuclear Power Plant is in early decommissioning. Wisconsin had no HRCQ shipments. In the next few years, Northstar Medical Isotopes will be shipping soon.

m. Pahrump Paiute Tribe/TRMTC: Mr. Arnold delivered the Pahrump Paiute Tribe and TRMTC reports. He indicated a new website and logo for TRMTC is in development. A meeting was held in San Diego last year and they are beginning to plan for next meeting. TRMTC developed comments on several federal documents, sent a letter on the SCCOP, participated in the various SRG groups, and are looking to expand membership to include the Pokagon Band of Pottawatomi. TRMTC is working with Jennifer Kanine of the Pokagon Band to get them into TRMTC, and the Nuclear Energy Tribal Working Group (NETWG) too. Mr. Arnold expressed gladness about the cooperation between DOE and the Prairie Island Indian Community. Finally, tribal universities and Oklahoma University are looking at opportunities related to CBS funding.

n. Prairie Island Indian Community: Mr. Johnson delivered Prairie Island Indian Community's report. He said that tribal leadership will take a trip to Camden, NJ, to the headquarters of Holtec. He also expressed that they want Prairie Island want to serve as a model for other Tribes when it comes to activities like the dose assessment project.

2. Cooperative Agreement Group Reports

a. Mr. Snee reminded the committee that, including the Midwest, there are five groups that have cooperative agreements with DOE. He invited each person representing the regional cooperative agreement groups to provide an update on their groups' activities.

b. CSG Eastern Regional Conference: Mr. DeHaas delivered CSG Eastern Regional Conference's report. Three Mile Island (TMI) Unit 1 shut down in December 2019. The East's meeting is scheduled for October 26-27. The region hosted the 2022 Annual Meeting of the NTSF meeting in June. Finally, Mr. DeHaas reported that TMI 2 has some remaining waste to be shipped off site.

c. Southern States Energy Board (SSEB): Mr. Wells delivered SSEB's report. The board's Annual Meeting was held August 28 – 30 in South Carolina with South Carolina Gov. Henry McMaster, Arkansas Gov. Asa Hutchison, and former Mississippi Gov. Phil Bryant in attendance. Nuclear energy and small modular reactors (SMRs) were a huge topic at the meeting. Mr. Wells was on a phone call with Gov. Bryant talking about siting an ISFSI in Mississippi. In other committee happenings, SSEB has reviewed the WIPP Transportation Plan, making comments on safe parking criteria and places. There is a radiation specialist course scheduled for December 5 – 9 in Nashville. Finally, SSEB's radioactive materials-related committees will meet on December 13 – 14 in Dallas.

d. Western Interstate Energy Board (WIEB): Ms. Snyder reported that WIEB will have two full days of meetings in San Diego in November. The committees are continuing their work on SwRI's Pilot Project, including more case studies and ground-truthing. She commented that the California legislature saved Diablo Canyon. Finally, Ms. Snyder discussed Nevada's legal filing to completely kill Yucca Mountain as a possible SNF deep geologic repository (DGR).

3. Transportation Emergency Preparedness Program (TEPP) Update

a. Mr. Snee reintroduced Mr. Keaton and thanked him again for his presentation the previous day on the Ukraine nuclear sites. He then invited Mr. Keaton to give an update on TEPP.

b. Mr. Keaton stated that TEPP's mission is to ensure that federal, state, tribal, and local responders have access to the plans, training, and technical assistance necessary to safely, efficiently, and effectively respond to transportation accidents involving DOE-owned radioactive materials.

c. In FY 2022, the Midwest had two classes led by DOE/TEPP and four classes led by state instructors with a total of 112 students attending. In FY 2023, TEPP plans to do about 20 MERRTT or Consolidated MERRTT (CMERRTT) sessions, about 10 Technician MERRTT (TMERRTT) sessions, about two hospital sessions, and about one radiation specialist session.

d. Mr. Keaton then discussed TEPP's program improvements. There is now an online MERRTT refresher training available at www.teppinfo.com. There are revised job aids, including those for first responder and hazardous materials responder dressup and dressdown decontamination.

e. Speaking about agency cooperation, TEPP continues to work with the NNSA Office of Secure Transportation (OST) and with the Federal Emergency Management Agency (FEMA) Center for Domestic Preparedness (CDP) in Anniston, AL.

f. Mr. Johnson asked how TEPP handles shelter in place. The answer indicated that the training includes a shelter in place module. Ms. Edge said she is working on communications training course. Mr. Arvidson asked about how the funding and scheduling of TEPP courses is set. Mr. Keaton said that these were set by DOE and the contacts were Mr. Arvidson, Ms. Edge, or Mark Linsley (TRG/TEPP).

g. Click here for Mr. Keaton's presentation.

4. Commercial Vehicle Safety Alliance (CVSA) Report

a. Mr. Snee reintroduced Mr. Horn and thanked him again for his presentation the previous day on the example of a non-compliant railcar transportation of Class 7 LLW. He then invited Mr. Horn to give a report on the CVSA.

b. Mr. Horn explained that he was giving the same report that Carlisle Smith, CVSA Level VI Inspection Specialist, would give. The report is available on the MRMTC webpage.

c. In FY23, CVSA continues to focus on public outreach at events like the NTSF and the International Fire Chief conference. Additionally, CVSA is working on updating of some of their training videos.

5. Committee Business Session

a. Table Resetting: Mr. Snee thanked everyone for their participation the last two days and let them know that they would be finishing the MRMTC Fall 2022 Meeting with the Committee Business Session. He let attendees know that all the presentations would be posted to the MRMTC website by the end of the week and that they should expect a reimbursement form to be sent to them by Mr. Arvidson next week and reminded attendees to save any travel-related receipts from the meeting.

b. Chair's Report: Mr. Snee delivered the Chair's Report, which is an opportunity to reflect on the current status of the committee and interesting projects. He discussed the Midwest's hosting of the next NTSF Meeting, the committee's new project with SwRI, encouraged state members to seek ways to increase their outreach to Tribes in their states, and encouraged people to seek out training and learning opportunities that CSG Midwest could cover travel expenses for.

c. Project Update: Mr. Arvidson provided an update on the Midwestern Radioactive Materials Transportation Project (MRMTP). He informed attendees that CSG Midwest currently has a cooperative agreement with DOE-NE that will run until September 30, 2026. This agreement funds work on future SNF shipments, biannual MRMTC meetings, the MRMTC Regional Tribal Engagement Work Group, Transportation Core Group Meetings, relevant NTSF AHWGs, and other activities. Its cooperative agreement with DOE-CBFO was granted a 12-month no-cost extension that will run until June 30, 2023. This agreement funds work on TRU waste shipments to WIPP, biannual MRMTC meetings, subaward agreements with Illinois and Iowa, and other activities. Finally, CSG Midwest has a cooperative agreement with DOE-OPT that is ending on March 31, 2023. CSG Midwest will submit an application for a new four and a half-year agreement with DOE-OPT by October 31, 2022. This agreement funds work on non-SNF shipments of radioactive materials by DOE, biannual MRMTC meetings, NTSF meetings like the 2023 Annual Meeting hosted by the Midwest, relevant NTSF AHWGs, and other activities. Overall, the funding received or expected will be sufficient to cover all regular project activities, including information and communications activities. In addition, travel funding is available to MRMTC members and other Midwestern state personnel who are interested in transportation-related trainings or exercises. Funding is also available to cover travel in connection with the committee's Regional Tribal Engagement work. State rail safety personnel from the Midwestern states

will be eligible for reimbursement of travel expenses for attending committee meetings and NTSF annual meetings.

Regarding staffing, Mr. Arvidson remains the Program Manager and sole staffer of the MRMTP. Kathy Treland (CSG Midwest) provides administrative support to the project. CSG Midwest is planning to hire a Policy Analyst by January 2023 to assist Mr. Arvidson.

Since the MRMTC Spring 2022 Meeting, a gubernatorial appointment was received from Wisconsin. Ruhamah Bauman of Wisconsin Emergency Management was appointed by Gov. Tony Evers. In turn, they designated Mark Paulson of the Wisconsin Department of Health Services as the state's official alternate. Welcome Ruhamah and Mark! On the other hand, the MRMTC lost Sarah Chaney (Indiana) as she took a federal contractor position. Longtime committee member, Paul Schmidt (Wisconsin) also left the committee as he retired. The MRMTC is currently awaiting a gubernatorial appointment from Indiana.

Mr. Arvidson then described how CSG Midwest hosts the NTSF website, https://www.ntsf.info/. He, Ms. Bickford, and Ms. Edge populate and maintain the site and AHWG leads, and Annual Meeting hosts are expected to maintain their portions of the website.

Next, Mr. Arvidson discussed transportation planning. DOE-OPT's PSR provides preliminary planning information on long-term shipping campaigns and other high-visibility and hazardous materials shipments as designated by DOE. In the most recent bi-annual edition, one campaign was listed that will travel through the Midwest. Three separate one-cask truck shipments of SNF will travel from the Missouri University Research Reactor (MURR) in Columbia, MO, to the Savannah River Site (SRS) near Aiken, SC. For this campaign, a shipment occurred in September 2022, one will occur in November 2022, and the final one will occur in May 2023.

Speaking on information and communication, Mr. Arvidson said that after several months of delay, the 2021-22 tracker on state and federal legislation related to nuclear energy and radioactive waste was created. The tracker can be found on the MRMTP Resources page of the CSG Midwest website. He encouraged attendees to let him know if they learn of any legislation that should be added to the tracker. Monthly e-newsletters continue to be distributed on the first Thursday of each month. Members and other readers should share any news items of interest, including announcements of personnel changes, with Mr. Arvidson. Finally, CSG Midwest maintains several webpages for the MRMTP and the MRMTC. If committee members have any suggestions for the MRMTC webpages, please contact Mr. Arvidson. These webpages can be found at https://csgmidwest.org/about-us/mrmtp/.

d. DOE-NE Transportation Core Group Update: Mr. Snee let attendees know that the next few updates would revolve around other meetings and events of note that committee members had attended in the last several months. He turned the floor over to Mr. Pitchford for an update on the DOE-NE Transportation Core Group Meeting that took place in Cincinnati, OH, in late August. Mr. Pitchford stated that attendees at the core group meeting learned about DOE-IWM programs and events, and he reviewed the meetings' agenda and attendees.

e. Naval SNF Transportation Exercise Demonstration: Mr. Snee invited Mr. Seabaugh to give an update on the Naval Nuclear Propulsion Program (NNPP) Accident Demonstration Exercise that took place in Moberly, MO, in September. Mr. Seabaugh started off by stating that Mark Saloman of the NNPP was the exercise's main organizer and his main point of contact. Mr. Seabaugh himself acted in the State of Missouri coordinator role, which involved organizing planning committees and mock exercises. The offices participating in the exercise included the Missouri Department of Natural Resources, the Missouri Department of Transportation, Missouri Highway Patrol, and the Missouri Department of Health. The exercise scenario was that a boom truck would strike a SNF NNPP shipment at an at-grade railroad crossing. There would be minor damage to heat dissipation fins and minor injuries to truck driver. The rest of the day was spent showing how the various agencies and responders would operate together. Mr. Rumas asked about the extensiveness of the planning and was told it took approximately a year of planning from when Mr. Seabaugh was hired, though a good deal of planning took place prior to his hire.

f. Palisades Nuclear Power Plant Site Visits: Mr. Snee then asked Mr. Gothard to give an update on the Palisades Nuclear Power Plant Infrastructure Site Visit that took place in southwestern Michigan the week prior. Mr. Gothard discussed the issues raised regarding bringing an SNF rail shipment through Chicago. Shipments will instead be routed through central Michigan, down through Ohio, Indiana, and over to St. Louis. He also observed that the Gun Lake Band of Pottawatomi will need to be contacted. Mr. Maheras added that the Chicago restriction isn't guaranteed, as it is more of a preference and not a regulation.

g. Regional Tribal Engagement Work Group: Mr. Snee invited Mr. Kallunki to give an update on the MRMTC Regional Tribal Engagement Work Group. Mr. Kallunki reported that the work group's purpose is to help MRMTC representatives' outreach to Tribes in their states. This is done through collaboration with TRMTC, Midwestern tribal representatives, federal agencies, and members of the MRMTC. There is great interest amongst the region's states in sharing information with, and collaborating with, Tribes regarding transportation of spent fuel and other radioactive materials. By working through the regional committee, it may be possible to overcome barriers that states have encountered in the past. Since the last MRMTC meeting in June, the work group met via Zoom on September 26. The group heard reports from members on recent and upcoming activities of interest. During the meeting, it was decided that Mr. Arvidson would speak with a representative of the Pokagon Band of Potawatomi Nation during DOE-NE's Palisades Nuclear Power Plant site visit, to determine if the Tribe might be interested in joining TRMTC. The southwest Michigan-based Pokagon Band is now strongly considering joining TRMTC. The work group is also working with the Michigan State Police and consulting with TRMTC for the first steps of planning a RADMAT or similar training specifically for Tribes in Michigan that have been, or will be, affected by shipments of radioactive material, including spent nuclear fuel. Mr. Johnson asked if Minnesota Gov. Tim Walz has any executive orders regarding tribal consultation. Mr. Kallunki responded that he didn't know but that he could check. Mr. Johnson added that he believes the Shakopee Nation and the Mille Lacs Band of Ojibwe should become involved with this work.

h. Election of Co-Chair: Mr. Pitchford led the election process and reminded members that the committee is led by two co-chairs who serve staggered two-year terms. Mr. Snee has been the Senior Co-Chair for well over a year now and his term will be ending at the end of 2022. He thanked Mr. Snee for his service to the committee. He announced that at this time, the committee would elect a new co-chair whose service would begin January 1, 2023 and finish at the end of 2024. Mr. Pitchford reminded members that, under the committee's rules, only appointees or designated alternates can serve as co-chair. Additionally, only appointees and designated alternates can nominate candidates. However, in order to maintain a one state, one vote structure, only gubernatorial appointees may cast a vote. Designated alternates may only vote if gubernatorial appointees are not in attendance.

   Mr. Pitchford then sought nominations and seconds. Mr. Boswell nominated Mr. Rumas and Mr. Saha seconded this nomination. Mr. Horn nominated Mr. Sanford and Mr. Gothard seconded this nomination. Mr. Pitchford then invited Mr. Rumas to say a few words about why he wished to lead the committee and what he hoped to accomplish as a co-chair. Mr. Sanford was not in attendance at the meeting. After collecting committee members' votes on slips of paper, Mr. Arvidson tallied the votes. Mr. Pitchford announced that Mr. Rumas had been elected as the new co-chair and congratulated him.

i. Committee Work Group Assignments and Plans: Mr. Pitchford then turned to committee work group assignments and plans. He stated that examples of past committee groups could be found on the pink sheet in the briefing folders. He stated that over the course of the meeting, it may have become apparent if any committee work groups needed to be formed. He also asked committee members if they had any suggestions for projects and/or work groups to carry out these projects. At this point the idea of forming a work group to manage the SwRI project was denied. Mr. Pitchford said that one committee work group that definitely needed to be formed was the biennial *Planning Guide* Review Work Group. Every odd-numbered year, members of the MRMTC assist staff to review and revise the "Part II. Recommended Practices" section in the *Planning Guide for Shipments of Radioactive Material through the Midwestern States*. With that being said, it was decided that Mr. Horn and Mr. Saha would join the NTSF SNF Management AHWG. Also, Mr. Emme, Mr. Gothard, and Mr. Paulson would form the *Planning Guide* Review Work Group.

j. NTSF 2023 and MRMTC Spring 2023 Meetings Discussion: Mr. Pitchford then invited Mr. Arvidson to lead a discussion on the NTSF 2023 and MRMTC Spring 2023 Meetings. Mr. Arvidson discussed the current status of both meetings and asked for input on possible sessions for both meetings. Here were the topics suggested: Iowa and ANL virtual reality, DOE-NE and various national labs' Package Performance Evaluation, progress at the Portsmouth Gaseous Diffusion Plant, the Prairie Island Indian Community dose assessment, and the future of nuclear energy and its workforce. The group also discussed possible tour opportunities, such as a St. Louis railroad hump-yard, holding a communication workshop, or the DOE-LM Weldon Springs Site.

6. Wrap-Up

a. Review Action Items: Mr. Arvidson reviewed the action items that he and other attendees should take away from the MRMTC Fall 2022 Meeting.

b. Closing Remarks: Mr. Snee gave some closing remarks about the meeting and reflected on his two years as co-chair, giving some advice to the committee and the 2023 Co-Chairs.

7. Adjourn

ATTENDEES

Committee Members:
Christopher Boswell, Iowa
Nick Emme, South Dakota
Greg Gothard, Michigan
Kelly Horn, Illinois
Aaron Kallunki, Minnesota
Angela Leek, Iowa
Mark Paulson, Wisconsin
Rodney Pitchford, Illinois
Tad Rumas, Ohio
Swapan Saha, Kansas
Ryan Seabaugh, Missouri
Michael Snee, Ohio
David Stradinger, North Dakota

Tribal Representatives:
Richard Arnold, Pahrump Paiute Tribe/ Consolidated Group of Tribes and Organizations (CGTO)/Tribal Radioactive Materials Transportation Committee (TRMTC)
Ronald Johnson, TRMTC

Speakers:
Erica Bickford, U.S. Department of Energy Office of Nuclear Energy (DOE-NE)
Joe Carter, Pacific Northwest National Laboratory (PNNL)
Ellen Edge, DOE Office of Packaging and Transportation (OPT)
Sara Hogan, DOE-NE

Speakers cont.:
Miriam Juckett, Southwest Research Institute (SwRI)
Ken Keaton, Transportation Resources Group (TRG)
Nicole Keller, DOE Office of Legacy Management (LM)
Steve Maheras, PNNL
James Mason, DOE Carlsbad Field Office (CBFO)/Waste Isolation Pilot Plant (WIPP)
Amy Minor, (SwRI)
Jeffrey Moore, U.S. Department of Transportation (DOT)/Federal Railroad Administration (FRA)
Bobby St. John, Nuclear Waste Partnership/ WIPP

Other State Attendees:
Wade DeHaas, Pennsylvania Department of Environmental Protection

Other Attendees:
Mitch Arvidson, Council of State Governments (CSG) Midwest
Lawrence “Mel” Massaro, DOT/FRA
Paige Schwarz, RSI EnTech
Melanie Snyder, Western Interstate Energy Board (WIEB)
Kaci Studer, Indiana Department of Homeland Security
Kathy Treland, CSG Midwest
Christopher Wells, Southern States Energy Board (SSEB)