

RADIOLOGICAL EMERGENCY PREPAREDNESS PLAN
Local Annex Template
(*Insert name of jurisdiction*), Alabama

I. INTRODUCTION

REV.05/18/09

A. PURPOSE

The purpose of this plan is to provide guidance and instructions to persons who will respond to and manage radiological incidents occurring in (*Insert name of jurisdiction*), Alabama, and to protect the health and safety of the public, including emergency response workers, from unnecessary exposure to ionizing radiation resulting from an incident that involves radioactive material.

B. SCOPE

These procedures are designed to assist incident commanders in their response to, and assessment of, radiological emergencies. During events that require immediate action to protect public health and safety, an incident commander must make decisions to the best of his/her ability. As with all emergency response activities, the incident will be managed using the National Incident Management System (NIMS).

At the scene of any radiological incident, it is very unlikely that any first on-the-scene responder will possess the expertise needed to serve as the radiation subject matter expert (subject matter expert being a component of NIMS). However, the assistance of a radiation subject matter expert can be obtained rapidly by contacting the Alabama Emergency Management Agency's State EOC 24-hr Communication Center at 1-800-843-0699.

Upon receipt of notification of an incident that involves radioactive material, or radiation, the State EOC will contact the State of Alabama Radiation Control Agency which is the Office of Radiation Control, Alabama Department of Public Health. The Office of Radiation Control 24-Hour duty officer will make contact with the local Emergency Management Agency (EMA), who will be in contact with the incident commander and serve as the radiation subject matter expert to the incident commander.

Using the services of the radiation subject matter expert and procedures in this plan, the incident commander should be able to protect the health and safety of the public, including emergency response personnel. This plan includes coordination and implementation of radiological assessment and medical services, as needed, during a radiological emergency.

II. POLICIES

- During a radiation emergency, all organizational elements of the **(Insert name of jurisdiction)** required to accomplish the mission of this plan will be utilized.
- In the event of circumstances that require an immediate action to protect the public health and safety, the incident commander is authorized to order or implement necessary protective actions. If possible, the incident commander, or designated entity, should consult with, and seek the advice of, the radiation subject matter expert on any decisions involving radiation prior to taking such actions.
- The radiation emergency response actions shall be coordinated with appropriate local officials following established procedures.

III. SITUATION

- A radiological incident may constitute a health hazard for the populace through direct exposure or the release of radioactive materials into the environment. Positive and prompt analysis coupled with effective decision making will be required to protect public health and safety in case of such an incident. Radiological incidents may involve transportation accidents, industrial accidents, fires, weather related incidents, and deliberate actions such as a radiological dispersal device (RDD or dirty bomb).
- It is most likely that a radiological incident will develop in an extremely short period of time, as a vehicle accident, a fire, a weather related incident, an industrial or a dirty bomb. However, an incident could develop slowly, providing sufficient time to institute effective protective measures. In the case where an incident develops in an extremely short time frame, rapid communication and quick decision making to implement actions to protect the public will be necessary. It is extremely important that the incident commander, or designated entity, notify local EMA staff as quickly as possible. Local EMA will notify the Alabama Emergency Management Agency (AEMA). Upon being advised of a radiological component to the incident, AEMA will notify the Office of Radiation Control duty officer, so that subject matter expert advice on radiation may be provided to the incident commander through the local EMA.
- The Alabama Department of Public Health is the Radiation Control Agency (RCA) for Alabama and is directed by the State Health Officer. The RCA is the decision making organization for protection of public health and safety during any radiological emergency in Alabama. The Office of Radiation Control duty officer will serve as the subject matter expert on radiation until Office of Radiation Control staff is assimilated into a unified command or as

long as needed. Where immediate emergency action is necessary, and on a day-to-day basis, the Office of Radiation Control acts for the Radiation Control Agency and will declare or implement necessary protective actions to protect the public.

IV. CONCEPT OF OPERATIONS

A. GENERAL

- The incident commander, or designated entity, will notify local EMA staff of an incident involving radioactive material. Local EMA staff will notify Alabama Emergency Management Agency (AEMA) through the State Emergency Operation Center (SEOC) 24-Hour Communications Center. Using information provided by AEMA, the Office of Radiation Control (ORC) duty officer will make contact with the local EMA staff, on-scene incident commander, or designated entity, and determine protective actions needed to protect emergency workers and the public, and issue any orders necessary to manage the incident. Such orders shall have the effect of law.
- Initially, upon receipt of notification of a radiological incident, the ORC duty officer, serving as the NIMS subject matter expert for radiation, will immediately transmit information needed for managing the incident to local EMA staff or the on-scene incident commander, or designated entity. Copies of all orders issued by Alabama Department of Public Health will be forwarded to AEMA and the Governor's Office, and other organizational units needed to implement the protective actions ordered.
- The on-scene incident commander, or designated entity, should remain in constant contact with local EMA staff who will remain in contact with the ORC duty officer, in order to ascertain and share information needed to manage the incident.

B. RESPONSE ACTIONS

This section lists actions to be performed by first on-the-scene responders under the direction of a designated incident commander for a radiological incident.

- For incidents where it is known that radioactive materials are involved (i.e., a plant that uses radioactive gauges), first on-the-scene responders should use portable radiation detectors (survey meters) to determine if abnormal radiation dose rates are present. The detectors (and speakers if one is on the detector) should be turned on prior to arriving at the scene. As responders approach the scene, increases in

instrument readings should be observed. Increases indicate abnormal radiation dose rates. This applies to all incidents such as transportation, fire, weather related, industrial accident or any explosion, including a so called dirty bomb. For a fire or industrial incident/accident at a plant, plant staff should be aware of the presence of radioactive material on site. A listing of all sites where radioactive materials are stored and used in Alabama is available from the Office of Radiation Control, along with contact information.

- For all transportation accidents, if radiation is not detected, on- scene responders should look for any U.S. DOT required placards on involved vehicles that indicate the presence of radioactive material. Shipping papers are another source of information for determining contents of a vehicle. It is important to note that many shipments of radioactive material destined for medical use are shipped in vehicles which require no external placards. Words such as “nuclear pharmacy”, appearing on the vehicle will be clues to contents of the vehicle. Package labels with the words “*Radioactive*” or “*Radioactive - NOS*” will also alert responders to radioactive material in transit.
- If radiation is detected, or suspected because of placards on a vehicle or by other means, the State EOC, 24-Hour Communication Center, should be immediately notified of an incident involving radiation or radioactive material.
- Once sufficient information is obtained, staff of the Office of Radiation Control will notify Alabama Emergency Management Agency (AEMA) of the nature of the incident, and any public health order or recommendations that have been issued. AEMA will summon state resources needed in managing the incident, such as law enforcement, military, and transportation.
- The Office of Radiation Control will proceed to make contact with local EMA staff or the on-scene incident commander, or designated entity, and will serve the incident commander as the NIMS subject matter expert for radiation and provide instructions and guidance for managing the radiological incident. This contact will be maintained until staff of the Office of Radiation Control arrive at the scene and report to the incident commander, or as long as needed. Office of Radiation Control Staff will assimilate into a Unified Command and assume all responsibilities, in coordination with the incident commander, for managing the radiological aspects of the incident.
- The Office of Radiation Control duty officer will contact and dispatch Office of Radiation Control staff to the scene of the incident as appropriate. Upon arrival at the scene, they will report to the incident

commander.

- As a member of the Unified Command, Office of Radiation Control staff will determine appropriate actions to be taken in managing all radiological aspects of the incident, through recovery and clean-up operations.

C. **RESPONSIBILITIES**

1. Local Health Departments

Public Health Environmentalists trained as Expanded Radiological Emergency Response Team members, in the Public Health Area in which the incident/accident occurred, may be dispatched to the scene by the Office of Radiation Control and serve as the liaison between the incident commander and the Office of Radiation Control, and perform radiological monitoring under the direction of the Office of Radiation Control as necessary. Upon arrival they will report to the incident commander.

Public Health Nurses, trained as Expanded Radiological Emergency Response Team members, in the Public Health Area in which the incident/accident occurred, may be dispatched by the Office of Radiation Control to the scene, or, if appropriate to health care facilities receiving persons injured in the incident/accident, to assist in providing medical care for possibly contaminated individuals.

Nurses may also assist with medical needs which may arise at the scene or medical care facility. Upon arrival at the scene they will report to the incident commander.

2. Other local agencies (**Option: To be completed by the jurisdiction**)

(List other local agencies that may support this plan such as local EMA, fire, law enforcement, etc.)

V. **RADIOLOGICAL RESOURCES AND TRAINING RESOURCES**

A. **RADIOLOGICAL DETECTION INSTRUMENTS AVAILABLE FOR USE**

(To be completed by the jurisdiction)

- *List all instruments available by manufacturer and model number)*

- *(One or more named individual(s) should be assigned the responsibility to make sure that instruments are working properly, that batteries are available, and that instruments are properly calibrated).* It is recommended that radiation detection equipment be calibrated and/or checked for proper operation at least once a year.
- *(All persons that may use radiological instrumentation should know where instruments are stored. The storage location(s) should be stated)*

B. RADIOLOGICAL TRAINING RESOURCES

- It is a goal of the *(insert name of jurisdiction)* to maintain at least *(insert number)* firefighters who have specialized training in radiation protection. These firefighters will be available as resource persons for other emergency response workers.
- Specialized radiological training for fire and law enforcement personnel, emergency medical personnel, and local officials is offered by the Office of Radiation Control, Alabama Department of Public Health. This training provides a basic understanding of radiation and radiation terminology and principles of radiation protections, with emphasis on the use of radiation detection equipment. This training can be tailored for specific needs including training at a site within the jurisdiction.
- Additional hands-on training is offered through the Center of Domestic Preparedness (CDP) at the Noble Training Center in Anniston, Alabama. This training is scheduled through AEMA.
- Contact the AEMA or the Office of Radiation Control for training assistance.

VI. MANAGEMENT CONCEPT

A radiological incident at any location in *(insert name of jurisdiction)* may constitute a health hazard for first on-the-scene responders and the populace through direct exposure to the radiation or from the spread of radioactive materials. Positive and immediate analysis, coupled with effective decision-making, will be required to protect the public in case of such an incident.

As soon as possible, upon recognition of a radiological component to the incident, the incident commander, or designated entity, should contact staff of the local EMA office who will advise the State EOC 24-hour Communication Center of an incident involving radiation.

State EOC Communication Center will then contact the Office of Radiation Control duty officer. The Radiation Control duty officer will provide direction and control and procedures necessary to resolve radiation concerns.

Tab 1

PROTECTIVE ACTION GUIDES

This tab is to provide for guidance to an incident commander for the management of a radiological incident.

I. GUIDANCE

- A. The incident commander will assure that an evaluation has been made to determine if radioactive materials are involved in the incident. The primary means of making such a determination will be by the use of a radiation detector or radiation survey meter. Radiation detectors should be turned on and observed prior to, and while approaching the scene, in addition to being used at the scene. Other means for determining if radiation is involved include statements from on-scene persons (i.e., a plant manager), observing placards on vehicles, review of shipping papers, and observing labeling on vehicles involved in the incident (i.e., name of a nuclear pharmacy on a door panel or package).
- B. Emergency response vehicles and equipment should approach the scene from an upwind direction if possible and stage operations in an area that does not exceed a radiation dose rate of 2 milliroentgens per hour as recorded by the radiation detector. It should be noted that even if operations are staged in a dose rate area less than 2 milliroentgens per hour, that equipment and personnel may become contaminated, but at no risk for injury to responders. Contamination can simply be removed by washing off at a later time or contained.
- C. Guidance contained in the “2008 Emergency Response Guidebook” (or latest edition) shall be used as guidance for determining the use of protective gear needed to be worn by emergency responders, techniques for fighting fires, and evacuation distances from the immediate incident scene, as well as other protective action suggestions. Specific guidance and recommendations can be provided by the radiation subject matter expert.
- D. If radioactive materials or radiation are suspected or known to be present, the incident commander, or designated entity, should, as soon as possible, contact the State Emergency Operation Center 24-Hour Communication Center and advise AEMA of a radiological incident.

The incident commander must provide the local EMA staff with an on-the-scene contact number. Local EMA will provide that contact number to the Office of Radiation Control duty officer in order to establish communication with the incident commander should lines of communication with the local EMA staff fail. Office of Radiation Control duty officer or staff will communicate with the incident commander through the local EMA staff if possible.

- E. The Office of Radiation Control duty officer will provide, through the local EMA staff, advice and information needed to assist in managing the incident.
- F. The local EMA should be kept current with conditions at the scene in order to fulfill their role of coordination, communication, and support.
- G. The incident commander, or designated entity, should maintain an open line of communication with local EMA staff. Local EMA should maintain an open line of communication with the Office of Radiation Control staff. Open lines of communication assure that needed support from both local EMA and the Office of Radiation Control can be provided.
- H. The incident commander should follow guidance and instructions provided by the radiation subject matter expert in managing the radiological aspects of the incident.
- I. The incident commander should consider establishing a zone around the incident site in which only needed and authorized persons are allowed to enter. See Tab 3 for guidance.
- J. **The first priority for on-the-scene responders should be the care of persons who may have been injured in the accident.** If radiation is present, injured persons should be removed from the scene and transported for medical care as rapidly as possible, irrespective of any contamination on injured persons.

Contamination can be easily managed at the medical facility. Refer to the guidance given in the **“2008 Emergency Response Guidebook”**, (or current edition), which substantiates this statement.

- K. **Fires** may be managed using guidance contained in the **“2008 Emergency Response Guidebook”** (or current edition). The fact that radioactive materials are present does not alter the firefighting methods.
- L. Once injured persons are removed, and fires are out, the radiation subject matter expert will likely suggest that all nonessential persons be kept outside the restricted or controlled area(s).

Once staff of the Office of Radiation Control arrive at the scene, and report to the incident commander, boundaries of the restricted area or controlled area will be reevaluated and adjusted as necessary, such that no person is within a radiation dose rate area that exceeds 2 milliroentgens per hour.

Any emergency response equipment or personnel within a radiation dose rate area exceeding 2 milliroentgens per hour will be required to relocate to areas that do not exceed 2 milliroentgens per hour.

- M. When staff of the Office of Radiation Control arrives at the scene, they will report to the incident commander and assimilate into the unified command and manage the radiological aspects of the incident, in coordination with the incident commander and other local officials, through clean-up operations.
- N. Using information provided from the scene, the radiation subject matter expert will make an initial estimate of radiation dose received by first on-the-scene responders and the population. This initial value may be used to determine protective actions until more accurate information is available.

As more accurate information becomes available, the projected radiation dose to the responders and radiation dose to the population will be adjusted to reflect the revised calculations.

- O. If radioactive material has been released from storage containers and dispersed to the atmosphere; there may be radiation dose rates at extended distances from the immediate accident site.

The areas suspected to be affected by a radioactive plume will be estimated by Office of Radiation Control duty officer. In the absence of definitive information about the size and location of the area subjected to an actual or projected exposure, the area will be assumed to extend 45 degrees on either side of the line extending downwind. A determination of wind direction will be important in managing the event. In absence definitive methods of determining wind direction, simple means will be useful.

II. PROTECTIVE ACTION GUIDES

- A. A Protective Action Guide is that projected dose savings which warrants consideration of taking a protective action. A Protective Action Guide under no circumstances implies an acceptance dose. These guides will be used by the radiation subject matter expert in making recommendations and in issuing orders to protect public health and safety.

<u>Protective Actions Considered</u>	<u>Projected Committed Dose Equivalent and Initiating Conditions</u>
Evacuation and/or Shelter	1 rem whole body exposure including eyes, gonads, and blood forming organs; or Conditions exist that make the above dose probable.
Sampling and Monitoring	Any release or potential release as appropriate

A protective action is an action taken to avoid or reduce the projected or potential committed dose equivalent of radiation to the populace.

Evacuation Evacuation of population from the area of exposure.

Shelter Shelter of the population from the plume.

Monitoring No protective action taken for plume exposure

Tab 2

PERSONAL PROTECTIVE GUIDELINES

This tab is to delineate the monitoring and control of external gamma exposure and internal or external radioactivity on members of the public and/or emergency workers.

I. FIRST ON-THE-SCENE RESPONDERS AND EMERGENCY WORKER EXPOSURE DOSE

Means for measuring the radiation dose to first on-the-scene responders may not be available initially. However, the objective is to minimize radiation exposure to all persons involved in the incident and to determine their accrued radiation dose.

It is the expressed policy of the State of Alabama that radiation dose to emergency workers do not exceed radiation doses defined in Rules of State Board of Health, Chapter 420-3-26-.03, Standards for Protection Against Radiation. The Alabama Radiation Control Agency may grant exemptions to these radiation dose limits in accordance with established procedures.

Emergency workers may receive radiation doses in excess of limits defined in Rules of State Board of Health, Chapter 420-3-26-.03, Standards for Protection Against Radiation only during missions approved for lifesaving and/or during early post radiological incident periods. Dosimetry for emergency workers, although not likely available in the very early phase of the incident, will be provided as quickly as available to all personnel involved in emergency operations. Emergency phase radiation dose limits for emergency workers are listed in the following table:

**RADIATION DOSAGE LIMITS FOR EMERGENCY WORKERS
TEDE (Total Effective Dose Equivalent)**

	Total Dose (TEDE)	Dosimeter Reading
Life Savings.....	25 rem.....	12.5 rem maximum
Evacuating Known Residents.....	10 rem.....	5.0 rem maximum
Fighting Residences Fires.....	10 rem.....	5.0 rem maximum
Protecting Property, Patrolling Evacuated Areas, Manning Check Points, Environmental Monitoring, and Locating Airborne Releases.....	1 rem per day 5 rem maximum	0.5 rem per day 2.5 rem maximum

In addition to the above individual dose limits, all emergency workers are advised to Make every reasonable effort to limit their dose, while at the same time accomplishing

their emergency duties.

II. CONTAMINATION CONTROL

The need to monitor all evacuees and emergency response workers from the evacuated areas is neither anticipated nor deemed practical since many of these individuals may have already departed by the time monitoring teams are available to perform this function. Initial contamination monitoring will be limited to emergency personnel and evacuees near the scene of the incident, and to persons who believe they may have been contaminated.

The magnitude of this monitoring task will be particularly prevalent where radioactivity is detected beyond the immediate area of the incident, where large numbers of the public may be involved.

Screening for the presence of contamination on persons at the scene, including emergency personnel and equipment leaving evacuated areas, will be performed at designated locations outside of contaminated areas and outside of areas having elevated radiation levels.

Equipment which cannot be readily decontaminated will be placed in segregated storage until sufficient time, material, and manpower can be made available to complete the procedure.

Screening of evacuees for contamination will be done in areas of background radiation. Emergency radiation workers and evacuees will be surveyed using appropriate radiation survey instruments, which may include portable “Portal Monitors” supplied by the Office of Radiation Control or by using available hand-held survey meters. Any survey using hand-held meters should be made holding the probe approximately 1 inch from the surface and moving the probe at the speed of no more than 1 inch per second.

Unless otherwise directed by the Alabama Radiation Control Agency, **“contamination” is defined** as, **“an open window reading of twice pre-accident background (2 x background).”**

Initial decontamination will consist of first removing contaminated clothing (this should remove approximately 80%) then washing body parts with copious quantities of mild soap and water. Careful attention should be paid to the hair. **Decontamination will not take place in environments that may be detrimental to public health such as cold weather or the lack of warm water or lack of privacy.**

For screening mass numbers of the public for contamination, the Office of Radiation Control will provide portable radiation monitors capable of monitoring both persons and/or vehicles. Consideration must be given for establishing mass screening locations following a radiological incident. A large area, with adequate

parking (i.e., a football, soccer, or baseball field) will serve this need. For screening very large numbers of people for real or suspected contamination, the Office of Radiation Control may recommend following guidance in National Council on Radiation Protection, NCRP Report #138, regarding sending persons home with information for self decontamination.

Persons should not be held against their will, even if contaminated.

Transport of all persons in need of medical care must take place immediately without regard to radiation or contamination levels. Do not decontaminate persons in need of medical care prior to transport. Decontamination can take place at the medical facility. Wrapping a sheet around a person will confine much of the contamination. If something does get contaminated, it can be easily cleaned up.

III. MEDICAL SERVICES

MISSION

To provide medical care on an uninterrupted basis during a radiological incident

A. SITUATION AND ASSUMPTIONS

1. A radiological incident could result in the evacuation of much of the populace near the scene of the incident.
2. Protective actions, such as evacuations may be early by the incident commander or may be ordered by the Radiation Control Agency (RCA). These protective measures will be taken so as to protect public health and safety of the public.
3. Medical institutions should be contacted by ambulance operators prior to arrival of patients, and informed that a possibly contaminated patient is in transport. Wrapping the possibly contaminated individual in a sheet will minimize the spread of contamination while in transport. The institution's procedures for controlling radioactive material contamination should be instituted. If guidance is needed by the institution, that guidance can be provided immediately by contacting the Office of Radiation Control. The nuclear medicine staff of all hospitals should be able to provide assistance in managing possibly contaminated individuals.

Tab 3

AT THE SCENE GUIDELINES

I. AT THE SCENE PROCEDURE GUIDELINES

Upon arrival at the scene, on-scene responders should visually survey the surrounding area. If possible, emergency response vehicles should be parked upwind of the incident/accident scene and outside any area where the radiation dose rate exceeds 2 milliroentgens per hour, avoiding smoke from fire or any area of liquid spills or leaks from transport vehicles or containers that may have been broken or ruptured in the incident/accident. It should be noted that vehicles, if parked inside this area may become contaminated. However, if they become contaminated, they can be cleaned, or decontaminated.

- A. KEY ITEMS in identifying a potential radiation accident include “RADIOACTIVE” transport placards attached to vehicles. Placards are required on vehicles transporting one or more packages bearing “Radioactive-Yellow III” labels, even if in Type A packages. Low Specific Activity (LSA) radioactive materials transported as full loads or in exclusive use vehicles will require that such vehicles be placarded.
- B. LABELS are required on the external surface of packages containing radioactive material. The required label is determined by the external radiation exposure rate. Package labels must specify the radionuclide (kind of radioactive material) contents, and quantities (activity expressed in curies or becquerels, or subunits thereof). In addition, Yellow II and Yellow III labels contain the TRANSPORT INDEX, which is equal to the maximum exposure rate (measured in millirems per hour or becquerels per hour) measured at 1 meter from the package.

C. REQUIREMENTS FOR PACKAGE LABELS:

TRANSPORT INDEX (TI) LABEL	MAXIMUM RADIATION LEVEL AT ANY POINT ON EXTERNAL SURFACE	LABEL CATEGORY
“0” (Zero) (if measured TI is not greater than 0.05)	Not more than 0.005 mSv/hr (0.5 mrem/hr)	WHITE I
More than “0” but not more than 1	More than 0.005 mSv/hr (0.5 mrem/hr), but not more than 0.5 mSv/hr (50 mrem/hr)	YELLOW II
More than 1, but not more than 10	More than 0.5 mSv/hr (50 mrem/hr) but not more than 2 mSv/hr (200 mrem/hr)	YELLOW III
More than 10	More than 2 mSv/hr (200 mrem/hr), but not more than 10 mSv (1000 mrem/hr)	YELLOW III (must be shipped under EXCLUSIVE USE provisions)

D. A package which exceeds radiation levels in paragraph **C.** must be transported in “EXCLUSIVE USE” shipment ONLY and the radiation levels must not exceed the following during transportation:

1. 200 millirem per hour (2 mSv/hr) on the external surface of packages unless the following conditions are met, in which case the limit is 10 mSv/hr (1,000 mrem/hr):
 - a. Shipment is made in a “CLOSED TRANSPORT VEHICLE” (except aircraft) with the following radiation level limits:
 - 200 millirem per hour (2 mSv/hr) at any point on the outer surface of vehicle.
 - 10 millirem per hour (0.1 mSv/hr) at any point 2 meters (6.6 feet) from the lateral surface of the vehicle.
 - 2 millirem per hour (0.02 mSv/hr) in any normally occupied space (does not apply to private carrier if their personnel wear dosimetry devices).

- b. LSA packages do not require these labels; however, they must be marked as “RADIOACTIVE - LSA”.
- c. **SHIPPING PAPER** information will be of great value in determining initial assessment of the possible consequences of a transportation accident. DOT regulations do not specify a format for shipping papers, but the papers must show the following information:
 - Proper shipping name (i.e., “RADIOACTIVE MATERIAL - EMPTY PACKAGES”, “RADIOACTIVE MATERIAL - INSTRUMENTS AND ARTICLES”)
 - A four-digit hazardous materials identification number must appear following the shipping name. The identification number provides the key to the emergency action guides in the “**2008 Emergency Response Guide Book**” (or current edition).
 - Activity of the radioactive material in curies, millicuries, microcuries, becquerels, etc. “LARGE QUANTITY” must be shown if the quantity meets that definition.
 - Name of the radionuclide.
 - Description of the physical and chemical form of the material (if the material is not in special form (i.e., sealed sources).

II. INITIAL MONITORING UPON ARRIVAL AT THE SCENE TO DETERMINE THE EXTENT OF RADIATION LEVELS AND POSSIBLE SPREAD OF CONTAMINATION

This should be done as expeditiously and as unobtrusively as possible following instructions provided by the radiation subject matter expert.

III. ISOLATION OF THE INVOLVED AREA THROUGH THE USE OF BARRICARE, ROPE, FENCES ECT.

Almost anything that can help provide a visual and/or physical barrier can be utilized - such as police and fire department barricades, hardware store rope, etc. In placing the barricades, consideration should be given to present and possible future weather and wind conditions. It is better to enclose a large area and reduce the size later than to enclose an area too small and have to enlarge it later. Ideally, the barrier line should be placed so that at any point along it, radiation dose rates do not exceed 2 milliroentgens per hour. The incident commander must use good judgment in establishing such boundaries. Due to the location of the incident, it may not be practical to place the barrier at 2 milliroentgen per hour locations. The incident commander may consider establishing boundaries in excess of 2

milliroentgens per hour as needed in managing the incident scene. Where levels are exceeded, the incident commander should discuss reasons for the departure with the radiation subject matter expert. Reasonable efforts should always be made to locate the boundary where radiation levels are as low as reasonably achievable. Boundaries can be established where radiation levels are background levels.

IV. HOT LINE PROCEDURES TO CONTROL SPREAD OF CONTAMINATION

Designated entry and exit points through which all traffic (personnel) must flow (a so called "HOT-LINE") should be established to avoid and control the unnecessary spread of contamination. The "HOT LINE" entry and exit points should be upwind from the scene of the incident. The incident commander should establish such a line as time permits. The line simply limits the size of the area and the number of persons requiring decontamination at a later time. Personnel entering the area should be logged in and monitored for contamination upon leaving, and have access only after it is determined that the proper protective clothing and equipment are being utilized. Law enforcement personnel may be required to assist with control of personnel entering the area and exiting the area.

Injured persons should be transported without regard for contamination. DO NOT DELAY TRANSPORTATION OF INJURED PERSONS IN NEED OF MEDICAL ATTENTION TO MONITOR FOR CONTAMINATION. A sheet wrapped around an injured person will minimize spread of contamination. Decontamination can take place at the facility where medical care is provided. Contaminated persons do not represent a threat to emergency response workers or medical personnel.

V. RECOVERY AND CLEAN UP

The recovery and clean-up of a spill of radioactive material involve radiological activities that require specialized training and licensure by the Office of Radiation Control and must not be attempted by untrained persons.

Radiological accident/incident scenes will be cleaned to appropriate standards as defined by the Rules of State Board of Health, Alabama Radiation Protection Rules, Chapter 420-3-26-.03. Clean-up of radiological contaminated sites must be done by persons authorized by a radioactive material license to perform such services.