

## UNIT SIX

### FEDERAL RESPONSE SYSTEMS



For a radiological emergency at a facility or site not under the control of a Federal agency, State and local governments have primary responsibility for determining and implementing measures to protect life, property and the environment outside the facility boundary. The owner or operator of a nuclear facility has primary responsibility for actions within the boundaries of that facility; for providing notification and advice to off-site officials and for minimizing the radiological hazard to the public.

For radiological emergencies involving an area under Federal control the responsibility for onsite actions belongs to the Federal agency, while off-site actions are the responsibility of the State or local government. In all other radiological emergencies, the State or local government has the responsibility for taking emergency actions both onsite and off-site, with support provided, upon request, by Federal agencies as designated by the Federal Radiological Emergency Response Plan (FRERP).

Each level of government maintains plans for radiological emergency response. In local government the coordination of that function may be assigned to emergency management, public health, or some other agency or department. That role will be identified in the local plan. At the State level, the responsibility for coordinating radiological emergency response lies with the State emergency management agency. At the Federal level, the Lead Federal Agency (LFA) is the coordinating agency for Federal response to radiological emergencies. In this unit you will explore the Federal response to radiological emergencies.



# ***GATE FRAME QUESTION***



A severe accident has occurred at the commercial nuclear power plant in your jurisdiction. The facility has issued a site area emergency notification and indicates that unless the problem is brought under control, off-site radiation levels are expected to exceed dose limits for the general public. As a result, the Federal Radiological Emergency Response Plan (FRERP) has been implemented, and Federal agencies are gearing up for immediate deployment to the site. The mayor wants to know what the FRERP is, what agencies will respond, who will be in charge, and what the Federal government can do to help solve the problem.

What will you tell him?

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**ANSWER**

*Your answer should include the adjacent information.*

The FRERP is an operational strategy by which Federal agencies with various statutory responsibilities in radiological protection and response coordinate their efforts at the accident scene.

Because this is an accident at a commercial nuclear facility, the Nuclear Regulatory Commission (NRC) is the Lead Federal Agency (LFA). This means the NRC manages the Federal response effort and coordinates among the Federal agencies and their interactions with the State. The Department of Energy (DOE) will set up a Federal Radiological Monitoring and Assessment Center (FRMAC).

The FRMAC provides a wide array of monitoring and assessment data to the State and local governments as well as to the LFA. The LFA will provide advice regarding protective actions to the State and local governments.

The Federal presence does not impact State and local authority or responsibility to assess the situation and to select and implement protective actions.

*If your answer included all or most of the above points, you should be ready for the Summary Questions at the end of this unit. Turn to page 6-22.*

*If your answer did not include these points, complete the instruction for this unit. Turn to page 6-4.*



## OVERVIEW OF THE FEDERAL RADIOLOGICAL EMERGENCY RESPONSE PLAN



In the event of a radiological accident, Federal agencies with various statutory responsibilities have agreed to coordinate their efforts at the accident scene under the umbrella of the *Federal Radiological Emergency Response Plan (FRERP)*. The FRERP covers any peacetime radiological emergency that has actual, potential, or perceived radiological consequences within the U.S., its Territories, possessions, or territorial waters, and that could require a response by the Federal government. The level of Federal response to a specific emergency will be based on the type and/or amount of radioactive material involved, the location of the emergency, the impact or the potential for impact on the public and the environment, and the size of the affected area. Emergencies occurring at fixed nuclear facilities or during the transportation of radioactive materials, including nuclear weapons, fall within the scope of the Plan regardless of ownership.

The objective of the FRERP is to establish an organized and integrated capability for timely coordinated response by Federal agencies to peacetime radiological emergencies. The agency that is responsible for leading and coordinating all aspects of Federal response is referred to as the *Lead Federal Agency (LFA)* and is determined by the type of emergency.

This cooperative effort is intended to assure the States and the LFA that all Federal technical assistance is fully supporting their efforts and that monitoring results are provided in a working data center for immediate use by the State(s) and LFA decision makers. The Federal agencies do not relinquish their statutory responsibilities. However, this mandated cooperation ensures that each agency can obtain the data critical to its specific responsibility.



The FRERP ensures that emergency response resources are available to respond to any accident scenario. The plan identifies the authorities and responsibilities of each Federal agency that may have a significant role in a radiological emergency. The State is fully recognized as the primary decision maker for any public action outside the boundaries of the facility which experienced the accident (areas considered to be off-site).

*Answer the following question to check your understanding of the FRERP.*

**QUESTION**

*Circle the correct answer*

The \_\_\_\_\_ describes the responsibilities of each Federal agency with major responsibilities in a radiological emergency.

- a. LFA.
- b. FRERP.

*Turn the page to check your answer.*



## ***ANSWERS***

- a. Incorrect. The Lead Federal Agency is one of the entities whose responsibilities are described within the FRERP.

*Try the next question*

- b. Right! The Federal Radiological Emergency Response Plan is the umbrella under which Federal agencies coordinate response to radiological emergencies.

*Turn to page 6-8*

## ***QUESTION***

*Circle the correct answer.*

The LFA is the primary decision maker for all public actions outside the boundaries of the facility where the accident occurred.

- a. true.
- b. false.

*Turn the page to check your answer.*



***ANSWERS***

- a. No, the State makes the decisions regarding off-site public actions.

*You should reread this section before moving on.*

- b. That's right. The Federal agencies are there to assist the State, not take over the State government.

*Turn to page 6-8.*



## THE FEDERAL RADIOLOGICAL MONITORING AND ASSESSMENT CENTER



The Department of Energy (DOE) may respond to a State or LFA request for assistance by dispatching a Radiological Assistance Program (RAP) team. If the situation requires more assistance than a RAP team can provide, DOE will alert or activate additional resources. These resources may include the establishment of a *Federal Radiological Monitoring and Assessment Center* (FRMAC), to be used as an on-scene coordination center for Federal radiological assessment activities. Federal and State agencies are encouraged to collocate their radiological assessment activities at the FRMAC.

The following radiological information is provided by the FRMAC to the States and the LFA:

- Plume predictions, as appropriate;
- Air and ground concentrations in time and space;
- Deposition patterns of isotopic concentrations & exposure rates;
- Concentrations in environmental media in time and space;
- Assurance of quality of data;
- Retrievable documentation of environmental conditions;
- Dose predictions in time and space;
- Results of data collection, analysis, and evaluation;
- Evaluations, assessments, and interpretation of data, as applicable;
- Technical assistance to State and LFA decision-making officials, as requested; and
- Weather forecasts



*Answer the following question to check your understanding of the FRMAC.*

**QUESTION**

*Circle the correct answer.*

In a major radiological emergency, the State might rely on the FRMAC to provide

- a. data on the scope and radiation content of the plume.
- b. off-site emergency rescue capability.

*Turn to the next page to check your answer.*



## **ANSWERS**

- a. That's correct. The FRMAC provides technical assistance to the State(s).

*Turn to page 6-12.*

- b. No, the off-site emergency response is provided by local and State agencies with possible assistance from Federal entities other than the FRMAC.

*Try the next question.*

## **QUESTION**

*Circle the correct answer.*

How would a local radiological response team access the FRMAC for technical assistance with low level radiation accidents?

- a. call the Department of Energy.
- b. the FRMAC would not be available.

*Turn to the next page to check your answer.*



## ***ANSWERS***

- a. No, a FRMAC is only established in the event of a significant radiological emergency. A local jurisdiction contacts the State Radiation Authority for technical assistance with a localized problem.

*Review this section before proceeding.*

- b. Correct. You realize that the FRMAC is established in the event of significant radiological emergencies.

*Turn to page 6-12.*



## THE LEAD FEDERAL AGENCY

When the State or facility owner requests Federal assistance in a radiological emergency, the FRERP is activated.

Under the FRERP, the LFA will lead and coordinate all Federal response activities from an on-scene location, referred to as the *Joint Operations Center (JOC)*.

The LFA will oversee the federal response, monitor and support owner or operator activities (if applicable), and serve as the principal Federal source of information about onsite conditions. The LFA will provide a hazard assessment of onsite conditions that might have significant off-site impact and ensure onsite measures are taken to mitigate off-site consequences.

The LFA will establish a *Joint Information Center (JIC)* for media release coordination and approval. It is the central point of contact for all news media at the scene of the incident. Public information officials from all participating Federal agencies collocate at the JIC.

The assignment of LFA responsibility is determined by the type and location of radiological accident.



<b>TYPE OF RADIOLOGICAL ACCIDENT</b>	
<b>LFA</b>	
<b>Nuclear Facilities</b>	
Licensed by NRC or an Agreement State	Nuclear Regulatory Commission (NRC)
Owned or operated by DoD or DOE	Department of Defense (DoD) or Department of Energy (DOE)
Material Not Licensed, Owned, or Operated by a Federal Agency or Agreement State	Environmental Protection Agency (EPA)
<b>Transportation of Radioactive Materials</b>	
Shipment of Materials Licensed by NRC or an Agreement State	NRC
Materials shipped by or for DoD or DOE	DoD or DOE
Shipment of Materials Not Licensed or Owned by a Federal Agency or an Agreement State	EPA
<b>Satellite Containing Radioactive Material</b>	NASA or DoD
<b>Impact from Foreign or Unknown Source</b>	EPA
<b>Other Types of Emergencies</b>	LFAs confer



*To apply your knowledge, answer the following question.*

**QUESTION**

The decisions regarding protective actions to be recommended to the public in a radiological emergency are made by

*Circle the correct answer.*

- a. the State.
- b. the LFA.

*Turn to the next page to check your answer.*



**ANSWER**

- a. Correct. The FRERP fully recognizes the State as the primary decision maker for any public action outside the boundaries of the facility that experienced the accident.

*Turn to page 6-17.*

- b. No. The LFA will *recommend* protective action measures to the State(s).

*Try another question.*

**QUESTION**

*Circle the correct answer.*

If a vehicle carrying high-level radioactive waste to a DOE facility is involved in a major accident with resulting fire and dispersion of radioactive materials, the LFA would be the

- a. NRC.
- b. DOE.

*Turn to the next page to check your answer.*



***ANSWERS***

- a. No. The NRC is the LFA for significant transportation accidents where the radioactive materials are not shipped for DOE or DoD.

*Review this section before continuing.*

- b. That is correct.

*Go to page 6-17.*



## ROLES OF FEDERAL, STATE, AND LOCAL AGENCIES



As defined by the FRERP, FEMA will coordinate provision of non-radiological Federal resources and assistance to affected State and local governments. The Federal non-radiological resource and assistance coordination functions will be performed at a Disaster Field Office (DFO).



The *DOE*, under the FRERP, has the initial responsibility for coordinating off-site Federal radiological monitoring and assessment assistance during response to a radiological emergency. Seven overall responsibilities fall initially to the DOE:

- Provide support to the State through coordination of the off-site Federal radiological monitoring, assessment, and evaluation activities;
- Maintain technical liaison with the State and local agencies having monitoring and assessment responsibilities;
- Maintain a common set of off-site radiological monitoring data;
- Provide monitoring data and any interpretations to the LFA and appropriate Federal, State, and local agencies;
- Provide off-site support, including the FRMAC and the majority of personnel to operate it; and
- Provide various operational assets, including detection and measurement equipment, communications support, and aerial sampling capability, as appropriate.



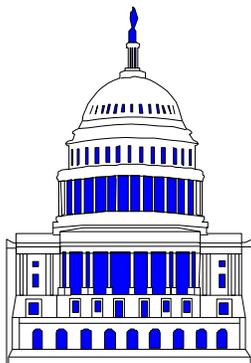


Following the initial phase of the emergency, the DOE will transfer certain responsibilities to the EPA at a mutually agreeable time. The EPA will assume the Federal agency responsibility for coordinating the intermediate and long-term, off-site radiation monitoring activities. EPA assumes control of the FRMAC with adequate assurances from DOE and the other Federal agencies that they will commit the necessary resources, personnel, and funds for the duration of the Federal response effort.



The U.S. Nuclear Regulatory Commission (NRC) regulates the use of byproduct, source, and special nuclear material, including activities at commercial and research nuclear facilities. The NRC provides assistance in Federal radiological monitoring and assessment activities during incidents. The NRC also provides, where available, continuous measurement of ambient radiation levels around NRC licensed facilities, primarily power reactors, using thermoluminescent dosimeters (TLDs).

### STATE AND LOCAL GOVERNMENTS



*State and local governments* are responsible for the health and welfare of the general public during an emergency. Off-site authority and responsibility at the accident site rests with the State and local officials. State and local officials also assess the situation and issue instructions for necessary protective actions to ensure the health and safety of the general public, making use of the recommendation of the LFA and the data provided by the FRMAC.



*Answer the following question to check your understanding.*

**QUESTION**

*Circle the correct answer.*

The Federal agency that will coordinate the Federal radiological emergency response with the State(s) is

- a. FEMA.
- b. LFA.

*Turn to the next page to check your answer.*



## ***ANSWERS***

- a. No, FEMA coordinates provision of non-radiological Federal resources and assistance.

*Try another question.*

- b. That is correct. The LFA assists State and local governments in determining protective actions and ensures that other Federal agencies assist State and local government in implementing protective actions.

*Go to page 6-22.*

## ***QUESTION***

*Circle the correct answer.*

The DOE is responsible for all off-site radiological assessment activities.

- a. true.
- b. false.

*Turn to the next page to check your answer.*



## ***ANSWERS***

- a. Incorrect. State and local officials will assess the situation, making use of the recommendation of the LFA and the data provided by the FRMAC.

*Review the section before proceeding.*

- b. Correct. State and local officials also assess the situation and issue instructions for necessary off-site protective actions.

*You are ready for the Summary Questions. Turn to page 6-22.*



## SUMMARY QUESTIONS

### **QUESTION**

*Circle the correct answer.*

As a local member of a State radiological emergency response team, who do you report to in the event of a radiological accident in which Federal response also is involved?

- a. the State radiological response team leader.
- b. the LFA.

*Turn to the next page to check your answer.*



## ***ANSWERS***

- a. Correct. The organizational structures of State response are unaffected by the Federal presence.

*Try the next question.*

- b. No. The LFA manages onsite Federal, not off-site State and local, response actions.

*You should go back and review the unit before trying the next question.*

## ***QUESTION***

*Circle the correct answer.*

- 2. One of the benefits to the local and State governments of Federal assistance in a radiological emergency is
  - a. freedom from decision making.
  - b. the monitoring and assessment data provided by the FRMAC.

*Turn the page to check your answer.*



***ANSWERS***

- a. No. The responsibilities of the State and local governments for the health and welfare of their public remain intact.

*You should review the unit before continuing on in the course.*

- b. Yes. The FRMAC provides an excellent resource to the States as well as the LFA and other Federal agencies involved.

*Move ahead to Unit Seven.*

