**(XXXX State/Tribal/County)**

**Needs Assessment**

**(Example - Conducted by the (State/Tribal/County Emergency Management Agency and the Radiation Health Branch and Region X TEPP Contractor Coordinator)**

**(Location)**

**(Date Month XX, 202X)**

**Participants (list all agencies)**

**(Fire Department)**

**(Police Department)**

**(Hazardous Materials Team)**

**(Emergency Management Agency)**

**PURPOSE**

The purpose of this Model Needs Assessment is to assist state, tribal, and local officials in determining emergency responder and support agencies' readiness for response to a transportation incident involving radioactive material.

1. **INTRODUCTION**

This Model Needs Assessment was developed by the Department of Energy’s Transportation Emergency Preparedness Program (DOE TEPP) as a planning and assessment tool for state, tribal, and local government officials. To complete the Model Needs Assessment, request assistance from the TEPP Regional Contractor Coordinator or designate an official from the jurisdiction interested in conducting the assessment. By answering the various questions for the participating organizations, the official will be able to determine/identify strengths and needed improvement areas. The TEPP Regional Contractor Coordinator can assist the state, tribal, and local officials in the conduct of the Needs Assessment. Upon completion of the assessment, the TEPP Regional Contractor Coordinator can assist in developing a summary report. A few examples of the template question answers are shown in **Section 4.0 Sample Summary Report** and a proposed report format is outlined in **Appendix B Report Format Guide**.

To support the assessment process, and any proposed recommendations for improvement, this document includes descriptions of additional TEPP planning and training tools. These tools have been developed to assist state, tribal, and county officials in identifying needs for improvement. Additionally, these tools provide suggested solutions. These additional resources can be found in Appendix A.

* 1. **ASSESSMENT ELEMENTS**

The assessment portion of this document is designed to evaluate different state, tribal, and county emergency response elements, assessing each response element’s capabilities, procedures, and training. The twelve emergency response elements included in this Model Needs Assessment are:

* Emergency Management Planning
* Emergency Communications Center
* Hazardous Materials Team
* Fire Response Organization
* Law Enforcement Response Organization
* Emergency Medical Services
* Hospital/Care Facility
* Public Information Officer
* Medical Examiner/Coroner
* State Emergency Management and/or Radiation Authority
* State Radiation Health and/or Environmental
* State Department of Transportation

It is recommended that the assessment be conducted/coordinated involving each of the aforementioned emergency response organizations. Telephone or virtual interviews are an excellent option to expedite the assessment process. As needed, organizations not typically associated with emergency/first response could also be added to the assessment process. TEPP has predeveloped questions/answers for numerous supporting organizations. The types of organizations and the questions/answers for those organizations can be provided by the TEPP Regional Contractor Coordinator.

1. **ASSESSMENT EVALUATION LISTING EXAMPLE**

Develop a listing and conduct the assessments of the agencies/organizations participating in this assessment:

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* 1. **EMERGENCY MANAGEMENT PLANNING**

1. Is radioactive material used or shipped within your jurisdiction?  
    Yes  No

If radioactive material is used or shipped within your jurisdiction, define the uses:

 Medical  Manufacturing  Research

 Industrial  Agriculture  Waste

 Spent Fuel  Government  Other

If radioactive material is used or shipped within your jurisdiction, define the mode of transport:

 Highway  Air  Rail  Water

1. Does your jurisdiction have an Emergency Operations Plan (EOP) that has an annex addressing the response to incidents/releases, including transportation incidents, involving radioactive material?

 Yes  No

1. Does the Emergency Operation Plan identify who is the state Radiation Authority?

 Yes  No

1. Does your jurisdiction’s emergency management official have telephone contact numbers or alternate communication methods for contacting the Radiation Authority?

 Yes  No

1. Are all referenced telephone numbers in your plans and procedures verified on at least an annual basis?

 Yes  No

1. Does the state or local plan identify allowable responder exposure limits and contamination levels for a response to a radiological incident?

 Yes  No

1. Does your Emergency Operations Plan (EOP) have a jurisdiction-wide complete listing of available radiological equipment?

 Yes  No

1. Does your jurisdiction have a general public notification alert system?

 Yes  No

If your jurisdiction does have a general public notification alert system, what type of system is it?

 Automated  Manual  Both

1. Does your jurisdiction have the means to notify the public of the need to shelter-in-place or evacuate?

 Yes  No

If so, what methods are used?

 Emergency Broadcast System  News Media  Social Media

 Emergency Sirens  Telephone Alert  Other

 Emergency Services Drive Through

1. Does your jurisdiction have at least two independent methods of notifying emergency responders of a need to respond?

 Yes  No

If so, what methods are used?

 Landline Telephone  Cell Phone  Radio

 Pager  Other  Text Alert

1. In your emergency planning have you identified the number and locations of radioactive material licensees within your jurisdiction?

 Yes  No

1. In your emergency planning have you identified the types of radioactive material used at these locations and evaluated the instrumentation needed to detect and quantify the potential hazards?

 Yes  No

1. In your emergency planning have you identified local resources and their contact information such as health physicists, radiological technicians, and licensee Radiation Safety Officers that may be available to help responders deal with a radioactive material incident?

 Yes  No

1. Are there county or state boundaries that would require additional planning or mutual aid agreements (regional hazardous materials team, Civil Support Team?

 Yes  No

1. As directed in Homeland Security Presidential Directive 5 (HSPD-5), have emergency management officials been trained in NIMS and the use of appropriate forms, procedures/checklists?

 Yes  No

1. Are all emergency management response vehicles equipped with a copy of the most current version of the DOT Emergency Response Guidebook?

 Yes  No

1. Has your jurisdiction conducted a hazardous materials drill within the past 12 months?

 Yes  No

1. Has it been greater than 3 years since responders conducted a drill or responded to an incident involving radioactive material?

 Yes  No

* 1. **EMERGENCY COMMUNICATIONS CENTER PROCEDURES AND CAPABILITIES**

1. Are 911 Center Call Taker/Dispatch personnel required to participate in minimum levels of training to meet local, state, or federal performance standards?

 Yes  No

1. Have 911 Center Call Taker/Dispatch personnel been trained in the use of the Emergency Response Guidebook (ERG)?

 Yes  No

1. Do the 911 Center Call Taker/Dispatch personnel have a current copy of the ERG?

 Yes  No

1. Do 911 Center Call Taker/Dispatch personnel have a method in place to contact local and state mutual aid support agencies?

 Yes  No

1. Do the 911 Center Call Taker/Dispatch personnel routinely check/test the call list/radio to confirm communication capabilities with the mutual aid support agencies?

 Yes  No

1. Have 911 Center Call Taker/Dispatch personnel been trained to the appropriate level of the National Incident Management System (NIMS)?

 Yes  No

1. Are 911 Center Call Taker/Dispatch personnel familiar with existing mutual aid agreements and have they tested these agreements during a drill or actual event?

 Yes  No

1. Does each 911 Center Call Taker/Dispatch position have an incident information form or computer system that is used to document information during emergencies?

 Yes  No

1. Do 911 Center Call Taker/Dispatch personnel ask probing questions of callers such as the number of victims, size of the fire, whether hazardous materials are involved, are there any

visible labels or placards, the condition of containers, or similar questions?

 Yes  No

* 1. **HAZARDOUS MATERIALS TEAM PROCEDURES AND CAPABILITIES**

1. Does the county/region have a Hazardous Materials Team?

 Yes  No

1. Has the Hazardous Materials Team completed a self-evaluation to ensure that the team meets local and state requirements and national guidance standards such as the National Fire Protection Association Standard?

 Yes  No

What is the Resource Type of the Hazardous Materials Team? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Has the resource type been assessed against FEAM guidance for radiological capabilities resource team typing?

 Yes  No

1. Are the Hazardous Materials Team’s services available 24 hours a day, 7 days a week?

 Yes  No

1. Are mutual aid agreements developed to support hazardous materials incidents?

 Yes  No

1. Has the Hazardous Materials Team’s mutual aid agreement been exercised/practiced in the past year?

 Yes  No

1. Does the Hazardous Materials Team utilize an incident scene accountability system?

 Yes  No

1. Has the Hazardous Materials Team been trained to the state and/or OSHA 29 CFR 1910.120 Technician Level?

 Yes  No

1. Has the Hazardous Materials Team been trained for response to incidents/releases, including transportation incidents, involving radioactive material?

 Yes  No

1. Has the Hazardous Materials Team evaluated its training programs against other current guidance documents or standards, such as the National Fire Protection Association?

 Yes  No

1. Does the Hazardous Materials Team have radiological survey instrumentation in its equipment inventory?

 Yes  No

If yes, identify the number of instruments, manufacturer, and model

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| **# of Units** | **Manufacturer** | **Model** |
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1. Is the monitoring equipment calibration current?

 Yes  No

1. Is there a program in place to routinely test and maintain monitoring equipment calibration?

 Yes  No

1. Does the radiological survey/monitoring equipment include:

 Exposure/Dose Rate (e.g., uR/hr, mR/hr, R/hr)

 Contamination Rate (e.g., cpm)

 Personnel Dosimeters (e.g., uR, mR)

 Yes  No

1. Has the Hazardous Materials Team been trained on the use of each type of radiological survey instrument, and is a program in place to maintain/demonstrate proficiency?

 Yes  No

1. Has the Hazardous Materials Team identified the number and locations of radioactive material licensees within their jurisdiction?

 Yes  No

1. Has the Hazardous Materials Team identified the types of radioactive material used at these locations and evaluated their instrumentation to ensure it can detect and quantify the potential hazards that may be present at these locations?

 Yes  No

1. Does the Hazardous Materials Team have a process or access to real-time weather information?

 Yes  No

1. Does the Hazardous Materials Team have computer plume-modeling capabilities for radioactive material?

 Yes  No

1. Has the Hazardous Materials Team developed response procedures that include a Site Safety Plan and Radiation Exposure Guidelines?

 Yes  No

1. Does the organization want an example of a Hazardous Material Incident Response Procedure that includes a Site Safety Plan and Radiation Exposure Guidelines (TEPP Planning Tool)?

 Yes  No

1. Do the Hazardous Materials Team response procedures identify radiation and contamination limits for establishing the hot, warm, and cold zones?

 Yes  No

1. Do the Hazardous Materials Team response procedures identify specific reporting levels for radiation readings (e.g., background, twice background 0.5 mR/hr, 2 mR/hr, 50 mR/hr, etc.), turn back dose rate limits, and allowable personnel exposure limits?

 Yes  No

1. Do the Hazardous Materials Team response procedures include the need to report radiation and contamination readings to the local or state Radiation Authority?

 Yes  No

* 1. **FIRE RESPONSE ORGANIZATION PROCEDURES AND CAPABILITIES**

1. Are all emergency response vehicles equipped with the current copy of the Emergency Response Guidebook?

 Yes  No

1. As directed in Homeland Security Presidential Directive 5 (HSPD-5), have all Fire Response personnel been trained in NIMS and the use of appropriate forms, procedures/checklists?

 Yes  No

1. Have Fire Response organizations been trained to the state and/or OSHA 29 CFR 1910.120 Operations Level?

 Yes  No

1. Have Fire Response organizations been trained for response to incidents/releases, including transportation incidents, involving radioactive material?

 Yes  No

1. Have Fire Response organizations evaluated their training programs against other current guidance documents or standards, such as the National Fire Protection Association?

 Yes  No

1. Do Fire Response organizations utilize an incident scene accountability system?

 Yes  No

1. Do Fire Response organizations have radiological survey instrumentation in their equipment inventory?

 Yes  No

If yes, identify the number of instruments, manufacturer, and model

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| **# of Units** | **Manufacturer** | **Model** |
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1. Is the monitoring equipment calibration current?

 Yes  No

1. Is there a program in place to routinely test and maintain monitoring equipment calibration?

 Yes  No

1. Does the radiological survey/monitoring equipment include:

 Exposure/Dose Rate (e.g., uR/hr, mR/hr, R/hr)

 Contamination Rate (e.g., cpm)

 Personnel Dosimeters (e.g., uR, mR)

 Yes  No

1. Have Fire Response organization personnel been trained on the use of each type of radiation instrument, and is a program in place to maintain/demonstrate proficiency?

 Yes  No

1. Have Fire Response organizations identified the number and locations of radioactive material licensees within their jurisdiction?

 Yes  No

1. Have Fire Response organizations identified the types of radioactive material used at these locations and evaluated their instrumentation to ensure it can detect and quantify the potential hazards that may be present at these locations?

 Yes  No

1. Do Fire Response organizations have standard operating procedures (SOPs) or guides for response to incidents/releases involving radioactive material?

 Yes  No

1. For transportation incidents involving radioactive material, do SOPs emphasize that the priorities for rescue, lifesaving, first aid, fire control, and other hazards are higher than the priority for measuring radiation levels?

 Yes  No

1. Does the assessment agency want a copy of a model response procedure for a transportation incident involving radioactive material (TEPP Planning Tool)?

 Yes  No

* 1. **LAW ENFORCEMENT RESPONSE ORGANIZATION PROCEDURES AND CAPABILITIES**

1. Are all Law Enforcement emergency response vehicles equipped with the most current version of the Emergency Response Guidebook?

 Yes  No

1. As directed in Homeland Security Presidential Directive 5 (HSPD-5), have Law Enforcement personnel been trained in NIMS and the use of appropriate forms, procedures/checklists?

 Yes  No

1. Do Law Enforcement response organizations utilize an incident scene accountability system?

 Yes  No

1. Have Law Enforcement response organizations been trained to the state and/or OSHA 29 CFR 1910.120 Awareness Level?

 Yes  No

1. Have Law Enforcement response organizations been trained for response to transportation incidents involving radioactive material?

 Yes  No

1. Do Law Enforcement response organizations have radiological survey instrumentation in their equipment inventory (not required)?

 Yes  No

If yes, identify the number of instruments, manufacturer, and model

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1. Is the monitoring equipment calibration current?

 Yes  No

1. Is there a program in place to routinely test and maintain monitoring equipment calibration?

 Yes  No

1. Does the radiological survey/monitoring equipment include:

 Exposure/Dose Rate (e.g., uR/hr, mR/hr, R/hr)

 Contamination Rate (e.g., cpm)

 Personnel Dosimeters (e.g., uR, mR)

 Yes  No

1. Have Law Enforcement response organization personnel been trained on the use of each type of radiation instrument, and is a program in place to maintain/demonstrate proficiency?

 Yes  No

1. Have Law Enforcement response organizations identified the number and locations of radioactive material licensees within their jurisdiction?

 Yes  No

1. Have Law Enforcement response organizations identified the types of radioactive material used at these locations and evaluated their instrumentation to ensure it can detect and quantify the potential hazards that may be present at these locations?

 Yes  No

1. Will Law Enforcement response organizations be required to escort highway route-controlled quantity shipments of radioactive material?

 Yes  No

1. Have law enforcement officers been training in the options for personal radioactive material decontamination, protection of sensitive items, and return to duty?

 Yes  No

1. Do law enforcement officials want a copy of the model procedure and job aid outlining the options for personal radioactive material decontamination, protection of sensitive items, and return to duty?

 Yes  No

* 1. **EMERGENCY MEDICAL SERVICES**

1. As directed in Homeland Security Presidential Directive 5 (HSPD-5), have EMS personnel been trained in NIMS and the use of appropriate forms, procedures/checklists?

 Yes  No

1. Have EMS personnel been trained in the use of the Emergency Response Guidebook?

 Yes  No

1. Are all EMS response vehicles equipped with a copy of the current version of the Emergency Response Guidebook (ERG)?

 Yes  No

1. Have EMS personnel been trained for response to incidents/releases, including transportation incidents, involving radioactive material?

 Yes  No

1. Has the EMS response organization been trained on the treatment and transportation of a potentially radiologically contaminated patient?

 Yes  No

1. Does the EMS response organization have a procedure for the handling and packaging of a potentially radiologically contaminated patient?

 Yes  No

1. Does the EMS response organization want a copy of the TEPP Model Procedure for handling and packaging a radiologically contaminated patient?

 Yes  No

1. Does the EMS response organization utilize an incident scene accountability system?

 Yes  No

1. Does the EMS response organization have radiological monitoring instrumentation as part of their equipment inventory (not required)?

 Yes  No

If yes, identify the number of instruments, manufacturer, and model

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1. Is the monitoring equipment calibration current?

 Yes  No

1. Is there a program in place to routinely test and maintain monitoring equipment calibration?

 Yes  No

1. Does the radiological survey/monitoring equipment include:

 Exposure/Dose Rate (e.g., uR/hr, mR/hr, R/hr)

 Contamination Rate (e.g., cpm)

 Personnel Dosimeters (e.g., uR, mR)

1. Have EMS personnel been trained on the use of each type of radiation instrument, and is a program in place to maintain/demonstrate proficiency?

 Yes  No

1. Have EMS response organizations identified the number and locations of radioactive material licensees within their jurisdiction?

 Yes  No

1. Have EMS response organizations identified the types of radioactive material used at these locations and evaluated their instrumentation to ensure it can detect and quantify the potential hazards that may be present at these locations?

 Yes  No

1. Do EMS plans and procedures identify primary and backup hospitals for single or multiple radiologically contaminated patients?

 Yes  No

1. Has there been a drill with the local/regional care facility within the past 12 months?

 Yes  No

1. Has a drill been conducted utilizing a scenario involving a radiologically contaminated patient within the past 3 years?

 Yes  No

1. Does the EMS response organization have plans and procedures for the transportation of a potentially radiologically contaminated patient by air?

 Yes  No

1. Have EMS personnel worked with the Medical Examiner/Coroner on determining the disposition of a radiologically contaminated body/human remains?

 Yes  No

1. Does the EMS organization have a procedure for handling a radiologically contaminated body/human remains?

 Yes  No

1. Does the EMS organization want a copy of the model procedure and job aid outlining the appropriate process for handling and decontaminating a patient?

 Yes  No

* 1. **HOSPITAL EMERGENCY DEPARTMENT/CARE FACILITY**

1. Does the hospital have an Emergency Operations Plan that contains information on how to prepare for, receive, and treat a radiologically contaminated or irradiated patient(s) and how to manage a contaminated body or human remains?

 Yes  No

1. As directed in Homeland Security Presidential Directive 5 (HSPD-5), have Emergency Department personnel been trained in NIMS and the use of appropriate forms, procedures, and checklists?

 Yes  No

1. Have Emergency Department personnel been trained in the setup, receiving, handling, decontamination, and treatment of radiologically contaminated patients?

 Yes  No

1. Does the Emergency Department want a copy of the model procedure and job aid that outlines the process for setting up, receiving, handling, and treating a radiologically contaminated patient?

 Yes  No

1. Does the hospital Emergency Department have radiological monitoring instrumentation as part of their equipment inventory?

 Yes  No

If yes, identify the number of instruments, manufacturer, and model

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| **# of Units** | **Manufacturer** | **Model** |
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1. Is the monitoring equipment calibration current?

 Yes  No

1. Is there a program in place to routinely test and maintain monitoring equipment calibration?

 Yes  No

1. Does the radiological survey/monitoring equipment include:

 Exposure/Dose Rate (e.g., uR/hr, mR/hr, R/hr)

 Contamination Rate (e.g., cpm)

 Personnel Dosimeters (e.g., uR, mR)

 Yes  No

1. Have Emergency Department personnel been trained on the use of each type of radiation instrument and is a program in place to maintain/demonstrate proficiency?

 Yes  No

1. Does the hospital have a Nuclear Medicine Department?

 Yes  No

1. Is there a process in place to have the hospital Radiation Safety Officer or Nuclear Medicine Technician available to assist Emergency Department staff in surveying potentially radiologically contaminated patients if needed?

 Yes  No

1. Has your hospital conducted a drill involving local responder agencies within the past 12 months?

 Yes  No

1. Has your hospital conducted a drill utilizing a scenario involving a radiologically contaminated patient within the past 3 years?

 Yes  No

* 1. **PUBLIC INFORMATION OFFICER**

1. As directed in Homeland Security Presidential Directive 5 (HSPD-5), has the Public Information Officer (PIO), and their designated alternate(s), been trained in NIMS and the use of appropriate forms, procedures, and checklists?

 Yes  No

1. Is the PIO, and their designated alternate(s), familiar with the plans and procedures for responding to a radiological incident so that information can be communicated effectively?

 Yes  No

1. Has the PIO, and their designated alternate(s), been trained in developing messages for incidents involving radioactive material?

 Yes  No

1. Is the PIO, and their designated alternate(s), aware of the external resources available from local, state, and federal levels to assist in preparing messages that can assist in preparing messages concerning incidents involving radioactive material?

 Yes  No

1. Does the PIO, and their designated alternate(s), monitor and use social media before and during an incident?

 Yes  No

1. Does the PIO, and their designated alternate(s), have messages prepared for social media distribution before and during an incident?

 Yes  No

1. Is there a procedure for coordinating public information between multiple organization PIOs such as local, state, tribal, and federal agencies?

 Yes  No

1. In advance of known shipping campaigns, has the PIO coordinated with elected officials in their locality about the campaign and the safety measures in place to protect the public, emergency responders, and the environment?

 Yes  No

1. In advance of known shipping campaigns, has the PIO coordinated with local media before an incident about the campaign and the safety measures in place to protect the public, emergency responders, and the environment?

 Yes  No

* 1. **MEDICAL EXAMINER/CORONER**

1. Have ME/C Officers been trained for response to incidents/releases, including transportation incidents, involving radioactive material?

 Yes  No

1. Have ME/C Officers been trained in the handling (contamination control/decontamination) of radiologically contaminated decedents (human remains)?

 Yes  No

1. Have the ME/C Officers been trained in managing decedents with radioactive material implants?

 Yes  No

1. Have the ME/C Officers been trained in managing decedents that have been injected, inhaled, or ingested radioactive material?

 Yes  No

1. Does the ME/C organization have a procedure for handling radiologically contaminated body/human remains?

 Yes  No

1. Does the ME/C want a copy of the TEPP Model Procedure for handling radioactive or radiologically contaminated decedents?

 Yes  No

1. Does ME/C Officers have radiological monitoring instrumentation as part of their equipment inventory?

 Yes  No

If yes, identify the number of instruments, manufacturer, and model

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| **# of Units** | **Manufacturer** | **Model** |
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1. Is the monitoring equipment calibration current?

 Yes  No

1. Is there a program in place to routinely test and maintain monitoring equipment calibration?

 Yes  No

* 1. **STATE EMERGENCY MANAGEMENT AND/OR RADIATION AUTHORITY**

1. Is radioactive material used or shipped within/through the state?

 Yes  No

If radioactive material is used or shipped within the state, define the uses:

 Medical  Manufacturing  Research

 Industrial  Agriculture  Waste

 Spent Fuel  Government  Other

If radioactive material is used or shipped within the state, define the mode of transport:

 Highway  Air  Rail  Water

1. Is the emergency management organization required to escort highway route-controlled quantity shipments of radioactive material?

 Yes  No

1. Other than nuclear power plant emergency planning zones, does the state’s Emergency Management or Radiation Authority have an established policy or procedure for managing incidents/releases, including transportation incidents, involving radioactive material.

 Yes  No

If yes, does the policy or procedure include the following?

 Radiation and contamination limits for establishing the hot, warm, and cold zones?

 Specific reporting levels to Incident Command for radiation readings (e.g., background, 100 uR/hr, 500 uR/hr, 1 mR/hr, 2 mR/hr, etc.)?

 Allowable personnel exposure limits?

 Turn back dose rate limits?

 Contamination levels (twice background or 300 cpm)

 The need to report radiation and contamination readings to the local or state Radiation Authority?

 Predetermined contamination levels for returning the scene back to normal

1. Does the Emergency Operation Plan identify who is the state Radiation Authority?

 Yes  No

1. Does emergency management officials have contact information or alternate communication methods for contacting the Radiation Authority?

 Yes  No

1. Are all referenced telephone numbers in your plans and procedures verified on at least an annual basis?

 Yes  No

1. Does the state or local plan identify allowable responder exposure limits and contamination levels for a response to a radiological incident?

 Yes  No

1. Does your Emergency Operations Plan (EOP) have a statewide listing of available radiological equipment?

 Yes  No

1. In your emergency planning have you identified and/or have access to the telephone numbers and locations of radioactive material licensees within the state?

 Yes  No

1. In your emergency planning have you identified the types of radioactive material used at these locations and evaluated the instrumentation needed to detect and quantify the potential hazards?

 Yes  No

1. Are there county or state boundaries that would require additional planning or mutual aid agreements?

 Yes  No

1. As directed in Homeland Security Presidential Directive 5 (HSPD-5), have emergency management officials been trained in NIMS and the use of appropriate forms, procedures/checklists?

 Yes  No

1. Are all emergency management response vehicles equipped with a copy of the most current version of the DOT Emergency Response Guidebook?

 Yes  No

1. Has your jurisdiction conducted a hazardous materials drill within the past 12 months?

 Yes  No

1. Other than nuclear power plant emergency planning zones, has t it been greater than 3 years since the state Emergency Management or Radiation Authority drilled or exercised with local responders in scenarios involving radiological incidents or releases?

 Yes  No

1. Does the state Emergency Management have a standardized radiological response training program?

 Yes  No

1. Are responders trained on the state’s policy or procedure?

 Yes  No

* 1. **STATE RADIATION AUTHORITY AND/OR ENVIRONMENTAL PROTECTION**

1. Is radioactive material used or shipped within the state?   
    Yes  No

If radioactive material is used or shipped within your jurisdiction, define the uses:

 Medical  Manufacturing  Research

 Industrial  Agriculture  Waste

 Spent Fuel  Government  Other

1. In your emergency planning do you maintain the telephone numbers and locations of radioactive material licensees within the state?

 Yes  No

1. Is the radiation health or environmental protection organization required to escort highway route-controlled quantity shipments of radioactive material?

 Yes  No

1. In your emergency planning have you identified the types of radioactive material used at these locations and evaluated the instrumentation needed to detect and quantify the potential hazards?

 Yes  No

1. In your emergency planning do you maintain a listing and contact information of licensee Radiation Safety Officers that may be available to help responders deal with a radioactive material incident?  
    Yes  No
2. Are there state boundaries that would require additional planning or mutual aid agreements?  
    Yes  No
3. Do you currently have a plan/guidance for mitigating an incident where radioactive material has made its way into the groundwater or an active waterway?

 Yes  No

If so, when was the last time it was reviewed or exercised?

1. Do any of your licensed users provide training for responders who may be called to an incident at any of their sites?   
    Yes  No
2. Does the state’s Radiation Authority or Environmental Protection have an established policy or procedure for managing incidents/releases, including transportation incidents, involving radioactive material.

 Yes  No

If yes, does the policy or procedure include the following?

 Radiation and contamination limits for establishing the hot, warm, and cold zones?

 Specific reporting levels to Incident Command for radiation readings (e.g., background, 100 uR/hr, 500 uR/hr, 1 mR/hr, 2 mR/hr, etc.)?

 Allowable personnel exposure limits?

 Turn back dose rate limits?

 Contamination levels (twice background or 300 cpm)

 The need to report radiation and contamination readings to the local or state Radiation Authority?

 Predetermined contamination levels for returning the scene back to normal

Who has the authority to release a scene back to normal? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* 1. **STATE DEPARTMENT OF TRANSPORTATION**

1. If there are DOE shipping routes through the state, are there identified safe parking locations along these routes?
2. Does the DOT have an emergency response capability (scene size up and response actions)?

 Yes  No

1. If so, have the DOT workers/responders been trained for response to incidents/releases, including transportation incidents, involving radioactive material?

 Yes  No

1. Have DOT workers/responders been trained in the use of the Emergency Response Guidebook (ERG)?

 Yes  No

1. Do the DOT workers/responders have a current copy of the ERG?

 Yes  No

1. Does the DOT have a procedure/process for monitoring and reporting the status of and closures/damage to the transportation system (highway, rail, air, or water) because of a radioactive materials incident?

 Yes  No

1. Does the DOT have a procedure/process to identify/recommend temporary alternative transportation solutions that can be implemented by other response agencies when the transportation system is damaged, unavailable, or overwhelmed by a radioactive materials incident?

 Yes  No

1. Does the DOT have a procedure/process to coordinate the restoration and recovery of the transportation systems with other response agencies when impacted by a radioactive materials incident?

 Yes  No

1. Does the DOT have radiological survey instrumentation in its equipment inventory?

 Yes  No

If yes, identify the number of instruments, manufacture, and model

|  |  |  |
| --- | --- | --- |
| **# of Units** | **Manufacturer** | **Model** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

1. Is the monitoring equipment calibration current?

 Yes  No

1. Is there a program in place to routinely test and maintain monitoring equipment calibration?

 Yes  No

1. Does the radiological survey/monitoring equipment include:

 Exposure/Dose Rate (e.g., uR/hr, mR/hr, R/hr)

 Contamination Rate (e.g., cpm)

 Personnel Dosimeters (e.g., uR, mR)

 Yes  No

1. Have workers been trained on the use of each type of radiological survey instrument, and is a program in place to maintain/demonstrate proficiency?

 Yes  No

1. **TRAINING EVALUATION CHECKLIST**

When conducting this section of the assessment, consider the training of all response elements. This section will assist the assessment authority in identifying topics that are not being provided in existing training programs. Upon completion of this section, the assessment authority will be able to identify training areas in need of improvement. The authority can then provide recommendations on which DOE-developed training materials can be used to augment existing training.

* 1. **AWARENESS AND OPERATIONS LEVEL RADIOLOGICAL TRAINING**

The checklist below corresponds with the objectives outlined in the DOE's Modular Emergency Response Radiological Transportation Training (MERRTT) program. MERRTT meets most of the radiological-specific competencies of the National Fire Protection Association's (NFPA) standard NFPA 470 for awareness, operations, technician, and specialist level trained responders.

When conducting this section of the assessment, consider the training of all response elements (see key below). This section will assist in identifying topics that are not covered in existing training programs. To complete this section, review each topic listed to that which is currently covered in your radiological or hazardous materials response training.

* If you feel your response personnel are adequately trained on the specific topic and prepared to respond to a radiological incident, mark ‘Yes’ under the appropriate discipline.
* If the topic is not relevant to a particular agency or response function, mark ‘N/A’ (not applicable) under the appropriate discipline.
* If you feel your response personnel are not adequately trained on the topic or prepared to respond to a radiological incident, mark ‘No’ under the appropriate discipline.

After completing the Training Needs Assessment, if you feel additional training should be provided to your response personnel, see Appendix A for a list of available DOE radiological response training programs.

**Response Elements Key:**

**Local and/or County**

* EMA = Emergency Management Agency
* HMT = Hazardous Materials Team
* FD = Fire Department
* LE = Law Enforcement
* EMS = Emergency Medical Services
* DIS = Dispatch
* HOS = Hospital
* PIO = Public Information Officers
* ME/C = Medical Examiner/ Coroner

**State Agencies**

* SEM/RA = State Emergency Management and or Radiation Authority
* SRH/EP = Radiation Authority and/or Environmental Protection
* DT = Department of Transportation

**MODULE 1 - RADIOLOGICAL BASICS**

Response personnel should have an understanding of the basic structure of an atom and the fundamentals of radiation.

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| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRH/EP** | **DT** |
| Identify the basic components of an atom (protons, neutrons, and electrons)? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the four basic types of ionizing radiation (alpha, beta, gamma, and neutron)? |  |  |  |  |  |  |  |  |  |  |  |  |
| Define ionizing radiation, radioactivity, radioactive material, and radioactive contamination? |  |  |  |  |  |  |  |  |  |  |  |  |
| Understand the difference between radiation exposure and radioactive contamination? |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 2 -BIOLOGICAL EFFECTS**

Response personnel should have an understanding of how ionizing radiation affects the human body.

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| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRH/EP** | **DT** |
| Identify the potential health effects of radiation exposure? |  |  |  |  |  |  |  |  |  |  |  |  |
| Define acute and chronic radiation doses? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify ways that radioactive material can enter the body? |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 3 - RADIOACTIVE MATERIAL SHIPPING PACKAGES**

Response personnel should have a basic understanding of the types of packages used to transport radioactive material and the potential hazard posed by the material contained within these packages.

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| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRH/EP** | **DT** |
| Identify typical packages used in the transport of radioactive material? |  |  |  |  |  |  |  |  |  |  |  |  |
| List examples of radioactive material that are shipped in various shipping packages. |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the risks associated with the various shipping packages. |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the testing methods for Type A and B Packages. |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify some commonly transported sources of radioactive material. |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 4 - HAZARD RECOGNITION**

Response personnel should have an understanding of package markings, warning labels, and placards used for packaging and shipping radioactive material and hazard assessment.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Can response personnel… (Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRH/EP** | **DT** |
| Identify terminology and acronyms associated with shipments of radioactive material? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify markings, labels, and placards used to transport radioactive material. |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the information contained on shipping papers and Proper Shipping Names used for transporting radioactive material. |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the basic steps for identification and hazard assessment at the scene of a transportation incident involving radioactive material. |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 5 - INITIAL RESPONSE ACTIONS**

Response personnel should understand the initial actions to take when arriving at a scene of a radioactive material transportation incident, use of the ERG, how to isolate and control the incident scene.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRH/EP** | **DT** |
| Identify the actions required by “Safety, Isolation, and Notification?” |  |  |  |  |  |  |  |  |  |  |  |  |
| Locate, in the U.S. Department of Transportation Emergency Response Guidebook (ERG), the response guide for radioactive material by using one or all of the following: UN Identification Number, material name, or shipment placards? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify factors to consider when implementing public protective actions at the scene of a transportation incident involving radioactive material. |  |  |  |  |  |  |  |  |  |  |  |  |
| Describe reasons for and methods of establishing hot, warm, and cold zones at the scene of a transportation incident involving radioactive material. |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify methods for protecting personnel from radiation exposure and controlling the spread of radioactive contamination. |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 6 - PATIENT HANDLING**

Response personnel should understand the potential risks in handling contaminated patients at a radioactive material transportation incident and how to prepare patients for transport from the incident scene to the hospital.

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| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRH/EP** | **DT** |
| Identify the risks to response personnel when rescuing injured persons at a radioactive material transportation incident? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the importance of gross decontamination for radiologically contaminated patients? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify methods for preparing radiologically contaminated patients for transport to the hospital? |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 7 - RADIOLOGICAL SURVEY INSTRUMENTS AND DOSIMETRY DEVICES**

Response personnel should have an understanding of radiological survey instruments and how they can be used to survey for radiation exposure and contamination.

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| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRH/EP** | **DT** |
| Identify the two categories of radiological survey instruments? |  |  |  |  |  |  |  |  |  |  |  |  |
| State the proper application and limitation of contamination survey instruments? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify a method for checking for the presence of removable contamination? |  |  |  |  |  |  |  |  |  |  |  |  |
| State the proper application and limitation of radiation exposure survey instruments? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the maximum radiation levels expected on shipping packages and/or transport vehicles? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify commonly used dosimetry devices? |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 8 - DECONTAMINATION, DISPOSAL, AND DOCUMENTATION**

Response personnel should have an understanding of the methods used to decontaminate personnel and equipment, further spread of radiological contamination, and minimize the amount of radioactive waste generated when performing response activities at the scene of a transportation incident involving radioactive material.

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| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRA/EP** | **DT** |
| Identify how personnel, personal protective equipment, apparatus, and tools become contaminated with radioactive material? |  |  |  |  |  |  |  |  |  |  |  |  |
| State the purpose of radioactive material decontamination? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the four recommended decontamination stations or processing steps? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the responsibilities for radioactive material disposal and event documentation? |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 9 -DOE SHIPMENTS AND RESPONSE RESOURCES**

***(For response organizations along all DOE transportation routes)***

Response personnel should have an understanding of the types of materials and wastes shipped by DOE, and knowledge of available resources that can make a response more efficient and effective.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRA/EP** | **DT** |
| Identify the types of radioactive material transported by the DOE? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the transportation modes used by DOE to transport radioactive material? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the enhanced safety measures used by DOE? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify federal response agencies/resources that provide assistance to on-scene responders? |  |  |  |  |  |  |  |  |  |  |  |  |
| List local, state, and federal agencies that can provide support during a transportation incident involving radioactive material? |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 10 - WASTE ISOLATION PILOT PLANT**

***(For response organizations along WIPP transportation routes)***

Response personnel should have an understanding of the type of radioactive material disposed of at the WIPP site and how it is being transported to WIPP.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRH/EP** | **DT** |
| State the importance of the Waste Isolation Pilot Plant (WIPP)? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify large quantity transuranic waste generator sites? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify waste verification techniques? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the characteristics of the waste transported to WIPP? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the packages used to transport waste to WIPP? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the enhanced safety measures used to transport waste to WIPP? |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 11 - PRE-HOSPITAL PRACTICES**

Response personnel should have an understanding of the unique aspects of pre-hospital patient care during a radioactive material transportation incident.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRA/EP** | **DT** |
| Identify personal protective equipment for responders. |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify patient management, care, and treatment considerations? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify techniques for patient transfer to a medical facility? |  |  |  |  |  |  |  |  |  |  |  |  |
| Demonstrate proper procedures for returning personnel, equipment, and vehicles to service? |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 12 - TRANSPORTATION OF SAFEGUARDS MATERIAL**

***(For response organizations along Office of Secure Transport (OST) transportation routes)***

Response personnel should have an understanding of why nuclear weapons are transported, how they are transported, and the OST resources available will increase the effectiveness and efficiency of response to a transportation accident involving an OST shipment.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRA/EP** | **DT** |
| Identify why OST provides safe and secure transportation of safeguards material? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the effective barriers used to prevent radioactive material dispersal? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the OST resources available in response to an OST operational emergency? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the special considerations specific to an OST operational emergency? |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 13 - TRANSPORTATION BY RAIL**

Response personnel should have an understanding of the radioactive material being transported by rail, and how to quickly recognize, safely respond, and accurately relay information during a rail accident involving radioactive material.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRH/EP** | **DT** |
| List examples of radioactive material the DOE transports by rail? |  |  |  |  |  |  |  |  |  |  |  |  |
| List the information resources available to the responder at a rail transportation incident? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the key elements of the Federal Railroad Administration’s Safety Compliance Oversight Plan? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify the unique aspects of responding to a rail accident involving radioactive material? |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 14 – CASE HISTORIES**

Response personnel are presented previous accidents involving radioactive material and gives participants the opportunity to see how other responders handled the accident scene. The module also recommends items for development of a recovery plan and incident termination considerations.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRH/EP** | **DT** |
| Identify size-up considerations while being shown photos of actual transportation accidents involving radioactive material. |  |  |  |  |  |  |  |  |  |  |  |  |
| List issues that should be considered during development of a recovery plan. |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify common post-incident concerns that the Incident Commander should consider. |  |  |  |  |  |  |  |  |  |  |  |  |

**MODULE 15 - PUBLIC INFORMATION OFFICER**

Response personnel should be able to effectively communicate necessary information to the media and public, thereby ensuring they are adequately and correctly informed during a transportation incident involving radioactive material.

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Can response personnel…**  **(Yes, No, N/A)** | **EMA** | **HMT** | **FD** | **LE** | **EMS** | **DIS** | **HOS** | **PIO** | **ME/C** | **SEM/RA** | **SRH/EP** | **DT** |
| Identify public concerns and perceptions about incidents involving radioactive material? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify basic messages that should be delivered to the media and the general public during a transportation incident involving radioactive material? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify emergency public information sources available to support an incident response? |  |  |  |  |  |  |  |  |  |  |  |  |
| Identify agencies that will require public information coordination during a response to an incident involving radioactive material? |  |  |  |  |  |  |  |  |  |  |  |  |

1. **SAMPLE SUMMARY REPORT DISCUSSIONS AND RECOMMENDATIONS EXAMPLES**

This section of the assessment identifies recommendations or actions necessary to improve planning and training skills/capabilities for emergency responders (emergency management personnel, hazardous materials teams, fire, law enforcement, and emergency medical service). Using the results of the previous sections, describe identified improvement areas and develop recommendations that, upon implementation, will improve responder capabilities for response to a transportation accident involving radioactive material. Several example answers are provided below. Remember, the TEPP Regional Contractor Coordinator has predeveloped template answers to the assessment questions. If you are interested in getting assistance in developing your report, please contact your TEPP Regional Contractor Coordinator or Central Operations. The teppinfo.com website can provide contact information for TEPP Central Operations.

**Example 1: Discussion and Recommendations for Emergency Management Planning**

You have indicated that in your emergency planning, the number and locations of radioactive material licensees. You also indicated that have you identified the types of radioactive material used at these locations and evaluated the instrumentation needed to detect and quantify the potential hazards. This is considered an area of strength and you should continue to maintain and update this list on a routine schedule. Identifying locations with potential radiological hazards, along with the types of radioactive material used, will enable your jurisdiction to better plan for and manage a radiological incident.

Recommendation:

Consider including this information as an appendix in your Emergency Operations Plan. This information should be reviewed periodically and updated as needed.

**Example 2: Discussion and Recommendations for Hazardous Materials Team Procedures and Capabilities**

The County has a Hazardous Materials Team that provides around-the-clock response capabilities. The team is supported by typical hazardous materials training and response equipment. Currently, all members meet OSHA 29 CFR 1910.120 Technical Level Training Requirements. The equipment cache for a radiological response should be re-evaluated.

An adequate number of radiological monitoring instruments (9) are available for a radiological transportation accident. However, the instrumentation available requires calibration and should be evaluated to determine if some existing instruments could be replaced with more current models/units. Mutual Aid agreements for additional support are developed and approved by neighboring counties.

Recommendation:

Re-evaluate currently available radiological monitoring equipment; determine calibration needs; and, the possibility of replacing some existing instruments with more current models/units.

**Example 3: Discussion and Recommendations for Law Enforcement Training**

Based on the response to the assessment questions concerning existing training programs associated with transportation accidents involving radioactive material, the following discussion and recommendations are provided

Through the assessment process and discussions with law enforcement officials, it was determined that each law enforcement recruit receives hazardous materials training as part of their initial qualifications. The hazardous material training is general in nature but does include the use of the ERG. After completion of the recruitment training program, each law enforcement officer routinely receives refresher training. However, existing refresher training programs do not include specifics on responding to transportation accidents involving radioactive material.

Based on discussions with law enforcement officials, it was identified that an Awareness Level Training Program for law enforcement officers would be useful. Law enforcement officials also expressed that due to limited training hours, available training programs should be packaged in a delivery system (video, slides, or handouts of 30 minutes or less). By developing training in this format/delivery system, the training could be conducted during daily lineup activities or specially called meetings/activities.

Recommendation:

Have law enforcement complete training modules at the Awareness Level and establish a regular refresher training cycle.

1. **SIGNATURE PAGE EXAMPLE**

Include signatures from organizational authorities (Police and Fire Chiefs, Emergency Management Director, State Radiation Authority Supervisor, Hazardous Materials Team Chief, Emergency Medical Service Chief, and Authority conducting the assessment).

The information included in this assessment is current and accurate to the best of each assessment team participant’s knowledge.

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Police Chief Date

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State Police Date

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Fire Chief Date

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Emergency Management Director Date

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Sheriff Date

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State Radiation Authority Supervisor Date

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Hazardous Materials Team Chief Date

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Emergency Medical Services Chief Date

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Conducting Authority Date

**ATTACHMENTS**

This section should include a list of attachments that have been considered useful and have become part of the report. Examples of the Model Plans and Procedures can be viewed on the Transportation Emergency Preparedness Program website ([www.teppinfo.com](http://www.teppinfo.com)).

**APPENDIX A – TEPP RESOURCES (available at www.teppinfo.com)**

**TRAINING PROGRAMS**

The U.S. Department of Energy Transportation Emergency Preparedness Program offers a variety of training courses to prepare emergency responders for response to transportation accidents involving radioactive material. The courses are divided into distinct topic and delivery options. Each option is designed to target specific types of emergency responder audiences and ensures emergency responders can identify and obtain the appropriate level and type of training to develop the necessary skills for response and management of a transportation accident involving radioactive materials.

Target audiences include fire services, law enforcement, EMS, environmental and public health, emergency management, healthcare, public works, transportation, dispatch, medical examiners, coroners, and crime scene investigators.

**Commission on Accreditation for Pre-Hospital Continuing Education (CAPCE)**

The 16-hour MERRTT course is accredited by CAPCE to provide licensed medical personnel with continuing education hours. CAPCE’s mission is to serve as the recognized leader for continuing education in EMS, promoting its evolution and growth through the development of continuing education standards, encouragement of innovative learning solutions, the support of continuous learning opportunities, and the assurance of optimal learning experiences to prepare all EMS providers for their professional challenges. More information about CAPCE can be viewed at [www.capce.org/about.aspx](http://www.capce.org/about.aspx)

* **Modular Emergency Response Radiological Transportation Training (MERRTT)**

This 16-hour training program is designed to take the complex topic of a radiological accident response and break it down into 15 easily understood modules and hands-on practical exercises. Students will be presented with the training to simplify the topic while developing a comprehensive understanding of radioactive material, radiological survey instruments, decontamination techniques for handling radiologically contaminated victims, and resources available to responders during a response. An important element of the training is detailed information on the types of packages used to transport radioactive material. The course includes the use of “live” radiation sources in the practical exercises to reinforce learning. Upon successful completion of the MERRTT course, students will receive a certificate from the Department of Energy’s Transportation Emergency Preparedness Program, including up to 9 hours of continuing education hours (CEH) for medical response personnel. MERRTT meets the WIPP Land Withdrawal Act training requirements and is listed on the Department of Homeland Security Federal Approved Courses Listing.

* **Compressed Modular Emergency Response Radiological Transportation Training (CMERRTT)**

This 8-hour compressed training consists of seven 30-minute modules and four hands-on practical exercises.  Students will receive a comprehensive review ensuring their understanding of radioactive material, radiological survey instruments and decontamination techniques for handling radiologically contaminated victims. Hands-on practical exercises verify the student’s understanding and knowledge of radiological principles, instrument operation, decontamination techniques and employing radiologically contaminated patient treatment practices is solid.  The course includes the use of “live” radiation sources in the practical exercises to reinforce learning.  Upon successful completion of this course students will receive a certificate from the Department of Energy’s Transportation Emergency Preparedness Program, including up to 5 hours of continuing education hours (CEH) for medical response personnel.

* **Technician Modular Emergency Response Radiological Transportation Training (TMERRTT)**

This 8-hour training program incorporates the use of various types of high activity “live” radiation sources.  This radiological hazard technician-level training program is aligned with specific radiological competencies listed in NFPA 470 for a technician level and agent specific responder. The course includes advanced level training on radiological instrument operation, radiological detector selection and limitations.  In addition to the classroom training, students will participate in three field hands-on drills.  During these drills, students establish an incident command structure, assign response positions, and develop objectives for each of the field drills.  Demonstrate skills including protective clothing considerations, selecting and using radiological survey instruments, demonstrating how to conduct both radiation and contamination surveys, mapping radiation and contamination levels at an accident, demonstrate decontamination methods, practice contamination controls, and have the opportunity to identify the different radiological sources/isotopes being used in each drill location.  It is recommended that each student have basic radiological response training and be a qualified hazardous materials technician level responder.  Examples of the prerequisite training includes; the USDOE’s Modular Emergency Radiological Response Transportation Training (MERRTT), completion of the DHS/FEMAFundamentals Course for Radiological Response, or equivalent type training.

* **Online Modular Emergency Response Radiological Transportation Training Refresher (OMERRTT)**

This interactive scenario-based approximately one-hour online training is designed to test participants knowledge and awareness when responding to an accident involving radioactive material. The OMERRTT Refresher was developed with the responder in mind. This interactive scenario-based training is designed to test participants knowledge and awareness when responding to an accident involving radioactive material. Electronic resources (job aids and ERG) to assist with completion of the training program are provided. Topics include: scene size-up, patient rescue, shipping papers, decontamination, hazmat response and the scene wrap-up.

* **Radiation Specialist**

This 40-hour training course is designed to meet the training competencies outlined in the 2022 version of the National Fire Protection Association (NFPA) Standard 470, Hazardous Materials/Weapons of Mass Destruction (WMD) Standard for Responders; Chapters 32 – Competencies for Hazardous Materials/WMD Technicians with a Radiological Hazard Specialty.

This is an advanced level training course. The course includes the use of high activity “live” radiation sources. The training covers 20 different topics including biological effects, radioactive material decay, advance detector theory, contamination, decontamination, and transportation is some of the topics. Using the high activity radiation sources, the training also offers seven hands-on activities including: solving an accident scene, locating/identifying isotopes, inverse square and solving mystery radiation sources/packages.

**RESPONSE PROCEDURE MODELS**

The response model procedures provide guidance to first response organizations that do not have specific procedures addressing response to a transportation incident involving radioactive material. There are eight model procedures available for use and include:

* First Responder Initial Response to Radiological Transportation Accidents
* Hazardous Materials Incident Response
* Properly Handling and Packaging Potentially Radiologically Contaminated Patients
* Medical Examiner/Coroner on the Handling of a Body/Human Remains that are Potentially Radiologically Contaminated
* Radioactive Material or Multiple Hazardous Materials Decontamination
* Recovery Procedure for Response to a Radiological Transportation Incident
* Radioactive Material Disposable Personal Protective Clothing Ensemble Entry Dress Up and Dressdown
* Decontamination Dressdown of an Armed Law Enforcement Officer

The First Responder Initial Response to Radiological Transportation Accidents model procedure uses a flow chart format to provide first responders with guidance for response to a transportation incident involving radioactive material. It includes lifesaving, fire-fighting and radioactive material considerations as well as Incident Command and size-up guidelines.

The Hazardous Materials Incident Response model procedure provides guidance for responding to transportation incidents involving radioactive material or other hazardous materials. It includes site safety plan information, exposure guidelines, and forms to document response activities.

The Properly Handling and Packaging Potentially Radiologically Contaminated Patients model procedure provides guidance to Emergency Medical Service care providers. It includes decontamination area set up guidance, gross decontamination instructions, as well as patient handling and packaging instructions.

The Medical Examiner/Coroner on the Handling of a Body/Human Remains that are Potentially Radiologically Contaminated model procedure identifies precautions and provides guidance to Medical Examiners/Coroners on the handling of a body or human remains that are potentially contaminated with radioactive material.

The Radioactive Material or Multiple Hazardous Materials Decontamination model procedure provides guidance for performing decontamination of individuals who have entered the “hot zone” during hazardous material incidents involving radioactive materials. It is designed to assist responders in determining an appropriate method for decontamination of responders where radioactive material as well as other hazardous material contaminates may be present. The procedure covers both wet and dry decontamination methods.

The Recovery Procedure for Response to a Radiological Transportation Incident model procedure contains the recommended elements for developing and conducting recovery planning at transportation incident scene involving radiological materials.

The Radioactive Material Disposable Personal Protective Clothing Ensemble Entry Dress Up and Dressdown model procedure provides guidance for performing decontamination of individuals wearing a disposable protective clothing ensemble who have entered a “hot zone” during hazardous material incidents involving only radioactive material.

The Decontamination Dressdown of an Armed Law Enforcement Officer model procedure provides law enforcement agencies guidance on how the existence of radioactive material from a transportation accident may affect weapon chain of custody procedures.

**JOB AIDS – QUICK REFERENCE RESPONSE GUIDANCE**

There are five quick information reference job aids that follow the training provided within the training modules and are outlined in the module procedures. The available quick reference information job aids are:

* Radioactive Material Shipping Quick Information
* Bunker Gear and Disposable Clothing Dressup and Dressdown Decontamination
* Law Enforcement Officer Decontamination Dressdown
* Hospital Emergency Department Care Providers Guidance
* EMS Patient Handling of a Radiologically Contaminated Patient

**EXERCISES/DRILLS/TABLETOPS**

Following the completion of the assessment process and the remedying of any identified improvement areas, an exercise/drill/tabletop involving applicable emergency response organizations should be conducted. The exercise/drill/tabletop will help to evaluate current emergency responder readiness. A typical exercise/drill/tabletop effort could include participation of some or all the jurisdiction’s emergency response organizations (including both career and volunteer responders):

TEPP provides five predesigned/scripted radioactive material transportation incident exercise/drill/tabletop scenarios. Each scenario provides a different type of transportation incident that may or may not include the release of radioactive materials. In addition to the exercise scenarios, a guidance document titled: “Guide to Conduct of Tabletops/Drills/Exercises” was developed to accompany the materials and provide step-by-step instructions on how to use the pre-scripted scenarios and tailor them to meet individual needs. Other supporting documents include sample drill schedules, facilitator materials for tabletop exercises, and a medical message index document containing 43 medical messages for various types of injuries. Each of the TEPP scenarios/tabletops are predesigned/scripted/formatted to meet the Homeland Security Exercise Evaluation Program format requirements. The available exercise/drill/tabletop are:

Each of these scenarios provide the planning instructions, guidance, and evaluation forms necessary to conduct an exercise involving a highway shipment of:

* Spent Nuclear
* Low Specific Activity
* Radiopharmaceuticals
* Radiography Camera
* Soil Moisture Density Gauge
* Mixed Radiation Sources

**APPENDIX B – REPORT FORMAT GUIDE**

A Model Needs Assessment should have the following components:

**1.0 INTRODUCTION**

A typical introduction would describe the reason for conducting the assessment and what services are being assessed. A list of participants from each organization interviewed during the assessment process should be included.

**2.0 ASSESSMENT EVALUATION**

In this section, list the organizations that participated in the Needs Assessment. The following organizations should complete the assessment questionnaire applicable to each individual organization:

* Emergency Management Planning
* Emergency Communications Center Procedures and Capabilities
* Hazardous Materials Team Procedures and Capabilities
* Fire Response Organization Procedures and Capabilities
* Law Enforcement Response Organization Procedures and Capabilities
* Emergency Medical Services Procedures and Capabilities
* Hospital/Care Facility Procedures and Capabilities
* Public Information Officer
* Medical Examiner/Coroner
* State Emergency Management and/or Radiation Authority
* State Radiation Health and/or Environmental
* State Department of Transportation

**3.0 TRAINING EVALUATION/CHECKLISTS**

Complete the training evaluation/checklist provided in the Model Needs Assessment for all emergency response organizations.

**4.0 REPORT SUMMARY DISCUSSIONS AND RECOMMENDED ACTIONS**

This section would identify any recommendations or actions necessary to improve planning and training skills/capabilities for emergency responders. It should identify the method for improving responder skills/capabilities. It should also include a description of the need for development of specific emergency response plans and procedures.

**5.0 SIGNATURE PAGE**

A typical signature page would comprise signatures from organizational authorities, including police chief, fire chief, emergency management director, state radiological supervisor, hazardous materials team chief, emergency medical services chief, and the authority conducting the assessment.