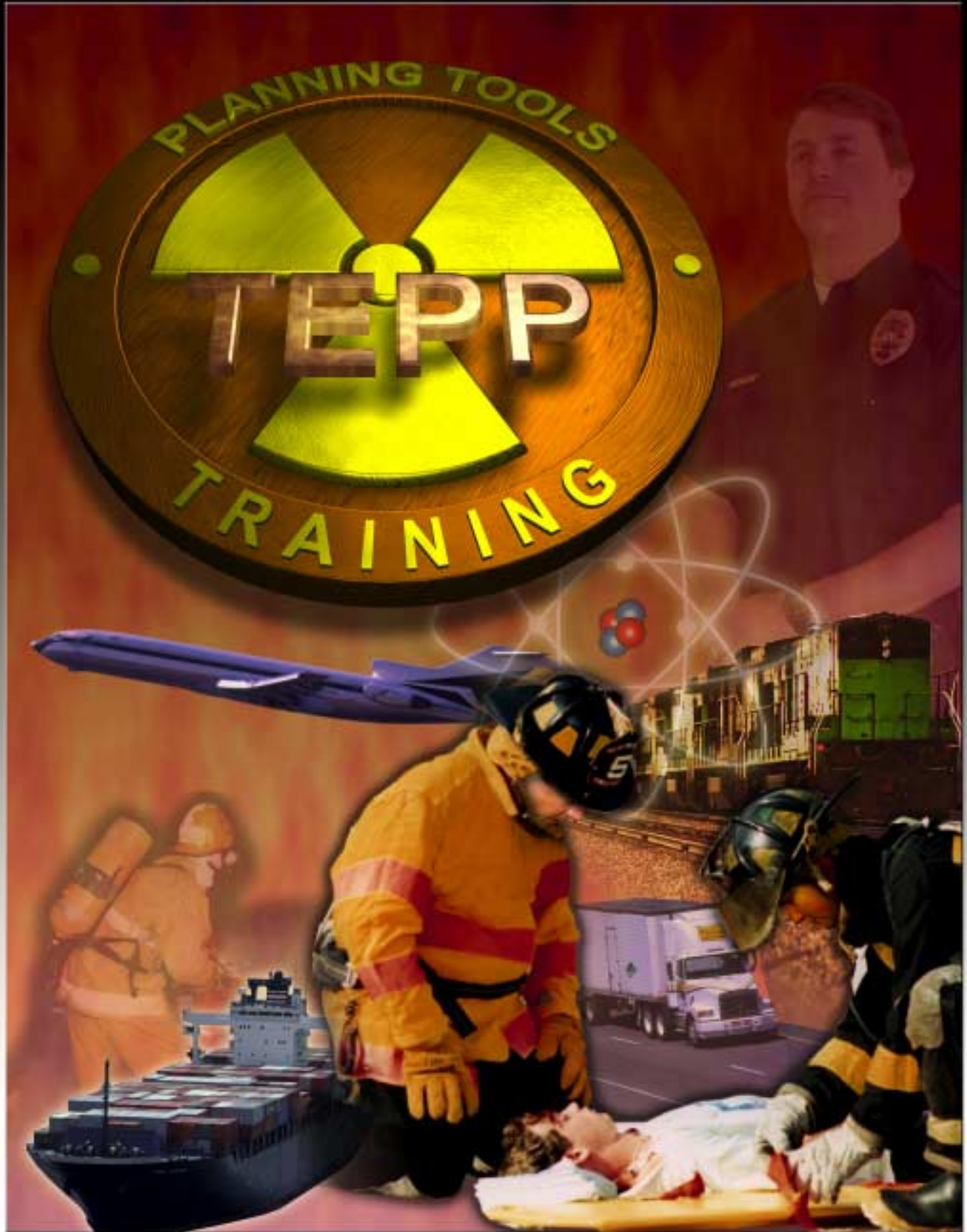




DEPARTMENT OF ENERGY



Model Procedure for Medical Examiner/Coroner on the Handling of a Body/Human Remains that are Potentially Radiologically Contaminated

Prepared For The Department of Energy Office of Transportation and Emergency Management

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table of contents

Transportation Emergency Preparedness Program (TEPP) Model Procedure for Medical Examiner/Coroner on the Handling of a Body/Human Remains that are Potentially Radiologically Contaminated



1.0 Purpose	4
2.0 Scope	4
3.0 Responsibilities	4
4.0 Records	4
5.0 Frequency	4
6.0 References	5
7.0 Safety	6
8.0 Precautions and Guidance for Handling Potentially Contaminated Human Remains	6
Attachment A – Radioactivity Tag	9
Attachment B – Form	10



1.0 PURPOSE

To identify precautions and provide guidance to Medical Examiners/Coroners on the handling of a body/human remains that are potentially radiologically contaminated.

2.0 SCOPE

This document outlines precautions and provides guidance to protect personnel involved in the recovery and disposition of the potentially radiologically contaminated body/human remains. The precautions and guidance outlined in this procedure are general and should not be considered all-inclusive. Medical Examiners/Coroners should already be aware of precautions that are necessary when handling a body/human remains which may have been exposed to hazardous materials. The documents referenced in Section 6.0 are an excellent resource for additional information on precautions, handling and decontamination of human remains.

3.0 RESPONSIBILITIES

- 3.1 Report to the Incident Command Post and coordinate identification, collection and packaging activities with the Incident Commander.
- 3.2 Maintain established incident/accident scene contamination control boundaries as established by the Incident Commander.
- 3.3 Utilize available monitoring resources provided by the radiation authority or licensee to determine radiological contamination levels of the human remains.
- 3.4 Do not remove human remains or personal belongings from the area until appropriate label/tag have been applied to the radiologically contaminated human remains.

4.0 RECORDS

- 4.1 Radioactivity Tag (Attachment 1).
- 4.2 Form for Radioactivity Report Accompanying Body/Human Remains (Attachment 2).

5.0 FREQUENCY

As needed.

6.0 REFERENCES

- 6.1 *Radiation Accidents* (March 1999), A Guide for Medical Professionals On Handling, Transporting, Evaluating and Treating Patients Accidentally Exposed To Radiation or Contamination with Radioactive Materials, Prepared by the Illinois Department of Nuclear Safety
- 6.2 *U.S. Department of Health and Human Services (HHS) Health and Medical Services Support Plan for the Federal Response to Acts of Chemical/Biological (C/B) Terrorism*, June 1996
- 6.3 *Precautions in the Management of Patients Who Have Received Therapeutic Amounts of Radionuclides*, NCRP Report No. 37, Fifth Reprinting August 1995
- 6.4 *Handbook of Health Physics and Radiological Health*, Third Edition
- 6.5 *Managing Hazardous Materials Incidents, Volume II*, Hospital Emergency Departments; A Planning Guide for the Management of Contaminated Patients, U.S. Department of Health and Human Services
- 6.6 *Mortuary Affairs Decontamination of Human Remains*, Appendix D Decontamination of Human Remains, Joint Chiefs of Staff Publication, Phillip R. Wagner

7.0 SAFETY

- 7.1 Respond and perform duties within boundaries identified by the Incident Commander.
- 7.2 Utilize protective clothing precautions as outlined by organizational procedures or as identified by the Incident Commander.

8.0 PRECAUTIONS AND GUIDANCE FOR HANDLING POTENTIALLY CONTAMINATED HUMAN REMAINS

- 8.1 Upon your arrival at the incident/accident scene contact the Incident Commander for a briefing on the incident/accident hazards, location of control zones and activities that have already taken place.
- 8.2 If you are not informed of the radiation hazards and persons that will provide you assistance in disposition of the body/human remains, inquire about radiation/contamination monitoring services that are available from the local hazardous materials team, state radiation or federal resources.
- 8.3 Discuss with the aforementioned radiation authority the need for protective clothing. If protective clothing is recommended, the clothing



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Model Procedure for Medical Examiner/Coroner on the Handling of a
Body/Human Remains that are Potentially Radiologically Contaminated**



DEPARTMENT OF ENERGY



will more than likely be similar to the clothing worn for protection of air and bloodborne pathogens.

- 8.4 Enter the incident/accident scene with a radiation authority escort. The radiation authority should monitor as you enter the incident/accident scene to determine if a radiation/contamination hazard is present.
- 8.5 Conduct necessary incident/accident investigation procedures (pictures, identification, damage assessments, cause, etc.). Do not touch the body/human remains at this time.
- 8.6 Have the radiation authority escort conduct a radiation/contamination survey of the body/human remains. Upon completion of the radiation authority survey and identification of contamination areas, completion of incident/accident investigation procedures (movement of the body/human remains) can be completed.
- 8.7 Conduct a gross decontamination of the contaminated body/human remains. This includes the removal of all outer clothing (shirt, shoes, pants, etc.). To assist the Medical Examiner/Coroner in the identification of the body/human remains all pockets shall be searched and any personal belongings (wallet, jewelry, watches, etc.) found, should be placed in a plastic bag. The removed clothing should remain at the incident/accident scene for proper disposal by the clean up team. However, if the Medical Examiner/Coroner determines the clothing could assist in the investigation and the clothing is to be shipped with the body/human remains, Step 8.13 outlines when the removed clothing can be placed in a plastic bag and shipped with the body/human remains.

Note: The radiation authority will use standard contamination control practices (monitoring, double gloving, tagging, etc.) when bagging potentially contaminated or contaminated items.

- 8.8 Upon completion of the gross decontamination process (removal of the outer clothing), have the radiation authority escort conduct an additional radiation/contamination survey of the body/human remains to determine radiation/contamination levels.
- 8.9 If the radiation authority determines that contamination is still present continue with the remaining steps of this procedure. However, it is possible that the gross decontamination process conducted in step 8.7 could eliminate previously identified contamination levels. If this occurs the radiation authority will identify the body/human remains as clean and custody of the body/human remains can be turned over to the Medical Examiner/Coroner for routine processing.
- 8.10 The radiation authority should tag the body/human remains with a radiation tag or provide such a tag to the Medical Examiner/Coroner (see Attachment 1). The tag should identify the radiation/contamination levels

- and location on the body.
- 8.11 The body/human remains should be placed in a body bag/pouch.
 - 8.12 Any personal belongings removed from the body/human remains and previously placed in a plastic bag in step 8.7 should be placed inside the body bag/pouch.
 - 8.13 If, the Medical Examiner/Coroner has determined, that the clothing removed during the gross decontamination process will be useful in the investigation, the contaminated clothing should now be placed in a plastic bag and tagged with a radiation tag (see Attachment 1). This bag should also be placed inside the body bag/pouch.
 - 8.14 The radiation authority should also tag the body bag/pouch with a radiation tag (see Attachment 1) identifying the contents, radiation/contamination levels and their location on the body. The radiation authority may provide such a tag to the Medical Examiner/Coroner for application to the body bag/pouch.
 - 8.15 Move the body bag/pouch that contains the body/human remains to the incident/accident scene Hot Zone Control Line.
 - 8.16 Have the radiation authority escort monitor the body bag/pouch for radiation/contamination before transferring the body bag/pouch to the Warm Zone.
 - 8.17 Transfer the body bag/pouch to the Warm Zone.
 - 8.18 Have the radiation authority escort monitor the external surfaces of the body bag/pouch for radiation/contamination before transferring the body bag/pouch to the Clean Area. If contamination levels exceed applicable limits, the exterior of the body bag/pouch must be decontaminated prior to removal from the area.
 - 8.19 Upon arrival at the Clean Area the Medical Examiner/Coroner can take possession of the body/human remains and transport to a facility for additional decontamination.
- Note: The radiation authority will ensure transportation and labeling concerns according to State and Federal requirements are addressed and complied with. The radiation authority will escort the Medical Examiner/Coroner to the selected decontamination facility. A morgue, because of its inherent equipment and access, will be the most likely recommendation to become a decontamination facility.*
- 8.20 The radiation authority will assist in decontamination of the body/human remains. This includes preparation of the decontamination facility, monitoring to determine contamination levels and location of contamination on the body/human remains, as well as removal of the contamination. To control waste generated during this



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Model Procedure for Medical Examiner/Coroner on the Handling of a
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process, the radiation authority should first attempt a dry decontamination. If this process is not successful in removal of the contamination, then a wash and rinse is conducted. If it is determined that internal contamination exists, the Medical Examiner/Coroner should work very closely with the radiation authority to determine exposure risk and best method to conduct embalming. Determining the type of radioactive contamination (radionuclide) can also be very useful. With the type of radioactive contamination identified the radiation authority can determine if radioactive decay should be allowed to occur.

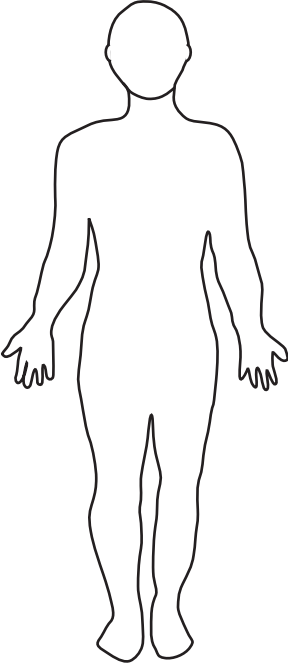
Note: If necessary, the radiation authority can take samples from the body/human remains and by using specialized equipment, determine the types of radionuclides on or inside the body/human remains.

- 8.21 The radiation authority will release the body/human remains based on levels of radiation/contamination to the Medical Examiner/Coroner for embalming and burial. If internal contamination levels are determined to be above jurisdiction requirements, the radiation authority should ensure the embalming process is carried out in an appropriate facility and necessary precautions are taken to protect persons performing the embalming.
- 8.22 The radiation authority or designated disposal contractor will place all waste generated from the decontamination process, autopsies, or embalming in appropriate packaging, label the package and provide proper disposal of the package.
- 8.23 The radiation authority and Medical Examiner/Coroner should determine or consult with a higher medical authority (REAC/TS) on the need for a Radioactivity Report (see Attachment 2) being attached to the death certificate.





ATTACHMENT A - RADIOACTIVITY TAG

<p style="text-align: center;">○</p> <p style="text-align: center;">Radioactivity Precautions</p> <p>Radionuclide _____</p> <p style="padding-left: 40px;">Date _____</p> <p>Tag is not to be removed until:</p> <ol style="list-style-type: none">1) Radioactive material is removed from patient, or2) Authorization is received from the Radiation Authority <p>Signature _____</p> <p>Organization _____</p>	<p style="text-align: center;">○</p> <p style="text-align: center;">Radioactivity Precautions</p> <p style="text-align: center;">Contamination Levels and Location</p> <div style="text-align: center;"></div>
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ATTACHMENT B - FORM



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**Radioactivity Report Form For Contaminated
Human Remains/Body**

Person Completing This Form _____

Organization Represented _____

Date Form Completed _____

Name of Radiation Authority _____

Organization Represented _____

() This body/human remains do not contain harmful amounts of radioactive materials.
No special precautions are required if standard embalming procedures are employed.

() This body/human remains contain a significant amount of radioactive material. The
following precautions are to be observed:

