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THREE MILE ISLAND NUCLEAR STATION
UNIT NO. 1 EMERGENCY PLAN IMPLEMENTING PROCEDURE 1004.16
CONTAMINATED INJURIES/RADIATION OVEREXPOSURE

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THREE MILE ISLAND NUCLEAR STATION
UNIT NO. 1 EMERGENCY PLAN IMPLEMENTING PROCEDURE 1004.16
CONTAMINATED INJURIES/RADIATION OVEREXPOSURE

1.0 PURPOSE

To define the conditions where person(s) working at Three Mile Island and exposed to ionizing radiation greater than 25 REM (acute dose), or ill or injured and contaminated or potentially contaminated with radioactive material will be removed from site to Milton S. Hershey Medical Center (HMC), Hershey, PA. To further define the steps involved in notifying HMC to allow time for preparation of the Radiation Emergency Area (REA) to receive the injured person(s). To provide for several levels of treatment based on the severity of the injury(ies) and the degree of exposure/contamination involved. The Shift Supervisor/Emergency Director is responsible for implementation of this procedure.

: NOTE: All persons having injuries or illness in a radio- :
: logically contaminated area or involving radioactive :
: material shall be considered contaminated until :
: proven otherwise. :

2.0 ATTACHMENTS

- 2.1 Attachment I, Radiological Controls Checklist for Contaminated Injured Persons

3.0 IMPLEMENTATION CRITERIA

- 3.1 Person(s) are injured in a radiologically controlled area and have a contaminated injury that can be treated on-site and released.
- 3.2 Person(s) are injured in a radiologically controlled area and must be transported off-site for medical observation/treatment before being surveyed for contamination.

3.3 Person(s) are injured or ill and have, or have the potential for, radioactive contamination on their clothing or skin and must be transported off-site for medical observation/treatment before decontamination can occur.

3.4 Person(s) have received acute radiation dose in excess of 25 REM.

4.0 EMERGENCY ACTIONS

4.1 The Shift Supervisor/Emergency Director and Radiological Controls Foreman shall be notified immediately upon discovery of the injured personnel.

: NOTE: The following steps may be performed concurrently. :

4.1.1 The Shift Supervisor/Emergency Director, upon notification of injured personnel, shall:

- a. Notify Site Medical Personnel at 8450. If Site Medical Personnel are unavailable, the Shift Supervisor/Emergency Director shall have first aid administered to the injured or ill personnel.

: NOTE: If possible the Shift Supervisor/Emergency Director :
: should provide the Medical/First Aid personnel with :
: a specific ingress/egress route for access and :
: patient transfer. The Shift Supervisor/Emergency :
: Director should consult with Radiological Controls :
: for this route if necessary. :

- b. Ensure that First Aid/medical personnel evaluate the injury, to determine the need of medical treatment beyond that provided by on site personnel and that Radiological Controls evaluate the radiological

condition of the victim (if injury involved radioactive contamination) and both report their assessment back to him.

: NOTE: Attachment I is a checklist for Radiological actions. :

- c. If off-site medical assistance is required, the Shift Supervisor/Emergency Director (or his designee) will notify Dauphin Co. EOC by dialing 9-911 and repeat the following message: "THIS IS _____ NAME/TITLE AT TMI NUCLEAR STATION. WE REQUEST AN AMBULANCE AND MEDIC TO REPORT TO TMI UNIT 1 PROCESSING CENTER. WE HAVE (POTENTIALLY) CONTAMINATED PERSONNEL WITH FOLLOWING INJURIES: (BRIEF DESCRIPTION OF INJURIES) REQUIRING MEDICAL ASSISTANCE."
Call Security at Extension 8039, 8040 to inform security of off-site medical assistance arrival so that they can direct off-site medical personnel to the injured person. The Shift Supervisor/Emergency Director shall also initiate the requirements of EPIP 1004.19 "Emergency Dosimetry/Security Badge Issuance"
- d. If appropriate, declare an Unusual Event in accordance with EPIP 1004.1 and perform actions as required in Step 4.5 below.

4.1.2 The Shift Supervisor/Emergency Director shall direct personnel with minor injuries, not requiring more medical attention than site first aid, to the decon facility for decontamination and treatment of the injury, per step 4.2.

4.2 The Shift Supervisor/Emergency Director shall, with concurrence of the available site medical and radiological controls personnel have the victim transported outside of the radiologically controlled area, if the injury and contamination levels will allow movement, for further treatment and surveys.

: NOTE: To prevent the possible spread of contamination, the :
: Shift Supervisor/Emergency Director should consider :
: having the contaminated person's evacuation route :
: announced over the page. :

4.3 If the injury allows, Radiological Controls personnel shall assess the degree of radiation exposure and/or radioactive contamination prior to removal from site.

: NOTE: All injuries occurring in a radiologically contamin- :
: ated area shall be considered contaminated until :
: monitored and cleared. :

4.4 The Shift Supervisor/Emergency Director, with concurrence of the available site medical staff, shall order the injured person(s) off-site for more extensive medical treatment.

: NOTE: If the injured person is contaminated, or potentially :
: contaminated, a Radiological Controls Technician will :
: be dispatched to H.M.C. to provide Radiological :
: Controls as needed. :

: NOTE: By agreement with the Milton S. Hershey Medical :
: Center (HMC), Hershey, PA, all contaminated persons :
: with injuries too severe to be handled onsite shall :
: be sent to H.M.C. for decontamination and treatment. :

4.5 The Shift Supervisor shall perform the following steps in the event an injured and contaminated or potentially contaminated person(s) is to be transported to HMC.

4.5.1 If an emergency classification is not already in effect, the Shift Supervisor shall assume the duties of the Emergency Director.

4.5.2 The Emergency Director shall implement the requirements of Emergency Plan Implementing Procedure 1004.1 "Unusual Event", if not already declared and request ambulance service from the Dauphin County Emergency Operations Center, as needed, for offsite assistance.

4.5.3 The Emergency Director or his designee (Shift Foreman, Communicator, etc.) shall call the Charge Nurse, Emergency Room, HMC at 9-534-8333, and using the following message, alert HMC of the arrival of the injured victim:

"THIS IS (NAME/TITLE) AT THREE MILE ISLAND ACTING AS (FOR) THE EMERGENCY DIRECTOR. TMI IS PREPARING TO TRANSFER A (POTENTIALLY) CONTAMINATED VICTIM WITH INJURIES TO HERSHEY MEDICAL CENTER. THE RADIATION EMERGENCY AREA SHOULD BE PREPARED TO RECEIVE THIS VICTIM. PLEASE ACKNOWLEDGE AND VERIFY THIS MESSAGE

BY CALLING 948-8069 (8070/8071) AND ASK FOR THE
EMERGENCY DIRECTOR."

4.5.4 The Emergency Director, or his designee, shall then:

- *briefly describe the injury(s)
- *give the name of the victim(s)
- *report levels of contamination, if known
- *request special equipment required
- *estimate time of arrival at HMC
- *describe method of transportation
- *estimate expected dose rate hazard to HMC Staff
Personnel based on dose rate taken 12 inches above
the victim
- *record the name and title of the person receiving
the notification call, and the time notified

4.5.5 Person(s) decontaminated shall receive whole body counting in accordance with RCP 1612 and RCP 1628.

4.6 The Emergency Director shall require transportation of person(s) with acute radiation exposures in excess of 25 REM whole body to HMC. In this case, the victim(s) can be transported in a conventional manner and will not require activation of the Emergency Plan.

4.7 The Emergency Director and/or RAC may request assistance in evaluation of extreme radiation overexposure (i.e. 25 REM or more) from various Radiological Health Specialists, (Porter Consultants, Radiation Management Corporation, etc.)

- 4.8 The Emergency Director and Radiological Assessment Coordinator shall restrict personnel who have received internal contamination of greater than 50 Percent of the Derived Investigation level, as stated in RCP 1628.1, from further work in Airborne Radioactivity Areas, until evaluation is made. Complete and direct the personnel for whole body counting, in accordance with RCP 1612, for evaluation of Body Burdens.

5.0 FINAL CONDITION

- 5.1 The person(s) has been decontaminated, treated for injury and released for work by the Site Medical Staff.
- 5.2 The person(s) has been entered into the Bioassay program for whole body counting per RCP 1612 and RCP 1628.
- 5.3 The victim(s) has been transported to HMC and has been admitted or released and all radioactive waste/used protective clothing has been removed to TMI.
- 5.4 The Radiological Controls Technician(s) who accompanied the victim(s) to HMC has coordinated the radiation safety actions at the emergency room. The hospital health physicist has relieved the Radiological Controls Technician(s).
- 5.5 The Radiation Emergency Area and ambulance(s) used for transportation of the victim(s) has been surveyed and cleared or decontaminated and cleared by the TMI Radiological Controls Technician(s).
- 5.6 The Unusual Event has been closed out by the Emergency Director.

Attachment I

Radiological Controls Checklist for Contaminated Injured Persons

: NOTE: The following actions should be performed or con- :
: sidered while handling a contaminated injured person. :
: These actions must not interfere with proper medical :
: treatment of the person. :

Check

- ___ 1. Prevent contamination spread from the injured person to other persons/areas by: lining the stretcher, wrapping the victim with a blanket, providing P.C.s to stretcher bearers, clearing the transfer path, etc.
- ___ 2. Limit contamination of the ambulance and crew by lining the ambulance with plastic and providing P.C.s to the crew.
- ___ 3. The technician that accompanies the victim to the hospital should have a radiation survey meter, a frisker and an ambulance kit (located at Rad Con Lab and in Site Ambulance).
- ___ 4. If possible, verify contamination and radiation levels enroute to the hospital.
- ___ 5. If available, a second Rad Con Tech should be sent to follow the ambulance to the hospital to assist with monitoring and decontamination as needed.
- ___ 6. Upon arrival at the hospital, and subsequently, the Rad Con Tech should periodically update the Control Room with current status.

Attachment I (Cont'd)

Check

- ___ 7. If possible, have the ambulance crew standby in the ambulance until both are surveyed and released or with the Emergency Director's permission, have the ambulance return to TMI for survey and decontamination as necessary. Inform the Control Room of the status of the ambulance.
- ___ 8. Rad Con Technician(s) at the hospital should coordinate the Radiation Safety actions in the Emergency Room with the attending physician.
- ___ 9. When possible, turn over Radiation Safety responsibilities to the Hospital Health Physicist. Remain at the hospital until the individual is admitted or released.
- ___ 10. Survey the path traveled by the ambulance personnel and the individual.
- ___ 11. Before leaving the hospital, ensure that all radioactive trash and used P.C.s have been collected and that a thorough survey of the hospital emergency room and adjacent areas as applicable has been completed.
- ___ 12. Ensure that the Control Room is informed of the status.