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BEST PRACTICE

Radiological Dispersal Device Incident Response Planning: Roles and Responsibilities of Emergency Response Organizations

PURPOSE

Identifies the roles and responsibilities of jurisdictions, states, and federal emergency response organizations following a radiological dispersal device (RDD) event.

SUMMARY

Municipalities have the primary responsibility for incident response within their jurisdictions following an RDD event. However, an RDD event may overwhelm jurisdictions' capabilities and require resources to supplement local assets. A large number of jurisdictions may not have the resources or authority to respond effectively to an RDD event. In many cases, partnerships between local emergency response organizations and state radiation control authorities will be critical. A number of state and federal agencies can provide municipalities with specialized expertise, equipment, and resources upon request to respond to an RDD incident.

This Best Practice discusses roles and responsibilities of jurisdictions following an RDD event. It also provides information on federal and state roles, expertise, and resources that could be deployed upon request. This document can support emergency planners by helping to familiarize themselves with these resources and functions.

DESCRIPTION

Extensive interagency coordination and cooperation with other local, state, and federal governments, as well as non-governmental and private sector institutions, will be necessary after an RDD event. The *Nuclear/Radiological Incident Annex* of the [National Response Plan](#) (NRP) maintains that:

- An RDD event could be a multi-hazard event requiring deployment of specialized resources and expertise not readily available at the local level.
- An RDD incident could affect several locations immediately, necessitating a multi-jurisdictional and/or multi-state response.
- An event that starts as a single-site response effort could rapidly become multi-jurisdictional due to changes in weather conditions or other events that can radically alter the plume size.
- Response and recovery operations from detection to site decontamination could extend for weeks or months. In some cases, long-term monitoring of population, food, and water supplies might have to be performed for years.

State and federal assistance to local jurisdictions will be determined by several factors, including local responders' ability to cope with the emergency, the type and amount of

radioactive material released, the size of the affected area, and the impact on the public and environment.

Municipal Responsibilities

Municipalities have primary responsibility for emergency response within their jurisdictions following an RDD event. Experts advise emergency managers to adopt RDD-specific emergency response plans and/or annexes to prepare for and respond to an RDD event. According to the Department of Energy (DOE), National Nuclear Security Administration (NNSA)'s *Municipal Radiological/Nuclear Emergency Preparedness Plan*, municipalities are responsible for providing command and control, communications, accident assessment, event classification, consequence mitigation, and protective action recommendations in order to protect the health and safety of the public, the emergency workers, and the environment. Municipalities are also responsible for:

- Deployment of hazardous materials (HazMat) teams with appropriate radiological detection equipment to perform monitoring, sampling, analysis, and exposure control.
- Notification and request of emergency support from federal and state agencies with specialized radiological expertise.

Notification

Jurisdictions should develop and periodically update a comprehensive list of local, state, and federal authorities to be notified after an RDD event. This list should include the name, emergency phone number, and other essential contact information of the organizations to be notified. This notification list may be incorporated into the jurisdiction's Emergency Operation Centers' protocols.

Notification lists should include such organizations as the Federal Bureau of Investigation (FBI), the state radiation control authority, the local emergency management agency, local radiological programs, as well as appropriate secondary response teams. The New Mexico State University, Carlsbad Environmental Monitoring and Research Center's "First Responders 12-Point Guidance in the Event of a Dirty Bomb, RDD or Other Radiological Incident" lists such secondary response teams as the National Guard Weapons of Mass Destruction-Civil Support Teams (WMD-CST) and the DOE Radiological Assistance Program (RAP).

The Metropolitan Washington Council of Governments' "[Radiological Dispersal Device \(RDD\) Response Guidelines](#)" includes a "Minimum Notifications" list of federal, state, and local agencies that first responding company officers should notify after an RDD event. For more information on this list, please refer to the *Lessons Learned Information Sharing* Practice Note document: "[Radiological Incident Response: Metropolitan Washington, DC's Notification List for Emergency Response Personnel.](#)"

Regional Response Planning

An RDD event will likely require a unified regional response that incorporates specialized expertise and resources. Planners should review regional response plans, mutual aid agreements, and other regional frameworks to ensure they address the requirements of an RDD incident response. For more information on mutual aid agreements, please refer to the *Lessons Learned Information Sharing* Best Practice documents: "[Mutual Aid Agreements: Overview](#)" and "[Mutual Aid Agreements: Addressing Terrorism.](#)"

The Metropolitan Washington Council of Governments published the "[Radiological Dispersal Device \(RDD\) Response Guidelines](#)" in July 2006. These guidelines address the heightened possibility of an RDD event in the National Capital Region. This document promotes regional cooperation by ensuring the all emergency response personnel in the Washington, DC area will operate under unified operational guidelines after an RDD event.

State Responsibilities

States may supply personnel, equipment, services, and facilities when local resources are insufficient to respond to an RDD event. States can provide such functions as command and control, communications, incident assessment, event classification, consequence mitigation, and protective action recommendations. States are also responsible for notifying relevant federal agencies of emergencies, implementing specific protective actions to prevent or minimize radiological and/or toxicological exposure, and protecting lives and property beyond the municipality's jurisdiction.

Home rule states can choose to delegate radiological control authority to local jurisdictions. Local jurisdictions can request state assistance after an RDD event. For instance, based on Ohio state law, the local fire chief or his/her designee is responsible for primary coordination of the on-scene activities following any hazardous material incident. First responders then will notify and, if necessary, request state assistance. This formal notification process is necessary to the activation of state resources and expertise. Non-home rule states as well as some home rule states such as Washington do not delegate authority below the state government level. As a result, the state radiation control authority may deploy resources without a formal request from a jurisdiction following an RDD event.

According to the [National League of Cities](#), "Home rule is a delegation of power from the state to its sub-units of governments (including counties, municipalities, towns or townships, or villages). That power is limited to specific fields, and subject to constant judicial interpretation. Home rule creates local autonomy and limits the degree of state interference in local affairs."

State Radiological Protection Programs

In the event of an RDD attack, a designated state radiation protection program can provide resources and expertise to protect the public, responders, and the environment from radiation exposure. The programs usually employ staff trained in radiological emergency response procedures who can help the Incident Commander (IC) assess risks and benefits of emergency response activities. These programs' personnel also are responsible for monitoring evacuees and emergency workers for contamination. The Conference of Radiation Control Program Directors provides a list of [State Radiation Protection Programs](#).

National Guard Weapons of Mass Destruction-Civil Support Teams

The WMD-CST can support state and local responses to terrorism events. The teams are federally resourced, trained, and evaluated but perform their missions primarily under the command and control of the governors of the states in which they are located. WMD-CSTs are not designed to replace local or state emergency responders. Indeed, the teams provide a well-trained, well-equipped addition to local or state responders. The WMD-CST teams are responsible solely for assessing a suspected WMD incident site, advising the IC on response measures, and assisting in expediting arrival of additional state and federal assets. A total of 22 members are assigned to each WMD-CST. These members are organized into six functional areas: command, operations, administration and logistics, communications, medical, and survey. The teams integrate into the Incident Command System.

Federal Responsibilities and Resources

Federal assistance following an RDD event will depend on factors such as the availability of state, local, and tribal resources; the type and amount of radioactive material released; the area affected; and the impact on the public and environment. Federal response to an RDD would be conducted through the NRP, specifically the *Nuclear/Radiological Incident Annex*. This annex classifies all RDD events as Incidents of National Significance. It also:

- Describes federal policies and planning;
- Explains roles and responsibilities of federal agencies for preventing, preparing for, responding to, and recovering from a radiological event;
- Illustrates coordination protocols for federal capabilities to respond to radiological incidents;
- Lists guidelines for notification and coordination of federal activities; and
- Outlines operational concepts for federal response to Incidents of National Significance.

According to the NRP's *Nuclear/Radiological Incident Annex*, an Incident of National Significance is "...an actual or potential high-impact event that requires a coordinated and effective response by an appropriate combination of Federal, State, local, tribal, nongovernmental, and/or private-sector entities in order to save lives and minimize damage, and provide the basis for long-term community recovery and mitigation activities."

The *Nuclear/Radiological Incident Annex* addresses the unique challenges associated with responding to RDD incidents and describes roles and responsibilities of:

- Department of Homeland Security (DHS);
- Coordinating agencies; and
- Cooperating agencies.

The NRP defines coordinating and cooperating agencies and describes their roles, responsibilities, and functions:

- **Coordinating agencies** support the DHS incident management mission by providing the leadership, expertise, and authorities to implement critical and specific aspects of the response. Federal agencies designated as coordinating agencies are responsible for implementation of processes detailed in the NRP annexes.
- **Cooperating agencies** conduct operations, when requested by DHS or the coordinating agency, using their own authorities, subject-matter experts, capabilities, or resources; participate in planning for short-term and long-term incident management and recovery operations and the development of supporting operational plans, standard operating procedures, checklists, or other job aids, in concert with existing first-responder standards; furnish available personnel, equipment, or other resource support; participate in training and exercises aimed at continuous improvement of prevention, response, and recovery capabilities; and nominate new technologies or procedures that have the potential to improve performance within or across functional areas to DHS for review and evaluation.

Department of Homeland Security

Under the NRP's *Nuclear/Radiological Incident Annex*, DHS is "responsible for overall coordination of all actual and potential Incidents of National Significance, including terrorist incidents involving nuclear materials." DHS performs the coordination function in accordance with the NRP and [Homeland Security Presidential Directive 5](#). The NRP's *Nuclear/Radiological Incident Annex* also establishes coordinating and cooperating agencies to assist DHS during an RDD event. These agencies provide technical expertise, specialized equipment, and personnel in support of DHS during RDD incidents.

Coordinating Agency

The NRP's *Nuclear/Radiological Incident Annex* defines a coordinating agency as "the federal agency which owns, has custody of, authorizes, regulates, or is otherwise designated responsible for the nuclear/radioactive material, facility, or activity involved in the incident." The coordinating agency supports DHS functions by providing federal radiological technical expertise and assets for responding to an RDD incident. This annex designates the following as the coordinating agency after an RDD, radiological exposure device, or improvised nuclear device event:

- **Department of Defense (DOD) or DOE** when DOD or DOE owns or operates the material or facilities, as appropriate.
- **Nuclear Regulatory Commission (NRC)** when NRC or Agreement states license the material or facilities.
- **DOE** for all other radiological terrorist incidents. The coordinating role transitions from DOE to the **Environmental Protection Agency (EPA)** during the environmental cleanup and site restoration phases. This transition occurs at a mutually agreeable time, and after consultation with state and local governments, cooperating agencies, and the Joint Field Office (JFO) Coordination Group.

The coordinating agency is represented in the JFO Coordination Group, the National Operations Center (NOC), the Incident Advisory Council (IAC), as well as in other response centers and entities, as appropriate for the specific event. Planners should refer to the NRP for more information on the JFO Coordinating Group, the NOC, and the IAC. Under the NRP's *Nuclear/Radiological Incident Annex*, the coordinating agency may use any structure consistent with the [National Incident Management System](#) (NIMS) for providing required support to state or local governments.

Notification

Accurate notification is essential after an RDD event to activate essential emergency response organizations and facilities. Based on the NRP's *Nuclear/Radiological Incident Annex*, the coordinating agency will notify the NOC and other coordinating agencies as appropriate of a radiological incident. Federal, state, and local governments are required to notify the NOC and the coordinating agency of a radiological incident if they are the first organizations to become aware of the event. Emergency managers should establish notification protocols to fulfill this requirement. Existing notification protocols should also be amended, if necessary, to apply to an RDD event.

Cooperating Agency

Cooperating agencies provide technical and resource support to DHS and the coordinating agencies. The NRP's *Nuclear/Radiological Incident Annex* identifies as cooperating agencies the Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, Housing and Urban Development, Interior, Justice, Labor, State, Transportation, and Veterans Affairs, as well as the American Red Cross, the EPA, the General Services Administration, and the NRC.

The cooperating agencies are represented in the NOC, the IAC, and response centers and entities as appropriate for the specific incident. They may be represented in the JFO Coordination Group. The NRP's *Nuclear/Radiological Incident Annex* identifies specific functions that the cooperating agencies will perform after a radiological event.

Department of Justice

The Attorney General, acting through the FBI, is responsible for criminal investigations of terrorist threats or acts, including ones involving an RDD. The Attorney General also

coordinates the activities of other members of the law enforcement community to detect, prevent, preempt, investigate, and disrupt terrorist activity in the US.

RDD Incident Response Capabilities of Federal Departments and Agencies

Several federal departments and agencies can supply resources and expertise to help state, local, and tribal emergency organizations respond to an RDD event. Some of the aforementioned federal interagency organizations, departments, and agencies include the following:

Interagency Elements

Advisory Team for Environment, Food, and Health

The Advisory Team for Environment, Food, and Health (also known as “the Advisory Team”) provides expert recommendations on protective action guidance for DHS, the JFO Coordination Group, the coordinating agency, as well as state, local, and tribal governments concerning environmental, food health, and animal health matters. The Advisory Team includes representatives from DHS, EPA, the Department of Agriculture, the Department of Health and Human Services’ Food and Drug Administration and Centers for Disease Control and Prevention, and other federal agencies.

Federal Radiological Monitoring and Assessment Center

The [Federal Radiological Monitoring and Assessment Center](#) (FRMAC) assists the coordinating agency by directing on-scene radiological assessment and monitoring. The Center is an interagency organization with representatives from DOE, EPA, the Department of Commerce, the National Communications System, the Army Corps of Engineers, and other federal agencies as needed.

The DOE’s National Nuclear Security Administration (NNSA) Nevada Site Office is responsible for FRMAC management and staffing. DOE is responsible for developing and maintaining FRMAC policies and procedures, determining FRMAC composition, and maintaining its operational readiness.

The FRMAC will usually deploy as a three-phased response:

- [Phase I](#) response consists of a 31-member team deployable in 4 hours. The team provides the core command and control functions. It is designed for quick response and rapid radiological data collection and assessment in order to provide early health effects advice and timely characterization of the radiological situations to the officials responsible for making and implementing protective actions for the public. The team can perform radiation monitoring, sampling, analysis, assessment, health and safety, and support and logistics functions, but only on a limited scale.
- [Phase II](#) response will dispatch an augmentation team in about 12 hours. This response team includes 32 personnel and an additional 39,000 pounds (2,400 cubic feet) of equipment. The Phase II response team will then integrate with the first team deployed on site. The team can support 24-hour-per-day operations for several weeks. It deploys with consumables to support operations for 96 hours without re-supply. This team can provide additional monitoring and assessment capability as well as initial sample collection and processing.

The [Weapons of Mass Destruction Response Resources](#) of the University of Texas Health Science Center at San Antonio, Center for Public Health Preparedness and Biomedical Research, includes a list of federal resources available to respond to radiological or nuclear events.

Emergency responders should call the DOE Emergency Operation Center (EOC) number to ask for FRMAC assistance. The DOE Emergency Response Officer on duty at the EOC at the time of the RDD event will be responsible for requesting the deployment of the FRMAC. DOE emergency number is: 202-586-8100.

- [Phase III](#) response consists of additional technical personnel from the National Laboratories and RAP regions (see below for more information on the RAP). Phase III personnel deployment begins 24 hours after notification. Mobile laboratories for the processing of data will also be deployed. This phase is prepared to support 24-hour-per-day operations for several weeks as determined by the severity of the emergency. The response during Phase III focuses on extensive sampling; sample processing and analysis; and further collection, assessment, compilation, and archiving of data in order to characterize the radiological conditions as specified by the NRP's *Nuclear/Radiological Incident Annex*.

Interagency Modeling and Atmospheric Assessment Center

The NRP's *Nuclear/Radiological Incident Annex* establishes the [Interagency Modeling and Atmospheric Assessment Center](#) (IMAAC) as the single source of atmospheric hazards predictions for Incidents of National Significance. IMAAC is charged with coordinating the efforts of all the federal agencies that traditionally work on atmospheric hazard predictions. IMAAC products are provided to federal, state, and local emergency responders, and other government officials as needed. The Center does not replace any agency-specific atmospheric transport and diffusion modeling activities.

Local or state emergency responders should call IMAAC only during major emergencies. The National Atmospheric Release Advisory Center ([NARAC](#)) at Lawrence Livermore National Laboratory (LLNL) currently is the interim provider of IMAAC services. The IMAAC reach-back support number is: 925-424-6465.

National Response Team

The [National Response Team](#) (NRT) provides technical assistance, resources, and coordination during emergencies that involve hazardous substances, oil, and Incidents of National Significance at the local, regional, and national levels. The NRT includes representatives of 16 federal agencies with environmental and public health responsibilities. The EPA chairs the NRT on a day-to-day basis. However, during emergencies, the NRT chair transitions to the agency responsible for federal on-scene coordination.

The NRT's National Response Center numbers are:

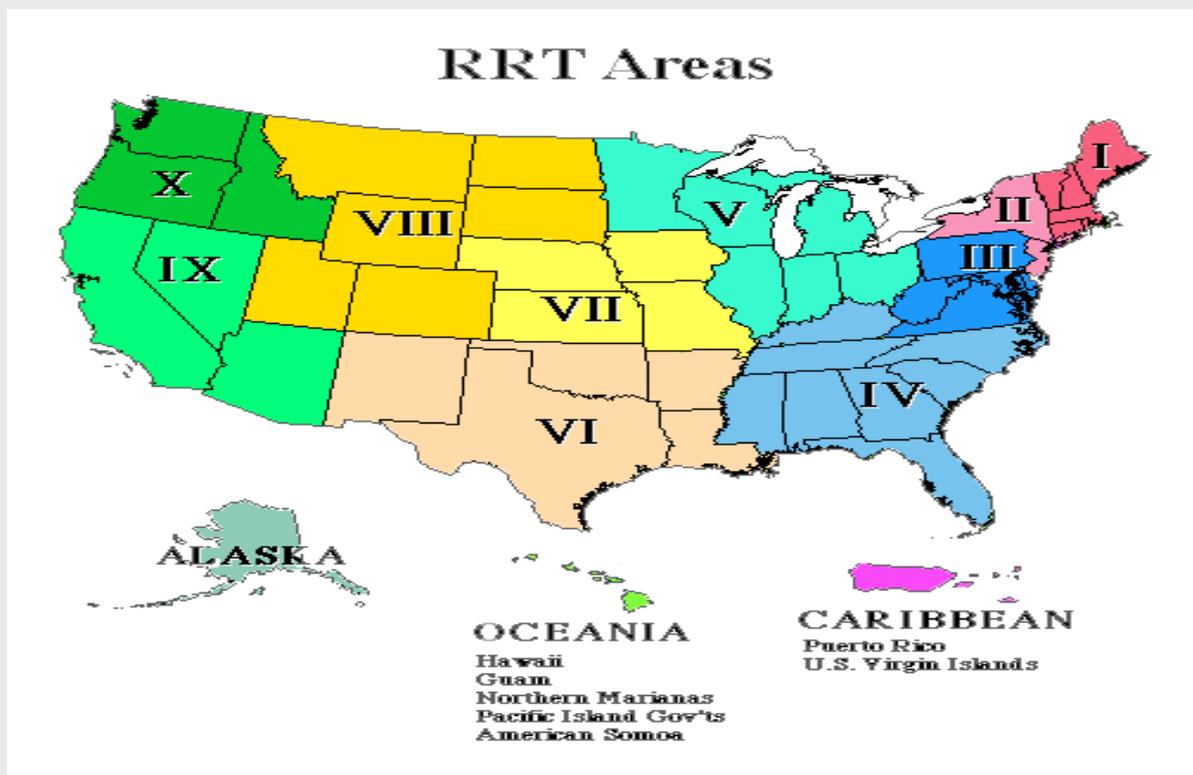
- 800-424-8802
- 202-267-2675

Once a report is made, the NRC notifies a pre-designated on-scene coordinator (OSC). The OSC may request the deployment of a Regional Response Team to access specialized expertise.

Regional Response Team

There are 13 [Regional Response Teams](#) (RRTs) in the US, each representing a specific geographic region. RRTs can provide local jurisdictions with technical advice, equipment, and manpower following incidents involving radioactive material, oil, or other hazardous substances.

Each RRT includes representatives from federal and state agencies. The EPA and the Coast Guard co-chair the RRTs. The RRTs are planning, policy, and coordinating bodies and do not respond directly to the scene. RRTs are charged with developing Regional Contingency Plans.



Source: [EPA RRT](#)

Selected Federal Departments and Agencies

Department of Energy

The DOE can provide a number of radiological emergency response assets to assist jurisdictions during RDD incident response, including:

- **Aerial Measuring System:** The [Aerial Measuring System](#) (AMS) is an aerial detection system designed to detect low levels of gamma and airborne radiation, and measure radioactive material on the ground. The system provides rapid response to a radiological emergency by deploying helicopters, a fixed-wing aircraft, and a KIWI four-wheel drive vehicle. The aircraft can detect a plume's radioactivity path and any ground contamination. The helicopters can perform detailed surveys of ground contamination. The KIWI four-wheel drive vehicle-based radiation detection system maps ground contamination sites.

Emergency responders should call the DOE EOC number to request the deployment of DOE radiological emergency response assets. The DOE Emergency Response Officer on duty at the time of the event will be in charge of requesting the deployment of FRMAC, AMS, NARAC, and most other DOE assets. The DOE emergency number is: 202-586-8100.

The AMS aircraft are based at Nellis Air Force Base in Las Vegas, Nevada with additional operational capability at Andrews Air Force Base near Washington, DC. The NNSA Nevada field office coordinates AMS's deployment.

- **National Atmospheric Release Advisory Center:** The NARAC maps accidental or intentional atmospheric releases of radiological, nuclear, chemical, or biological material. The NARAC is located at LLNL.

During an emergency, NARAC can provide real-time assessment and atmospheric plume predictions to help emergency responders identify and implement on-site protective actions. NARAC's primary products are plume contour plots, ground exposure dose, and ground contamination overlaid on a map. Time and location of the event are the minimum information needed to plot the general downwind area of concern.

- **National Nuclear Security Administration:** The [NNSA](#) can respond to nuclear and radiological emergencies in the US and abroad. NNSA "is the prime federal agency responsible for dispatching appropriate response elements, at the request of a local/state emergency response organization." It can provide several relevant resources to support local emergency response following a radiological event, including:
 - A site emergency operations center to direct NNSA/DOE site response;
 - Identification of available federal assistance for state and local responders;
 - Incident-specific technical information when available;
 - Liaison and coordination with other federal agencies; and
 - Monitoring, sampling, health physics, and waste management.

In October 2003, NNSA produced the *Municipal Radiological/Nuclear Emergency Preparedness Plan*. This plan offers a template for municipalities and/or local governments that have not established radiological emergency plans. A *Supplementary Guidance Document* provides additional plan implementation details.

NNSA has established the Radiological Dispersal Device Program in response to heightened concern over the threat of a radiological attack. The RDD Program is operated by the DOE in partnership with the International Atomic Energy Agency and several nations. The goal of the Program is to secure radioactive material that could be used in a dirty bomb. The Pacific Northwest National Laboratory manages the Program.

- **Nuclear Emergency Support Team:** The [Nuclear Emergency Support Team](#) (NEST) provides specialized technical expertise to federal response agencies during a nuclear or radiological terrorist event. A NEST Search Response Team is usually ready to deploy within 4 hours after notification.

The NEST can provide technical assistance to the FBI in conducting, directing, and coordinating search and recovery operations for nuclear materials, weapons, or devices. NEST teams can also identify and deactivate RDDs and improvised nuclear devices.

- **Oak Ridge Institute for Science and Education's Radiation Emergency Assistance Center/Training Site:** The Oak Ridge Institute for Science and Education's (ORISE) Radiation Emergency Assistance Center/Training Site (REAC/TS) provides medical consultation and treatment of radiation exposure and contamination injuries. The REAC/TS provides a number of training courses that address the medical aspects of radiation accident management. REAC/TS teams consist of physicians, nurses, health physicists, radiobiologists, and

The REAC/TS emergency number is: 865-576-1005 (Ask for REAC/TS).

emergency coordinators. The teams provide around-the-clock assistance, training, and consultation in response to radiation accidents or incidents at the local, national, or international level.

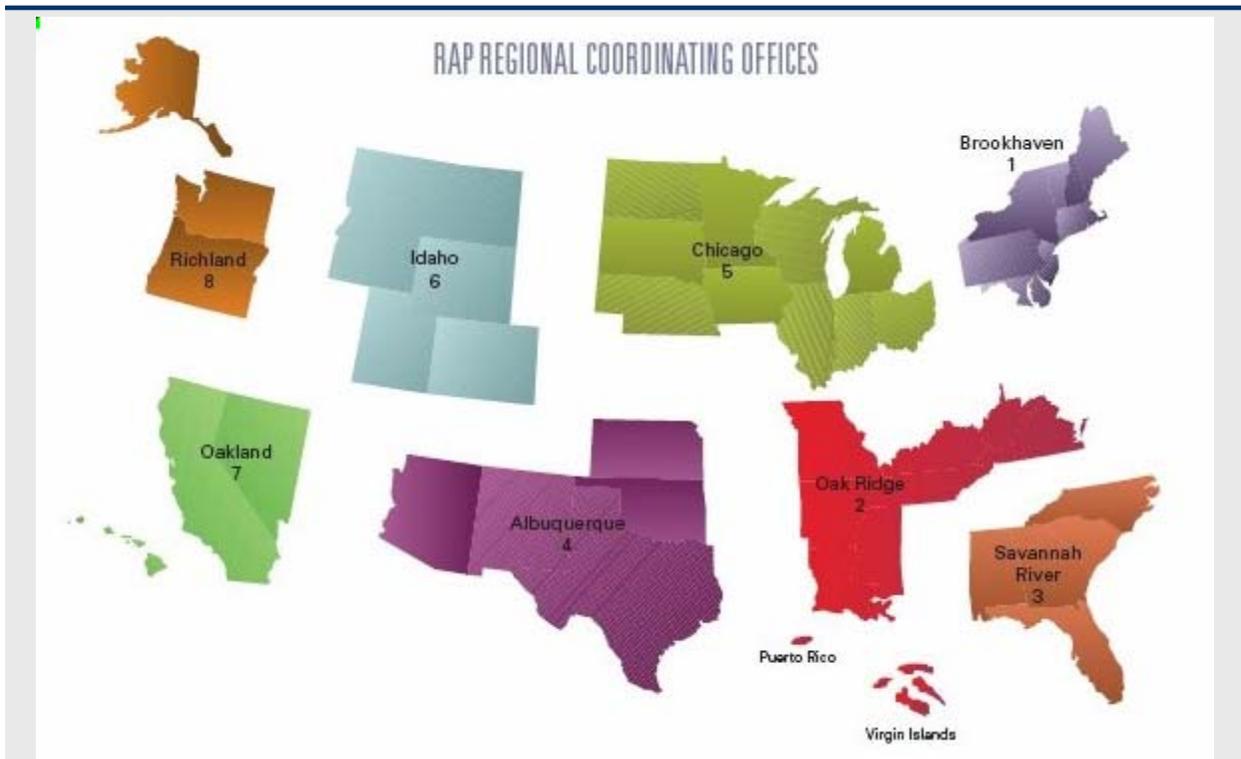
- **Radiological Assistance Program:** RAP provides radiological assistance to federal agencies, states, tribes, local governments, and NRC licensees in case of a radiological emergency. The RAP program is organized according to eight geographical regions, each managed by a Regional Coordinating Office. Regional response coordinators organize RAP response capabilities and functions. The designated regional response coordinator is responsible for deploying a RAP team.

The number of RAP team members deployed depends on the potential hazards, risks, or emergency scenario. A RAP team could be composed of DOE experts and contractors in health physics, reactor safety, hazardous waste management, transportation, fire protection, medicine, and other areas relevant to the incident. A typical RAP team consists of a team leader, a team captain, four health physicists, survey/support personnel, and a public information officer. The number of members deployed usually depends on the specific emergency scenario. Ordinarily, a team can deploy in 4-to-6 hours.

RAP headquarters hotline: 202-586-8100

RAP regional contact numbers are:

- Region 1, Brookhaven Area Office
631-344-2200
- Region 2, Oak Ridge Operations Office
865-576-1005
- Region 3, Savannah River Operations
Office 803-725-3333
- Region 4, NNSA Service Center
505-845-4667
- Region 5, Chicago Operations Office
630-252-4800
- Region 6, Idaho Operations Office
208-526-1515
- Region 7, Livermore Site Office
925-422-8951
- Region 8, Richland Operations Office
509-373-3800.



Source: Department of Energy, National Nuclear Security Administration. "[Radiological Assistance Program.](#)"

Environmental Protection Agency

The EPA has a number of available resources to assist local emergency responders understand and prepare for a radiological event. These resources include, but are not limited, to:

- **[Radiological Emergency Response Program:](#)** The Radiological Emergency Response Program helps emergency responders prepare for and respond to incidents involving radioactive materials.
- **[Radiological Emergency Response Team:](#)** The Radiological Emergency Response Team (RERT) responds to radioactive material release emergencies. The team can respond to emergencies ranging from accidents at nuclear power plants, to transportation accidents involving shipments of radioactive materials, to deliberate acts of nuclear terrorism.

Accidents or other emergencies involving radioactive materials should be reported to the EPA National Response Center at: 800-424-8802.

RERT field teams can begin deploying within 6 hours of notification. The RERT can provide environmental measurement and guidance activities such as monitoring, sampling, laboratory activities, and radiation exposure recommendations to state and local authorities. The team is on standby alert at all times. If needed, the team can deploy its mobile emergency response vehicles to any site in the US within 2-to-4 days.

Nuclear Regulatory Commission

The [NRC](#) is an independent agency responsible for protecting public health and safety, and the environment from the effects of radiation from nuclear reactors, materials, and waste facilities. The Commission can provide expert consultation, support, and assistance to state and local public safety officials responding to an RDD event. The NRC Operations Center's hot lines accept reports of accidents involving radiological materials.

The NRC Operations Center's hot lines number is: 301-816-5100. Collect calls are accepted.

The NRC will activate its incident response program at the Headquarters Operations Center and one of the four Regional Incident Response Centers during an event at an NRC-licensed facility. Teams of specialists are assembled at the Headquarters Operations Center and Regional Incident Response Center. They evaluate the potential impact of the event, possible recovery strategies, and protective action effectiveness. The Headquarters Operations Center coordinates communications with the news media, states, other federal agencies, the Congress, and the White House.

International Cooperation

Canada-United States Joint Radiological Emergency Response Plan

The Canada-United States Joint Radiological Emergency Response Plan, signed in 1996, establishes a coordination and response framework for radiological events that affect both countries. The plan also includes provisions for radiological events within one signatory that are so destructive that they may require assistance from the other signatory. The plan establishes international notification mechanisms, introduces scientific and technical information exchange between the two countries, and incorporates joint monitoring and assessment procedures at the borders.

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Aerial Measuring System

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Conference of Radiation Control Program Directors. *State Radiation Protection Programs*.

<http://www.crcpd.org/links.asp>

Consequence Management Response Team Phases I-III

<http://www.nv.doe.gov/nationalsecurity/homelandsecurity/frmac/phases.htm>

Department of Energy

<http://www.energy.gov/engine/content.do>

Department of Homeland Security

<http://www.dhs.gov/dhspublic/>

Department of Justice

<http://www.usdoj.gov/>

Environmental Protection Agency

<http://www.epa.gov/>

Federal Emergency Management Agency

<http://www.fema.gov/>

Federal Radiological Monitoring and Assessment Center

<http://www.nv.doe.gov/nationalsecurity/homelandsecurity/frmac.htm>

Interagency Modeling and Atmospheric Assessment Center

<https://narcweb.llnl.gov/NaracWeb/jsp/imaacsession.jsp>

National Atmospheric Release Advisory Center

<http://narc.llnl.gov/>

National Guard Weapons of Mass Destruction Civil Support Teams

<http://www.globalsecurity.org/military/agency/army/wmd-cst.htm>

National League of Cities

http://www.nlc.org/about_cities/cities_101/153.cfm

National Nuclear Security Administration

<http://www.nnsa.doe.gov/>

National Response Team

<http://www.nrt.org/>

Nuclear Emergency Support Team
<http://www.nv.doe.gov/nationalsecurity/homelandsecurity/nest.htm>

Nuclear Regulatory Commission
<http://www.nrc.gov/>

Oak Ridge Institute for Science and Education's (ORISE) Radiation Emergency Assistance Center/Training Site (REAC/TS)
<http://www.ornl.gov/reacts/>

Radiological Assistance Program
<http://www.lm.doe.gov/rap/general.html>

Radiological Emergency Response Program
<http://www.epa.gov/radiation/rert/index.html>

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<http://www.epa.gov/radiation/rert/rert.htm>

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