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DOE Partnerships with States, Tribes and Other Federal Programs Help Responders Prepare for Challenges Involving Transport of Radioactive Materials¹ – 11038

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ABSTRACT

Implementing adequate institutional programs and validating preparedness for emergency response to radiological transportation incidents along or near U.S. Department of Energy (DOE) shipping corridors poses unique challenges to transportation operations management. Delayed or insufficient attention to State and Tribal preparedness needs may significantly impact the transportation operations schedule and budget. The DOE Transportation Emergency Preparedness Program (TEPP) has successfully used a cooperative planning process to develop strong partnerships with States, Tribes, Federal agencies and other national programs to support responder preparedness across the United States. DOE TEPP has found that building solid partnerships with key State and Tribal emergency response agencies ensures responders have access to the planning, training, technical expertise and assistance necessary to safely, efficiently and effectively respond to a radiological transportation accident.

Through the efforts of TEPP over the past fifteen years, partnerships have resulted in States and Tribal Nations either using significant portions of the TEPP planning resources in their programs and/or adopting the Modular Emergency Response Radiological Transportation Training (MERRTT) program into their hazardous material training curriculums to prepare their fire departments, law enforcement, hazardous materials response teams, emergency management officials, public information officers and emergency medical technicians for responding to transportation incidents involving radioactive materials. In addition, through strong partnerships with Federal Agencies and other national programs TEPP has provided technical expertise to support a variety of radiological response initiatives and assisted several programs with integration of the nationally recognized MERRTT program into other training venues, thus ensuring consistency of radiological response curriculums delivered to responders.

INTRODUCTION

Implementing adequate institutional programs and validating preparedness for emergency response to radiological transportation incidents along or near U.S. Department of Energy (DOE) shipping corridors poses unique challenges to transportation operations management. Delayed or insufficient attention to State and Tribal preparedness needs may significantly impact the transportation operations schedule and budget. The DOE Transportation Emergency Preparedness Program (TEPP) has successfully used a cooperative planning process to develop strong partnerships with States, Tribes, Federal agencies and other national programs to support responder preparedness across the United States. DOE TEPP has found that building solid partnerships with key emergency response agencies ensures responders have access to the planning, training, technical expertise and

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assistance necessary to safely, efficiently and effectively respond to a radiological transportation accident.

This paper provides an overview of TEPP activities which have resulted in a variety of partnerships with States, Tribes, Federal agencies and other national programs. Highlighted are the events, accident scenarios, and training where TEPP was proven to be integral in building the radiological response capabilities of first responders to actual radiological incidents.

BACKGROUND

TEPP is a national program managed at a headquarters level and implemented through a regional approach. The TEPP mission is to ensure that Federal, State, Tribal, and local responders have access to the plans, training, and technical assistance necessary to safely, efficiently, and effectively respond to transportation accidents involving DOE-owned radioactive materials. To support this mission TEPP has formed strong partnerships over the last fifteen years with State, Tribal and local response organizations, Federal agencies and other national programs.

These partnerships have resulted in States and Tribal Nations either using significant portions of the TEPP resources (Needs Assessments, Model Procedures, Exercise Scenarios) in their programs and/or adopting the Modular Emergency Response Radiological Transportation Training (MERRTT) as their training curriculum to prepare fire departments, law enforcement organizations, hazardous materials response teams, emergency management officials, public information officers and emergency medical technicians for responding to transportation incidents involving DOE (and a variety of other shippers) radioactive materials. TEPP's assistance to emergency response organizations as they integrate the nationally recognized MERRTT training program into their training venues helps to ensure consistency of radiological response curriculums delivered to responders.

In addition to partnerships with States and Tribal Nations, TEPP partners with Federal Agencies and other national programs to provide technical expertise and support to a variety of other radiological response initiatives.

PARTNERSHIPS MAKE A DIFFERENCE IN PREPAREDNESS AND INCIDENT RESPONSE

To appreciate the collaborative efforts States, Tribes, Federal agencies and other national programs are engaging in with the DOE TEPP to ensure responders are adequately prepared to respond to shipments of radioactive materials through their communities it is important to recognize that TEPP is forming partnerships with response agencies along DOE Environmental Management's (EM) shipping corridors all across the country. TEPP's resources, tools and training address the response concerns of States, Tribes and local jurisdictions about shipments of radioactive materials through their jurisdictions.

TEPP's extensive partnering efforts with States and Tribes resulted in recognition of the Program's value during actual radiological responses as being instrumental in having provided training to responders allowing them to make better decisions in mitigating accidents involving radiological materials. Incidents in West Virginia, Indiana, Idaho and Wyoming demonstrated the unique

capabilities of response organizations that had completed a MERRTT course prior to the incidents. In each incident, responder actions and the outcome of each response were all considered to be very effective. The trained responders demonstrated their skills, effectively managed the incidents, and successfully communicated to the media the potential and actual radiological hazards associated with each incident.

After responding to a truck fire involving uranium hexafluoride (UF₆) the Beckley Fire Department responders from Beckley, West Virginia, said they were glad they had been through training provided by TEPP. *“We were a whole lot calmer than we would have been because we had been through the training, and we made better decisions,”* said Lieutenant Bryan Trump, the Assistant Training Officer for the Beckley Fire Department. Trump worked with DOE to coordinate training for firefighters from his department in May 2009. Around midnight on Sunday, August 2, 2009 a tractor-trailer carrying a cylinder of UF₆ swerved to avoid debris on the roadway, overturned and caught fire on Interstate 64 near Beckley. The Beckley Hazardous Material Team arrived on the scene around 3:30 a.m., tested the air for chemicals, and approached the scene with radiological survey instrumentation to determine if radioactive material had been released.

In Evansville, Indiana, a transportation accident involving a radiography source shipped in a Type B package tied up traffic for 1½ hours and sent three people to the hospital. The incident occurred when a pickup truck carrying the source pulled out of a parking lot onto U.S. 41 in Evansville and was struck by an oncoming vehicle. According to police, a semitrailer had stopped in the right-hand lane to let the pickup truck pull out. As the pickup truck pulled out it continued into the left-hand lane where an oncoming Ford Expedition hit it broadside. The impact knocked the camper off the pickup’s bed and sent the radiography camera from inside the camper onto the roadway. The Evansville Fire Department’s Hazardous Material Team identified the radiation source and used radiation detection equipment to verify that the package had not been breached. They also determined that the radiography company had the proper documentation and packaging for the material.

In early 2009, the Idaho Falls, Idaho Fire Department Hazardous Material Team was notified of an incident involving the release of radioactive material resulting in the contamination of three individuals and the spread of contamination throughout an industrial facility. After the situation was brought under control, the Captain of the Idaho Falls Fire Department stated: *“Because of the TEPP training and exercises we have participated in over the years, our team had a confidence and calmness with the radiological response that we would not have demonstrated had we not been trained....The efforts of your TEPP staff are commendable and I applaud your efforts in training and preparing the Nation’s first responders and their communities.”*

A four way partnership with the DOE Waste Isolation Pilot Plant (WIPP), TEPP and the States of Wyoming and Colorado resulted in several months of collaboration with representatives from the Wyoming Office of Homeland Security and Emergency Management, Wyoming Highway Patrol, Wyoming Department of Transportation, Federal Bureau of Investigation (FBI-Cheyenne Office), Colorado Highway Patrol, and the Colorado Department of Public Health and Environment as they prepared for a joint Wyoming/Colorado tabletop exercise. The tabletop was preliminary to a full-scale WIPP transportation exercise scheduled for fall of 2004. The tabletop was a tool to validate communications between public and private emergency preparedness systems when responding to a

transportation accident involving a WIPP TRUPACT-II waste shipment. Particular emphasis was focused on the integration of effort and cooperation among the many emergency response organizations participating in the tabletop. In March 2004 the planning group completed the security communications functional tabletop and continued planning for the full-scale response and recovery exercise to be held near Cheyenne, Wyoming. On August 19, 2004 interagency communications were significantly tested following a fiery 35-vehicle crash along I-80 in Wyoming during dense fog conditions. In the middle of the scene WIPP drivers avoided other vehicles by driving off the highway and into the ditch. The WIPP truck was escorted to safe parking in Cheyenne, Wyoming where it was parked overnight and inspected prior to resuming the trip to WIPP. In the week following the pileup emergency management staff from both Wyoming and Colorado indicated that they had tested their communications and emergency systems completely during the event. During the actual response the responding agencies utilized information from the tabletop as those discussions had considered various scenarios and very relevant coordination between agencies in dealing with; where to take WIPP trucks following an event and prior to inspecting, level of inspections necessary prior to resuming transport, notifications down-route of delays, communications protocols relative to the event, both intra and inter-state, State notification procedures and response actions by the DOE.

Wyoming and Colorado determined that with the combination of the tabletop preparation and the reality of the August 2004 event it was not necessary to complete the fall full-scale exercise.

TRAINING PARTNERSHIPS

Regional TEPP Coordinators and contractor staff initiate partnerships with States, Tribes and local response organizations through outreach efforts at conferences and workshops where they identify response organizations with radiological training needs and schedule with them to teach an initial DOE sponsored MERRTT Train-the-Trainer (T3) course. As those response organizations implement their radiological preparedness training programs they request that MERRTT instructors from TEPP partner with them for the first few MERRTT courses they provide for their emergency responders. To ensure consistency in curriculum all State, Tribal, Federal and other MERRTT certified trainers throughout the complex who demonstrate use of the training program are provided with annual updates to the instructor materials. The following partnerships are typical examples of how State, Tribal, Federal and local emergency management and response organizations are partnering with TEPP to incorporate MERRTT into their radiological preparedness programs and build their response capacity.

In Philadelphia, Pennsylvania, as a follow up to a MERRTT T3 conducted in October 2009, TEPP representatives partnered with staff from the Philadelphia Fire Department Training Division to coordinate a TEPP MERRTT training project for the over 450 Hazardous Materials radiological response specialists assigned to engine companies from the nation's fifth largest fire department. At the request of the Training Division, TEPP incorporated several additional slides on a new instrument Philadelphia Fire Department Hazardous Materials responders would begin using after being MERRTT trained. Initial courses were taught February 15-21 and 22-28, 2010. A total of 116 students attended the first five MERRTT sessions. As the MERRTT project continued through March 15 more MERRTT sessions were conducted training an additional 270 responders. The training project concluded in April with the final two MERRTT courses training 59 responders. Of

the over 400 students attending the Philadelphia Fire Department three month long MERRTT training project 113 elected to receive medical continuing education hours (CEH's).

For the International Hazardous Materials Conference held in Baltimore, Maryland May 19-22, 2010 TEPP representatives conducted three training sessions on radiation emergencies. Conference participants included over 2,000 emergency responders from around the world. Thirteen attendees completed the initial Compressed MERRTT and seven requested medical CEH's. A second, two hour training session titled *Understanding Radiological Threats in Your Community* was attended by 10 students. This training session reviewed how to respond to emergencies where radioactive materials are involved and included basic information on radiation, common materials encountered, hazards, and signs indicating the presence of radioactive materials. The session included a demonstration on treating, packaging and transporting contaminated patients. The third and final session titled *Advanced Radiological Instruments* was attended by 11 students who received information on radiological detection instrument operations, equipment limitations and equipment capabilities.

TEPP has been partnering with the Brotherhood of Locomotive Engineers and Trainmen (BLET) and National Labor College (NLC) since 2005. As BLET trainers become MERRTT certified they have been active in using MERRTT at the NLC and they have developed a "Rail Union MERRTT." The one day class is taught by NLC Hazardous Material instructors that have completed a MERRTT T3. As part of the continued partnership with the NLC Rail Workers Hazardous Materials Program TEPP instructors regularly partner with BLET to present the course which is scheduled to be presented to rail employees across the nation as union trainers take the Rail Union MERRTT back to their work locations training, as needed, local railroad workers or responders.

For the past several years TEPP has partnered with Norfolk Southern Railroad to support the annual TRANSCAER Whistle Stop Tour (WST) in the eastern United States. The WST is designed to increase community understanding of the importance of emergency planning, and to provide local emergency response groups an opportunity to receive some hands-on training and identify additional training needs of their organizations. In FY 2010 TEPP representatives supported the WST which began in Mobile, Alabama and traveled through McIntosh, Selma, and Jasper with the final stop in Muscle Shoals, Alabama. At each stop, TEPP representatives partnered with Radiological Assistance Program (RAP) representatives and staffed a display, handing out TEPP and RAP information, and conducting a one hour training session on radioactive material shipping packages and hazard recognition in the Norfolk Southern Coach Car. An average of 150 emergency services responders participated at each WST location with approximately 15 of those attending each of the training sessions.

MERRTT instructors from TEPP and WIPP have formed solid partnerships and regularly partner to provide MERRTT courses in support of existing DOE EM shipping corridors or for new WIPP routes. Courses are offered to response agencies along DOE's primary transportation corridors or to those agencies with reciprocal agreements with response agencies along primary corridors. When WIPP opens new routes or as TEPP identifies training needs along existing WIPP routes the two programs collaborate to plan and schedule courses. The strong partnership between the two DOE programs results from years of collaboration on development of the MERRTT curriculum and ensures consistency of messages being brought to first responders. Over the past few years WIPP

has increased shipments and opened corridors in both the eastern and western United States significantly increasing the number of MERRTT courses being conducted by both WIPP and TEPP.

In FY 2010 WIPP opened a new route for shipments of contact handled Transuranic (TRU) waste from Lawrence Livermore National Laboratory (LLNL) and the GE Hitachi Nuclear Energy's Vallecitos Nuclear Center to the Idaho National Laboratory (INL). The TRU waste was being shipped to the INL for re-characterization and re-packaging prior to shipment to WIPP. In support of training along the new route, throughout the spring and summer of 2010 TEPP Instructors coordinated resources with WIPP to support 30 of the courses offered along the shipping corridor. The courses included Full MERRTT's, Compressed MERRTT's, and MERRTT T3's depending on the needs of each jurisdiction. TEPP supported MERRTT courses conducted in Reno, Sparks, Verdi, Carson City, Virginia City, Lockwood, Winnemucca, Elko, Spring Creek and Wells, Nevada and in Stanford, Auburn and Truckee, California along the Interstate 80 and feeder transportation corridors. Agencies represented included: Placer County Office of Emergency Services/HazMat, Placer County Environmental Health; Cal Fire, Truckee Fire Department, Fire Departments from Carson City, Reno, Sparks, Wells, Winnemucca, Elko and Manteca, and from Storey, Lyon and Wells Counties; Fire Protection Districts of North Lake Tahoe and North Lyon County; Sierra Fire Protection; Nevada County Environmental Health, Nevada County Sheriff's Office and Emergency Services, State of Nevada Radiation Control Program, Nevada Ambulance Services (REMSA), Humboldt General Hospital, Humboldt County Sheriff's Office, Elko County Ambulance, Elko Sheriff's Office, Washoe County District Health, Winnemucca Police Department, the Nevada Division of Forestry and the Nevada Division of Environmental Protection.

In the eastern United States TEPP instructors also partnered extensively with WIPP instructors to provide MERRTT courses for several State and local response organizations. In support of requests to TEPP and WIPP for training along existing DOE EM shipping corridors and new WIPP routes thirty-four MERRTT courses were coordinated in partnership with WIPP and conducted in the States of Georgia, Mississippi, Missouri, Tennessee, and West Virginia from February – September 2010.

The TEPP mission includes providing radiological transportation training to States, Tribes and other Federal Agencies. In support of that mission DOE-HQ approved a MERRTT T3 course for the 93rd Civil Support Team (CST) out of Honolulu, Hawaii. The training was at the request of the CST Operations Officer who was working with the DOE Region 7 RAP to prepare for a RAP RoadRapter Exercise and the Kaimalu O' Hawaii (KOH) Port Security Exercise. The CST Operations Officer reviewed the TEPP website and determined that the MERRTT T3 course would be an excellent fit not only for exercise preparation but to allow the CST to incorporate MERRTT into their outreach activities in Hawaii. RAP coordinated with TEPP to provide additional course information and to schedule the MERRTT T3 at the Seafarer's Training Facility in Kapolei, Hawaii.

The MERRTT T3 course was co-taught by MERRTT instructors from TEPP and RAP April 20-21, 2010. Thirty-eight participants attended the two-day course which included training on radiological basics, biological effects, packaging, hazard recognition, initial response actions, radiological contaminated patient handling techniques, incident control, instrumentation, decontamination, and public information responsibilities, as well as, instructor techniques and responsibilities for new MERRTT trainers. In addition to the 93rd CST, responders from the 9th CST out of California

attended the training, as well as, representatives from a variety of response agencies in the Honolulu area including U.S. Coast Guard, 18th Medical Command (Fort Shafter, Honolulu), Defense Threat Reduction Agency, Honolulu Fire Department and the Honolulu Police Department. A total of thirty-eight trainers from the participating agencies successfully completed the T3 with six emergency medical technicians receiving medical CEH's for their participation. The CST trainers completing the T3 planned to incorporate MERRTT materials into their outreach efforts and include applicable modules from the course in their radiological training for Fire, Law Enforcement, Emergency Management and military personnel throughout the Hawaiian Islands.

MERRTT COURSE DEVELOPMENT PARTNERSHIPS

The TEPP Core Task Group completed development of a new Technician MERRTT (TMERRTT) course which incorporated National Fire Protection Association (NFPA) requirements and competencies. The course was vetted through partnerships with stakeholders who provided technical expertise and reviewed the course materials. The TMERRTT was piloted in Lincoln, Nebraska and Kansas City, Kansas in FY 2010. In Lincoln the TMERRTT was taught to members of the Lincoln Fire and Rescue Hazardous Materials Team and Lincoln-Lancaster County Health Department Environmental Specialists. Recommendations from both students and instructors at the Lincoln, Nebraska and Kansas City, Kansas courses were incorporated in subsequent revisions to the course materials and the curriculum was reviewed extensively following the pilots to eliminate duplication, streamline module content, and finalize practical exercises. The new TMERRTT program has been offered to DOE for acceptance and was added to the DOE TEPP Training Course Catalog.

TEPP's Radiation Specialist course was developed to meet the advanced needs of responders and to address the new competencies found in the NFPA 472 *Standard for Competence of Responders to Hazardous Materials/Weapons of Mass Destruction Incidents*. At the request of the Chicago Bomb Squad and in partnership with Argonne National Laboratory (ANL) TEPP Central Operations instructors partnered with ANL to conduct the Radiation Specialist Training Session July 12-16, 2010 at ANL in Argonne, Illinois. The course was taught for metro area Chicago Hazardous Material Teams and the Chicago Bomb Squad. The partnership with ANL allowed students to use actual radiation sources and use their own instrumentation to conduct surveys in radiation fields. The training proved to be a very valuable and positive experience for participating responders. Representatives from several Chicago area HazMat agencies attended with 21 students completing the 5 days of training.

EXERCISE PARTNERSHIPS

TEPP partners with States, Tribes and other Federal Agencies to support a variety of drills, tabletop exercises, practical exercises, and full-scale exercises to verify that emergency responders can effectively implement their procedures and demonstrate skills learned during training. Exercise partnerships are an integral part of TEPP implementation and validate program effectiveness. The exercises noted below are typical of TEPP exercise planning and conduct in partnership with States, Tribes and other Federal agencies.

On January 13-14, 2010 TEPP representatives partnered with representatives from the Massachusetts Division of Fire Safety to provide a MERRTT T3 and conduct a simple field exercise in Topsfield, Massachusetts. The exercise scenario involved one accident victim and a vehicle transporting 18 various types of radioactive material packages. The victim was injured and the scenario required responders to practice the double blanketing method to remove the victim from the hot zone. The 18 packages were scattered around the accident scene and several were damaged as a result of the accident. Representatives from the Massachusetts Radiation Authority participated with the numerous emergency response agencies to conduct scene surveys to determine radiation and check for contamination. Response activities included ensuring package accountability of all the packages listed in the shipping papers.

TEPP representatives supported the March 15, 2010 Operation Cornhusker Exercise held in Lincoln, Nebraska. The exercise was a joint effort between Nebraska Emergency Management Agency (NEMA), Lincoln Fire Department and TEPP. In preparation for the exercise conduct and to determine agency training and operational needs a TEPP Needs Assessment was completed for each agency participating in the exercise. TEPP representatives also completed a Controller/Evaluator Handbook and conducted Controller/Evaluator training for designated personnel. Training in preparation for the exercise included a four-hour version of the FEMA Department of Homeland Security (DHS) Radiological Hospital training which was attended by St. Elizabeth Medical Center and Bryan LGH Medical Center Staff. In addition, TEPP instructors taught several MERRTT awareness level modules and demonstrated the patient packaging practical exercise for six Lincoln Fire and Rescue first responders. Training Captains for the Lincoln Fire Department also completed the MERRTT T3 and incorporated MERRTT into their programs subsequently teaching the course to other first responders in the Fire Department. Over the course of exercise preparations feedback was very positive, and Jon Schwarz, NEMA, wrote a letter to DOE-Headquarters (HQ) expressing appreciation for the class and the Region 5 TEPP instructor.

Operation Cornhusker was conducted on Monday, March 15, 2010 with positive results and two local news stations reporting on the event. In the weeks following the exercise DOE TEPP Staff drafted a detailed report on all exercise activities and then met with exercise leaders from participating agencies at the After Action Report meeting June 18, 2010. TEPP presented the detailed report to the group and previewed with exercise participants, a TEPP video production of exercise play, followed by a slide show of the final list of strengths, weaknesses, and planned corrective actions for all players. During the meeting, the State of Nebraska presented John Riley, Region 5 TEPP, with a wall plaque citing NEMA's appreciation for the exercise support provided. In addition, a State of Nebraska "Admiral's Club" certificate signed by the Governor of Nebraska was also presented to Mr. Riley.

Using the TEPP Model Needs Assessment TEPP partnered with the Shoshone-Bannock Tribes at Fort Hall, Idaho to complete a comprehensive program analysis of Tribal emergency management functions. One of the outcomes of that analysis is annual MERRTT refresher training provided by TEPP for Shoshone-Bannock Tribes emergency response organizations. Another outcome was to test the system and validate the training. TEPP representatives supported the validation through a 2008 five-hour, full-scale radiological response exercise dubbed *Operation RadReck*. The exercise was hosted by the Shoshone-Bannock Fort Hall Fire Department Hazardous Materials Response Team with the Idaho District 6 and District 7 Regional Response Teams also participating. The

exercise was conducted by representatives from the State of Idaho Department of Environmental Quality Radiation Control Program, the Idaho Bureau of Homeland Security and TEPP. The exercise scenario involved a multi-vehicle transportation accident with a radiological release and three victims with various types of injuries. One of the three vehicles involved in the accident was a radiological transport service hauling several different types of radioactive material packages. Using live radiological sources, exercise controllers were able to create a radiation field around the accident scene. First responders conducted a prompt rescue of the injured, recognized the radiological hazards, and requested assistance from the regional response teams. These objectives included numerous entry operations to; verify all accident victims had been removed from the scene; identify the radiological hazards at the scene; identify breached packages; obtain the shipping papers and conduct radiological / contamination surveys of the scene to determine radiation and contamination levels and map the location. Accident victims were transported to Bingham Memorial Hospital for treatment. As part of the exercise play hospital staff implemented their radiological control and patient treatment procedures. Those procedures included the preparation of the emergency room, dress out of the emergency room staff and use of detection equipment by emergency room staff. Prior to the full scale exercise, TEPP conducted a series of training sessions, drills, and tabletop exercises to verify responders were properly prepared for this type of accident response.

TEPP planning and implementation activities have also proven very relevant for preparedness for high visibility DOE shipping campaigns. In conjunction with efforts to prepare for the 1998 shipment of Foreign Research Reactor (FRR) spent nuclear fuel from the west coast to the INL, the DOE and the Pyramid Lake Paiute Tribal (PLPT) Council entered into an agreement calling for subject matter experts from the INL to assist in the establishment of a self-determined, integrated public safety program. TEPP was instrumental in carrying out that agreement and provided assistance in the areas of; organization and planning, mutual aid and cooperative agreements, equipment selection and procurement, and training and exercises. TEPP partnerships with PLPT Emergency Management during the 5 years of the agreement resulted in revisions to the PLPT Emergency Management Plan and helped to clarify the emergency response organizational structure and the roles and responsibilities of Tribal emergency organizations and resources and provided training for response personnel. In 2003 an emergency exercise was held in Nixon, Nevada under the direction of the PLPT Emergency Management Office. Participating Tribal agencies included the PLPT Fire Department, Police Department, Search and Rescue, Medical Clinic, and the Pyramid Lake Junior and Senior High School. Personnel representing DOE, the Federal Emergency Management Agency (FEMA) and TEPP provided exercise support. The exercise clearly demonstrated the enormous progress made by Tribal emergency organizations over the five years of the partnership.

PARTNERSHIPS WITH FEDERAL AGENCIES AND OTHER NATIONAL PROGRAMS

In addition to partnerships with States and Tribes TEPP actively pursues opportunities to partner with Federal agencies and other national programs in areas related to homeland security and preparedness for radiological events. These strong partnerships provide a mechanism for TEPP to integrate the MERRTT program into other training programs helping to ensure consistency of radiological response curriculums delivered to responders. Programs incorporating the DHS

approved MERRTT into their hazardous materials training have recognized significant cost efficiencies and are highlighted below.

TEPP has partnered extensively with FEMA during the last few years to accomplish tasks such as the development of a Hospital Course (FEMA Course G-346) for hospital personnel who may be involved in responding to incidents involving potentially radiologically contaminated patients. FEMA has also adopted the MERRTT modules as independent study courses and have made them available as self-study courses posted on their Emergency Management Institute website. In FY 2010 TEPP again partnered with FEMA to finalize the FEMA Question and Answer Booklet issued by FEMA to help increase understanding of radiological materials.

TEPP representatives partnered with the DHS in discussions about streamlining all Federal radiological training programs into a single radiological training program suite or toolbox. One streamlining effort that TEPP supported was the Homeland Defense Equipment Reuse (HDER) training program. This training program was funded by DHS to provide radiological terrorism training to first responders. The DHS used MERRTT as the foundation for development of the HDER training program. The objective of the HDER training program was to develop a catalog of short courses that emergency responders can choose from to satisfy identified areas of weakness in their existing training programs. The HDER/TEPP program was completed in 2006. On March 27, 2007 TEPP again partnered with DHS to conduct a streamlined radiological training program in Harpers Ferry, West Virginia. The pilot training program included a combination of MERRTT and the DHS HDER modules. The training was conducted for U.S. Customs and Border Protection (CBP). The four-hour class was held at the CBP Advanced Training Center for a group of international responders from Eastern Europe. The U.S. State Department provided interpreters to translate the training delivery and to assist with questions and discussion between the instructor and the 25 students attending the training.

In partnership with DHS and the American Society for Testing and Materials (ASTM) TEPP participated in several meetings on ATMS Committee E54 – Homeland Security Applications to create standardized approaches for response to incidents involving radioactive material. The standard: *E54.02 New Practice for Radiological Emergency Response* was designed to assist local jurisdictions and regional first responders by providing a standardized set of decision-making guidance, procedures, and tools. TEPP also assisted the committee in the development of ASTM standard WK7020 “*Guide for the Development of a Radiological Emergency Response Playbook*” to help emergency responders develop succinct, usable emergency response guidance in the event of a radiological event, including anything from a transportation accident involving radioactive material up to the intentional release, or an attack, involving a radiological dispersal device (also known as a “dirty bomb”). The standard provides guidance in developing and implementing recommended practices for emergency responders at radiological events and includes directions for instructing any person having a functional role in response to a radiological event, for the duration of the event, from the first recognition of the event to the point where established radiation protection procedures for both occupational and public exposure are reinstated. This standard provides decision making considerations that jurisdictions can use to respond to incidents that involve radioactive material and provides a consistent set of practices that can be incorporated into the response planning.

Established in 1896, the NFPA serves as the world's leading advocate of fire prevention and is an authoritative source on public safety. The mission of the NFPA is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating consensus codes and standards, research, training, and education. NFPA membership totals more than 79,000 individuals from around the world and more than 80 national trade and professional organizations. NFPA publishes 300 codes and standards. A number of these standards have to do with response to incidents involving hazardous materials and form the basis for many first responder hazardous materials training programs. TEPP has been partnering with the NFPA's Hazardous Materials Response Personnel Committee for many years. This Committee has primary responsibility for developing consensus codes and standards on the requirements for the professional competence, training, procedures, and equipment for emergency responders to hazardous materials incidents. Specifically, TEPP has supported re-writes on three NFPA standards: *NFPA 471: Recommended Practice for Responding to Hazardous Materials Incidents*; *NFPA 472: Standard for Professional Competence of Responders to Hazardous Materials Incidents*; and *NFPA 473: Standard for Competencies for EMS Personnel Responding to Hazardous Materials Incidents*. TEPP regularly consults with NFPA providing technical expertise about issues associated with responding to transportation incidents involving radioactive material. TEPP partners with NFPA in evaluating/revising training competencies outlined in the standards, and assists with resolving public comment or questions about the standards' content with respect to radioactive material response. TEPP's other activities with the Committee include developing competencies for hazardous materials responders with a radioactive material specialty.

Strong partnerships between TEPP and several of DOE's RAP Regional Response Teams provide opportunities for collaboration on training and outreach activities including radiological transportation training which meets the goals of both programs. MERRTT modules have been integrated into several regional RAP outreach and training programs and are being used to train responders both on and off DOE's transportation corridors. DOE Region 6 and 7 RAP instructors certified to teach MERRTT co-taught with TEPP instructors at a variety of venues along DOE's shipping corridors and TEPP reciprocates by supporting a variety of training activities RAP conducts as they prepare for exercises such as those conducted with the Civil Support Teams in Montana, Colorado, Wyoming, Hawaii, Utah and Idaho. TEPP trainers also partnered with the Region 3 RAP Team Outreach Training Officer to conduct three MERRTT Train-the-Trainer courses at the Hartsfield International Airport in Atlanta, Georgia. The coordinated effort with TEPP effectively expanded the RAP outreach effort in an efficient manner and utilized existing programs to maintain consistent training promoting the readiness of local responders, and demonstrating the commitment of all parties to partner with jurisdictions to safely and successfully respond to and resolve radiological incidents.

TEPP, as a DOE national program, is embedded in DOE's National Laboratory system. In 2009-2010 TEPP partnered extensively with Region 6 RAP, the State of Idaho DEQ, Idaho State Police, Idaho Falls Fire Department and the INL Fire Department to teach monthly MERRTT courses until all fire stations at the INL had received the training. In addition partnerships with Region 7 RAP at the Nevada National Security Site (NNSS) provided opportunities for NNSS trainers to become MERRTT certified instructors and incorporate MERRTT into their training program for firefighters at the NNSS (*formerly the Nevada Test Site*). Emergency response personnel from the communities surrounding the INL and NNSS were invited to the respective courses and participants expressed

appreciation for the opportunity to meet and mingle with National Laboratory firefighters. This cross organizational support is invaluable in building networks and providing Fire Department Staff with insight into the workings of other departments and response organizations. Off-site course participants noted that the interactions and connections forged between their agencies and the Site Firefighters would be very valuable in a joint response. This value gained by the forging of relationships is a consistent theme among participants at MERRTT courses throughout the nation.

CONCLUSION

TEPP partnerships help to meet the challenges of successful shipment campaign preparedness by establishing an integrated, planned, coordinated and structured foundation for all transportation emergency preparedness actions. The program ensures that public and environmental safety is maintained as the highest priority. The successful implementation of TEPP using a variety of Federal, State and Tribal partnerships continues to demonstrate significant progress toward removing emergency preparedness issues as a barrier to transportation. From technical assistance provided to emergency management and responders in the use of TEPP's emergency preparedness "tools" to partnering to co-teach with newly trained State, Tribal and local MERRTT instructors as they provide courses in their jurisdictions, TEPP has become nationally recognized as the emergency response radiological transportation program. The success of the various partnerships, resulting in the use of the MERRTT training program and TEPP planning tools, are strong indicators that TEPP has been and will continue to be a very crucial DOE program for all levels of emergency responders across the United States.