

HAZARDOUS MATERIALS ROUNDTABLE

June 2–3, 2026

Sterling, Virginia

Sponsored by the U.S. Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA), the International Association of Fire Chiefs (IAFC), and the U.S. Fire Administration (USFA)



The Roundtable's positions do not necessarily reflect the views of PHMSA, the USFA, or the IAFC.

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1 Executive Summary

The 2026 Hazardous Materials Emergency Response Roundtable (HazMat Roundtable) was held June 2–3, 2026, in Sterling, Virginia. Sponsored by the U.S. Department of Transportation’s Pipeline and Hazardous Materials Safety Administration (PHMSA), in partnership with the Federal Emergency Management Agency (FEMA) U.S. Fire Administration (USFA), and the International Association of Fire Chiefs (IAFC), the Roundtable brought together 49 participants representing federal agencies, state and local governments, emergency response organizations, industry associations, academia, nonprofit organizations, and private-sector stakeholders involved in hazardous materials preparedness, response, recovery, and mitigation activities. The Roundtable provided a collaborative forum for participants to exchange information, discuss emerging challenges, review progress on issues identified during previous Roundtables, and identify opportunities to strengthen the Nation’s hazardous materials preparedness and response capabilities.

The 2026 Roundtable included presentations and updates from federal agencies, national trade (or professional) associations, emergency response organizations, and industry partners. Topics included National Response Center (NRC) modernization efforts, hazardous materials transportation safety initiatives, emergency planning and community right-to-know updates, chemical incident preparedness, responder training effectiveness, rail and marine transportation incident lessons learned, hazardous materials risk analysis, and emerging response technologies. Participants also reviewed ongoing initiatives designed to improve responder readiness, strengthen community preparedness, and enhance coordination among government agencies, industry stakeholders, and emergency response organizations.

A recurring theme throughout the Roundtable was the importance of improving data collection, information quality, information sharing, and data-driven decision-making. Discussions were heavily influenced by ongoing NRC modernization efforts and implementation of the National Emergency Response Information System (NERIS) in 2025, which highlighted opportunities to improve incident reporting, data accessibility, interoperability, dashboard development, and the ability to transform incident information into actionable intelligence for responders, planners, and decision-makers. Participants discussed ongoing efforts to modernize information systems, improve accessibility of incident data, enhance interoperability among agencies and organizations, and leveraging emerging technologies to support preparedness and response activities. Discussions highlighted the need to move beyond simply collecting information and toward developing processes that transform data into actionable intelligence for responders, planners, and decision-makers. Participants also explored the concept of a centralized hazardous materials information-sharing clearinghouse to improve awareness of available resources, training opportunities, funding programs, and preparedness tools.

Participants examined the long-term sustainability of hazardous materials programs and response capabilities. Discussions focused on workforce development, responder recruitment and retention, training accessibility, succession planning, funding limitations, and preservation of specialized hazardous materials capabilities in both urban and rural communities. Several organizations highlighted initiatives designed to improve training delivery, evaluate training effectiveness, and expand access to technical expertise and specialized resources. Training availability for rural emergency responders was also mentioned, with some attendees focusing on this topic.

Community planning, prevention, and mitigation remained a significant focus area. Participants emphasized the importance of strengthening State Emergency Response Commissions (SERCs), Local Emergency Planning Committees (LEPCs), and partnerships among industry, emergency

management agencies, emergency responders, and community stakeholders. Discussions reinforced the need for risk-based planning approaches that align preparedness activities with local hazards, transportation corridors, population centers, and community vulnerabilities. Participants also discussed engaging State Emergency Managers as a key audience and distribution mechanism for preparedness of resources, training opportunities, and hazard information.



The Roundtable also explored emerging hazards and evolving operational challenges facing the hazardous materials response community. Participants discussed lithium-ion battery transportation incidents; Battery Energy Storage Systems (BESS); nuclear fuel transportation preparedness; alternative fuels such as liquefied natural gas (LNG), compressed natural gas (CNG), and hydrogen; and the increasing complexity of transportation-related hazardous materials emergencies. Presentations

examining the One Henry Hudson vessel fire response, rail transportation preparedness initiatives, and Unified Command coordination highlighted the importance of planning, information sharing, and multi-agency collaboration during large-scale incidents.

Technology and innovation were also prominent discussion topics. Participants reviewed ongoing development of Geographic Information System (GIS)-based hazardous materials risk assessment tools, improvements to chemical incident planning resources, advances in emergency response decision-support systems, and the potential benefits and challenges associated with artificial intelligence (AI) and emerging technologies for hazardous materials preparedness and response. Discussions emphasized the importance of ensuring technological advancements remain practical, accessible, and aligned with responder needs while maintaining confidence in the quality and reliability of information used to support operational decision-making.

During Day Two breakout sessions, participants revisited issues identified in previous Roundtable reports and evaluated their continued relevance to the hazardous materials response community. Discussions confirmed that data collection, analysis, and information sharing; HazMat response program sustainment; and community planning, prevention, and mitigation remain critical national issues requiring continued attention. Participants also identified risk-based response and preparedness, as well as technology and emerging hazards, as priority areas for continued collaboration and future Roundtable discussion. Participants emphasized the importance of risk-based preparedness approaches that align planning, training, and resource investments with local hazards, transportation corridors, commodity flows, and community vulnerabilities.

The 2026 HazMat Roundtable reinforced the value of sustained collaboration among government agencies, emergency responders, industry representatives, researchers, and other stakeholders.

Participants agreed that continued communication, information sharing, and coordinated action are essential to addressing emerging threats, strengthening hazardous materials preparedness, and enhancing the Nation’s ability to safely manage increasingly complex hazardous materials incidents. Participants also emphasized the importance of maintaining momentum between annual Roundtable meetings through more frequent and continued collaboration, follow-up activities, and progress tracking on identified priorities and action items.

2 Meeting Participants

2.1 Special Acknowledgements

The 2026 Hazardous Materials Emergency Response Roundtable was made possible through the continued support and collaboration of PHMSA, the USFA, and the IAFC. Their sponsorship and commitment to advancing hazardous materials preparedness and response continue to make the Roundtable possible.

The Roundtable also recognizes the contributions of the presenters, breakout session facilitators, note takers, and participants who shared their expertise, lessons learned, and perspectives throughout the event. Their participation continues to strengthen the national hazardous materials preparedness and response community and supports the advancement of initiatives identified through the Roundtable process.

The Roundtable extends special thanks to the International Association of Fire Fighters (IAFF) for its continued support of the Roundtable and for sponsoring the Day 1 luncheon, providing participants with an additional opportunity to network, exchange ideas, and strengthen professional relationships across the hazardous materials response community.

Finally, the Roundtable extends its appreciation to all members and partner organizations whose continued commitment and collaboration contributes to improving hazardous materials preparedness, prevention, response, recovery, and mitigation capabilities across the Nation.

2.2 Names of Participants and Acronyms

[Appendix A](#) of this report includes a complete list of the Roundtable participants, while [Appendix B](#) lists acronyms used in the report.

3 Welcome

The 2026 Hazardous Materials Emergency Response Roundtable (HazMat Roundtable) convened on June 2–3, 2026, in Sterling, Virginia. Sponsored by PHMSA in partnership with FEMA’s USFA and the IAFC, the Roundtable brought together representatives from federal agencies, state and local governments, emergency response organizations, industry associations, academia, nonprofit organizations, and private-sector stakeholders to discuss issues affecting hazardous materials preparedness, prevention, response, recovery, and mitigation.

The meeting opened with welcoming remarks from William Quade, Associate Administrator for Hazardous Materials Safety, PHMSA; Paul Roberti, Administrator, PHMSA; and Eriks Gabliks, Superintendent of the United States Fire Administration – National Fire Academy (NFA). The speakers welcomed participants and emphasized the importance of collaboration among government agencies, emergency responders, industry representatives, and community stakeholders in addressing hazardous materials challenges and strengthening national preparedness.

The speakers highlighted the value of the HazMat Roundtable as a forum for information sharing, professional engagement, and the exchange of ideas among organizations with diverse

responsibilities and perspectives. Participants were encouraged to use the meeting to discuss current and emerging issues, share lessons learned, identify challenges facing the hazardous materials response community, and explore opportunities for future collaboration.

Opening remarks also recognized the continued contributions of Roundtable members and partner organizations in advancing hazardous materials preparedness, response, recovery, and mitigation efforts nationwide. The opening speakers emphasized the importance of maintaining strong partnerships and fostering ongoing dialogue among stakeholders as a key component of improving responder readiness and community resilience. The Roundtable continues to serve as a national forum for identifying emerging hazardous materials issues, sharing lessons learned, and fostering collaboration among organizations responsible for preparedness, prevention, response, recovery, and mitigation.

Following the opening remarks, participants introduced themselves and their organizations. The introductions highlighted the broad range of expertise represented at the Roundtable and reinforced the collaborative nature of the event. The meeting then transitioned into presentations, organizational updates, and facilitated discussions focused on issues and trends affecting the hazardous materials emergency response community.

3.1 PHMSA Opening Remarks

Paul Roberti, Administrator, PHMSA, and William Quade, Associate Administrator for Hazardous Materials Safety, PHMSA, welcomed participants to the 2026 HazMat Roundtable and emphasized the importance of collaboration among federal agencies, emergency responders, industry organizations, and other stakeholders involved in hazardous materials preparedness and response.

The speakers highlighted the strategic nature of the Roundtable and encouraged participants to focus on long-term issues affecting hazardous materials preparedness, prevention, response, recovery, and mitigation. Participants were encouraged to use the meeting to exchange information, identify challenges, and develop actionable recommendations that can help improve national preparedness and response capabilities.

Discussion emphasized the importance of ongoing engagement among regulators, emergency responders, and industry partners. The speakers noted that many of the challenges facing the hazardous materials community require collaborative approaches and sustained communication among stakeholders. The Roundtable was recognized as an important mechanism for sharing perspectives and lessons learned and identifying opportunities for future improvement.

The speakers also emphasized the need for regulations, programs, and response practices to evolve alongside changing risks, technologies, and operational environments. Participants were encouraged to provide feedback and share experiences that can help inform future initiatives, strengthen preparedness efforts, and support continuous improvement across the hazardous materials emergency response community.

In closing, PHMSA thanked participants for their continued commitment to hazardous materials safety and preparedness and encouraged active engagement throughout the two-day meeting.

4 Roundtable Member and Federal Partner Updates and Presentations

Roundtable participants provided updates on ongoing initiatives, emerging issues, lessons learned, and activities related to hazardous materials preparedness, prevention, response, recovery, and mitigation. Presentations highlighted efforts underway across federal agencies, emergency response organizations, industry associations, academia, and the private sector to address current challenges,

improve coordination, strengthen responder capabilities, and enhance national preparedness for hazardous materials incidents.

4.1 NFA Updates and Important Initiatives for the HazMat Preparedness Community

Eriks Gabliks, Superintendent of NFA, provided an update on NFA activities and initiatives relevant to the hazardous materials preparedness community. He reaffirmed NFA’s commitment to supporting emergency responders through training, education, professional development, and partnerships with federal agencies, state fire training organizations, and national associations.

Mr. Gabliks discussed ongoing efforts to strengthen training opportunities for the fire and emergency services community, including curriculum updates and initiatives designed to address emerging hazards and evolving response requirements. He emphasized the importance of ensuring training programs remain aligned with responder needs and continue to support preparedness, response, recovery, and mitigation activities across the Nation.

The presentation included updates on NFA operations, training delivery, and participation in national preparedness initiatives. Participants were informed of continued progress related to NERIS, increasing collaboration among federal and state partners, and ongoing efforts to enhance training accessibility and effectiveness. NFA also continues to work with partner organizations to ensure hazardous materials and all-hazards training programs remain current and responsive to emerging challenges.

Mr. Gabliks highlighted the important role state fire training organizations play in delivering NFA courses and expanding access to training nationwide. He encouraged participants to continue working through their state training organizations to identify training needs and bring NFA programs, including hazardous materials training courses, to responders within their jurisdictions.

The discussion also addressed workforce and program sustainment challenges, including the need to maintain specialized hazardous materials training capabilities and ensure continuity of expertise within the training community. Participants noted the importance of filling key training positions and continuing to invest in the development of future hazardous materials instructors and subject matter experts.

Mr. Gabliks expressed appreciation for the partnerships among NFA, PHMSA, IAFC, and other organizations represented at the Roundtable. He emphasized that feedback generated during the Roundtable helps inform future training priorities and supports NFA’s ongoing efforts to strengthen responder preparedness and professional development throughout the Nation’s fire and emergency services community.

4.2 Rail Unified Command Workshop

John Woulfe, Andy Elkins, and Richard Miller provided an update on the IAFC Significant Rail Incident Study and the Unified Command Workshop conducted as part of the study. Funded by PHMSA, the workshop was held March 10–12, 2026, at MxV’s Security and Emergency Response Training Center in Pueblo, Colorado. The event brought together 47 participants representing five key sectors: emergency services, emergency management, federal government, freight railroads, and the chemical industry.

The primary objectives of the workshop were to improve incident management coordination during significant hazardous materials rail incidents and to identify essential response actions that should occur during the early stages of a major rail emergency. Facilitated discussions focused on response priorities, Unified Command coordination, local jurisdiction authorities, railroad emergency response capabilities, and implementation of the Transportation Rail Incident Preparedness and Response (TRIPR) program.

Participants reviewed and refined a set of Initial Priority Response Actions (IPRAs) intended to support decision-making during the initial phases of a significant rail incident. These actions included:

- Establishing prompt communications between incident command and railroad hazardous materials officials,
- Performing an initial scene size-up and establishing incident command,
- Obtaining and confirming hazardous materials information through train consists and other available resources,
- Conducting comprehensive site assessments, and
- Developing an initial plan of action focused on life safety, environmental protection, and incident stabilization.

Workshop participants also examined opportunities to improve coordination within Unified Command structures during rail incidents. Discussions emphasized the importance of:

- Ensuring railroad participation in Unified Command,
- Improving communication between responding agencies and railroad representatives,
- Strengthening emergency planning and preparedness activities, and
- Enhancing access to technical information needed to support risk-based response decisions.

Representatives from the participating sectors identified several commitments intended to improve preparedness and response coordination. Freight railroad representatives committed to ensuring qualified railroad personnel are identified and deployed to support Unified Command during hazardous materials incidents. Emergency management representatives emphasized the importance of conducting interface workshops to clarify roles and responsibilities among railroads, emergency managers, and response agencies. Representatives from the chemical industry identified opportunities to expand Unified Command training and address knowledge gaps, while IAFC representatives committed to pursuing funding for a rail-incident-specific Unified Command training course and integrating workshop findings into future hazardous materials training activities.

A key outcome of the workshop was the development of the EPICC framework. EPICC stands for Establish, Perform, Identify, Conduct, and Create, identifying five essential response actions for significant rail incidents:

- Establish communications between incident command and the railroad;
- Perform an initial size-up and establish incident command;
- Identify the products involved, particularly hazardous materials;
- Conduct a thorough site assessment and evaluate public safety needs; and
- Create an initial plan of action.

Participants noted that these actions provide a practical framework for improving coordination and supporting effective decision-making during complex rail emergencies.

The presenters reported that a summary report documenting the Significant Rail Incident Study and Unified Command Workshop findings had been completed and would be shared with stakeholders to support future preparedness, training, and response initiatives. The workshop findings are expected to

inform future discussions regarding rail hazardous materials response protocols, Unified Command practices, and responder training needs.

4.3 U.S. Coast Guard Update: One Henry Hudson Incident and Lithium-Ion Battery Response

Lieutenant Commander Mark Leahey, U.S. Coast Guard (USCG), presented a case study of the One Henry Hudson incident, a significant maritime hazardous materials response involving a container vessel fire in the Port of Los Angeles. The presentation provided an overview of the incident, response operations, challenges encountered, and lessons learned applicable to future hazardous materials transportation emergencies.

The fire began on November 21, 2025, while the vessel was loading cargo at the Yusen Terminal in the Port of Los Angeles. The 1,100-foot container ship was carrying approximately 2,851 containers, including products containing lithium-ion batteries, oxidizers, flammable liquids and solids, corrosive materials, and other general cargo. More than 200 responders participated in the initial response effort. Due to the complexity of the incident and ongoing fire conditions, the vessel was relocated from the terminal to an offshore anchorage where firefighting and incident stabilization operations continued under a Unified Command structure.

The Unified Command included USCG, the Los Angeles Fire Department, Los Angeles Port Police, vessel representatives, and numerous supporting organizations. Responders faced significant operational challenges, including management of more than four million gallons of firefighting water that accumulated within cargo holds, vessel stability concerns, structural integrity assessments, cargo analysis, air monitoring, and coordination of specialized marine firefighting resources. The response required extensive collaboration among local, state, federal, industry, and maritime stakeholders.

Following stabilization of the vessel, response operations transitioned to cargo removal, waste management, and recovery activities. During cargo inspections, responders discovered improperly packaged and mismanifested damaged, defective, or recalled lithium-ion batteries. The discovery prompted additional mitigation measures to address potential thermal runaway events, off-gassing hazards, volatile organic compounds, and other risks associated with compromised lithium-ion battery shipments. USCG led coordination efforts to safely segregate, repackage, and manage the affected materials while maintaining responder and public safety.

Lieutenant Commander Leahey described the incident as a multi-phase response involving fire suppression, vessel stabilization, cargo removal, hazardous materials management, and recovery operations. The presentation highlighted the importance of Unified Command, continuous air monitoring, accurate cargo information, technical expertise, and sustained interagency coordination during complex transportation incidents involving hazardous materials. The presentation also emphasized the challenges associated with lithium-ion battery shipments, vessel cargo analysis, and maintaining situational awareness throughout a prolonged response operation.

The presentation identified several lessons learned, including the need to address discrepancies between cargo manifests and actual cargo contents, improve public understanding of complex response operations, account for vessel stability impacts associated with large-scale firefighting water use, and ensure effective coordination among responding agencies and private-sector partners. Participants noted that the incident demonstrated the increasing complexity of hazardous materials transportation emergencies and the importance of preparedness, planning, and cross-sector collaboration in achieving successful response outcomes.

4.4 IAFF Hazardous Materials Operations Training Level 3 Evaluation

James Burgess, IAFF, and Dr. Sue Ann Sarpy, Sarpy and Associates, presented the results of a Level 3 evaluation of the IAFF Hazardous Materials Operations Training Program. The evaluation examined whether knowledge and skills acquired during training were successfully transferred to workplace performance and whether the training contributed to improved safety-related behaviors among emergency responders.

The presenters noted that since 2014, more than 61,000 firefighters and response partners have completed IAFF Hazardous Materials Operations Training. The Level 3 evaluation was designed to address increasing interest in measuring training effectiveness beyond participant satisfaction and knowledge acquisition by examining changes in on-the-job behavior and safety performance. The evaluation focused on determining whether training-related knowledge, skills, and abilities were being applied in operational settings and whether the training contributed to improved responder safety and performance.

The evaluation included trainees from multiple IAFF Hazardous Materials Operations Training courses representing a broad range of fire departments, including rural, suburban, and urban organizations. Surveys were conducted with trainees, supervisors, and managers to assess workplace application of training, safety motivation, safety climate, and behavioral performance outcomes. The assessment examined four primary safety performance categories: (1) proper use of personal protective equipment (PPE), (2) engagement in work practices that reduce risk, (3) communication of health and safety information, and (4) exercising employee rights and responsibilities related to safety.

Results demonstrated measurable improvements in participant self-assessments immediately following training and continued positive performance ratings six to nine months after course completion. Improvements were observed across all four safety performance categories, with particularly strong results associated with PPE use and communication of health and safety information. The evaluation also found consistently high levels of safety motivation among trainees and generally positive safety climate ratings across participating organizations, both of which were identified as factors supporting successful transfer of training to workplace performance.

Participants reported applying training concepts during actual hazardous materials responses, including incidents involving transportation accidents, fuel spills, hazardous materials identification, spill control operations, decontamination activities, and PPE selection and use. Many respondents indicated that the training improved their confidence and preparedness for responding to incidents involving hazardous materials and reinforced safe operational practices during emergency response activities. Approximately 39 percent of respondents reported directly applying training concepts during incidents within six to nine months of completing the course, while an additional 25 percent indicated they had not yet encountered an applicable incident but felt prepared to respond when needed.

Supervisor assessments generally supported the positive findings reported by trainees, although supervisors tended to provide slightly lower ratings than participants when evaluating some workplace behaviors. The presenters noted that differences may be attributable to varying opportunities for supervisors to directly observe specific hazardous materials response activities. A lack of opportunities to perform certain infrequently used hazardous materials tasks was also identified as a factor affecting long-term transfer of training and skill maintenance.

The presenters concluded that both qualitative and quantitative evidence demonstrated positive transfer of training to workplace performance and provided evidence of the value and impact of the

IAFF Hazardous Materials Operations Training Program. Future efforts will focus on incorporating Level 3 evaluation measures into broader training assessment processes, identifying opportunities to reinforce less frequently used skills, and expanding evaluation methodologies to support additional hazardous materials and responder safety training programs.

4.5 NASTTPO Issues and Initiatives

Roy Rudisill, Board Member of the National Association of SARA Title III Program Officials (NASTTPO) and Director of the Weld County (CO) Office of Emergency Management, provided an update on NASTTPO activities, policy priorities, and initiatives intended to strengthen hazardous materials preparedness planning and support SERCs and LEPCs. The presentation focused on organizational efforts to improve preparedness capabilities, increase stakeholder engagement, and address challenges facing local planning organizations.

Mr. Rudisill discussed NASTTPO's continuing efforts to support SERCs and LEPCs through enhanced guidance documents, training programs, webinars, and outreach activities. He emphasized the importance of increasing public awareness and involvement in preparedness planning and noted that NASTTPO is working to expand direct engagement with SERCs and LEPCs nationwide. Efforts are also underway to strengthen communication among preparedness stakeholders and provide additional resources to support local planning and emergency preparedness activities.

The presentation highlighted several organizational initiatives designed to strengthen preparedness capabilities and support volunteer participation in emergency planning. NASTTPO has expanded recognition programs for LEPC members and leaders and continues to develop advanced training opportunities addressing emerging preparedness issues. Mr. Rudisill also discussed efforts to hold a national SERC conference and increase opportunities for information sharing among emergency planning professionals.

A significant focus of the presentation was the establishment of the NASTTPO Foundation, a nonprofit organization created to support preparedness initiatives, conferences, scholarships, research activities, and future program development. Mr. Rudisill described how the Foundation has already supported preparedness-related projects, including a statewide hazardous materials capabilities study in Colorado, and may provide additional opportunities to strengthen preparedness programs and support future workforce development efforts.

Mr. Rudisill also addressed challenges facing rural communities, noting that many jurisdictions continue to experience limitations in personnel, training resources, equipment, and funding. To help address these capability gaps, NASTTPO is exploring regional partnership models and supporting the development of nonprofit organizations that can raise awareness, attract resources, and enhance preparedness capabilities across multiple jurisdictions. The presentation highlighted the High Plains Preparedness Partnership as an example of a regional approach designed to support preparedness and emergency management objectives.

The presentation concluded with a discussion of NASTTPO's preparedness philosophy that emphasizes stakeholder involvement, risk and capability assessments, measurable capability improvement activities, and active promotion of preparedness programs. Mr. Rudisill encouraged continued collaboration among government agencies, emergency planners, industry representatives, and community stakeholders to strengthen hazardous materials preparedness and ensure that planning efforts remain effective, sustainable, and responsive to evolving risks and community needs.

4.6 NVFC HazMat Partners in Training

Tom Miller, National Volunteer Fire Council (NVFC), provided an update on NVFC hazardous materials training and outreach initiatives designed to improve responder preparedness and expand access to training opportunities, particularly for volunteer, rural, tribal, and underserved communities.

Mr. Miller highlighted the success of the Partners In Training (PIT) Crew Training Program that delivers hands-on hazardous materials training to responders in areas that may have limited access to specialized training resources. Since 2023, the program has reached responders in 19 states and continues to expand with additional courses under development. Training topics include hazardous materials sampling, detection technologies, incident command, and other operational response skills intended to strengthen responder capabilities and preparedness.

A significant focus of the presentation was the integration of Incident Action Planning (IAP) into training activities. Mr. Miller noted that IAP concepts are now incorporated into all training sessions, with digital planning forms and supporting resources provided to participating departments. The initiative was developed in response to identified gaps in responder familiarity with practical incident action planning and incident management processes.

The presentation also highlighted the growing adoption of risk-based response training developed in partnership with Rick Edinger and other hazardous materials subject matter experts. The training emphasizes risk-informed decision-making and provides responders with practical tools and resources to support operational planning. Participants receive electronic resource packages containing guidance documents, reference materials, glossaries, National Incident Management System (NIMS) forms, and other tools intended to support preparedness and response activities.

Mr. Miller discussed outreach efforts focused on tribal and rural communities where hazardous materials response resources may be limited and response times may be significantly extended. Training programs emphasize practical response considerations, including isolation distances, scene management, and protective actions that can be implemented until specialized hazardous materials teams arrive. The presentation also highlighted the expansion of virtual hazardous materials training opportunities and electric vehicle response training programs developed in partnership with industry organizations, including vehicle manufacturers.

The presentation reinforced the importance of collaboration among federal agencies, national organizations, and training providers in expanding access to hazardous materials training and ensuring that responders across all jurisdictions have the knowledge, resources, and support necessary to safely and effectively manage hazardous materials incidents.

4.7 NFPA 470 Hazardous Materials Standards Revision

Rick Edinger, Chair of the National Fire Protection Association (NFPA) Hazardous Materials Committee, and other attending members of the committee provided an update on the ongoing revision of NFPA 470, Hazardous Materials/Weapons of Mass Destruction (WMD) Standard for Responders. The discussion focused on significant structural and content changes intended to improve usability, support certification and training programs, and provide greater consistency across the hazardous materials response community.

Participants were informed that the standards committee has undertaken a comprehensive revision of NFPA 470, including a transition from dual competency-based and Job Performance Requirements (JPR) language format to a strictly JPR language format. The change is intended to provide clearer performance expectations and improve the standard's utility for certification agencies, instructors, training organizations, and responders. The revised structure is expected to simplify the development

of training materials, testing, and professional qualification programs while improving consistency among users.

The update described a substantial consolidation and reorganization effort that will reduce the document from 48 chapters to approximately 16 chapters while retaining Emergency Medical Services (EMS) content and completing other revisions. Committee members noted that the project represents a major undertaking involving an estimated 10,000 hours of volunteer effort dedicated to reviewing, restructuring, and rewriting the standard.

Discussion highlighted the anticipated benefits of the revised document, including improved readability, streamlined organization, and greater accessibility for end users. Participants emphasized that the updated format is intended to support training and certification processes while maintaining the technical rigor necessary for hazardous materials and WMD response programs.

The committee outlined the ongoing development process, including a series of virtual working sessions scheduled to complete the initial draft, followed by editorial review, public comment opportunities, and development of a second draft. At the time of the Roundtable, publication of the revised standard was anticipated in late 2027 or early 2028.

Participants recognized the importance of NFPA 470 within the hazardous materials preparedness community and discussed the potential implications of the revision for training providers, certification organizations, emergency response agencies, and other stakeholders. Continued engagement and feedback from the responder community were encouraged throughout the standards development process.

4.8 EPA Regulatory Updates and Guidance

Jennifer Barre, U.S. Environmental Protection Agency (EPA), provided an update on regulatory initiatives, guidance development efforts, software modernization projects, and risk management programs affecting the hazardous materials preparedness and response community. The presentation highlighted several ongoing efforts intended to improve regulatory consistency, enhance information sharing, and support emergency planning and preparedness activities at the state and local levels.

Ms. Barre discussed recent changes to hazard communication requirements, including the addition of new Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (HCS) hazard categories addressing aerosols and chemicals under pressure, as well as revisions to Safety Data Sheet (SDS) requirements for both substances and mixtures. The EPA is incorporating updated OSHA and Globally Harmonized System (GHS) hazard classifications into the Emergency Planning and Community Right-to-Know Act (EPCRA) Hazardous Chemical Inventory Reports and guidance materials to improve consistency and ensure stakeholders have access to current hazard information.

The presentation also addressed EPA efforts to update training materials, guidance documents, and frequently asked questions associated with EPCRA requirements. The EPA is revising educational resources and clarifying distinctions between the roles and responsibilities of emergency managers, SERCs, and LEPCs. Participants discussed the importance of improving LEPC effectiveness and ensuring local responders have access to current facility and hazardous materials information.

Ms. Barre highlighted several software modernization initiatives, including planned updates to the Areal Locations of Hazardous Atmospheres (ALOHA) modeling system and Tier 2 Submit software. The EPA is developing enhanced data standards intended to improve interoperability among state and local reporting systems and support information sharing across jurisdictions. These efforts are expected to provide greater flexibility for states and private-sector partners while improving access to preparedness and planning information.

The presentation also included updates regarding the EPA’s Risk Management Program and emerging facility response planning requirements. The EPA is evaluating risk management program requirements and implementing new planning and exercise provisions associated with facility response plans under the Clean Water Act and National Contingency Plan. These efforts are intended to strengthen preparedness, improve coordination with local response organizations, and enhance facility participation in planning and exercise activities.

Participants discussed challenges associated with staffing limitations and reduced capacity for EPA personnel to support outreach, observation, and coordination activities. Ms. Barre encouraged stakeholders to remain engaged in ongoing regulatory and guidance development efforts and emphasized the importance of information sharing, collaboration, and stakeholder participation in strengthening hazardous materials preparedness and emergency response capabilities nationwide.

4.9 FRA Vent and Burn Guidance Document Update and Lessons Learned

Mark Maday, Federal Railroad Administration (FRA), provided an update on FRA's Vent and Burn Guidance Document and ongoing efforts to incorporate lessons learned from recent hazardous materials transportation incidents into emergency planning, incident management, and responder decision-making processes. The presentation emphasized that the updated document serves as an addendum to previous reports and places greater emphasis on incident command, decision-making processes, coordination among responding organizations, and information management during complex hazardous materials emergencies.

Discussion highlighted several key lessons learned from the East Palestine, Ohio, rail incident and other significant transportation incidents. These lessons included the importance of establishing effective Unified Command structures, ensuring timely access to accurate technical information, clearly defining stakeholder roles and responsibilities, and maintaining effective communication among responders, shippers, carriers, government agencies, and affected communities. Participants noted that these factors play a critical role in supporting informed decision-making and maintaining public confidence during large-scale incidents.

The update also emphasized the importance of emergency planning and preparedness activities conducted before an incident occurs. Participants discussed the need for continued engagement among emergency responders, emergency managers, transportation stakeholders, and industry partners to improve coordination, clarify expectations, and strengthen incident management capabilities. Particular attention was given to the role of information sharing and communication processes in supporting operational decision-making during rapidly evolving incidents.

The presentation noted that the updated guidance document was in leadership review and would be distributed to key stakeholder organizations for additional feedback and implementation planning. Future outreach efforts will include presentations, workshops, and discussions with emergency response organizations to ensure lessons learned are incorporated into preparedness, training, and incident management activities.

Participants recognized the importance of capturing and sharing lessons learned from major transportation incidents and noted that the updated guidance provides an opportunity to strengthen coordination, improve incident management practices, and support more effective decision-making during future hazardous materials emergencies.

4.10 CHEMTREC and TRANSCAER Training and Support Initiatives

Andrew LaVanway, CEO of CHEMTREC, and Erica Fischer, TRANSCAER, provided updates on their organizations’ efforts to support hazardous materials responders through emergency information services, training programs, outreach initiatives, and community preparedness activities. The

presentation highlighted the complementary roles CHEMTREC and TRANSCAER play in enhancing responder capabilities and improving access to hazardous materials information and training resources.

Mr. LaVanway discussed CHEMTREC's role in providing 24-hour emergency response information and technical assistance to responders, shippers, carriers, and emergency management organizations. CHEMTREC maintains a database containing millions of SDSs and supports thousands of customers worldwide. The organization continues to focus on improving data quality, accessibility, and information sharing to ensure responders receive accurate and timely information during hazardous materials incidents.

The presentation highlighted CHEMTREC's multilingual emergency response capabilities and access to technician-level hazardous materials expertise. Participants were informed that CHEMTREC provides technical support for emergency incidents and information requests and continues to expand training opportunities designed to improve responder understanding of hazardous materials identification, risk assessment, and emergency response procedures.



Mr. LaVanway also discussed grant-supported initiatives and partnerships that provide financial assistance, training opportunities, and equipment support to local emergency response organizations. These programs help strengthen hazardous materials preparedness capabilities, particularly within smaller and underserved jurisdictions that may face resource limitations.

Ms. Fischer provided an update on TRANSCAER's nationwide training and community outreach activities. TRANSCAER continues to deliver training

programs, workshops, and educational resources designed to improve hazardous materials transportation preparedness and response capabilities. During the previous year, TRANSCAER conducted approximately 1,000 training events, reaching more than 45,000 participants. The organization also expanded its educational offerings through new training videos, online learning modules, podcasts, and community safety outreach initiatives.

Participants discussed ongoing challenges associated with identifying and communicating with hazardous materials response organizations across the country. TRANSCAER representatives emphasized the importance of maintaining accurate responder contact information and improving outreach capabilities to ensure training opportunities and preparedness resources reach the intended audience. The presenters encouraged continued collaboration among industry, government agencies, and responder organizations to strengthen preparedness and enhance access to training, technical information, and emergency response support services.

4.11 CVSA HazMat Enforcement and Training Programs

Matt Mullen, Commercial Vehicle Safety Alliance (CVSA), provided an overview of CVSA’s hazardous materials enforcement activities, inspection programs, and training initiatives designed to improve transportation safety and regulatory compliance throughout North America. The presentation highlighted CVSA’s role in supporting consistent enforcement of hazardous materials transportation regulations and promoting collaboration among enforcement agencies, industry partners, and federal organizations.

Mr. Mullen described CVSA’s organizational structure and membership that includes state, local, provincial, territorial, federal, and industry representatives. Through its hazardous materials committees and enforcement programs, CVSA works to improve the safe transportation of hazardous materials by supporting uniform enforcement practices, developing inspection procedures, and facilitating information sharing among stakeholders.

The presentation included an overview of CVSA’s hazardous materials inspection and enforcement responsibilities, including participation in the North American Standard Inspection Program and the development of out-of-service criteria used to identify vehicles and shipments that present significant safety risks. Participants discussed the importance of maintaining consistent enforcement standards and ensuring that inspectors receive specialized hazardous materials training necessary to evaluate compliance with applicable regulations.

Mr. Mullen highlighted CVSA’s extensive training and professional development programs for enforcement personnel. These programs include advanced hazardous materials training courses, instructor development opportunities, webinars, and online learning resources addressing emerging transportation safety issues. Recent training topics have included lithium battery transportation, crude oil transportation, regulatory updates, and other hazardous materials transportation issues of interest to both enforcement personnel and industry stakeholders.

The presentation also addressed CVSA’s efforts to expand outreach and educational opportunities through its learning management system and virtual training platforms. These resources provide enforcement personnel with ongoing access to technical information, regulatory updates, and specialized hazardous materials training intended to support effective inspection and enforcement activities.

Participants recognized the important role CVSA plays in supporting hazardous materials transportation safety and emphasized the value of continued collaboration among enforcement agencies, regulators, industry representatives, and emergency responders. The discussion reinforced the importance of training, information sharing, and consistent enforcement practices in reducing transportation risks and improving hazardous materials safety nationwide.

4.12 FEMA COSS Program

Janis McCarroll and Jeramie Calandro, FEMA Office of Emerging Threats (OET), provided an overview of the Chemical Operations Support Specialist (COSS) Program and its role in strengthening chemical incident preparedness and response capabilities at the state, local, tribal, and territorial levels. The presentation highlighted ongoing program development efforts, training initiatives, and FEMA’s long-term strategy for building a nationwide cadre of chemical subject matter experts.

The presenters explained that development of the COSS Program began in 2019 and was modeled after FEMA’s successful Radiological Operations Support Specialist (ROSS) Program. FEMA has worked closely with state and local subject matter experts to identify the skills, knowledge, abilities, training requirements, and qualification standards necessary to establish a national chemical incident

support capability. The program is intended to create a network of qualified personnel capable of assisting emergency managers and responders during complex chemical incidents while supporting preparedness planning, training, and exercises.

Ms. Calandro described the COSS position as a force multiplier that bridges chemical expertise and emergency response operations. COSS personnel are trained to identify chemical hazards, analyze incident information, support protective action decision-making, and provide technical recommendations to incident commanders, emergency operations centers, and other decision-makers. The position is designed to function as a NIMS Technical Specialist and may support incident command, planning, operations, public information, and emergency management functions during chemical emergencies.



The presentation outlined the program's qualification structure that includes three certification levels ranging from entry-level Type 3 personnel to highly experienced Type 1 specialists. Position Task Books (PTBs) establish qualification requirements and document the competencies necessary for certification. Participants discussed the importance of ensuring chemical expertise is available to support local jurisdictions that may not have access to specialized hazardous materials resources during large or complex incidents.

Ms. McCarroll and Ms. Calandro also discussed FEMA's efforts to integrate the COSS Program into the Emergency Management Assistance Compact (EMAC) framework, enabling qualified personnel to support interstate response operations when requested. FEMA is working to establish a sustainable program structure that includes training, exercises, cadre management, stakeholder engagement, and continued collaboration with federal, state, and local partners. The presenters noted that the COSS training course is delivered through the Center for Domestic Preparedness (CDP) and serves as the first step toward certification and participation in the national program.

The presentation concluded with a discussion of future training opportunities and outreach efforts intended to expand participation and strengthen national chemical preparedness capabilities. Participants were encouraged to support development of the program and identify qualified candidates interested in contributing to the growing COSS network.

4.13 FEMA CBRN Directorate and Radiological Preparedness Initiatives

Janis McCarroll, FEMA, and Jeramie Calandro, FEMA, provided an update on the agency's newly established Chemical, Biological, Radiological, and Nuclear (CBRN) Directorate and ongoing efforts to strengthen preparedness, planning, and response capabilities for radiological and chemical incidents. The presentation highlighted organizational changes, regulatory developments,

transportation preparedness activities, and training programs intended to support federal, state, local, tribal, and territorial partners.

Participants were informed that FEMA recently established the CBRN Directorate through the integration of several preparedness and response functions, including responsibilities previously associated with the Countering Weapons of Mass Destruction Office. The organizational restructuring is intended to enhance FEMA’s ability to coordinate preparedness, planning, training, and response activities related to chemical, biological, radiological, and nuclear hazards while improving collaboration across federal agencies and stakeholder organizations.

The presentation included an overview of FEMA’s Radiological Emergency Preparedness (REP) Program and its continuing partnership with the Nuclear Regulatory Commission to support off-site preparedness for commercial nuclear power plants. Ms. McCarroll and Ms. Calandro discussed upcoming regulatory changes, public comment opportunities, and ongoing efforts to ensure that state and local jurisdictions maintain the capabilities necessary to protect the public during radiological emergencies. Participants noted the importance of maintaining preparedness capabilities despite changes within the Nation’s nuclear power infrastructure.

A significant topic of discussion involved the transportation of spent nuclear fuel from decommissioned nuclear power facilities. Ms. McCarroll and Ms. Calandro noted that the decommissioning of nuclear power plants is expected to result in a substantial increase in rail shipments of radioactive materials in the coming years. Participants discussed planning considerations associated with these shipments, including risk assessment, interagency coordination, public information requirements, and preparedness activities necessary to support safe transportation operations. The anticipated shipment of the first spent nuclear fuel cask in more than three decades was highlighted as an important milestone requiring continued coordination among federal, state, and local partners.

The presentation also provided an update on FEMA’s COSS Program. The program is designed to develop chemical incident expertise at the state and local levels and support preparedness for catastrophic hazardous materials events. Ms. McCarroll and Ms. Calandro discussed available training opportunities, efforts to expand participation, and ongoing collaboration with industry and emergency management stakeholders to strengthen national chemical preparedness capabilities. Participants were encouraged to engage with the program and provide input regarding future training and capability development needs.

The discussion emphasized the importance of interagency coordination, stakeholder engagement, and sustained investment in preparedness programs to address evolving chemical and radiological risks. Participants recognized the value of FEMA’s leadership role in supporting preparedness planning, training, and capability development and highlighted the need for continued collaboration across all levels of government and the private sector.

4.14 IAFC HazMat Community Risk Analysis Index Tool

Richard Miller, IAFC, and Katie Harrold, GFT, provided an update on the development of the HazMat Community Risk Analysis Index Tool, an initiative designed to help jurisdictions better identify, visualize, and assess hazardous materials risks within their communities. The project is intended to provide responders, emergency managers, and decision-makers with a practical risk assessment resource that integrates publicly available data sources into a user-friendly GIS platform.

The presenters described the project’s objective of creating a comprehensive data-driven tool that supports local risk identification, preparedness planning, resource allocation, and mitigation activities. The tool is being developed using GIS technology and incorporates multiple datasets

related to hazardous materials transportation and fixed-facility risks. Information layers include rail infrastructure, highway transportation networks, pipeline systems, fire stations, demographic data, critical infrastructure, and other community-specific risk indicators. The project seeks to provide responders with a consolidated view of hazards that may affect their jurisdictions and support informed preparedness and planning decisions.

A significant portion of the presentation focused on development of the Risk Analysis Index methodology. The project team is evaluating how various risk factors should be weighted and incorporated into a meaningful index that reflects both hazard exposure and potential consequences. Participants discussed the importance of considering factors such as hazardous materials transportation activity, commodity flow information, local response capabilities, social vulnerability indicators, critical infrastructure, and community demographics when assessing risk. The presenters emphasized that the tool is intended to support local decision-making rather than prescribe specific risk rankings.

The presenters also discussed challenges associated with accurately identifying hazardous materials response capabilities nationwide. Current data sources do not consistently capture the full range of hazardous materials response organizations, team configurations, and response models used throughout the country. Participants noted that jurisdictions vary significantly in how they organize hazardous materials response resources, making it difficult to establish a comprehensive national picture of response capabilities. Discussion highlighted the need to better define what constitutes a hazardous materials response program and to improve the collection of capability-related data at the federal, state, and local levels.

Participants emphasized that local jurisdictions remain best positioned to assess their own capabilities, response times, mutual aid agreements, and operational responsibilities. The tool is intended to support those assessments by providing access to relevant data and improving situational awareness. Ongoing stakeholder engagement is being used to refine the tool's functionality, improve data quality, and identify additional datasets that may enhance its value to the hazardous materials response community. Participants were encouraged to provide input regarding risk assessment methodologies, available data sources, and operational considerations that should be incorporated into future versions of the tool.

The presentation concluded with a discussion of future development efforts and opportunities for collaboration. The project team emphasized that the HazMat Community Risk Analysis Index Tool is intended to serve as a practical planning resource that supports preparedness, mitigation, and risk-informed decision-making while helping communities better understand the hazardous materials risks they face and the capabilities available to address them.

5 Day 2 Presentations and Breakout Discussions

5.1 Opening Remarks and Day 2 Overview

Rick Edinger welcomed participants to the second day of the 2026 Hazardous Materials Roundtable and thanked attendees for their continued participation and engagement throughout the event. He noted that the Roundtable continues to serve as a unique forum for collaboration among federal agencies, state and local governments, emergency responders, industry representatives, training organizations, and professional associations involved in hazardous materials preparedness and response. The meeting provides an opportunity for stakeholders to share information, identify common challenges, discuss emerging issues, and develop practical recommendations intended to improve hazardous materials preparedness nationwide.

Mr. Edinger reviewed the objectives and agenda for Day 2, explaining that the focus would shift from organizational updates and presentations to facilitated discussions designed to validate previous



Roundtable findings, identify emerging trends, and develop recommendations for future action. Participants were reminded that the Roundtable process emphasizes collaboration, open dialogue, and consensus-building to ensure that recommendations reflect the collective expertise and experience of the hazardous materials community.

As part of the opening session, Mr. Edinger reviewed the Rules of Engagement that have guided previous Roundtables. Participants were encouraged to maintain a strategic perspective, share lessons learned and best practices, respect differing viewpoints, and focus discussions on issues that would provide the greatest benefit to the hazardous materials response community. He reiterated the importance of the Roundtable’s structured approach of identifying observations, developing findings based on experience and evidence, and generating recommendations that provide a practical path forward for addressing identified challenges.

Mr. Edinger also reviewed the historical priorities that have emerged from previous Roundtables, including data and information sharing, hazardous materials response program sustainment, community planning and prevention, risk-based response and preparedness, and the impact of rapidly evolving technologies on hazardous materials operations. Participants were advised that these issues would serve as the foundation for the Day 2 breakout discussions and would be evaluated to determine whether they remain valid priorities or require modification based on current conditions and emerging threats.

The opening session concluded with an overview of the breakout process and report-out methodology that would be used later in the day. Participants were informed that breakout groups would review existing findings and recommendations, identify gaps and emerging issues, and develop consensus-based recommendations for inclusion in the 2026 Hazardous Materials Roundtable Report. The first formal presentation of Day 2 was then introduced, with Travis McWhirter providing an update on NRC modernization efforts and future data management initiatives.

5.2 National Response Center Modernization and Data Capabilities

Travis McWhirter, Director of the NRC, provided an update on ongoing modernization efforts intended to improve incident reporting, data management, information sharing, and stakeholder access to hazardous materials incident data. The presentation focused on enhancements to NRC's reporting systems, development of new analytical capabilities, and opportunities for increased collaboration with federal, state, local, tribal, territorial, and industry partners.

Mr. McWhirter explained that NRC is transitioning from legacy software systems to a modern low-code platform designed to improve operational efficiency, increase system flexibility, and reduce maintenance requirements. The modernization effort will eliminate the need for extensive server management and allow NRC personnel to focus on customer-driven enhancements, process improvements, and automation of report intake and dissemination functions. Participants discussed how modernization will support improved information flow and more effective utilization of incident data.



A significant portion of the presentation focused on the development of enhanced reporting and dashboard capabilities. NRC is exploring customizable dashboards that would allow federal, state, and local agencies to query incident information based on operational needs. Examples discussed included the ability to identify specific transportation incidents, chemical releases, geographic trends, and other incident characteristics through user-defined searches and reporting tools. Future development efforts may include public-facing portals and integration with GIS capabilities to improve situational awareness and data accessibility.

Participants also discussed opportunities to improve report intake, amendment tracking, and follow-up reporting processes. Proposed enhancements include the ability to electronically submit supporting documentation, improved tracking of report amendments, and addressing concerns about information flow and historical tracking. Representatives from FRA and the Association of American Railroads (AAR) emphasized the importance of maintaining historical continuity and ensuring responders have access to complete and accurate incident information throughout an event's lifecycle.

Mr. McWhirter acknowledged challenges associated with migrating more than three decades of historical NRC data into the new system. Participants discussed data quality concerns resulting from inconsistencies, formatting differences, and legacy reporting practices. NRC is exploring the use of AI and advanced data analytics tools to assist with data cleansing, normalization, and improved utilization of historical information for trend analysis and decision-making purposes.

The presentation concluded with a discussion regarding stakeholder engagement and future system development priorities. Mr. McWhirter encouraged participants to provide recommendations and operational requirements to help guide system enhancements. Roundtable participants emphasized the importance of maintaining strong collaboration between the NRC, federal agencies, industry organizations, emergency responders, and emergency managers to ensure that future reporting and information-sharing systems meet the needs of the hazardous materials response community.

5.3 Historical Review of Roundtable Priorities and Breakout Session Instructions

Following the NRC presentation, Rick Edinger facilitated a review of historical HazMat Roundtable priorities and findings from previous meetings. Using the 2025 HazMat Roundtable Report as a baseline, participants reviewed previously identified critical issues, high-priority concerns, emerging

trends, and recommendations to determine their continued relevance to the hazardous materials preparedness and response community.

Mr. Edinger reviewed the critical issues identified during the 2025 Roundtable, including data and information sharing, HazMat response program sustainment, and community planning, prevention, and mitigation. Participants also reviewed previously identified high-priority issues involving risk-based response and preparedness and the impact of rapidly evolving technologies on hazardous materials preparedness and response activities.

Participants discussed the status of previous recommendations and identified several continuing concerns involving information collection and analysis, program sustainment, community planning efforts, risk-based decision making, and technology-related challenges. The discussion emphasized the importance of validating previous findings while identifying new issues and opportunities for improvement.

Mr. Edinger reviewed the Roundtable process for developing observations, findings, and recommendations and provided instructions for the breakout sessions. Participants were assigned to breakout groups and tasked with validating previous priorities, identifying emerging issues, updating recommendations, and prioritizing topics for inclusion in the 2026 HazMat Roundtable Report. Notetakers were assigned to each group, and participants were encouraged to focus on actionable recommendations that could be tracked and evaluated during future Roundtables.

Following the review and breakout instructions, participants divided into small groups to discuss priority issues, evaluate existing recommendations, identify emerging challenges, and develop observations and recommendations for consideration by the full Roundtable membership.

5.4 Breakout Session Discussion and Findings

Following the review of historical Roundtable priorities, participants were divided into three breakout groups to evaluate previously identified issues, discuss emerging challenges, and develop recommendations for future action. Building upon the outcomes of the 2025 HazMat Roundtable, participants were asked to review current priorities, determine whether previously identified issues remained relevant, identify emerging trends and issues affecting the hazardous materials preparedness and response community, and propose actions that could improve preparedness, planning, information sharing, training, and response capabilities nationwide.

Consistent with previous Roundtables, discussions focused on both current and future needs of the hazardous materials preparedness and responses communities. Participants reviewed priority issues identified during previous meetings, considered the impact of emerging technologies and evolving transportation risks, and explored opportunities to improve collaboration among government agencies, industry partners, emergency responders, and professional organizations. Breakout groups reported their findings to the full membership for discussion, validation, and inclusion in the 2026 HazMat Roundtable Report.

The discussions and recommendations developed during the breakout sessions are summarized in the following sections.

5.4.1 Data Collection, Analysis, and Information Sharing

Participants identified data collection, analysis, and information sharing as continuing critical issues affecting hazardous materials preparedness, response, and decision-making. During the breakout discussions, participants noted that although significant amounts of hazardous materials information exist across government agencies, industry organizations, emergency response systems, and private-sector databases, challenges remain in identifying available resources, determining where information resides, ensuring data quality, and making information readily accessible to those who need it.

A recurring theme throughout the discussion was that the issue is often not the absence of data, but rather the difficulty of locating, analyzing, and effectively utilizing existing information. Participants observed that numerous organizations collect and maintain valuable hazardous materials data; however, information is often dispersed across multiple systems and platforms, creating barriers to information sharing and coordinated decision-making. Participants emphasized the importance of improving awareness of existing resources and reducing duplication of effort among organizations.

Discussion also focused on the need for a more coordinated information-sharing environment that supports collaboration among federal agencies, state and local governments, industry partners, emergency responders, and professional organizations. Participants referenced existing information-sharing resources and systems, including PHMSA, the Common Operating Environment (COE), AskRail, CHEMTREC, NRC reporting systems, and other specialized databases that provide operational and preparedness-related information. Although these resources provide significant value, participants noted that access to, awareness of, interoperability of, and utilization of resources and information remain inconsistent throughout the hazardous materials community.

Several participants discussed the potential value of a centralized information-sharing network or clearinghouse capable of providing access to trusted information, preparedness resources, funding opportunities, training materials, and incident-related data. Such a resource could improve visibility of existing programs and capabilities while reducing duplication of effort and improving coordination among stakeholders. Participants noted that improved access to information could support preparedness planning, risk assessment, training, and incident management activities at all levels of government.

The discussion also addressed concerns regarding information quality, validation, and credibility. Participants emphasized the importance of ensuring that information used to support planning and operational decisions is derived from reliable and verified sources. As AI and automated analytical tools become more prevalent, participants stressed the importance of maintaining a “trust but verify” approach and ensuring users understand how information is generated, validated, and applied.

Participants further discussed opportunities to improve data standardization and reduce redundant reporting requirements. Suggestions included identifying core data elements, improving consistency among reporting systems, and exploring methods that would allow information to be entered once and utilized across multiple platforms. Participants noted that ongoing modernization efforts within the NRC may provide future opportunities to improve data integration, reporting capabilities, and information accessibility.

Overall, participants agreed that improving information collection, analysis, and sharing remains one of the most significant opportunities for strengthening hazardous materials preparedness and response capabilities. Continued collaboration among stakeholders will be necessary to improve data accessibility, enhance information quality, and support the development of a more comprehensive common operating picture for hazardous materials preparedness and response activities.



5.4.2 HazMat Response Program Sustainment

Participants identified HazMat response program sustainment as a continuing critical issue affecting the long-term readiness and effectiveness of hazardous materials response capabilities nationwide. Discussion focused on workforce challenges, succession planning, training accessibility, funding stability, and the ability of organizations to maintain response capabilities in the face of changing operational and economic conditions.

Participants expressed concern regarding the ongoing loss of experienced hazardous materials personnel due to retirements, career transitions, and workforce turnover. Many organizations have invested significant time and resources in developing technical expertise, only to face challenges replacing experienced personnel as they leave the workforce. Participants noted that the loss of institutional knowledge can have a significant impact on program effectiveness, particularly in smaller organizations where specialized expertise may be concentrated among a limited number of individuals.

Recruitment and retention challenges were discussed extensively throughout the breakout sessions. Participants observed that many jurisdictions continue to experience difficulties attracting and retaining personnel willing to commit to the additional training, certification, and operational responsibilities associated with hazardous materials response. These challenges are particularly pronounced within volunteer and combination departments, where staffing limitations and competing demands often affect participation in specialized response programs.

The discussion also highlighted the importance of maintaining access to training and professional development opportunities. Participants emphasized that hazardous materials response capabilities depend upon continuous training, exercises, and skill development. Concerns were raised regarding the availability of training resources, travel funding, instructor capacity, and the ability of smaller jurisdictions to participate in advanced training programs. Participants noted the value of federal training programs, state-sponsored initiatives, industry partnerships, and professional associations in supporting responder development and maintaining technical competency.

Funding stability was identified as another important factor affecting program sustainment. Participants discussed the uncertainty associated with grant funding cycles and the challenges organizations face when attempting to maintain personnel, equipment, and training programs over the long term. Although grant programs remain an important resource, participants emphasized the need to identify sustainable approaches that support continued capability development and program management beyond individual grant periods.

Several participants also discussed the need to broaden the focus beyond hazardous materials technicians alone and consider the larger hazardous materials response ecosystem. Effective response depends upon trained personnel at multiple levels, including operations-level responders, incident commanders, emergency managers, dispatch personnel, planners, and other support personnel. Participants noted that future workforce development efforts should consider the full range of individuals who contribute to hazardous materials preparedness and response activities.

Participants agreed that sustaining hazardous materials response capabilities will require continued investment in workforce development, succession planning, training accessibility, and organizational support. Strengthening recruitment and retention efforts, preserving institutional knowledge, and ensuring continued access to training and preparedness resources were identified as essential components of maintaining effective hazardous materials response programs nationwide.

5.4.3 Community Planning, Prevention, and Mitigation

Participants identified community planning, prevention, and mitigation as continuing critical issues affecting hazardous materials preparedness at the local, state, tribal, territorial, and regional levels. Discussion focused on the importance of stakeholder engagement, preparedness planning, risk awareness, and the effective use of existing planning and mitigation resources to reduce the consequences of hazardous materials incidents before they occur.

Participants noted that many communities continue to face challenges engaging stakeholders in preparedness planning activities. Although numerous planning resources, guidance documents, and support programs are available through federal agencies, state governments, industry organizations, and professional associations, participation and utilization vary significantly among jurisdictions. Participants emphasized that effective hazardous materials preparedness requires active involvement from emergency responders, emergency managers, local elected officials, industry representatives, transportation stakeholders, public health officials, schools, hospitals, and other community partners.

Participants also discussed the importance of engaging State Emergency Managers as a key audience and distribution mechanism for preparedness information, training opportunities, funding resources, and hazard awareness materials. Participants noted that State Emergency Managers can help improve resource visibility and facilitate communication between state agencies, local jurisdictions, and preparedness stakeholders.

The discussion highlighted the continuing importance of LEPCs and local and regional planning organizations in supporting community preparedness efforts. Participants noted that the effectiveness of LEPCs varies considerably across the country, with some jurisdictions maintaining highly active planning programs while others struggle with participation, leadership, resources, and stakeholder engagement. Participants emphasized the need to strengthen LEPC effectiveness and increase awareness of their role in coordinating preparedness activities, facilitating information sharing, and supporting local risk reduction initiatives.

Participants also discussed the importance of understanding local hazardous materials risks and ensuring planning activities reflect current transportation patterns, commodity flows, industrial operations, and emerging hazards. Several participants emphasized the value of risk assessments, commodity flow studies, and other planning tools that help communities identify vulnerabilities, assess capabilities, and prioritize preparedness investments. Improved access to these resources was viewed as an important component of strengthening local planning efforts.

The breakout discussions further emphasized the need for broader stakeholder participation in planning and prevention activities. Participants noted that hazardous materials preparedness is often viewed as a responsibility of emergency response agencies alone; however, effective preparedness requires involvement from the entire community. Increasing engagement among local governments, industry partners, transportation stakeholders, schools, healthcare organizations, and other community entities was identified as an important opportunity to improve planning outcomes and strengthen resilience.



Participants also discussed the importance of prevention and mitigation activities that reduce risk before an incident occurs. These activities include public education and outreach, risk communication, preparedness exercises, infrastructure planning, and implementation of protective measures that address identified hazards. Participants noted that strengthening prevention and mitigation efforts can reduce the likelihood of incidents and improve community readiness when incidents do occur.

Overall, participants agreed that community planning, prevention, and mitigation remain foundational components of hazardous materials preparedness. Strengthening stakeholder engagement, improving utilization of planning resources, supporting LEPC effectiveness, and increasing community awareness of hazardous materials risks were identified as key opportunities for enhancing preparedness and resilience nationwide.

5.4.4 Risk-Based Response and Preparedness

Participants identified risk-based response and preparedness as a continuing high-priority issue affecting the ability of jurisdictions to effectively prepare for and respond to hazardous materials incidents. Discussions focused on understanding local risks, identifying capability gaps, improving resource awareness, and ensuring that preparedness activities are aligned with the hazards most likely to impact a community.

A recurring theme throughout the discussion was the challenge of maintaining preparedness for low-frequency, high-consequence events. Participants noted that hazardous materials incidents often receive significant attention following major events; however, sustaining awareness, training, and preparedness activities between incidents remains difficult. Participants emphasized the importance of maintaining focus on hazardous materials preparedness before incidents occur rather than relying on reactive efforts following a major event.

Participants discussed the value of using risk-based planning tools to better understand local hazards and preparedness needs. Commodity flow studies, transportation data, risk assessments, and geographic information systems were identified as valuable resources for helping communities understand the types and quantities of hazardous materials moving through their jurisdictions. Participants noted that these tools can assist emergency managers, elected officials, industry partners, and emergency responders in prioritizing preparedness activities and making informed decisions regarding training, equipment, and resource allocation.

The discussion also highlighted significant differences in hazardous materials response capabilities across the country, particularly between urban and rural jurisdictions. Many rural communities lack

the personnel, equipment, and specialized expertise necessary to manage complex hazardous materials incidents independently. As a result, participants explored the concept of regional hazardous materials response models that could provide specialized resources and technical expertise to jurisdictions with limited local capabilities. Participants referenced regional approaches similar to Urban Search and Rescue Task Forces as potential models for supporting communities facing complex hazardous materials emergencies.

Participants further emphasized the importance of maximizing the capabilities of awareness personnel and operations-level responders, who are often the first responders to arrive at hazardous materials



incidents. Training these operations-level responders to recognize and analyze hazards, make a plan, implement the plan with available resources, identify trigger points for requesting additional resources, and evaluate progress on the implemented plan was viewed as a critical component of effective response. Participants noted that successful incident outcomes often depend on early recognition of hazards and timely activation of mutual aid, regional assets, industry resources, and specialized response teams.

Resource identification and mapping were also discussed as important preparedness activities. Participants noted that valuable capabilities already exist within neighboring jurisdictions, state agencies, industry organizations, and specialized response teams. However, awareness of these resources is often limited. Participants highlighted tools such as the rail industry’s COE, AskRail, and other information-sharing platforms that can help responders identify available resources and improve situational awareness during incidents.

Overall, participants agreed that risk-based response and community preparedness requires a proactive approach that combines hazard identification, creation of incident action plans, capability and vulnerability assessment, predicting consequences, resource awareness, regional coordination, emergency response planning, exercising the plan, and ongoing training at multiple levels. By understanding local risks, strengthening partnerships, and improving access to preparedness resources, communities can make more informed decisions and enhance their ability to respond effectively to hazardous materials incidents.

5.4.5 Technology and Emerging Hazards

Participants identified technology and emerging hazards as continuing high-priority issues affecting hazardous materials preparedness, response, training, and regulatory oversight. Discussions focused on the rapid introduction of new technologies, the evolving use of hazardous materials in transportation and energy systems, and the challenges associated with preparing responders and regulatory frameworks for emerging risks.

A significant portion of the discussion focused on lithium-ion batteries and BESS. Participants noted the increasing frequency of incidents involving lithium-ion batteries, including thermal runaway events, transportation incidents, and fires involving battery-powered products and energy storage

systems. As the use of lithium-ion battery technology continues to expand across multiple end uses and within various industries, participants expressed concern regarding responder awareness, specialized training requirements, incident management practices, and the need for consistent emergency response guidance.

Participants also discussed the growing transportation of BESS and other advanced energy technologies. Industry representatives described ongoing efforts to evaluate transportation risks, improve responder preparedness, and coordinate with manufacturers, regulatory agencies, and emergency response organizations. Participants emphasized that technological advancements often outpace the development of training programs, standards, and operational guidance, creating challenges for responders tasked with managing incidents involving unfamiliar technologies and materials.

Nuclear material transportation was identified as another area requiring continued attention. Participants discussed ongoing coordination among industry organizations, federal agencies, and emergency response stakeholders to support the safe movement of nuclear materials. The discussion highlighted the importance of advance planning, route awareness, responder training, security considerations, and stakeholder engagement to ensure communities are prepared for incidents involving radiological materials. Participants also recommended broader engagement with organizations responsible for radiological preparedness and response planning.

AI emerged as both a potential opportunity and a potential concern. Participants discussed the increasing use of AI tools for data analysis, information management, and decision support while recognizing the need to ensure information accuracy and reliability. Concerns were raised regarding the possibility of inaccurate or unverified information being incorporated into operational decision-making processes. Participants emphasized the importance of maintaining a “trust but verify” approach and ensuring responders are trained to evaluate information sources critically before relying on AI-generated outputs. The use of AI for nefarious means, such as chemical engineering for weapons of mass destruction, was also discussed as an emerging concern.

The discussion also addressed emerging threats associated with drone technology and other rapidly evolving technologies. Participants noted that advances in unmanned systems, automation, and chemical engineering may introduce new risks that have not yet been fully evaluated by the hazardous materials response community. Maintaining awareness of these developments and incorporating them into preparedness planning, training, and research efforts was identified as an important priority.

Several participants emphasized the need for continued research and development to support responder safety and operational effectiveness. Topics identified for additional study included chemical exposure monitoring, personal protective equipment, decontamination practices, battery-related hazards, and other emerging threats. Participants also discussed the importance of ensuring that regulations, standards, and training programs evolve in parallel with technological advancements and remain relevant to current and future operational environments.

Overall, participants agreed that the pace of technological change will continue to create new opportunities and new challenges for the hazardous materials community. Strengthening collaboration among industry, government, researchers, consensus standards organizations, and emergency responders will be essential to improving awareness, enhancing preparedness, and ensuring training, regulations, and response capabilities keep pace with emerging hazards.

6 Roundtable Findings and Observations

Following the breakout group discussions and report-outs, several common themes emerged across multiple issue areas. Participants consistently identified challenges associated with information sharing, workforce development, stakeholder coordination, and the ability of preparedness programs to adapt to evolving technologies and emerging hazards. Although each discussion topic focused on a specific aspect of hazardous materials preparedness and response, participants noted that many of the underlying challenges are interconnected and require collaborative solutions involving government agencies, industry partners, emergency responders, professional associations, and training organizations.

6.1 Information Sharing and Resource Accessibility

Information sharing remained a recurring theme throughout the Roundtable discussions. Participants repeatedly identified challenges associated with locating, validating, accessing, and utilizing hazardous materials information. Although numerous data sources, reporting systems, training resources, and operational tools exist, awareness and accessibility remain inconsistent across the preparedness and response community. Participants emphasized the importance of improving coordination among information providers, increasing visibility of existing resources, and exploring opportunities to establish centralized information-sharing mechanisms that support planning, training, response, and decision-making activities.

Participants also emphasized that information accessibility alone is insufficient unless information is validated, trusted, and relevant to operational decision-making. The increasing use of AI and automated analytical tools reinforced the need to ensure that information is accurate, transparent, and derived from credible sources.



6.2 Workforce Development and Program Sustainability

Participants consistently highlighted concerns regarding workforce recruitment, retention, succession planning, and institutional knowledge transfer. Many organizations continue to experience staffing shortages and increasing turnover among both operational and leadership personnel. These challenges affect the ability to sustain hazardous materials programs, maintain technical expertise, and ensure long-term preparedness capabilities. Participants emphasized the importance of accessible training, professional development opportunities, and strategies that support the full hazardous materials response ecosystem, including emergency responders, emergency managers, planners, communications and dispatch personnel, and supporting organizations.

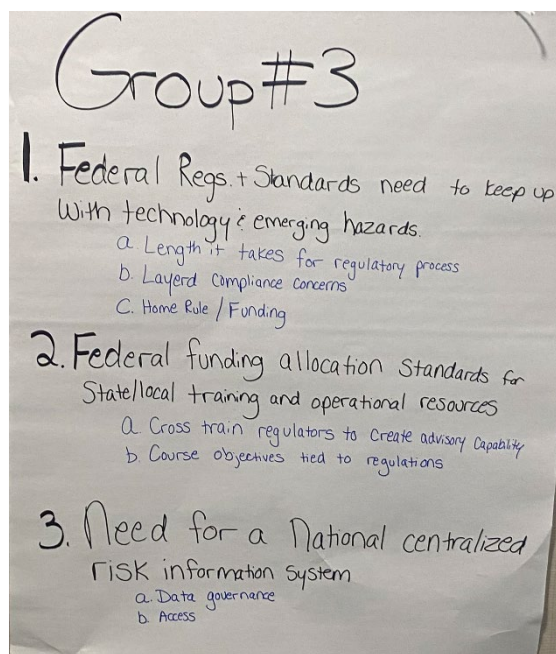
Participants noted that future workforce strategies should consider the broader hazardous materials response ecosystem, including awareness-level personnel, operations-level responders, incident commanders, dispatchers, planners, and emergency managers.

6.3 Collaboration and Stakeholder Engagement

The importance of collaboration was evident throughout the Roundtable discussions. Participants specifically highlighted the importance of strengthening relationships among SERCs, LEPCs, State Emergency Managers, industry stakeholders, and emergency response organizations to improve planning, preparedness, and information dissemination. Participants emphasized that effective hazardous materials preparedness depends upon active engagement among federal agencies, state and local governments, industry organizations, emergency responders, community leaders, and professional associations. Participants noted that many existing resources and capabilities could be better leveraged through improved communication, stronger partnerships, and more deliberate coordination efforts. The value of stakeholder engagement was particularly evident in discussions involving planning, training, information sharing, and preparedness initiatives.

6.4 Maintaining Preparedness in a Changing Environment

Participants observed that the pace of technological change continues to challenge hazardous materials preparedness programs. Discussions highlighted the growing impact of lithium-ion batteries, BESS, AI, nuclear material transportation, and other emerging technologies on planning, training, and response operations. Participants emphasized that preparedness programs, training curricula, standards, regulations, and response guidance must evolve alongside these changes to ensure responders have the knowledge, tools, and resources necessary to safely manage emerging hazards.



6.5 Risk-Based Planning and Preparedness

Participants emphasized the importance of risk-based planning and preparedness approaches that align training, resource investments, and capability development with local hazards, transportation corridors, commodity flows, and community vulnerabilities. Participants noted that improved risk identification and capability assessment can help jurisdictions make more informed decisions regarding preparedness priorities and resource allocation.

7 Emerging Trends and Issues

7.1 Emerging Trends and Issues

Participants identified several emerging trends and issues that are expected to influence hazardous materials preparedness, planning, and response activities in the coming years. Although many of these issues are already affecting the hazardous materials community, participants noted that their significance is likely to increase as technologies mature, transportation systems evolve, and operational environments become more complex.

7.2 Artificial Intelligence and Data Analytics

Participants discussed the growing role of AI and advanced analytics in information management, decision support, and data analysis. Although these technologies offer opportunities to improve efficiency and enhance situational awareness, participants emphasized the need to ensure information

quality, maintain data integrity, and train users to critically evaluate information generated through automated systems.

Participants also discussed the importance of understanding how AI-generated information is produced and validated. Concerns were raised regarding the potential for inaccurate or incomplete information to influence operational decision-making if users rely on automated outputs without adequate review and verification.

7.3 Lithium-Ion Batteries and Energy Storage Systems

The continued expansion of lithium-ion battery technology and BESS was identified as a significant emerging issue. Participants noted increasing transportation volumes, growing deployment of energy storage systems, and the frequency of battery-related incidents. Continued research, responder training, and development of operational guidance were identified as important priorities.

Participants noted that responder training, operational guidance, and research efforts continue to lag behind the rapid expansion of lithium-ion battery applications and transportation volumes.

7.4 Nuclear Material Transportation

Participants noted ongoing efforts involving the transportation of nuclear materials and radioactive waste. Future transportation activities will require continued coordination among federal agencies, industry organizations, emergency managers, and response agencies to ensure preparedness, route awareness, security, and responder training.

Participants noted that many jurisdictions have limited recent experience with large-scale nuclear material transportation activities, creating a need for renewed planning, training, and stakeholder engagement efforts.

7.5 Unmanned Systems and Emerging Technologies

Advances in unmanned systems, automation, advanced energy technologies, and emerging transportation technologies were identified as issues requiring continued monitoring. Participants noted that new technologies often introduce operational, regulatory, and training challenges before responder guidance and preparedness programs can fully adapt. Continued engagement with industry, researchers, and technology developers was recommended to improve awareness of emerging risks and preparedness requirements.

7.6 Information Integration and Common Operating Picture Development

Participants expressed continued interest in improving the integration of information systems, incident reporting platforms, training databases, and operational tools. Development of a more comprehensive common operating picture remains a long-term objective that could improve preparedness, situational awareness, and decision-making across all levels of government and industry.

7.7 Workforce and Knowledge Transfer Challenges

Participants identified workforce succession and institutional knowledge transfer as emerging concerns that may significantly affect future hazardous materials preparedness capabilities. As experienced personnel retire or transition to other roles, organizations may face challenges maintaining technical expertise, training capacity, and leadership continuity. Participants emphasized the importance of documenting lessons learned, expanding mentorship opportunities, and developing future hazardous materials leaders to ensure long-term program sustainability.

8 Action Items and Recommended Next Steps

The Roundtable generated several actionable initiatives intended to support continued progress between annual meetings. Participants emphasized the importance of maintaining momentum throughout the year and tracking the status of key initiatives identified during the discussions.

Key action items identified during the Roundtable include:

- Continuing stakeholder engagement and feedback to support NRC modernization efforts and future dashboard development.
- Exploring the development of a centralized hazardous materials information-sharing clearinghouse to improve access to training resources, preparedness tools, funding opportunities, and operational information.
- Developing a process for engaging State Emergency Managers as a primary audience for hazardous materials preparedness resources and information distribution.
- Assessing hazardous materials training standards and identifying ways to improve consistency across training and certification programs.
- Developing a questionnaire to identify essential data fields for incident reporting, training records, and preparedness activities to support future data standardization efforts.
- Exploring opportunities for increased coordination among federal agencies involved in hazardous materials preparedness, response, research, and regulatory activities.
- Assessing the status and effectiveness of LEPCs and identifying opportunities to strengthen community planning efforts.
- Improving awareness of existing preparedness resources, information-sharing tools, and training opportunities available through government agencies, industry organizations, and professional associations.
- Continuing to monitor emerging technologies and hazards, including lithium-ion batteries, BESS, AI, drone technology, and radiological transportation activities.
- Promoting the use of risk assessments, commodity flow studies, and other risk-based planning tools to support preparedness decision-making and resource allocation.
- Maintaining collaboration among Roundtable participants throughout the year and tracking progress on recommendations and initiatives identified during the 2026 HazMat Roundtable.

These action items will help guide future collaboration and provide a framework for evaluating progress during subsequent Roundtable meetings.

9 2026 Challenge and Recommendation Matrix

The following matrix summarizes the principal challenges and recommendations identified during the 2026 Hazardous Materials Emergency Response Roundtable. The matrix reflects themes discussed during presentations, breakout sessions, and participant report-outs and is intended to provide a concise summary of priority issues and potential actions for consideration by stakeholders across the hazardous materials preparedness and response community.

Challenge	Recommendations
Data Collection, Analysis, and Information Sharing Difficulty identifying, validating, accessing, and sharing hazardous materials information limits preparedness and response decision-making.	• Develop a centralized information-sharing network or clearinghouse. • Improve awareness of existing information-sharing platforms and resources. • Standardize data collection and reporting practices. • Reduce duplicative reporting requirements. • Improve data quality, validation, and accessibility.
HazMat Response Program Sustainment Workforce shortages, retirements, loss of institutional knowledge, training barriers, and funding uncertainties continue to challenge long-term program sustainability.	• Improve recruitment and retention strategies. • Strengthen succession planning and knowledge transfer. • Expand access to training and professional development. • Address barriers to training participation. • Promote sustainable funding and partnership opportunities.
Community Planning, Prevention, and Mitigation Communities continue to face challenges ensuring that preparedness resources, training opportunities, funding information, and planning tools reach the appropriate stakeholders and are effectively incorporated into preparedness activities.	• Engage State Emergency Managers as resource coordinators. • Strengthen stakeholder participation in preparedness activities. • Enhance LEPC effectiveness and community engagement. • Promote use of risk assessments and planning tools. • Expand outreach, education, and risk communication efforts.
Risk-Based Response and Preparedness Many jurisdictions, particularly rural and resource-constrained communities, face challenges maintaining preparedness for low-frequency, high-consequence hazardous materials incidents while balancing competing priorities and limited resources.	• Promote risk-based planning and preparedness activities. • Explore regional hazardous materials response models. • Strengthen awareness personnel and operations-level responder training. • Improve resource identification and capability mapping. • Enhance mutual aid and regional coordination efforts.

Challenge	Recommendations
Technology and Emerging Hazards Rapid advancements in technology, energy systems, transportation methods, and hazardous materials applications continue to outpace responder awareness, training programs, standards development, and regulatory adaptation.	• Expand preparedness for lithium-ion batteries and other emerging energy storage technologies. • Strengthen coordination among industry, government, and responders. • Support research and development on emerging hazards. • Update regulations, standards, and training programs. • Improve preparedness for incidents involving AI-enabled systems, radiological materials, drones, and undeclared hazardous materials.

10 Next Steps

Participants emphasized the importance of maintaining momentum between annual HazMat Roundtable meetings and ensuring the discussions, recommendations, and action items identified during the 2026 Roundtable result in measurable progress. Throughout the meeting, participants stressed that many of the issues discussed require sustained collaboration among government agencies, industry partners, emergency responders, training organizations, and professional associations.

Several initiatives were identified for continued development over the next year. These include:

- Supporting NRC modernization efforts,
- Advancing the concept of a centralized hazardous materials information-sharing clearinghouse,
- Engaging State Emergency Managers as a primary audience for preparedness resources,
- Improving awareness of existing training and funding opportunities, and
- Evaluating opportunities to enhance training standardization and data collection practices.

Participants discussed the potential value of conducting periodic virtual engagements between annual Roundtable meetings to review progress on identified initiatives, exchange information on emerging issues, and identify opportunities for continued collaboration. The Roundtable will continue to serve as a forum for validating previous recommendations, identifying emerging issues, sharing best practices, and strengthening partnerships across the hazardous materials preparedness and response community. Progress made on the initiatives identified during the 2026 Roundtable will help inform future discussions and contribute to the development of subsequent Roundtable reports. Participants emphasized the importance of documenting progress on action items and recommendations throughout the year to support future Roundtable discussions and help evaluate the effectiveness of ongoing preparedness initiatives.

11 Conclusion

The 2026 Hazardous Materials Roundtable provided a valuable forum for collaboration among federal agencies, state and local governments, emergency responders, industry representatives, professional associations, training organizations, and other stakeholders involved in hazardous materials preparedness and response. Through presentations, facilitated discussions, and breakout

sessions, participants examined current challenges, validated previous Roundtable priorities, identified emerging issues, and developed recommendations intended to strengthen hazardous materials preparedness nationwide.

Participants reaffirmed that data collection, analysis, and information sharing; HazMat response program sustainment; and community planning, prevention, and mitigation remain critical issues requiring continued attention. In addition, risk-based response and preparedness and technology and emerging hazards were identified as high-priority areas that will continue to influence planning, training, and operational decision-making across the hazardous materials community.

Several common themes emerged throughout the discussions, including the need for improved information sharing, stronger stakeholder coordination, sustainable workforce development, enhanced preparedness planning, and continued adaptation to evolving technologies and emerging risks. Participants emphasized that many of these challenges are interconnected and will require ongoing collaboration among government agencies, industry partners, emergency responders, researchers, and professional organizations.

The Roundtable also identified several actionable initiatives intended to advance preparedness efforts between annual meetings. These initiatives include continued support for NRC modernization efforts, exploration of a centralized information-sharing clearinghouse, increased engagement with State Emergency Managers, improved training standardization and data collection practices, and enhanced coordination among organizations involved in hazardous materials preparedness and response.

Participants expressed optimism regarding the progress made since previous Roundtables and highlighted the importance of maintaining momentum on identified initiatives. The collaborative nature of the Roundtable continues to provide a unique opportunity for stakeholders to share expertise, build relationships, identify solutions, and promote continuous improvement across the hazardous materials preparedness and response community.

As hazardous materials transportation, technology, and operational environments continue to evolve, the need for collaboration, information sharing, and proactive preparedness remains essential. The recommendations and action items identified during the 2026 Hazardous Materials Roundtable provide a foundation for future work and will help guide efforts to improve preparedness, response capabilities, and community resilience in the years ahead.

Appendix A: List of Participants

The 2026 HazMat Roundtable participants are listed in alphabetical order (based on last name) in the following table.

Name	Agency/Company/Organization
Jennifer Barre	U.S. Environmental Protection Agency, Chemical Branch
David Bierling	Texas A&M Transportation Institute
Lauren Boggs	GFT
Abena Bonso-Bruce	National Volunteer Fire Council
James Burgess	International Association of Fire Fighters, HazMat Training Department
Tim Butters	International Association of Fire Chiefs
Andy Byrnes	Utah Valley University Emergency Services
Melvin Byrne	Ashburn Volunteer Fire and Rescue Department
Nicole Cassels	National Fire Protection Association
Jeramie Calandro	Federal Emergency Management Agency
John Cunningham	National Association of Fire Training Directors
Andrea Curtis	University of Findlay All Hazards Training Center
Art Deyo	Utah Department of Public Safety
Rick Edinger	National Fire Protection Association Technical Committee for Hazardous Materials/Weapons of Mass Destruction Response
Andy Elkins	Association of American Railroads, Bureau of Explosives
Erica Fischer	TRANSCAER
Eriks Gabliks	United States Fire Administration – National Fire Academy
Jennifer Grimes	International Association of Fire Fighters
Katie Harrold	GFT
Nick Hickson	Texas A&M Engineering Extension Service
Pete Jensen	Ventura County Fire Department
Randy Keltz	National Transportation Safety Board
Scott Lancaster	Washington State Patrol
Andrew LaVanway	CHEMTREC
Lt. Cmdr. Mark Leahey	United States Coast Guard
Kinha Lester	Bloomsburie
Mark Maday	U.S. DOT Federal Railroad Administration

Name	Agency/Company/Organization
Andrew Maguire	U.S. Environmental Protection Agency
Antony Mangeri	Center for Disaster Science, Risks, and Community Resilience
Janis McCarroll	Federal Emergency Management Agency
Sean McIver	Bloomsburie
Travis McWhirter	National Response Center
Richard Miller	International Association of Fire Chiefs
Thomas Miller	National Volunteer Fire Council
Aaron Mitchell	U.S. DOT Pipeline and Hazardous Materials Safety Administration
Matt Mullen	Commercial Vehicle Safety Alliance
Taylor Munday	International Association of Fire Chiefs
Eddie Murphy	U.S. DOT Pipeline and Hazardous Materials Safety Administration
Greg Noll	South-Central Pennsylvania Regional Task Force
William Quade	U.S. DOT Pipeline and Hazardous Materials Safety Administration
Paul Roberti	U.S. DOT Pipeline and Hazardous Materials Safety Administration
Lovetta Rogers	Bloomsburie
Roy Rudisill	Weld County (CO) Office of Emergency Management; National Association of SARA Title III Program Officials
Dr. Sue Ann Sarpy	Sarpy and Associates
Joshua Smith	International Association of Fire Fighters
Tom Warnock	Target Hazard
Young Wheeler	OSHA Directorate of Technical Support & Emergency Management
John Woulfe	International Association of Fire Chiefs
Dennis Wojciewchowicz	Washington State Patrol

Appendix B: Acronyms

Name	Agency/Company/Organization
AAR	Association of American Railroads
AI	Artificial Intelligence
ALOHA	Areal Locations of Hazardous Atmospheres
BESS	Battery Energy Storage Systems
CBRN	Chemical, Biological, Radiological, and Nuclear
CDP	Center for Domestic Preparedness
CHEMTREC	Chemical Transportation Emergency Center
CNG	Compressed Natural Gas
COE	Common Operating Environment
COSS	Chemical Operations Support Specialist
CVSA	Commercial Vehicle Safety Alliance
DOT	Department of Transportation
EMAC	Emergency Management Assistance Compact
EMS	Emergency Medical Services
EPA	Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPICC	Emergency Preparedness for Industry and Commerce Council
FEMA	Federal Emergency Management Agency
FRA	Federal Railroad Administration
GHS	Globally Harmonized System
GIS	Geographic Information Systems
HazMat	Hazardous Materials
HCS	Hazard Communication Standard
IAFC	International Association of Fire Chiefs
IAFF	International Association of Fire Fighters
IAP	Incident Action Planning
IPRA	Initial Priority Response Actions
JPR	Job Performance Requirements
LEPC	Local Emergency Planning Committee
LNG	Liquified Natural Gas

Name	Agency/Company/Organization
NASTTPO	National Association of SARA Title III Program Officials
NFA	National Fire Academy
NFPA	National Fire Protection Association
NERIS	National Emergency Response Information System
NIMS	National Incident Management System
NRC	National Response Center
NVFC	National Volunteer Fire Council
OET	Office of Emerging Threats
OSHA	Occupational Safety and Health Administration
PHMSA	Pipeline and Hazardous Materials Safety Administration
PIT	Partners In Training
PPE	Personal Protective Equipment
PTB	Position Task Book
REP	Radiological Emergency Preparedness
ROSS	Radiological Operations Support Specialist
SDS	Safety Data Sheets
SERC	State Emergency Response Commission
TRANSCAER	Transportation Community Awareness and Emergency Response
TRIPR	Transportation Rail Incident Preparedness and Response
USCG	United States Coast Guard
USFA	U.S. Fire Administration
WMD	Weapons of Mass Destruction