

**Emergency Support Function (ESF) #16  
Radiological Incidents – Ingestion County**

<b>Lead Coordinating Agency</b>	Green County Emergency Management
<b>Primary Agency</b>	Green County Health Department
<b>Support Agencies</b>	Green County Sheriff's Department Municipal Law Enforcement Green County Fire Departments Green County EMS Agencies County and Municipal Highway/Public Works Green County UW Extension
<b>State Agencies</b>	
<b>Primary Agencies</b>	Wisconsin Emergency Management (WEM) Wisconsin Dept. of Health – Radiation Protection Services (DHSRPS)
<b>Support Agencies</b>	Dept. of Natural Resources Dept. of Agriculture, Trade and Consumer Protection Dept. of Transportation Dept. of Military Affairs Dept. of Justice
<b>Federal Agencies</b>	
<b>Primary Agencies</b>	Dept. Of Homeland Security/FEMA Nuclear Regulatory Commission
<b>Support Agencies</b>	Dept. of Agriculture Dept. of Energy Environmental Protection Agency (EPA) United States Dept. of Health and Human Services United States Dept. of Agriculture Center of Disease Control National Aeronautics and Space Administration
<b>Private Agencies</b>	Byron Nuclear Generating Station

**I. INTRODUCTION**

**A. Purpose**

This ESF identifies resources and responsibilities for agencies that will respond to accidents involving radioactive materials. Because of the county's inclusion in the 50-mile ingestion pathway zone of the Byron Nuclear Generating Station, details of the special activities required in the recovery phase have been included.

## **B. Scope**

FEMA and the Nuclear Regulatory Commission (NRC) have jointly established guidelines for the protection of the population from radioactivity-contaminated food, feed, and water within a 50-mile radius of a nuclear power plant. In accordance with these guidelines the State of Wisconsin has the primary responsibility for ingestion emergency response. However, if the food supply is adversely affected in a county by a nuclear power plant incident, the county has the responsibility to be able to receive and disseminate information from the state in order to keep the public fully informed. A county may also be requested to provide support to the state in the implementation of emergency response actions of the following types:

- 1) Providing transportation and communications assistance to state and federal sampling teams if requested.
- 2) Assisting with distribution of Emergency Ingestion Public Information brochures or flyers.
- 3) Providing assistance in responding to citizens questions about the progress of the emergency response and rumor control.

## **II. Policies**

- A. Wisconsin shares responsibility for offsite response at two plants (i.e., Prairie Island, Byron) with the States of Minnesota and Illinois, respectively. For an emergency at these plants, the response would be coordinated with the state emergency management agency in which the plant resides as outlined in the appropriate memorandum of agreement. (Byron Nuclear Plant is located in Byron, Illinois).
- B. This plan has been developed to direct Green County's response; to identify the means by which it will protect the population and to define the rolls and responsibilities between the state, county and federal governments as well as the utility and private emergency response organizations.
- C. During the recovery phase, all agencies are expected to support continuing operations with equipment and staff.
- D. Non-nuclear power plant incidents that involve radiological materials will, as required by state statute, primarily be handled by local responders acting with direction from the Wisconsin Department of Health and Family Services – Radiation Protection Section (DHFS-RPS) staff.
- E. The FBI has lead responsibility for criminal investigations of terrorist acts of terrorist threats, and for coordinating activities of other members of the law enforcement community to detect, prevent, preempt, investigate, and disrupt terrorist attacks against the United States, including incidents involving nuclear/radioactive materials.
- F. The owner/operator of a nuclear/radiological facility is primarily responsible for providing notification and appropriate protective action recommendations to State and local government officials, and minimizing the radiological hazard and consequences of an incident to the public. The owner/operator has primary responsibility for actions within the facility boundary and may also have responsibilities for response and recovery activities outside the facility boundary under applicable legal obligations.
- G. State and local governments are responsible for determining and implementing measures to protect life, property, and the environment in areas outside the facility boundary or incident location. This does not relieve the nuclear/radiological facility or material owners/operators from any applicable legal obligations.

- H. In coordination with local officials, actions to protect the public from the ingestion of radioactively contaminated food or water (e.g., embargo or disposal of contaminated food or animals, shutting down surface water intakes for public water supply systems, curtailment of hunting or fishing) will be reviewed and determined jointly by Green County, WEM, DHFS, DATCP, DNR and other agencies as deemed necessary.
- I. Local resources will provide the primary response for incidents within their jurisdiction. The state provides additional resources upon local request, to include requesting federal assistance resources. The Governor of Wisconsin or designee is authorized to request federal assistance in the event of a nuclear power plant incident. When requesting federal resources, the state will identify the type and quantity of resources needed from federal agencies.
- J. Coordination with the federal government for the direction of offsite emergency response is secured under the provisions of the appropriate federal plans {e.g., National Response Framework (NRF) and the Nuclear /Radiological Incident Annex} The Nuclear Regulatory Commission (NRC) is the Lead Federal Agency (LFA) for NPP incidents. Primary coordination occurs through WEM and the NRC for radiological issues, FEMA for non-radiological issues and Department of Energy (DOE) for monitoring and assessment issues

### **III. CONCEPT OF OPERATIONS**

#### **A. General**

1. Radioactive hazardous materials are commonly used in a variety of settings (e.g., medical facilities, building and infrastructure construction and inspection, nuclear power plants.) The materials needed for these applications are transported via special and common carrier on the road, air, rail and water. If released into the environment, these materials require special consideration regarding their safe handling and disposal

The on-scene Incident Commander has responsibility for this operation. The Green County Emergency Management Director will act as the liaison between the on-scene responders and additional resources. Statutory authority for oversight regarding the remediation of radiological materials incidents rests with the State of Wisconsin.

#### **B. Organization**

1. In the event of a nuclear release from the power plants, the County Chair will take appropriate action to mobilize and utilize county emergency services to support the state in protecting the people in the affected areas of the county pertaining to ingestion of contaminated food, feed and water.
2. Operations at the county level will be coordinated through the Green County EOC, which will be fully activated with the appropriate personnel.
3. The level of response to a specific incident is based on numerous factors, including the ability of the state, local and tribal officials to respond, the type and/or amount of radiation material involved the extent of the impact or potential impact on the public and environment, and the size of the affected area. Consideration is given to all incidents including those of sabotage, or terrorist involvement.

### C. Level of Emergencies for Nuclear Power Plants

In the event of a nuclear power plant incident, it will be necessary to insure the safety of the public. Local, county, state and federal resources will have to be mobilized to cope with the situation. Such incidents have been classified by the U. S. Nuclear Regulatory Commission as follows.

- 1) **Unusual Event** - Events are in process or have occurred which indicate a potential degradation of the level of the safety of the plant or indicate a security threat to facility protection has been initiated. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs.
- 2) **Alert** - Events are in process or have occurred which involve an actual or potential substantial degradation of the level of the plant or a security event that involves probable life threatening risk of site safety personnel or damage to site equipment because of a HOSTILE ACTION. Any releases are expected to be limited to small fractions of the EPA Protective Action Guideline exposure levels.
- 3) **Site Area Emergency** - Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public or HOSTILE ACTION that results in intentional damage or malicious acts; (1) toward site personnel or equipment that could lead to the likely failure of or; (2) that prevent effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA Protective Action Guideline exposure levels beyond the site boundary.
- 4) **General Emergency** - Events are in process or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity or HOSTILE ACTION that result in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed the EPA Protective Action Guideline exposure levels offsite for more than the immediate site area.

### D. Phases of Emergency Management

The following activities will be performed by county agencies and private organizations as appropriate.

#### 1. Mitigation and Preparedness

- a. Personnel with supervisory, command level responsibility or who may be working in the EOC from county agencies, municipalities, villages and cites, should registered on Esponder and request permission to access the Green County site. Green County's site contains the emergency response plan, and other pertinent documents which can be downloaded. EOC activities can be documented on this secure system and WEM may require state assets to be requested through Esponder
- b. Participate in exercises and trainings, such as Incident Command and other specialized training to support ESF 16 and the Green County Emergency Response Plan for the purpose of developing and testing abilities to ensure effective response to various types of emergencies.

- c. WEM provides specific training and exercises for radiological releases. First responders, elected officials and other agencies should participate in these trainings.

## **2. Response Activities**

- a. In accordance with ESF #5, primary agencies shall designate a qualified representative in the Command Post/EOC or other designated location as deemed appropriate.
- b. Notify the WEM on-call Duty Officer (DO) (800-943-0003) and the Department of Health Services – Radiation Protection Section (DHS-RPS, 608-267-4797)
- c. Set up a perimeter around the facility or spill and enact an access control system.
- d. Document all personnel who might have been exposed to radiation or radioactive contamination.
- e. Provide for staff to address media inquiries and public information regarding the event. In the event of a nuclear power plant incident, supply a Public Information Officer (PIO) to the Joint Public Information Center (JPIC) to coordinate the release of public information with all involved parties.
- f. Ensure staff and equipment is not returned to service until qualified personnel have monitored both for radioactive contamination.
- g. Provide and distribute brochures which provide information for protecting the public and livestock from ingesting contaminated food, feed and water within the 50-mile radius of a nuclear power plant. This provided to the general public and for all food producers, processors and distributors affected. This booklet is provided by WEM and will be printed and distributed in the event of an accident using the following procedures established by WEM;
  - 1) Camera-ready copy for a brochure for each affected county is maintained by WEM. Arrangements have been made for emergency printing of brochures for the affected counties at state printing facilities in Madison. Affected counties will be contacted and asked for the number of brochures they need. The total numbers of brochures to be printed in the first emergency printing are: Byron (3,800), Kewaunee/Point Beach (9,300) and Prairie Island (5,100.)
  - 2) WEM arranges for delivering copies of the brochure to the EOC in each affected county. The counties are responsible for distributing brochures to the food producers, processors and distributors in the affected risk and ingestion counties.

## **3. Recovery**

- a. A radiological release from a nuclear power plant or from other sources is a very complex situation necessitates coordination and assistance from state and federal agencies.
- b. WEM has established a State Recovery Task Force and in accordance Annex H, Appendix 2 their responsibilities are, but not limited to;

- 1) The State Recovery Task Force will consist of the Administrator (or designee) of WEM and representatives from the following agencies/organizations as needed:
  - a) WI-DHS – Divisions of Public Health, Disability and Elderly Services, and Health Care Financing
  - b) WI Dept. of Children and Families
  - c) WI DOT – Divisions of Transportation System Development and State Patrol
  - d) DNR – Divisions of Enforcement, Environmental Quality and Resource Mgmt.
  - e) DATCP – Food Division, Animal Health Division and Agricultural Resource Management Division
  - f) Dept. of Military Affairs - The Adjutant General;
  - g) PSC Chairperson
  - h) American Red Cross Director of Disaster Services
  - i) and other state agencies as deemed appropriate.

The task force will also include appropriate representation from the risk and ingestion counties, the utility and affected adjacent states. Federal representation should include liaisons from the Federal Advisory Team for Environment, Food and Health and may include some or all of the agencies identified in the NRF and the Nuclear/Radiological Incident Annex.

- 2) State Recovery operations are a natural extension of the Governor's responsibilities as delegated to WEM under Chapter 323 Wis. Stats. When the Administrator determines that the Response phase has been completed the Administrator after consultation with other federal, state and county officials and agencies, coordinates with the Governor to transition from the Response phase to the Recovery phase. The transition time is announced to all responders at the federal, state, county and federal and that a State Recovery Task Force has been established will manage the recovery efforts for offsite areas affected by an incident at a NPP. The WEM Administrator, acting on behalf of the governor, will create and chair a State Recovery Task Force, identifying which agencies and organizations that compose it, to guide recovery efforts in those areas affected by the incident at the NPP. The State Recovery Task Force shall create a recovery plan to address responsibilities including but not limited to:
  - a) Developing a long – term radiological monitoring and assessment plan.
  - b) Developing a plan for the decontamination and restoration activities of both ingestion areas and restricted zones as closely as possible to their pre-incident condition.
  - c) Determining priorities for and scheduling restoration activities

- d) Determining which agencies and organizations can provide the personnel, equipment and resources necessary to complete restoration activities and securing this assistance.
- e) Determining which areas must remain restricted on a long-term or permanent basis due to radiological or economic considerations.
- f) Arranging for services to the evacuated population.
- g) Assisting evacuated individuals, business and industries with return and/or resettlement activities
- h) Creating a process for identifying losses caused by or resulting from the incident and for negotiating reimbursement of those losses from the utility and its insurers (e.g., American Nuclear Insurers.)
- i) Provide continuing public information about recovery actions, activities and timetables through the media.

#### **IV. Responsibilities**

##### **A. All Agencies**

- 1. All primary and support agencies and volunteers will operate under NIMS and the Incident Command System and ensure personnel are properly trained in ICS and EOC operations All agencies will use plain language – no ten codes.
- 2. All agencies shall conduct an assessment of damage to their systems and report them immediately to the EOC and assist in recovery activities as requested.
- 3. All agencies providing services to the emergency/disaster shall participate in an after action review. These agencies should also review and make any necessary updates/improvements to their emergency plans and to the county's emergency response plans.
- 4. All agencies responding the emergency/disaster will document all costs associated with response and recovery activities (separate from normal, daily work) and provide these reports regularly/as requested to the EOC/Green County Emergency Management. This documentation should begin immediately after notification to respond the emergency/disaster.

##### **B. Primary Agencies**

###### **Lead Coordinating Agency Green County Emergency Management**

- 1. Coordinate with the WEM Duty Officer to have other appropriate state and federal response agencies work with the first responders. These agencies may, but are not limited to:
  - a) Wisconsin Dept. of Health Services – Radiation Protection Section.
  - b) Wisconsin Department of Natural Resources (DNR)
  - c) Level A Hazardous Materials Team

- d) U.S. Department of Energy – Radiological Assistance Program (DOE-RAP) Team
  - e) Federal Bureau of Investigation in the event of a suspected terrorist event.
2. Activate the EOC and utilize the Green County ERP as necessary.
  3. Obtain or work with GIS to make maps showing agricultural areas within the ingestion zone.
  4. Work with WEM to implement the recommended protective actions within the 50 mile ingestion zone.

**Green County Health Department**

1. Coordinate and assist the Wisconsin Department of Health and other state and federal agencies.
2. Assist with providing ingestion brochures provided by WEM and other pertinent health information for the public.
3. Coordinate with UW-Extension to educate local farms and food producer on handling possible contamination.
4. Continue long term monitoring of the food supply.

**C. Support Agencies**

**Fire Department**

1. Notify the Green County Emergency Management Director of the radiological release
2. Use appropriate guidance {e.g., US DOT Hazardous Materials Guidebook, shipping papers, Materials Safety Data Sheet (MSDS)} for recommendations regarding:
  - a) Extinguishing or controlling fires
  - b) Appropriate personal protective equipment (PPE) for responders
  - c) First aid recommendations for those exposed to the substance.
3. Contact the shipper or facility representative for more information regarding the hazardous material and to notify them of the incident.
4. Recommend protective actions as necessary (ss. 213.095).
5. See attachment 3 State of Wisconsin Dept. of Health Services “Fire Department Procedures-Emergency Response to Incidents Involving Radioactive Materials”

**Emergency Medical Services**

1. Provide emergency, lifesaving care to victim(s) using necessary protective measures.
2. Notify the hospital (Monroe Clinic Hospital) as soon as possible of the victim's potential exposure to radioactive materials so that hospital personnel may prepare the receiving area.
3. See Attachment 2 – State of Wisconsin Dept. of Health Services “ EMS Treatment of Radioactively Contaminated Patients”



**Green County Sheriff's Department and Municipal Police Departments**

1. Upon request, assist with establishing a perimeter and controlling access.
2. Assist with the notification and implementation of any protective actions that have been ordered. In the event of an escalating emergency outside of a city or village limits, the county sheriff has the authority to recommend an evacuation of residents (ss. 66.325).
3. Provide escort for emergency response personnel and equipment dispatched to the emergency site, when requested. This may include personnel from local, state and federal agencies.
4. In the event of a suspected terrorist act, assure the FBI is notified.
5. Assist with the enforcement of agricultural hold or embargo zones as requested.

**Green County Highway Dept. and Municipal Public Works**

1. Provide equipment and staff to augment operations, upon request.
2. Assist law enforcement with traffic control activities as needed.

**Green County UW-Extension**

1. Assist and coordinate with the Department of Health-Radiation Protection Services in collecting agricultural samples to be monitored for contamination (The State of Wisconsin accepts primary responsibility for supply staff, equipment, training and maintenance for state teams).
2. Coordinate with Green County Health Department to educate the local farms and food producers on handling possible contamination.

**IV. PLAN DEVELOPMENT AND MAINTENANCE**

- A. Green County Emergency Management, in coordination with the lead agencies are responsible for the development, annual review/updating of ESF-16, its attachments and distribution. Each agency/service with emergency assignments is responsible for assisting with the development and maintenance of their own portion of ESF-16, the appropriate attachment, and their own SOGs. Each agency/service is also responsible for assigning personnel, equipment, and providing training necessary to carry out emergency functions All agencies/services shall provide current personnel/equipment resource lists to the Green County Emergency Management office upon request.
- B. This ESF will be reviewed at least annually and updated based on deficiencies identified by drills and exercises, post-disaster critiques, self-assessments, audits, administrative reviews, changes in local government structure, technological changes or any other reasons that necessitate revisions. Copies will be available to copyholders of record by downloading them from Esponder or requesting a copy from Green County Emergency Management.

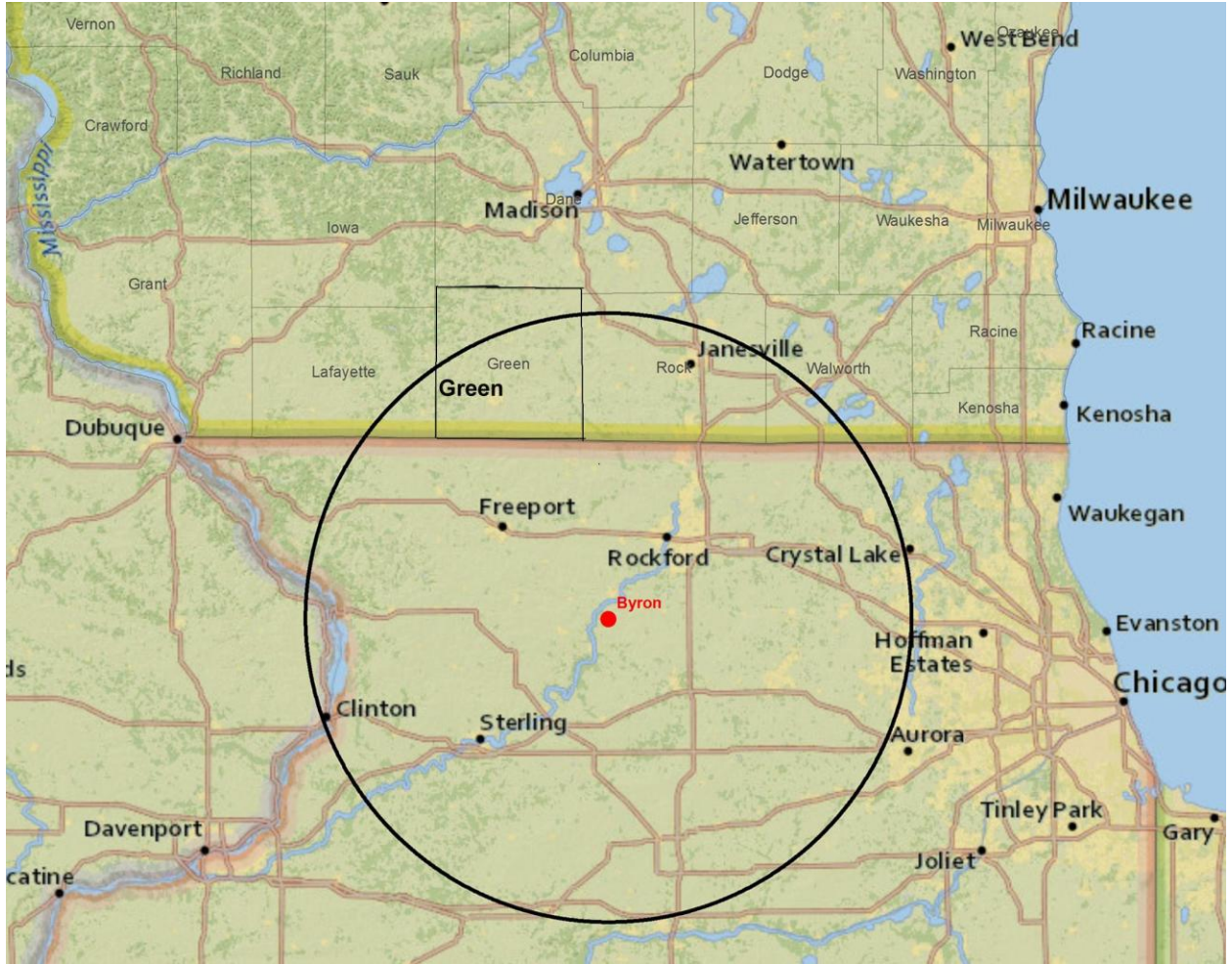
**V. References**

1. North American Emergency Response Guidebook
2. Radiological Emergency Information for Wisconsin Farmers, Food Processors and Distributors.
3. State of Wisconsin Radiological Nuclear Incident Annex

**Attachments**

1. Map – 50 Mile Ingestion Zone for Byron Nuclear Plant
2. State of Wisconsin Dept. of Health Services “ EMS Treatment of Radioactively Contaminated Patients
3. State of Wisconsin Dept. of Health Services “Fire Department Procedures-Emergency Response to Incidents Involving Radioactive Materials”
4. WI Dept. of Health Services Local Agency Emergency Preparedness Plans to address Response to a Radiological Incident.

### 50 Mile Ingestion Zone Map for Byron Nuclear Plant





State of Wisconsin  
Department of Health Services

DIVISION OF PUBLIC HEALTH

1 WEST WILSON STREET  
P O BOX 2659  
MADISON WI 53701-2659

608-266-1251  
FAX: 608-267-2832  
TTY: 888-701-1253  
dhs.wisconsin.gov

## EMS TREATMENT OF RADIOACTIVE CONTAMINATED PATIENTS

*Life-threatening emergencies always have priority over concerns involving radioactive contamination.*

1. Park upwind and outside controlled area set-up by police or fire dept. personnel.  
*If no controlled area is designated, park at least 100 ft. upwind of accident scene.*
2. Don protective clothing.  
*Wear gloves, booties, and coveralls.*
3. Provide emergency life-saving care to victim.
4. When medically feasible, remove victim from immediate area of suspected contamination. Remain within the controlled area.
5. Notify hospital as soon as possible to allow time to prepare receiving area.
6. Remove victim's clothing, if possible, and wrap victim in a clean sheet or similar covering.
7. Prior to leaving scene, remove outer protective clothing and change gloves.  
*Clothing and non-essential equipment should remain within the controlled area.*
8. Do not decontaminate personnel or equipment unless state health personnel are present.
9. Transport victim to hospital.  
*Change gloves after handling victim while en route.*
10. Transfer victim to clean hospital gurney.  
*Ambulance personnel, sheets, blankets, and equipment should remain with the ambulance. The equipment and personnel are in a controlled area.*
11. Ambulance personnel, equipment, and vehicle should not return to service until checked for radioactive contamination by state health or qualified hospital personnel.

**NOTE: NO EATING, DRINKING, OR SMOKING IN CONTROLLED AREAS.**

DEPARTMENT OF HEALTH SERVICES  
**24 HOUR EMERGENCY HOTLINE (608) 258 - 0099**

*Wisconsin.gov*



State of Wisconsin

Department of Health Services

DIVISION OF PUBLIC HEALTH

1 WEST WILSON STREET  
P O BOX 2659  
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## FIRE DEPARTMENT PROCEDURES EMERGENCY RESPONSE TO INCIDENTS INVOLVING RADIOACTIVE MATERIALS

*Life-threatening emergencies always have priority over concerns involving radioactive contamination.*

1. Restrict access to area. Keep all non-emergency personnel & vehicles at least 500 feet from scene.
2. Approach scene that may involve radioactive materials with meters on and with personnel dosimetry in place. *Do not enter areas > 100 mR/hr unless it is necessary to treat injured personnel or prevent the spread of radioactive contamination.*
3. Extinguish or control fires. *Use the US DOT's Hazardous Materials Guidebook or other appropriate guidance.*
4. Measure exposure levels at scene if possible and minimize personnel exposure by using appropriate time, distance and shielding methods.
5. Set up controlled area for emergency personnel at least 100 feet from the scene. Remain upwind if possible. *Exposure levels in uncontrolled areas must be less than 2 mR/hr.*
6. Do not handle or move radioactive materials. Cover or contain materials to prevent contamination spreading. Do not decontaminate anything at the scene unless directed by personnel from the Radiation Protection Section.
7. Control access to and from controlled area if the possibility of radioactive contamination exists at the scene. *No unnecessary personnel or equipment shall enter controlled area.*
  - a. A control point should be established to control access to and exits from the scene. The control point should be manned at all times. All personnel shall enter or leave the scene through the control point.
  - b. All material and equipment should remain within the controlled area.
  - c. Personnel should be surveyed for radioactive contamination before they leave the controlled area. If survey equipment is not available, and personnel involved must leave the area, they should leave outer clothing and all equipment within the controlled area and change into fresh clothing when they pass through the control point. Personnel not surveyed should make themselves available for a survey as soon as possible. *Contamination is considered to be readings of 100cpm > background or greater when measured with a Geiger-Mueller type instrument equipped with a "pancake" detector.*
  - d. The names, SSN's, addresses, and survey results if available should be obtained from all personnel that have entered the controlled area.
8. All equipment at the scene shall be surveyed by Radiation Protection Section personnel. The Section will arrange for the disposal of radioactive waste and evaluate exposure to all personnel involved with the incident.

**NO EATING, DRINKING OR SMOKING IN CONTROLLED AREAS**  
**24 HOUR EMERGENCY HOTLINE: (608) 258-0099**

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Sorry not available due to sensitive information