



Environmental Protection Agency Radiological Emergency Response Plan

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ENVIRONMENTAL PROTECTION AGENCY RADIOLOGICAL EMERGENCY RESPONSE PLAN

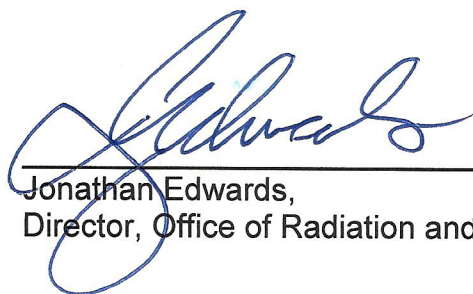
- January 12, 2017 -




U.S. Environmental Protection Agency
Office of Radiation and Indoor Air
Washington, DC

Foreword

We hereby endorse for use by the U.S. Environmental Protection Agency (EPA) this Radiological Emergency Response Plan. It represents the EPA revised authorities, organization, capabilities, and concept of operations for responding to actual or potential radiological releases in the environment. This plan will be used as a guide for maintaining readiness to respond to radiological emergencies in support of EPA responsibilities for protecting public health and the environment and in support of the National Response Framework, and the National Oil and Hazardous Substances Pollution Contingency Plan.

 1/12/17
Jonathan Edwards, Date
Director, Office of Radiation and Indoor Air

 1/12/17
Reggie Cheatham Date
Director, Office of Emergency Management

EPA Mission

EPA's mission is to protect human health and the environment.

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Disclaimer

This U.S. Environmental Protection Agency Radiological Emergency Response Plan (EPA-RERP) represents EPA's current programmatic and operational plans for responding to radiological emergencies based on existing statutory authorities and obligations. The EPA-RERP does not provide tactical information for responding to radiological incidents, and is intended solely as guidance. The EPA-RERP does not establish legal authorities, obligations, or any other binding rights and duties. The EPA-RERP does not impose any legal obligations or duties on any party other than those that exist under current law.

Preface

The 2017 U.S. Environmental Protection Agency Radiological Emergency Response Plan (EPA-RERP or Plan) is published by the Office of Radiation and Indoor Air (ORIA) within the Office of Air and Radiation (OAR) and replaces the 2000 Plan. EPA has made significant changes to its radiological emergency response procedures since 2000, including improved procedures for response coordination among offices within EPA, further clarification of EPA's authorities for radiological emergency response, and reflection of organizational changes within and outside of EPA.

External changes include the establishment of the U.S. Department of Homeland Security, the creation of a National Incident Management System, and the issuance of the Federal Interagency Operational Plans that supplement the National Response Framework, which superseded the Federal Radiological Emergency Response Plan.

Within EPA, the Office of Solid Waste and Emergency Response, later renamed the Office of Land and Emergency Management (OLEM), created the Office of Emergency Management (OEM) to integrate Headquarters hazardous substance and oil emergency preparedness, prevention, and response programs. In addition, the Office established the Chemical, Biological, Radiological and Nuclear (CBRN) Consequence Management Assistance Division (CMAD), which has radiological expertise and capabilities. In addition, the Office of Solid Waste and Emergency Response also reorganized the prior Office of Emergency and Remedial Response into the Office of Superfund Remediation and Technology Innovation (OSRTI), which integrated the Technology Innovative Office into OSRTI, and continued to maintain the Superfund Remedial Program and the Environmental Response Team (ERT). The Administrator issued a National Approach to Response (NAR) in 2003, which was made into an EPA Order in 2008, to coordinate and manage the Agency's emergency response assets during a nationally significant incident or disaster. Finally, the Agency created the National Homeland Security Research Center (NHSRC) within the Office of Research and Development (ORD) to focus on research on CBRN.

It is important to note that the focus of this document is on radiological emergencies and how the emergency will be addressed by EPA. The EPA-RERP does not provide tactical information for responding to radiological incidents, and is intended solely as guidance. The EPA-RERP does not establish legal authorities, obligations, or any other binding rights and duties. The EPA-RERP does not impose any legal obligations or duties on any party other than those that exist under current law.

Two scenarios will be discussed which lay out the expected roles and responsibilities of OAR, OLEM, and other Offices within EPA. Emergency responses may transition to a longer-term EPA response under EPA's removal or remedial programs. Emergency actions and Removals should be carried out in a manner

consistent with long-term actions whenever possible. Long-term cleanup is not addressed by this document but is generally a responsibility of EPA's OSRTI.

Representatives from Headquarters offices, the Special Teams (i.e., CBRN CMAD, ERT, the National Criminal Enforcement Response Team (NCERT) and the Radiological Emergency Response Team (RERT)), On-Scene Coordinators (OSCs), other regional radiation and removal response programs and other EPA offices have participated in the development of this plan. Overall, the EPA-RERP represents the Agency's integrated approach to the management of radiological releases. The Plan documents the roles and responsibilities of:

- EPA's Emergency Response and Removal Program and pre-designated federal OSCs.
- ORIA Headquarters, regional personnel, laboratories, RERT, and members of the Advisory Team for Food, Environment, and Health.
- OLEM's OEM Headquarters, CBRN-CMAD and ERT.
- Other EPA offices and their response assets, such as the NCERT, EPA Response Support Corps and Radiation Task Force Leaders.

I. INTRODUCTION AND BACKGROUND

1.1 Introduction

This U.S. Environmental Protection Agency Radiological Emergency Response Plan (**EPA-RERP** or **Plan**) supersedes the EPA-RERP issued in 2000. The Plan represents EPA's concept of operations consistent with the federal policies, planning considerations, and response provisions outlined in:

- The 1994 National Oil and Hazardous Substances Pollution Contingency Plan (NCP)¹.
- The 2013 National Response Framework (NRF)² and 2011 National Disaster Recovery Framework; their respective operational components, the 2014 Response and Recovery Federal Interagency Operational Plans (FIOPs)³; and the Nuclear/Radiological Incident Annex (NRIA)⁴. The NRF and FIOPs superseded the 2004 National Response Plan and the NRIA superseded the 1986 Federal Radiological Emergency Response Plan.
- Radiation responsibilities and authorities transferred to the EPA under Reorganization Plan No.3 of 1970⁵ (hereafter referred to as Public Health Service Act/Atomic Energy Act (PHSA/AEA) authorities).

Within EPA, On-Scene Coordinators (OSCs)⁶ are responsible for coordinating and directing the emergency response actions under the NCP and, when appropriate,

¹National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300.

²"National Response Framework, 2nd ed.," Department of Homeland Security, May 2013.

³"Response Federal Interagency Operational Plan," Department of Homeland Security, July 30, 2014.
"Recovery Federal Interagency Operational Plan," Department of Homeland Security, July 30, 2014.

⁴"Nuclear/Radiological Incident Annex to the Response and Recovery Federal Interagency Operations Plans", Department of Homeland Security, Draft as of 01 May 2015.

⁵Reorganization Plan No. 3 of 1970, 35 Fed. Reg. 15623 (October 6, 1970), transferred to EPA certain radiation authorities and responsibilities from other federal departments and agencies. The applicable authorities transferred include certain sections from the Public Health Service Act (PHSA) and the Atomic Energy Act (AEA). This includes the authorities of the Federal Radiation Council which were originally designated through Executive Order and later codified in the AEA.

⁶OSC authorities are given by 40 CFR 300.120. Further discussion on OSCs from other federal agencies (Department of Defense, Department of Energy, and Coast Guard) is found later in the document. Delegations are addressed in Executive Order 12580, EPA Delegation 14-2, and in Regional Delegations documents.

for coordinating EPA's on-scene response under the NRIA (see Section II for further information). In addition, a number of programs and teams in EPA Headquarters and regions are responsible for preparedness planning and supporting response involving potential or actual radiological releases at the local, national or international level, including activities traditionally undertaken by the Office of Radiation and Indoor Air (ORIA) under the PHSA/AEA authorities.

The EPA-RERP identifies the overall roles, responsibilities, and coordination for management of potential or actual radiological incidents and emergencies and coordination among the following EPA offices and Special Teams:

- EPA's Emergency Response and Removal Program and pre-designated federal OSCs.
- ORIA Headquarters, regional personnel, laboratories, Radiological Emergency Response Team (RERT), and members of the Advisory Team for Food, Environment, and Health.
- Office of Land and Emergency Management (OLEM)'s Office of Emergency Management (OEM) Headquarters, Chemical, Biological, Radiological, and Nuclear (CBRN) - Consequence Management Assessment Division (CMAD) and Environmental Response Team (ERT).
- Other EPA offices and their response assets, such as the National Criminal Enforcement Response Team (NCERT), EPA Response Support Corps and Radiation Task Force Leaders.

The NCP requires the development of Regional and Area Contingency Plans by a collaborative process which is initiated and led by a federal agency and involves stakeholders within the defined area, organized as an Area Committee. The Regions tailor their radiological response operations to reflect the priorities, specific organizational structure, and the regional/local conditions of the Area Contingency Plans. The EPA-RERP does not preclude or supplant regional planning and preparedness.

In addition, the EPA-RERP does not provide EPA responders with tactical-level information for responding to radiological incidents. Information on using the Incident Command System (ICS) under the National Incident Management System (NIMS) for radiological incidents can be found in the EPA Incident Management Handbook (IMH) Chapter on "Radiological/Nuclear Incidents." The OSC Radiological Response Guides and the National Comprehensive Radiological Response Guide provide EPA OSCs with up-to-date technical information on radiological emergency responses for a full range of radiological incidents, with a particular focus on RDD incidents. Finally, the Foreign Nuclear Incident Playbook provides EPA with strategic guidance for coordination of the federal domestic technical response to a foreign nuclear incident that poses or may

pose a radiological risk to the United States without creating a specific site on U.S. Territory.

1.2 Scenarios Addressed

This Plan addresses two scenarios. The first scenario is EPA responding to radiological incidents impacting one or more distinct locations (“sites”) within the United States, its territories, possessions, or territorial waters (referred to hereafter as simply the United States). An example of the first scenario is the 2011 Las Conchas Fires that threatened Los Alamos National Laboratory. These incidents include domestic radiological incidents involving the release or potential release of radionuclides, including such releases from: nuclear facilities; radioactive materials being transported; radioactive materials in space vehicles impacting within the United States; foreign, unknown, or unlicensed material; nuclear weapons; and deliberate attacks involving nuclear/radiological facilities, or materials, including Radiological Dispersal Devices and Improvised Nuclear Devices that have actual, potential, or perceived consequences to the United States. It is expected that most EPA responses will fall into this category of response.

The second scenario is EPA responding to incidents that do not take place within the United States and do not create a specific site within the United States, but which require a general EPA response. Examples include international radiological emergencies such as the Japan Foreign Nuclear Incident of 2011 or Chernobyl Accident of 1986, subject to the International Atomic Energy Agency (IAEA) “Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency” and “Convention of Early Notification of a Nuclear Accident.”

1.3 EPA Radiological Emergency Response Mission

The EPA mission in responding to the majority of radiological emergencies falls under the Agency’s traditional response to hazardous substances, pollutants, or contaminants under the Superfund program, which has responsibilities for both enforcement and response. EPA may respond to accidental or intentional releases, including terrorist attacks.

Under the NCP¹, the EPA OSC has discretionary response authority. In general, EPA’s response under the NCP may range from leading the environmental response to providing technical advice and response support to state and local governments, oversight to the site or facility owner/operator, and other federal agencies. EPA also has the authority to order private party cleanup of hazardous substances, perform cleanup of hazardous substances at abandoned sites, and to oversee and monitor emergency response and cleanup activities by others.

In some instances, under a number of other EPA authorities, such as the PHSA/AEA authorities, EPA maintains a mission of monitoring the environment to ensure that the public is protected from unnecessary or accidental exposures to ionizing radiation. A full set of Authorities is included in Section VI.

EPA achieves its mission by:

- Coordinating or supporting the multi-agency federal response pursuant to the NRF and FIOPs by:
 - When EPA is the NRIA Primary Agency, coordinating the federal environmental response and cleanup of radiological emergencies. If the Department of Homeland Security (DHS) is coordinating the overall federal response under the NRIA, EPA will generally be providing that response support for DHS.
 - When EPA is not the NRIA Primary Agency, providing assessment of the threat of or actual release, and technical support and operational response support to the NRIA primary agency for potential or actual terrorist incidents or for other incidents as appropriate.
- Evaluating the need for, and conducting emergency, time-critical, or non-time-critical removal actions to protect health and the environment pursuant to the NCP. (Note that non-time critical removal actions are not covered by this document and are generally managed by OSRTI's remedial program.)
- Utilizing existing EPA emergency contractors for response needs or otherwise procuring needed response support.
- Notifying and/or activating Regional Response Team (RRT) and National Response Team (NRT) members as appropriate.
- Activating "Special Teams" (i.e., RERT, CBRN-CMAD, ERT, NCERT), and other special teams of the NCP.
- Developing Protective Action Guides (PAGs).
- Providing subject matter expertise to the Advisory Team for Environment, Food, and Health, which makes protective action recommendations not decisions; provides coordinated technical and scientific advice through the state and federal agency with primary authority; and bases its recommendations on science and best practices.
- Performing timely and accurate environmental measurements, assessing radiological conditions in the environment, and determining the environmental consequences of radiation and releases of radioactive material (in addition to addressing non-radiological releases).
- Providing nationwide and local environmental monitoring data from RadNet fixed and deployable stations for assessing the impact of a release.

- Requesting DOE activation of the Federal Radiological Monitoring and Assessment Center (FRMAC) as needed and providing staff to participate in its activities, including a Senior EPA Representative, and assuming control of FRMAC activities at a mutually agreeable time for the intermediate and long-term phases of response.
- Coordinating federal non-radiological monitoring and assessments through all phases of the response.
- Supporting the activities of the Interagency Modeling and Atmospheric Assessment Center (IMAAC) in generating the single federal prediction of atmospheric dispersions and their consequences.
- Supporting or leading environmental decontamination and cleanup activities, including development of recommended cleanup criteria.
- Assisting in the preparation of long-term environmental monitoring plans.
- Coordinating with Department of the Interior (DOI) for advice and assistance on economic, social, and political matters in the U.S. insular areas for incidents occurring on, or with possible consequences to, Indian tribal lands.
- Establishing and maintaining a high level of readiness through planning, training, and drills/exercises.

1.4 Background

Radiological incidents or emergencies may occur anywhere, including at hazardous waste sites, fixed nuclear facilities (domestic and foreign), scrap metal reprocessing yards, or during transport. They may involve simple scenarios such as packages leaking radioactive liquid or complex scenarios such as releases associated with spacecraft launch/reentry, nuclear weapons and devices, intentional acts of sabotage, and nuclear or radiological terrorism. These situations may result in radionuclide releases with actual, potential, or perceived harm or consequences to human health and the environment within the United States.

State and local government officials have the primary responsibility for responding and protecting the public during a radiological emergency. Federal assistance may be needed for emergencies that have the potential for significant offsite consequences, such as those involving multiple jurisdictions, those that last longer than several hours, and those that exceed the capabilities of the state or local community. Federal response to radiological incidents and emergencies is carried out under the auspices of the statutes, agreements, memoranda of understanding, Executive Orders, and Presidential Directives listed in Section IV.

1.5 Purpose

The purpose of this Plan is to describe EPA's concept of operations to implement its various roles and responsibilities when responding to a threat of or actual unauthorized radiological release. It identifies applicable response authorities and plans, the response frameworks for different scenarios, response coordination, and the organizational responsibilities and resources required for effectively preparing for and responding to radiological releases in the United States. The Plan is intended to be used by, and provide coordination among, EPA radiological emergency responders and planners.

1.6 Plan Considerations

1.6.1 EPA Support of State, Local, Territorial and Tribal Governments⁷

State and local governments are the lead for emergency response and protecting the health and safety of the public and the environment in the event of a radiological incident. EPA supports state and local governments in their emergency response planning. In the event that state and local governments need specialized federal support, EPA can respond to and provide assistance in support of state and local responders. EPA may assist by providing technical assistance, including radiological monitoring and protective action guidance. EPA may also provide direct field assistance and support, including site characterization, cleanup and disposal of radiological materials and contamination. Such EPA assistance is provided pursuant to the authorities and procedures discussed in the EPA-RERP. Under EPA's CERCLA authorities, OSCs have the authority to direct on-site response actions in certain circumstances.

1.6.2 Federal Response Plans and Related Authorities

The EPA-RERP provides EPA responders with guidance for coordinated radiological response pursuant to the NRF, FIOPs and the NCP. The EPA-RERP does not supersede current interagency agreements, memoranda of understanding or agreement, Executive Orders, Presidential Directives, or statutory or regulatory authorities.

NCP, CERCLA, CWA and Regional Contingency Plans

Historically, most EPA radiological responses have been undertaken pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or Superfund) and SARA authority and it is anticipated that most future responses will also be CERCLA responses. EPA responses may also be undertaken

⁷ This document will make use of the term "state and local" as simplified language to indicate "state, local, territorial and tribal" throughout.

pursuant to the Clean Water Act (CWA) under certain circumstances⁸. The NCP is the regulatory framework for implementing CERCLA (Superfund) and CWA responses.

Under CERCLA and the NCP, EPA is the lead response agency for many releases of hazardous substances, including radionuclides, in the inland zone of the United States^{9,10,11}. EPA has broad authority for cleanup pursuant to the CERCLA and the statute gives the federal government broad enforcement authorities, including the authority to order commercial utility operators to carry out cleanup activities and to recover its response costs. EPA appoints an OSC to direct removal actions.

There may be a potential CERCLA exclusion where it has been determined based on sufficient information that all the relevant conditions in the exclusion (CERCLA Section 101(22)(C)) have been met.¹² Potential application of any exclusion under this

⁸ CWA authorizes response only to oil and CWA hazardous substances, which do not include radionuclides. Note that response to hazardous substances includes determining whether or not there are hazardous substances that warrant response. For a commingled release, CERCLA could be used for the radionuclides, and CWA for oil and other CWA hazardous substances.

⁹ Under CERCLA, Executive Order 12580, and the NCP, the Department of Defense (DoD) or Department of Energy (DOE) is responsible for hazardous substance responses to releases on or from DoD or DOE facilities or vessels under the jurisdiction, custody, or control of DoD or DOE, respectively, including transportation-related incidents. For responses under these circumstances, DoD or DOE provides a Federal OSC responsible for taking all CERCLA response actions, which includes on-site and off-site response actions (40 CFR 300.120(c) and 40 CFR 300.175(b)(4)).

¹⁰ Under the NRF NRIA, the Secretary of Homeland Security may coordinate the federal response to a nuclear/radiological incident in accordance with the domestic incident management responsibilities described under Homeland Security Presidential Directive-5. When not exercising that authority, other federal agencies are designated to lead the response under their own authorities.

¹¹ Under the NRF NRIA, the United States Coast Guard is the Primary Agency for nuclear/radiological incidents in "certain areas" of the coastal zone, which means the following areas ("coastal zone" as defined by the NCP):

- Vessels, as defined in 33 CFR 160.
- Areas seaward of the shoreline to the outer edge of the Economic Exclusion Zone.
- Within the boundaries of the following waterfront facilities subject to the jurisdiction of DHS/USCG: those regulated by 33 CFR 126 (Dangerous cargo handling), 127 (LPG/LNG), 128 (Passenger terminals), 140 (Outer continental shelf activities), 154-156 (Waterfront portions of oil and hazmat bulk transfer facilities – delineated as per the NCP), 105 (Maritime security – facilities).

¹² CERCLA section 101(22) states: "The term "release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles containing any hazardous substance or pollutant or contaminant), but excludes (A) any release which results in exposure to persons solely within a workplace, with respect to a claim which such persons may assert against the employer of such persons, (B) emissions from the engine exhaust of a motor vehicle, rolling stock, aircraft, vessel, or pipeline pumping station engine, (C) release of source, byproduct, or special nuclear material from a nuclear incident, as those terms are defined in the Atomic Energy Act of 1954, if such release is subject to requirements with respect to financial protection established by the Nuclear Regulatory Commission under section 170 of such Act, or, for the purposes of section 104 of this title or

CERCLA provision would require more specific information to be gathered. As a result, CERCLA would authorize EPA to proceed in the early data-gathering stages of response, and EPA would need to consider the potential CERCLA exclusion as to the later stages of response. In the early stages, CERCLA would authorize EPA to sample and gather data (42 USC 9604(e)(1)). The data would help show whether the release included commingled non-radioactive hazardous substances (e.g., polychlorinated biphenyls from a fire), or radioactive material other than the certain, specified radioactive material listed in the exclusion in CERCLA Section 101(22). EPA has full CERCLA authority over non-radioactive hazardous substances and radioactive material other than the certain, specified radioactive material listed in the exclusion in CERCLA Section 101(22). If, on the other hand, the release consisted of only the certain, specified radioactive substances listed in the exclusion (i.e., no comingling with other hazardous substances, pollutants or contaminants), then the CERCLA exclusion could possibly limit use of this response authority if the other conditions in that exclusion also were met.

NRF, NDRF, FIOPs, NRIA, and Stafford Act

Under the Homeland Security Act of 2002 and Homeland Security Presidential Directive-5, the Secretary of Homeland Security is the principal federal official for domestic incident management. This includes coordinating federal operations and resources deployments within the United States to prepare for, respond to, and recover from terrorist attacks, major disasters, or other emergencies. The NRF sets forth the national framework for responding to domestic incidents and describes the role of the DHS and the federal government. The NDRF is a guide that enables effective recovery support to disaster-impacted States, Tribes, Territorial and local jurisdictions. In addition, the FIOPs describe the concept of operations for integrating and synchronizing existing national-level Federal capabilities to support local, state, tribal, territorial, insular area, and Federal plans, and are supported by Federal department-level operational plans, where appropriate.

The NRF, NDRF, and FIOPs recognize that incidents that do not require DHS coordination may be led by other federal agencies under their own authorities and interagency plans (which are identified as supplements to the FIOPs). The NCP is provided as an example of such a plan.

EPA may undertake response pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended (Stafford Act), the NRF NRIA, and/or interagency agreements for providing support to other federal agencies. Under the Stafford Act, during an Emergency or Major Disaster, states can make a request for

any other response action, any release of source byproduct, or special nuclear material from any processing site designated under section 102(a)(1) or 302(a) of the Uranium Mill Tailings Radiation Control Act of 1978, and (D) the normal application of fertilizer.”

federal assistance to the DHS Federal Emergency Management Agency (FEMA). Following Presidential approval through a Presidential emergency or disaster declaration, FEMA issues Mission Assignments to federal agencies, including EPA, for the accomplishment of specific tasks related to the response. FEMA could issue a Mission Assignment directly to EPA under the NRF's Emergency Support Function (ESF) #10 to undertake the actions delineated in the Mission Assignment. FEMA may task EPA under the Stafford Act with additional responsibilities beyond those typically undertaken under the NCP. DHS/FEMA could also issue an ESF #10 (Oil and Hazardous Materials Response) Mission Assignment to EPA when EPA assistance is requested by another federal agency under the Federal-to-Federal support provisions of the NRF and NDRF.

The NRIA provides additional details on how federal agencies, including EPA, will coordinate their actions when responding to nuclear/radiological incidents involving the release or potential release of radioactive material that poses an actual or perceived hazard to public health, safety, national security, and/or the environment. This includes, but is not limited to, terrorist use of radiological dispersal devices (RDDs), nuclear weapons, or improvised nuclear devices (INDs) as well as nuclear reactor (commercial or defense) accidents, research or academic reactor accidents, lost radioactive material sources, transportation accidents involving radioactive material, domestic nuclear weapons accidents, and accidents involving radioactive material that impact the United States.

Under the NRIA, EPA is the primary agency for the federal environmental response to incidents:

- That occur at facilities not licensed, owned, or operated by a federal agency or an Nuclear Regulatory Commission (NRCCom)¹³ agreement state, or currently or formerly licensed facilities for which the owner/operator is not financially viable or is otherwise unable to respond;
- Involving the release of nuclear/radioactive materials that occur in the inland zone and in areas of the coastal zone not addressed by the U.S. Coast Guard;
- Including transportation incidents involving the release of nuclear/radioactive materials that are not licensed or owned by a federal agency or NRCCom agreement state;
- Involving space vehicles not managed by DoD or NASA; and

¹³For the purposes of this document only, the acronym "NRCCom" is used to refer to the U.S. Nuclear Regulatory Commission, whereas "NRC" is used to refer to the National Response Center.

- Involving foreign, unknown, or unlicensed radiological sources that have actual, potential, or perceived radiological consequences in the United States and that are not addressed by the U.S. Customs and Border Patrol.

Finally, EPA may be called upon to provide support to incidents for which one of the other federal agencies has been designated as the primary agency. Table 1 from the NRIA lists the primary agencies for different incident types.

There are some important differences to note between the NRIA and the NCP. For example: the United States Coast Guard (USCG) has jurisdiction over the coastal zone as defined by the NCP and for which an Area Contingency Plan is required by the CWA, while its jurisdiction for radiological incidents is limited to “certain areas”¹¹ of the coastal zone in the NRIA. Thus, EPA is the federal lead for certain radiological responses in the coastal zone. Note also that the primary agency under the NRIA for incidents involving the inadvertent import of radioactive materials as well as any other incidents where radioactive material is detected at borders is U.S. Customs and Border Protection. After the material has been distributed, EPA and USCG will share responsibility for federal coordination in their role leading the National Response Team as chair and vice-chair, respectively; however, it is anticipated that this type of incident will be addressed largely by state and local governments. Finally, note that DHS serves as the primary agency for all deliberate attacks involving nuclear/radiological facilities or materials, including RDDs or INDs. EPA may still be asked to provide support to the environmental response and cleanup in these scenarios, especially if ESF #10 is activated.

Table 1 of the NRIA details various federal agency roles and responsibilities for different aspects of radiological emergency response. EPA planners and responders should be aware that HHS, through ESF #8 (Public Health and Medical Services) and in consultation with the NRIA primary agency for the particular incident, coordinates federal support for population monitoring and population decontamination. This is not an ESF #10 function; however, EPA is listed as a support agency under ESF #8, and may be called upon to assist HHS in carrying out its duties under ESF #8. EPA also has some radiological responsibilities to support the U.S. Army Corps of Engineers under ESF #3 (Public Works and Engineering), and the U.S. Department of Agriculture under ESF #11 (Agriculture and Natural Resources).

PHSA/AEA/CAA Authorities

Reorganization Plan No. 3 of 1970 transferred to EPA certain radiation authorities and responsibilities from other federal departments and agencies. The applicable authorities transferred include certain sections from the Public Health Service Act (PHSA) and the Atomic Energy Act (AEA). This includes the authorities of the Federal Radiation Council which were originally designated through Executive Order and later codified in the AEA. Under these and other authorities, EPA has a mission for

Table 1: Federal Agencies with Primary Authority for Nuclear/Radiological Incidents under the Nuclear Radiological Incident Annex

Incident Type, Facilities, or Materials Involved	Primary Authority for Federal Response
Nuclear Facilities that are: a) Owned or operated by the DOD b) Owned or operated by the DOE c) Licensed by the NRC or an NRC Agreement State d) Not licensed, owned, or operated by a federal agency, an NRC Agreement State or currently or formerly licensed facilities for which the owner/operator is not financially viable or is otherwise unable to respond	a) DOD b) DOE c) NRC d) EPA
Nuclear Weapons and Components that are: e) In the custody of the DOD f) In the custody of the DOE	e) DOD f) DOE
Radioactive Materials Being Transported: g) By or for the DOD h) By or for the DOE i) Containing NRC or NRC Agreement State licensed materials j) Within certain areas of the coastal zone for materials that are not licensed or owned by a federal agency or an NRC Agreement State k) All others	g) DOD h) DOE i) NRC j) USCG k) EPA
Radioactive Materials in Space Vehicles Impacting the United States that are: l) Managed by the National Aeronautics and Space Administration (NASA) m) Managed by the DOD n) Not managed by the DOD or the NASA and impacting certain areas of the coastal zone o) All others	l) NASA m) DOD n) USCG o) EPA
Disused and Unwanted Sealed Sources with no Disposition Pathway p) Off-Site Source Recovery	p) DOE
Unknown or Unlicensed Materials, and Domestic Response to Foreign Materials and International Incidents: q) Certain areas of the coastal zone r) Outside certain areas of the coastal zone s) Imported contaminated consumer products that are distributed before detection t) Inadvertently imported radioactive materials u) All others	q) USCG r) EPA s) EPA t) CBP u) EPA
v) Inadvertent Incidents Involving Lost/Found/Orphaned Radioactive Material	v) DOE
U.S. Assistance to Foreign Governments for Incidents with International Impacts w) U.S. Government assistance to foreign government response and recovery efforts	w) DOS/USAID
All deliberate attacks involving nuclear/radiological facilities or materials (e.g., RDDs, INDs)	DHS
Law Enforcement and Counterterrorism Operations Related to the Incidents in this Table: It is the policy of the United States that until otherwise determined by the Attorney General, generally acting through the FBI Director, any WMD incident will be treated as an actual terrorist incident. Note: DHS/FEMA may be called upon to lead or provide supplemental operational coordination support for the primary authority during complex incidents.	

publishing PAGs, providing technical assistance to state and local governments, conducting long-term monitoring of ambient radiation levels, and taking other actions to prevent adverse effects to public health due to unnecessary exposure to ionizing radiation.

Clean Air Act (CAA) sections 103 and 303 also provide EPA with authority for certain emergency response/recovery activities. Section 103's broad authorities support EPA's air pollution-related investigative, monitoring, modeling, sampling, assessment, counseling and similar emergency response/recovery activities during a radiological emergency. Section 303 provides the Administrator with "emergency powers" for responding to air pollution through a civil lawsuit or an administrative order if the pollution source "is presenting an imminent and substantial endangerment to public health or welfare, or the environment." Under section 303, the Administrator could enable an EPA response by issuing "such orders as may be necessary to protect public health or welfare or the environment."

1.6.3 Notification under the NCP and Other Notifications

Notification under the NCP

Notifications of incidents, spills, and emergencies are made to EPA through the National Response Center (NRC), Headquarters (HQ) Emergency Operations Center (EOC) and the Regional Emergency Operations Centers (REOCs). Notifications to the NRC are relayed directly to the federal OSC through the appropriate REOC and then to pre-designated EPA personnel. If notifications are made directly to other EPA radiological emergency responders, the recipient should immediately relay them to the NRC, HQ EOC and the appropriate REOC. When notified of an incident, the OSC will assess the situation ("site") to determine if it requires EPA response action pursuant to the NCP.

In addition, any notifications received from, or provided to, the NRC will be conveyed to the DHS National Operations Center (NOC) to meet the notifications provisions of the NRF and to promote situational awareness. DHS created the NOC to coordinate incident information sharing, operational planning, and deployment of federal resources at the federal headquarters level. The NOC is the primary national hub for domestic incident management operational coordination and situational awareness. The NOC is a standing 24 hours/7 days per week interagency organization fusing law enforcement, national intelligence, emergency response, and private sector reporting.

Within EPA, key support for radiological emergencies may be provided by the Special Teams and regional radiation programs. If the incident is of national or global significance, additional EPA HQ organizations will be involved, providing support to the region, coordinating with senior leadership, coordinating national assets, and providing

programmatic and response guidance. Typically, these organizations would be notified via the EPA HQ EOC, which would be notified by the NRC.

Other Notifications

If it does not involve a reportable quantity under CERCLA, requests for EPA's assistance may come from a variety of sources, including state and local governments, the owners and operators of radiological facilities, other federal agencies (such as from DHS via the NOC), or even the general public. When a call is received by the EPA Headquarters EOC, or by an OSC regardless of the source, the NCP review and assessment process will be followed as appropriate.

1.6.4 Activation

Most radiological responses conducted by EPA are undertaken under NCP authorities, and do not require coordination with DHS. In this case, once notification of a release is received at the regional level, an EPA OSC generally consults with a State OSC or other state official to determine the need for federal assistance. However, the EPA OSC also maintains the authority to initiate a federal response. When an EPA OSC determines that a federal response is needed, whether in a lead or support role, the OSC will request EPA resources from within EPA and other NCP support agencies as needed.

For a Stafford Act or federal-to-federal support incident where DHS oversees the federal response, EPA will provide staffing to the DHS-led interagency coordination centers as needed to ensure effective coordination between EPA activities and those of the interagency community. At the Headquarters level, EPA will staff the National Response Coordination Center (NRCC), a functional component of the NOC, during incidents. The NRCC is a multiagency center that provides overall federal response coordination for nationally significant incidents and emergency management program implementation. EPA also will staff the Nuclear/Radiological Incident Task Force (NRITF), an interagency group that convenes within the NRCC to provide standardized radiological/nuclear incident subject matter expertise in support of national level incident planning and whole community core capability delivery. At the regional level, when EPA resources are activated, the regional EPA office will staff the Regional Response Coordination Center (RRCC), which DHS/FEMA activates to coordinate regional response efforts, establish federal priorities, and implement local federal program support until a Joint Field Office (JFO) is established and/or the Secretary of Homeland Security, Federal Coordinating Officer (FCO) for Stafford Act incidents, or Federal Resource Coordinator for federal-to-federal support incidents can assume their NRF coordination responsibilities. The RRCC establishes communications with the affected state emergency management agency and the NRCC, coordinates deployment of the FEMA-led Incident Management Assistance Teams to field locations, assesses damage information, develops situation reports, and issues initial mission assignments. In closer

proximity to the incident, the regional EPA office will also support and staff the JFO, which provides a central location for coordination of federal, state, local, tribal, nongovernmental, and private-sector organizations with primary responsibility for threat response and incident support. The JFO enables the effective and efficient coordination of federal incident-related prevention, preparedness, response, and recovery actions.

The REOC will help coordinate provision of support to the OSC. The EPA region may activate the RRT if needed to provide interagency ESF #10 support. At HQ, the NRT may be activated as well, to provide interagency support at the HQ level.

In some cases, EPA may begin a response under its NCP authorities, and DHS may step in to coordinate the response at a later time. In that case, EPA transitions its response from NCP procedures to ESF #10 procedures (e.g., providing additional representatives to venues such as the RRCC/JFO and coordinating EPA activities with DHS/FEMA); however, EPA documentation and reporting procedures remain consistent with the NCP as the NCP stays in effect.

The NRF also includes a Catastrophic Incident Annex (NRF-CIA), which is supported by a “For Official Use Only” Catastrophic Incident Supplement (NRF-CIS). A catastrophic incident, as defined by the NRF, is any natural or manmade incident, including terrorism, which results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions.

For responses conducted solely under the PHS/AEA authorities, the lead EPA official (typically an RERT Commander) will make the decision whether an incident requires a response. These incidents have traditionally been smaller incidents where the EPA response consists of advice and occasionally monitoring assistance provided to State and local responders without reimbursement. The lead EPA official makes requests for necessary resources from within EPA; however, due to the lack of funding associated with PHS/AEA responses, each laboratory, region, and program office is responsible for determining if and how to meet resource requests for a PHS/AEA authority response.

1.6.5 EPA Resources

Regional Resources

The OSC coordinates federal efforts with and provides support and information to local, state, and regional response communities. The OSC assesses the release to determine whether federal response action or assistance will be necessary to help control and contain it. If the state requests EPA support or the OSC decides that federal assistance is required, the OSC obtains needed resources such as personnel and equipment. The Regions also have OSCs with expertise in radiation that should be used

as a resource. As needed, the OSC can procure needed response assets through EPA emergency contractor support contracts in place (Superfund Technical Assistance and Response Team (START) and Emergency and Rapid Response Service (ERRS)) and has other procurement options as a warranted contract officer (limited warrant) or can contact the EPA 1102 Contract Officer for procurement or other response support. START contractors provide broad technical support for response activities including support for radiological response. ERRS contractors can perform a broad array of response service, such as mitigation, cleanup, construction, and other services in support of response activities including radiological response services.

Each region has a radiation program and regional radiation personnel who are available to assist in responding to an incident. Located in the regional office, the **Regional Radiation Advisor** provides technical assistance to regional management, EPA OSCs, and other regional personnel, as needed; coordinates with both affected and non-affected federal, state, and local radiation programs; coordinates with regional radiation resources, if applicable; and works directly with the REOC during emergencies. The **Regional RERT Liaison** provides the impacted Regional Radiation Program with a direct link to the RERT from the field and assists the RERT in understanding regional and state and local relationships and resources. The Regional RERT Liaison serves as a representative for the impacted Region and Regional Radiation Program with the rest of the RERT. If the impacted region cannot staff these positions, they may be staffed by another Region which has agreed to serve as a backup Region to the Region where the incident occurred. The Regional Radiation Advisor is expected to work from the REOC or Regional Office, whereas the regional RERT Liaison is expected to work with the RERT in the field; therefore, it is expected that different individuals will be called to serve in these roles.

The Regional Administrator provides strategic vision for the scope of EPA involvement in the response by coordinating overall agency objectives and priorities, acting as spokesperson, coordinating at the political and strategic level with other agencies, resolving cross-program issues, and designating the Regional Incident Coordinator (RIC). The RIC is the primary point of contact with the Incident Commander (IC) and provides the IC with management and strategic objectives for the incident and ensures effective and timely communication between the field and senior management.

Each EPA Region maintains a **Regional Incident Coordination Team (RICT)**, which is a standing team with representatives from regional program offices. The RICTs provide policy and resource coordination, information sharing, technical assistance, and issue resolution to support OSCs conducting emergency response activities. In addition, the regional Removal Program may decide to activate and staff its REOC, usually located at the Regional Headquarters or field office.

The Region, in coordination with the RICT, may decide to activate the **region's Response Support Corps (RSC) members**. The RSC comprises skilled professionals

from all EPA offices who volunteer to participate in a network of support personnel who respond during a major event. The RSC has three categories of personnel: (1) non-emergency response personnel serving in Incident Management Team Key Leadership Positions (e.g., Planning Section Chief or Public Information Officer); (2) emergency response mission-essential support personnel (e.g., technical specialists for sampling and monitoring); and (3) emergency response support personnel (e.g., watch officers, field runners, or administrative support). RSC members may: lead field sampling teams; sample environmental media and/or hazardous material as part of a field support team; provide technical advice and support to the Operations Section and field teams; serve as task force unit leaders or the field operations branch chief; oversee contractor support; set up and dismantle RadNet deployable stations; provide tactical support to the Operations Section, or provide administrative support.

Radiation Task Force Leaders (RTFLs) are members of the RSC with special expertise and training in radiological emergency response. RTFLs conduct radiological field operations and perform a variety of activities, including performing radiological surveying/monitoring and environmental sampling to determine the extent of radioactive contamination; collecting and managing field data; collecting and processing environmental samples (e.g., air, water, smear (also called swipes or wipes), surface soil, vegetation); serving in the decontamination line; and performing personnel surveys.

Headquarters Resources

The National Incident Coordination Team (NICT) is a HQ-level standing team of senior representatives from each EPA program office that serves as an intra-Agency forum to provide national-level guidance and policy direction on response coordination and operational issues. It is the mechanism for sharing information and requesting assistance among EPA HQ program offices during emergencies. The NICT can be activated by its chair during an emergency situation of national or international significance. Depending on the nature of the event and the staffing needs for both the HQ and regional response, the NICT Chair may decide to activate the HQ component of the RSC. For a Scenario 1 response, the Office Director of OEM chairs the NICT, while for a Scenario 2 response, the Office Director of ORIA co-chairs the NICT with the Office Director of OEM. More information on the two Scenarios is included in Section 2 of this document.

OEM HQ may decide to activate and staff the HQ EOC, located in Washington, D.C. The EOC is designated as the Agency's hub of communication and coordination during an incident. The EOC may be staffed by OEM personnel, members of the Response Support Corps and, as needed, technical and subject matter experts from throughout the Agency. Depending on the incident, ORIA HQ personnel and other designated experts may provide their expertise in dose assessment to the interagency Advisory Team for Environment, Food and Health. The Director of OEM serves as the

National Incident Coordinator, overseeing the HQ EOC for Scenario 1 and for Scenario 2, the Office Director of ORIA serves as the co-NIC with Office Director of OEM.

Senior agency management may provide strategic direction and policy and program coordination for the incident. The Administrator, or his/her designee, is responsible for the overall EPA radiological incident/emergency response. The Associate Administrator of the Office of Homeland Security serves as the principal EPA contact with the White House National Security Council, serves as the Domestic Readiness Group representative for the Agency, and provides agency-wide policy, guidance and direction, and recommendations for resources on matters of homeland security in coordination with the Assistant Administrator for OLEM. The Assistant Administrator for OLEM also oversees the National Incident Coordinator (NIC) and ensures the effectiveness of the response to meet Agency objectives.

Additional EPA Offices have important roles to play in EPA radiological emergency response, either as technical experts, response support, or in coordination and planning, including EPA's Office of Water (OW), Office of Congressional and Intergovernmental Relations (OCIR), Office of Public Affairs and Office of Research and Development's (ORD's) National Homeland Security Research Center (NHSRC). A complete list of EPA offices and organizations involved in radiological emergency response and their capabilities appears in Annex A. Further information is available in the National Approach to Response Order (EPA 2008).

Special Teams

The EPA Special Teams are the ORIA RERT, the OEM CBRN CMAD, the OSRTI ERT, and the OECA NCERT¹⁴. ORIA will coordinate with OEM for the mobilization of the RERT and any other Special Teams that are needed to support the OSC, and when the DOE/National Nuclear Security Agency (NNSA) FRMAC is deployed, ORIA will coordinate with OEM on other EPA resources with the FRMAC. OLEM will coordinate mobilization of the ERT and CBRN CMAD, as appropriate. If the incident involves a criminal investigation, or needs a Level A, Personal Protective Equipment (PPE) Team, the OECA NCERT may be asked to assist. External requests for mobilization of these response elements may be made directly through the EPA OSC and/or the NRC, which would then put the requester directly in communication with the HQ EOC who would contact the desired Special Teams' representatives. For smaller incidents being handled under the PHSA/AEA, state and local governments can make requests for RERT assistance directly to the RERT, typically consisting of advice and consultation.

¹⁴ Non-EPA NCP Special Teams are included in Appendix B.

RERT

The RERT responds to emergencies involving releases of radioactive materials. This team provides expertise in radiation monitoring, radionuclide analyses, health physics, and risk assessment. The RERT can provide both mobile and fixed laboratory support during a response.

Working closely with EPA's Superfund Program as well as other federal and state and local government response efforts before, during, and following a radiological incident, the RERT responds by providing support in various forms:

- Technical advice and assistance to prevent or minimize threats to public health and the environment.
- Advice on protective measures to ensure public health and safety.
- Assessments of dose and impact upon public health and the environment.
- Monitoring, sampling, laboratory analyses and data assessments to assess and characterize environmental impact (personnel from the ORIA laboratories provide environmental monitoring, sampling, and assessment services both at the labs and at the response site, if needed).
- Technical advice and assistance for containment, cleanup, restoration, and recovery following a radiological incident.

The RERT has approximately 20 forward team and 15 support team field-deployable members stationed at EPA's National Analytical and Radiation Environmental Laboratory (NAREL) in Montgomery, Alabama, and the National Center for Radiation Field Operations (NCRFO) in Las Vegas, Nevada. ORIA members of the Advisory Team for Environment, Food and Health, Domestic Emergency Support Team (DEST) via OEM, and Public Information Officer Cadre located in the Radiation Protection Division in Washington, D.C. are considered RERT personnel. Additional support personnel are located in EPA's 10 regional offices (two per Region with some personnel coming from backup Regions) and may be able to assist with incidents within or without their Region. EPA can send a few specialists or the entire RERT to an emergency site. Headquarters RERT members can provide support to field operations activities from the HQ EOC in Washington, DC, or from other coordination centers (e.g., the Incident Command Post (ICP), state or local EOC, and JFO).

The RERT provides protective equipment and personal dosimeters to protect the health and safety of RERT members in the field. It also has handheld survey equipment, including alpha, beta, gamma and neutron detection instruments; air sampling equipment; exposure rate and dose instruments; field gamma spectroscopy; and global positioning systems. In addition, RERT has both laboratory and emergency management vehicles, including a mobile command post; a mobile radiation laboratory;

a sample preparation laboratory; and specialized mobile platforms equipped to scan for gamma radiation in the environment. These mobile facilities can be driven to the scene of an emergency. Local, satellite, and internet-based communication capabilities help them keep in touch with response personnel from other agencies. When a DOE/NNSA FRMAC is established, the RERT will provide a Senior EPA Representative to the FRMAC. Further information on the RERT can be found in the OSC Radiological Response Guides in Section 2.5.2.

CMAD

The CMAD consists of 18 highly specialized and experienced emergency responders, engineers, scientists, and certified health physicists (CHPs) dedicated to providing sampling, decontamination, and health and safety for any contamination events or incidents involving CBRN materials. CMAD provides scientific support and technical expertise to OSCs in all aspects of consequence management, including site characterization, decontamination, clearance, and waste management for CBRN incidents. CMAD is available 24/7 for response.

The team can deliver the following specialized radiological and chemical expertise (as well as biological not provided here) and capabilities to assist local, national, and international agencies supporting hazardous substance response operations:

- ASPECT plane for site radiation (and chemical) surveys/characterization with the capability of downloading QA/QC data within minutes; also includes neutron detection capability and well as high resolution imagery;
- Ground-based radiological characterization capability;
- Monitoring, sampling, laboratory analyses and data assessments to characterize environmental impact;
- Identification and review of vendor capabilities for sampling and decontamination technologies;
- Implementation of innovative solutions to fill remediation gaps;
- Technical support and assistance for containment, cleanup, restoration, and recovery following a radiological incident; and
- Leveraging of other homeland security resources, including other federal agencies, and national laboratories.

The CBRN CMAD also focuses on emerging technologies and research related to responder needs in sampling, decontamination, and health and safety and the waste management arena. Members coordinate closely with EPA's NHSRC and other research institutions to continuously develop and implement bench scale technologies and advances for use in a field environment. CMAD also partners with other EPA

special teams, program offices, and national and international agencies involved in CBRN research and response.

CMAD was formed in 2004 (under the original name, the National Decontamination Team) to address a gap within the EPA in responding to incidents involving releases of chemical, biological, or radiological contaminants. In a response, CMAD can serve as a Scientific Support Coordinator (SSC), lead Technical Working Groups (TWGs), lead the Environmental Unit, employ state-of-the-art sampling and decontamination, coordinate and provide analytical support through the ERLN, and help fill other ICS positions needed to support the use of these technologies during a response. When there is not an active field response, CMAD is engaged in providing field training to EPA, state, and local responders around the world, leading field studies to advance knowledge and technology for CBRN response, supporting routine EPA oil and hazardous material missions, developing guidance and policy for CBRN response, and maintain field assets and laboratories. The team has members in 6 locations (Boston, MA; Erlanger, KY; Kansas City, KS; Edison, NJ; Research Triangle Park, NC; and Washington, DC), ensuring availability when called upon. Further information on the CMAD can be found in the OSC Radiological Response Guides Section 2.5.2.

ERT

The Environmental Response Team (ERT), formed in 1978, is a nation-wide team of EPA experts who provide scientific, technical, and logistical support in responding to time-critical events, such as oil spills, hazardous materials releases, consequence management incidents, natural disasters, and the characterization and cleanup of contaminated sites within EPA's Superfund Office. ERT offers a wide range of expertise in areas of chemistry, hydrology, geology, human health and environmental risk, radiation science, and engineering. With unique multi-disciplinary backgrounds, the ERT staff can provide assistance in rapid assessment techniques (stationary and mobile), clean-up and treatment technologies, field analytics and method development, health and safety protocols, and the development and/or review of site/project specific documentation.

The staff of ERT is available 24 hours/7 days-per-week and keeps vital equipment updated and maintained for response-readiness to biological, chemical, radiological, and/or nuclear emergency incidents anywhere in the continental United States as well as in the international arena. ERT and its support contractor can provide technical assistance to a full range of emergency response actions, including responding to unusual or complex emergency incidents. In such cases, ERT can bring in specialized equipment and experienced responders to OSCs or lead responders. ERT members are specially trained to respond to environmental emergencies and, more specifically, to provide on-scene assistance to deal with the human health and environmental impacts of a hazardous situation.

The ERT:

- Supplies scientific support coordination to the EPA OSC for inland oil and hazardous material spills;
- Maintains an around-the-clock emergency response activation system of personnel, teams, and equipment;
- Assists the Regional, Tribal, and program offices in responding to environmental emergencies and uncontrolled oil and hazardous wastes sites;
- Consults on water and air quality criteria, health and safety, human health and environmental risk assessment, interpretation and evaluation of analytical data, and engineering and scientific studies;
- Provides specialized equipment to meet specific site requirements for monitoring, analytical support, waste treatment, and containment and control;
- Manages the OLEM Integrated Safety and Health Program;
- Develops technical manuals, policies and Standard Operating Procedures (SOPs) for specialized equipment, computer systems, and analytical processes;
- Assists in the development of innovative technologies for use at environmental emergencies and uncontrolled hazardous waste sites; and
- Trains Federal, State and local government officials and private industry representatives in the latest oil and hazardous substance response technology.

The ERT's major focus includes responding to oil and hazardous substance spills, superfund site support, and emergency response support for natural disasters and consequence management incidents. In addition to these activities, ERT experts also serve as in-house consultants on innovative and emerging technologies. The staff of ERT helps develop topic specific SOPs, technical bulletins, fact sheets, and analytical methods. With the vast knowledge within, ERT staff also provide training to first responders, such as local fire fighters and other emergency response personnel, EPA personnel, and state and local members on all aspects of emergency response, readiness, and subject-specific topics.

The ERT is strategically located and operates out of Edison, NJ; Erlanger, KY; Las Vegas, NV; and Research Triangle Park, NC. Further information on the ERT can be found in the OSC Radiological Response Guides Section 2.5.2.

NCERT

The NCERT is managed within the Field Operations Program of EPA's OECA Office of Criminal Enforcement, Forensics and Training (OCEFT) to provide law enforcement response personnel and support for incidents or sites that contain or may

contain chemical, biological, or radiological hazards and have a link to environmental crimes. Its activities are carried out to support Criminal Investigation Division Special Agents, OSCs, and other EPA Special Teams. Additionally, the NCERT brings extensive law enforcement coordination capabilities to any incident. NCERT members have extensive knowledge of investigations involving EPA programs and operations. They are specially trained to provide threat/risk assessments and downrange forensic evidence collection in high hazard crime scenes. NCERT members have received special training and equipment to support their entry into contaminated areas to collect evidence.

1.6.6 Multi-Agency Resources

EPA participates in several multi-agency response organizations that have important roles in radiological emergency response. Examples of such multi-agency radiological response resources include the RRTs and NRT, FRMAC, DEST, National Incident Response Team (NIRT), IMAAC, and Advisory Team for Environment, Food, and Health.

EPA can call upon other federal radiological capabilities as needed through the RRTs and the NRT. The NRT consists of 15 federal agencies with interests and expertise in various aspects of emergency response to oil and hazardous substance incidents. The team oversees the Nation's ability to respond effectively and efficiently to incidents by coordinating federal activities under the NCP, CERCLA, and ESF #10. NRT assistance usually takes the form of technical advice, access to additional resources or equipment, or coordination with the RRTs. The 13 RRTs are comprised of regional representatives of the federal agencies on the NRT and representatives of each state within the region. They serve as planning and preparedness bodies before a response, and provide coordination and advice to the federal OSC during response actions. Annex B provides a summary listing of the capabilities of other federal agencies.

Federal Radiological Monitoring and Assessment Center (FRMAC)

The purpose of the FRMAC is to assist the states and local governments in their mission to protect the health and well-being of their citizens with:

- Verified radiation measurements;
- Interpretations of radiation distributions based on EPA, Food and Drug Administration (FDA), or local Protective Action Guidelines; and
- Characterization of overall radiological controls.

Participants in the FRMAC typically include DOE/NNSA and EPA, but may include a number of other agencies as appropriate. If the OSC wants to request activation of the FRMAC, DOE/NNSA FRMAC assets can be requested through the

EPA RERT. State, local, and other federal agencies can also request FRMAC activation directly from DOE/NNSA, so DOE/NNSA FRMAC assets may already be deployed to some radiation incidents, even where not requested by the OSC. EPA is a member of the FRMAC and so may be called upon by DOE/NNSA to provide resources, including personnel, equipment, and laboratory support for sampling and analysis to support FRMAC operations. If the FRMAC is activated, and assuming appropriate response authorities and funding sources are available, some EPA field personnel, labs, equipment and other assets may be deployed as requested to join with DOE, other federal FRMAC responders, and state and local personnel to provide FRMAC monitoring and analysis and coordinate data sharing through the FRMAC. Additional details on procedures for coordination between FRMAC operations and ICP operations are contained in the EPA IMH and FRMAC Operations Manual. It is important to note that when activated, FRMAC has the federal lead for environmental radiological monitoring and assessment activities to provide overall characterization of the radiological risk and protective action decisions. For radiation incidents that also involve non-radiological environmental contaminants, EPA would still maintain the federal lead for the assessment of such contaminants. EPA and FRMAC data outputs would need to be coordinated to provide a complete picture of the environmental contamination.

In all instances under the NRF/NRIA, when a FRMAC is activated, DOE/NNSA has the lead responsibility for managing the FRMAC during the early or emergency phase of the emergency, then the leadership transitions to EPA. The DOE FRMAC Director and the FRMAC's Senior EPA representative will agree on a time to transition the management responsibility to EPA. This will most likely occur during the intermediate phase of the response when immediate emergency operations have largely been completed. EPA would then be responsible for the transition into long-term monitoring and assessment. The transfer will be based upon the five criteria listed in the NRIA:

1. The immediate emergency condition is stabilized.
2. Off-site releases of radioactive material have ceased, and there is little or no potential for further unintentional off-site releases.
3. The off-site radiological conditions are evaluated and the immediate consequences are assessed.
4. An initial long-range monitoring plan has been developed in conjunction with the affected state and local governments, and appropriate federal agencies.
5. EPA has received adequate assurances from the other federal agencies that they are committing the required resources, personnel, and funds for the duration of the federal response.

Termination of FRMAC operations will occur when the following determinations are made by the coordinating agency, in consultation with all participating federal agencies, and State tribal and local governments, as stated in the NRIA:

1. There is no longer a threat to public health and safety or the environment;
2. State, tribal and local resources are adequate for the situation; and
3. There is mutual agreement among the agencies involved to terminate monitoring and assessment.

Domestic Emergency Support Team (DEST)

In a potential or actual radiological emergency of potential terrorist origins, EPA may provide threat assessment assistance via OEM HQ to the Department of Justice/Federal Bureau of Investigation (FBI) through the DHS DEST. This DHS asset provides expert advice and guidance to the FBI Special Agent in Charge concerning weapons of mass destruction terrorist threats and actual incidents. The advice and support provided by this rapidly deployable, interagency team includes crisis and consequence management assistance, technical and scientific advice, and contingency planning guidance tailored to situations involving chemical, biological, or nuclear/radiological weapons. The type of incident will determine who will staff the DEST on behalf of EPA.

Nuclear Incident Response Team (NIRT)

The Homeland Security Act of 2002 gave the Secretary of DHS the authority to activate a NIRT in response to an actual or threatened terrorist attack, major disaster, or other emergency in the U.S. involving or potentially involving nuclear or radiological devices or materials. The law defined the NIRT as those assets from the DOE and EPA that perform nuclear and/or radiological emergency response related functions, and stated that when activated, the NIRT operates as an organizational unit of DHS. The NIRT is comprised of scientists, engineers, and technicians with highly specialized expertise and equipment located at various locations around the country. EPA NIRT assets consist of the CBRN CMAD ASPECT and certain large RERT assets, including the mobile radiation laboratory, sample preparation laboratory, RadNet deployable monitors, scanner van and other large scanning assets with their associated personnel. EPA expects the Secretary of DHS to use the standard ESF #10 mission assignment process through the FEMA Federal Coordinating Officer as the mechanism for directing EPA's NIRT assets. While DHS/FEMA will provide strategic guidance and coordination, tactical control over EPA NIRT personnel and assets will remain with EPA.

Interagency Modeling and Atmospheric Assessment Center (IMAAC)

When needed, EPA can request that DHS activate its IMAAC, which is responsible for production, coordination, and dissemination of consequence predictions for an airborne hazardous material release. The IMAAC generates the single federal prediction of atmospheric dispersions and their consequences using the best available resources from the federal government.

Advisory Team for Environment, Food, and Health (A-Team)

When the radiological emergency has the potential for public health consequences, the coordinating agency can request that HHS activate the Advisory Team for Environment, Food and Health (or A-Team). This team of representatives from EPA, HHS (including the Centers for Disease Control and FDA), and the U.S. Department of Agriculture, as well as representatives from other federal agencies as necessary, provides timely interagency advice and recommendations to the federal coordinating agency and the state and locality on protecting the environment, food and water supply, and public health.

1.6.7 Responses Led by Other Federal Agencies

USCG provides OSCs for radiological incidents that occur in “certain areas” of the coastal zone, as per the definition provided in the NRIA. EPA may be expected to be asked to provide significant support for a USCG led response, due to EPA’s expertise. The USCG may ask to transition the lead for a radiological incident to the EPA after the emergency phase is over if there is still significant follow-up work needed.

In addition to DOE’s role in providing initial leadership for the FRMAC, DOE and DoD each have significant leadership roles under the NCP. Under the NCP and Executive Order 12580, DoD and DOE provide the OSC for releases from their facilities, both the on-site and off-site response, and technical support as requested by others. Consistent with Section 300.135 of the NCP, the OSC’s efforts are coordinated with other appropriate federal, state and local, and private response agencies, including HHS and the U.S. Department of Labor’s Occupational Safety and Health Administration in cases involving public health emergencies and worker health and safety issues, respectively. If DOE or DoD request EPA support for a nuclear/radiological release, EPA regions would make that determination in consultation with OEM HQ on a case-by-case basis. In order for EPA to agree to provide support, DOE or DoD should: 1) Agree to reimburse the Superfund for EPA’s efforts; 2) Retain overall leadership for the response (i.e., remain the OSC for the response)¹⁵; and 3) Retain responsibility for ensuring ultimate waste disposal.

¹⁵ Executive Order 12580 does provide for redelegation if the heads of both agencies agree.

Under the AEA, NRCCom regulates certain nuclear material in the United States. Under the NRIA, NRCCom is the coordinating agency for responses involving NRCCom- or agreement state¹⁶-licensed materials. However, in the absence of Stafford Act funding, NRCCom does not have response funding or enabling legislative authority to fund or mount significant response actions should the licensee be bankrupt, missing, or unable or unwilling to respond in a timely manner. Pursuant to CERCLA and the NCP, EPA OSCs may, at the OSC's discretion and after consultation with OEM HQ, undertake CERCLA response actions to address releases or potential releases of hazardous substances (including radionuclides), pollutants, or contaminants at NRCCom-licensed facilities, except where specifically excluded by CERCLA. In the event of a release or potential release of NRCCom-licensed radiological materials, the OSC should consult with NRCCom or the agreement state to consider enforcement action by NRCCom or the agreement state pursuant to the AEA before pursuing CERCLA response action, if time, circumstances, and the exigencies of the situation allow.

Excluded by definition under CERCLA are certain radiological releases from NRCCom-licensed nuclear reactors (see Section 1.6.2 for more information); however, EPA retains the authority to use CERCLA's investigative authority to determine the nature of the release and to address non-excluded and co-mingled (combined excluded and non-excluded) materials. If the release is determined to consist solely of excluded substances, EPA emergency responders may need to rely upon other authorities and funding sources for the response, or the NRCCom may need to pursue other options for the response. Based on the exigency of the situation, and after NRCCom has taken reasonable steps to enforce licensee cleanup under the AEA, CERCLA enforcement authorities should also be evaluated and utilized before expending Superfund Trust Fund monies, as required by the NCP. EPA could respond, however, if FEMA issues a Stafford Act ESF #10 mission assignment for such an incident.

Several other federal agencies have responsibilities and resources that may be available to the EPA for responding to a radiological emergency. A summary listing of other federal agency resources is included in Annex B.

1.6.8 Reimbursement

In the event of an activation of the Stafford Act and issuance of a mission assignment, EPA will be reimbursed for activities given mission assignments by DHS/FEMA in accordance with policies and procedures outlined in the Financial Management Annex of the NRF. DHS/FEMA may reimburse funds to cover eligible costs for response activities (for which there were mission assignments) and, in special cases, may advance such funds. The NRF also contains provisions for Federal-to-

¹⁶ Agreement states are states that have entered into agreements with NRCCom to assume NRCCom regulatory authority under the AEA. When entering into an Agreement with a state, NRCCom retains authority over, among other things, nuclear power plants within the state, exports from the state, and large quantities of special nuclear material.

Federal support, which are also described in the NRF Financial Management Annex. If the Federal-to-Federal support provisions are activated, EPA may receive reimbursement through this mechanism if assisting another federal agency. Finally, EPA may assist another Agency at their request toward mutually agreeable response goals with reimbursement for response actions under the Economy Act or other interagency agreement.

EPA may expend Superfund monies to respond to releases of radiological materials pursuant to the NCP. CERCLA authorizes EPA to recover from potentially responsible parties costs incurred for response actions, and trustee agencies may seek compensation for damages to natural resources. For responses undertaken under EPA's PHSA/AEA authorities, no reimbursement is possible, and Superfund monies cannot be used to fund these response actions. As such, all response actions undertaken for PHSA/AEA responses are funded by the responding organizations.

1.6.9 Special Areas

Federal Lands under Remote Management

A response to a radiological incident or emergency on or affecting federal lands not occupied by a government agency should be coordinated with the agency responsible for managing that land. This ensures that response activities are consistent with federal statutes governing the use and occupancy of these lands to the extent required pursuant to CERCLA and the NCP.

Tribal Lands

Coordination is particularly necessary in the case of Indian tribal lands, because federally recognized Indian tribes have a special relationship with the U.S. Government, and the state and local governments may have limited or no authority on Indian reservations. Indian tribes are in general treated as states under CERCLA.

For radiological emergencies occurring on or with possible consequences to Indian tribal lands, the DOI will act as a liaison among federally recognized Indian tribal governments, the NRIA-designated federal primary agency, and state and local governments for coordinating the response and protective action(s) efforts.

US Territories under Department of the Interior Administration

Additionally, DOI will advise and assist the NRIA-designated primary agency on economic, social, and political matters in the Virgin Islands, the Territories of Guam and American Samoa, and the Trust Territories of the Pacific Islands should a radiological emergency occur in these areas.

Areas under Temporary Federal Control

In the event of a radiological accident involving a nuclear weapon or special nuclear material, the owner of the weapon or material can declare the area a National Defense Area (for DoD) or National Security Area (for DOE or NASA), depending on the circumstances of the emergency. These areas are established only during the emergency in accordance with appropriate national security classification directives to safeguard classified information and/or restricted data or equipment and material (e.g., nuclear weapons, terrorist threats, special nuclear materials at reactors, and certain fuel cycle facilities producing military fuel). Establishment of these areas may place non-federal lands under federal control. Typically, EPA's assistance will not be requested for incidents within the boundary of a National Defense Area or National Security Area. If response actions are needed outside the boundaries of a DoD or DOE area, DOE and DoD would be responsible for providing the OSC for all response actions, as described in Section 1.6.7 above. NASA would be responsible for response actions inside and outside the boundary that are not emergencies. However, NASA does not have OSC authority, and therefore EPA (or USCG, for incidents occurring in certain areas of the coastal zone) would provide the OSC for response actions that are emergencies.

1.6.10 Enforcement Instruments

EPA will exercise its enforcement authority through the use of an EPA Administrative Order or by performing oversight without the use of an Enforcement Instrument. EPA must determine that the responsible party is capable of performing a proper response action. EPA, state, or local legal actions will be taken to obtain compliance with environmental laws, rules, regulations, or agreements and/or to obtain penalties or criminal sanctions for violations.

Under CERCLA, EPA will seek to require potentially responsible parties to undertake full response and/or pay for the cleanup. Any administrative or civil enforcement action does not preclude criminal investigation or prosecution by the U.S. Department of Justice.

The goal of EPA's removal program (for emergency response) is to prevent, limit, or mitigate the release or threat of release of CERCLA hazardous substances, including radioactive materials. In this case, enforcement actions are taken as time allows based on the incident-specific threats.

1.6.11 International Coordination

In the event of a radiological incident or emergency originating on foreign soil or, conversely, a domestic incident with an actual or potential foreign or transboundary impact, EPA will immediately notify the U.S. Department of State (**DOS**), which has responsibility for official notification of foreign governments. DOS coordinates

notification and information gathering/exchange activities with foreign governments, except when EPA, as the lead agency under the NCP, has existing bilateral agreements that permit direct EPA communication. The Agency will keep DOS informed of communications EPA has with its foreign counterparts. Agency officials should take care that consultations do not exceed the scope of the relevant agreement(s). In keeping with the IAEA “Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency” and “Convention on Early Notification of a Nuclear Accident,” EPA will ensure that it coordinates with DOS regarding offers of assistance to, or requests from, foreign governments. Under HSPD-5, DOS and DHS will establish appropriate relationships and mechanisms for cooperation and coordination, and EPA will rely on such mechanisms to ensure that DHS is properly notified regarding international issues.

When a radiological incident is being coordinated under NRF mechanisms, the NRF International Coordination Support Annex contains additional information on the role of DOS in interagency international coordination activities for ESF #10, including:

- Providing coordination assistance for the development of international oil and hazardous materials (HAZMAT) contingency plans and other agreements;
- Providing coordination assistance and facilitates information sharing among federal response entities and foreign governments and international organizations for responses to oil and HAZMAT releases and transportation with cross-border impacts;
- Facilitating entry of federal oil and HAZMAT personnel into other countries; and
- Coordinating assistance from foreign nations.

II. CONCEPT OF OPERATIONS

The concept of operations for radiological response is defined in terms of EPA's overall response framework. The EPA RERP response framework is designed to address two basic types of scenarios to which EPA may respond as delineated in Section 2.1. Section 2.2 discusses response coordination involving regional and HQ programs. Annex A identifies other EPA response organizations and Annex B lists other federal agencies with a key role in the Agency emergency response. Termination of EPA response (i.e., deactivation and recovery) is described in Section 2.3.

2.1 EPA Response Framework

Most types of incidents or emergencies to which EPA may respond will fall into one of two scenarios. Exceptions include an IND incident or a large-scale nuclear power plant, fuel processing facility or waste treatment facility release, which would be treated as Scenario 1, but would incorporate elements of Scenario 2 as appropriate. Tables 2 and 4 illustrate the response framework for each, with examples provided in Boxes 1 and 2. Each of the tables documents the expected EPA response structure under each scenario in interagency coordinating structures (under the NRF and FIOPs) and within EPA (under EPA's National Approach to Response), describing the expected roles of each. In addition to assigning overall organizational lead for the response, these tables detail the roles and responsibilities for the various EPA entities, by each "level" of coordination under the approach. In addition, Tables 3 and 5 provide examples of the types of activities that EPA might be undertaking during various phases of each type of scenario.

2.1.1 Scenario 1: Response to a Radiological Emergency Impacting One or More Specific Sites in the United States

Tables 2 and 3 address Scenario 1, EPA's response to a radiological emergency impacting one or more sites within the United States, its territories, possessions, or territorial waters (referred to hereafter as simply the United States). It is expected that most EPA responses will fall into this category. Most responses will likely be conducted under CERCLA authority; however, EPA may consider using other authorities (e.g. PHS, AEA). The response may be handled under either the NCP alone (e.g., for usual EPA responses) or the NRF/FIOPs (e.g., for incidents for which EPA has received a Stafford Act Mission Assignment). Box 1 provides an example of just one of the many incidents that are included in this category.

Box 1: EPA Response to the Las Conchas Fires

In June/July 2011, a tree fell on a power line in Santa Fe National Forest, starting the Las Conchas wildfire that burned more than 150,000 acres, making it the largest wildfire in New Mexico's history at that time. The fire threatened Los Alamos National Laboratory (LANL), and on June 27, the nearby town and laboratory were evacuated. In response to concerns that the fire might cause a radioactive plume if radioactive materials on the LANL site were burned in the fire, EPA Region 6 OSCs requested RERT and CBRN CMAT assistance. Eight response personnel from ORIA's NCRFO travelled to the site to assist EPA Region 6, bringing with them medium-volume air samplers and associated sampling equipment and the RERT Mobile Command Post. EPA set up a 12-station air sampling and radiation monitoring system in the area around the fire to determine whether any radioactive material was released. EPA Region 6 OSCs monitored chemical toxins released during the fire. The CBRN CMAT ASPECT performed repeated aerial surveys of the smoke for radioactive material. Careful management by fire crews avoided a release of radioactive material from LANL, despite a spot fire burning on LANL property. The EPA network detected only a slight increase in background radiation, probably due to dirt thrown into the air during fire storms that swept the forests and LANL property, ASPECT data showed no unusual or elevated levels in the smoke from the fires as well, and 12,000 residents were able to return to their homes.

Table 2. Scenario 1: Overview of Roles in EPA's Response to a Radiological Emergency Impacting One or More Specific Sites in the United States

National Coordination	
EPA Response Lead	OLEM/OEM
National Incident Coordinator	The OEM Director acts as the NIC and chairs the NICT, unless he or she delegates this responsibility. Provides the chair of the NRT if activated for a specific incident where EPA is providing the OSC. Receives information from Region on all requested and deployed resources. Coordinates resolution of conflicting requests.
OLEM	Among other leadership responsibilities, provides the NIC, may activate the EPA EOC, if required, and serves as the lead advisor to the Administrator.
OHS	Coordinates with the White House and Domestic Resilience Group the strategic direction for the response.
OAR/ORIA	Supports the Agency response, including activating the RERT, if needed, providing SMEs to the EPA EOC, as needed, and serving as a key advisor to the Administrator.
OECA	Activates the NCERT if requested, and provides enforcement for incidents with Potentially Responsible Parties.
NRCC	If activated by DHS/FEMA, OEM will provide staffing for the NRCC, with technical support from ORIA, upon request.

Table 2 Continued. Scenario 1: Overview of Roles in EPA's Response to a Radiological Emergency Impacting One or More Specific Sites in the United States

Regional Coordination	
Area Commander	The Regional Removal Manager or his/her designee will serve as the Area Commander, if one is needed.
Regional Removal Program/Superfund Division Director	Serves as the focal point for consolidating operational EPA information, chairs the RICT, and serves as the official channel for information flow among EPA field, regional, and HQ personnel. If applicable, will assign an EPA senior official for the JFO, and activate the REOC. Provides the EPA Chair of the RRT if activated for a specific incident where EPA is providing the OSC.
Regional Radiation Program	Supports the Regional Removal Program and provides SMEs to assist the response. If appropriate, may provide technical advice on protective actions to the affected state and local governments.
RRCC	If activated by DHS/FEMA, the Region will provide staffing for the RRCC, with technical support from ORIA, upon request.
JFO	If activated by DHS/FEMA, the Region will provide staffing for the JFO, with technical support from ORIA, upon request.
JIC	If activated by the IC/Unified Command (UC), the Regional Public Affairs Director would coordinate staffing with the IC/UC Public Information Officer (PIO), with reach-back to the Office of Public Affairs for additional support.
Field Coordination¹⁷	
Incident Commander	The OSC typically serves as EPA's Incident Commander under ICS and EPA representative under UC to direct field operations. In addition to other responsibilities and authorities, may request support from the RERT, ERT, CBRN CMAD, and/or NCERT. Determines, in coordination with DHS and the coordinating agency (if applicable), when EPA tactical operations may be terminated.
RERT Commander/RERT	If applicable, the RERT Commander serves as the EPA Senior Representative in the FRMAC. If the NIRT is requested to respond, RERT activities are coordinated under the EPA NIRT response and in close coordination with the OSC.
Regional Radiation Program	May provide support for the response in the ORIA roles of Regional Radiation Advisor and Regional RERT Liaison.
RSC	If needed, the RSC can be activated by the RICT(s)/NICT to provide staff to supplement the emergency response program resources. In particular, the RTFLs would provide staff specially trained for duties related to radiological contaminants. RSC members may also be used to deploy the RadNet deployable systems.

¹⁷ Note that a sample Organization Chart (ICS Form 207) and other information on field-level operations for this Scenario are found in the EPA IMH (2016).

Table 3. Scenario 1: Phases of an EPA Response to a Radiological Emergency Impacting One or More Specific Sites within the United States

EPA is notified and evaluates release or threat of release	Response preparation	Response implementation	Response termination
<p>EPA receives notice from/through:</p> <ul style="list-style-type: none"> • NRC, • state and local responders, • designated HAZMAT Team, • source owner/operator, • DHS NOC, • general public, and/or • other federal agencies. <p>*****</p> <p>The EPA OSC:</p> <ul style="list-style-type: none"> • investigates and determines the actual, potential, or perceived threat to public health and/or welfare or the environment, • assesses and determines the type, magnitude, quantity, and source of the release, • consults with the regional radiation programs for expert advice and radiation support, • determines the extent of response consistent with the methods and criteria established in §300.400 of the NCP, and plans the EPA (and federal, if applicable) response accordingly, and • provides information and responds to inquiries throughout the response from public/congressional inquiries via the Public Affairs Division.¹⁸ <p>*****</p> <p>If DHS activates ESF #10, EPA's scope of work would be identified through the Mission Assignment process.</p>	<p>When the need for EPA response is established, the OSC with support of the REOC:</p> <ul style="list-style-type: none"> • confers with the Regional Radiation Program Manager /leadership of the Special Team(s) to identify the assistance needed (and roles within the ICS for the Special Team(s)), including, when EPA is leading the response, the need to request FRMAC and A-Team assistance, and • plans and prepares the appropriate level of activation, consistent with typical NCP response, and/or ESF #10 as appropriate. <p>*****</p> <p>If needed, ORIA will move RadNet monitoring activities to an emergency basis.</p>	<p>Under the NCP, EPA may act at state and local government's request, or unilaterally in order to fulfill its statutory responsibility. However, if DHS initiates the response mechanisms of the NRF, EPA may integrate its efforts into the overall federal response, through ESF #10 under a mission assignment.</p> <p>*****</p> <p>At the scene, the EPA OSC meets his/her obligation under §300.120 of the NCP.</p> <p>*****</p> <p>If the FRMAC is activated, EPA ensures coordination between FRMAC and other EPA response activities.</p>	<p>EPA response actions are limited by the NCP and availability of funds. EPA has discretionary authority to respond or to terminate the response. The OSC may consider terminating the response when:</p> <ul style="list-style-type: none"> • the release is stabilized as much as possible considering the situation, and • the necessary post-emergency response actions are in place to ensure the effectiveness and integrity of the response actions after the completion of emergency response. <p>If EPA is providing support to DHS and/or another coordinating agency, EPA expects to consult with those agencies in determining when its support is no longer needed.</p>

¹⁸ For incidents coordinated by DHS or other EPA nationally significant incidents, public messaging and congressional outreach may be coordinated a national level.

2.1.2 Scenario 2: Response to a Radiological Emergency that Takes Place Outside of the United States and Does Not Create a Specific Site within the United States

Tables 4 and 5 illustrate Scenario 2, EPA's response to an incident that takes place outside of the United States and does not create a specific site within the United States, but requires an EPA response. An example of such an incident would be a foreign reactor that created a potential for a U.S. impact (see Box 2), or radioactive fallout from atmospheric testing of nuclear devices. For these types of incidents, unless DHS coordinates the response, EPA responds as the primary agency under the NRIA, and would provide all leadership and coordination for the multi-agency domestic response activities. Where this scenario does not result in an incident that qualifies for a CERCLA response, other authorities and funding sources would be needed to support the EPA response.

Box 2: EPA Response to Fukushima Dai-ichi

On Friday, March 11, 2011, at approximately 12:46 a.m. EST, a 9.0 earthquake hit off the east coast of Honshu, Japan, approximately 80 miles east of the northeastern city of Sendai. The earthquake spawned a tsunami which caused massive damage to the Sendai region. The Fukushima Dai-ichi nuclear power station (Fukushima Dai-ichi) was severely damaged by the earthquake and tsunami. The plant suffered equipment failures, and loss of cooling resulted in radiological releases of varying severity.

The HQ EOC was activated to coordinate Agency efforts in monitoring, communicating, and coordinating EPA expertise (e.g., OAR, OW, OLEM, Office of Public Affairs, and OCIR).

NAREL and NCRFO sent deployable RadNet monitors and personnel to Alaska, California, Idaho, Hawaii, Guam and Saipan. Additional deployables were staged in San Francisco, Portland, Seattle, and Anchorage to expand coverage. The RadNet system accelerated its schedule of sampling and analysis. The NAREL RadNet Control Room continually monitored data and numerous samples were processed, analyzed and reported. EPA Regions coordinated with HQ on public information and messaging, operated deployable monitors, and assisted State and local counterparts.

As a result of the incident with the Fukushima nuclear plant in Japan, EPA detected very low levels of radioactive material in the United States consistent with estimates from the damaged nuclear reactors. These detections were expected and the levels detected were far below levels of concern for public health. Slightly elevated levels of radioactive material in precipitation were also expected and similarly were far below levels of public health concern.

Table 4. Scenario 2: Overview of Roles in EPA's Response to a Radiological Emergency that Does Not Create a Specific Site within the United States

National Coordination	
EPA Response Lead	OAR/ORIA in coordination with OLEM/OEM
National Incident Coordinator	OAR/ORIA and OLEM/OEM would assign the co-NICs for this type of incident. Co-chairs the NICT with ORIA. Coordinates deployment of Special Teams.
OLEM	Among other support activities, provides a co-NIC, may activate the EPA EOC and NICT, and serves as a key advisor to the Administrator.
OAR/ORIA	Among other leadership responsibilities, provides a co-NIC, changes RadNet monitoring activities to an emergency basis to monitor any impact on the United States, activates the RERT if required, co-chairs the NICT with OEM, and serves as a key advisor to the Administrator. May request OEM to activate the EPA HQ EOC.
OECA	Activates the NCERT, if requested.
NRCC	If activated by DHS/FEMA, ORIA and OEM will coordinate regarding NRCC representation.
Regional Coordination	
Regional Radiation Program	Coordinates closely with ORIA, OEM, and the Regional Removal Manager/Superfund Division Director and serves as the lead advisor to the Regional Administrator. Will provide advice on protective actions to any affected or potentially affected portions of the United States. Will chair the RICT in some regions, depending on the Region's RICT procedures.
Regional Removal Program/Superfund Division Director	Will closely monitor the situation, in coordination with the Regional Radiation Program, to determine whether the situation will transition into a Scenario 1 situation. As needed, will activate the REOC. Will chair the RICT in some regions, depending on the Region's RICT procedures.
Tactical (Field-Level) Operations	
Only limited tactical operations are expected because this scenario does not involve a specific site. In the absence of an "Incident Commander", the field tactical operations will be managed by the Regions and Special Teams under coordination of the HQ EOC Operations Section. Possible field activities would include the collection of air, water, and/or deposition samples beyond the scope of RadNet and the deployment and operation of RadNet deployable monitors.	
RSC	If needed, the RSC can be activated by the RICTs/NICT to provide staff to supplement the emergency response program resources. In particular, the RTFLs would provide staff specially trained for duties related to radiological contaminants. RSC members may also be utilized to deploy the RadNet deployable systems.

Table 5. Scenario 2: Phases of an EPA Response to a Radiological Emergency that Does Not Create a Specific Site within the United States

EPA is notified and evaluates release or threat of release	Response preparation	Response implementation	Response termination
<p>EPA may receive notice from:</p> <ul style="list-style-type: none"> • NRC • IAEA • DOS • responsible country • other federal agencies including DOE and NRCOM • news media • others <p>*****</p> <p>EPA may verify such notification with:</p> <ul style="list-style-type: none"> • IAEA • DOS • source country <p>*****</p> <p>ORIA coordinates with OEM and may become the EPA focal point for coordination and communication with other organizations internal and external to EPA, and may request OEM to activate the HQ EOC.</p> <p>*****</p> <p>OEM and ORIA are responsible for:</p> <ul style="list-style-type: none"> • coordinating with regional removal programs, • facilitating the availability of radiological assets and capabilities (e.g., mobile rad labs), and other such federal resources, • coordinating with other EPA offices and Regions, IAEA, and other federal entities, and • providing information and responding to inquiries throughout the response from public/congressional inquiries, unless DHS opts to coordinate the federal domestic response. 	<p>When the emergency requires a multi-agency response, EPA as the primary agency, through ORIA, the regional ORIA programs, OEM, the four Special Teams as needed, and the OSCs, develops the response measures, including advice on protective actions and radiological monitoring and assessment.</p> <p>*****</p> <p>ORIA will move RadNet monitoring activities to an emergency basis.</p>	<p>ORIA coordinates with OEM and other offices, as well as DHS and other federal agencies and state and local organizations.</p> <p>ORIA and OEM also</p> <ul style="list-style-type: none"> • coordinate EPA radiological technical assessment and support, • coordinate deployment of the Special Teams, as needed, • coordinate and share monitoring data, and • request activation of the FRMAC, if necessary. 	<p>EPA may terminate the response when the emergency situation is under control/stabilized.</p>

2.2 Response Coordination

Certain phases of response or special circumstances will require additional concerted coordination to ensure effective response. These circumstances are outlined below:

- Deployment of Special Team Resources. When Special Team (RERT, CBRN CMAD, ERT and/or NCERT) resources are being deployed in support of an OSC, when coordination is needed, the HQ EOC will work with the OSC through the established REOCs and Special Team(s) to discuss response needs and expectations of the Special Team(s) during their deployment, including the roles that the OSC would like the staff or team to play within the ICS.
- Activation of the NIRT. Under the Homeland Security Act of 2002 and the Post-Katrina Emergency Management Reform Act (PKEMRA) of 2006, some EPA radiological response resources, consisting of CBRN CMAD's ASPECT and RERT large assets including RadNet deployable monitors, may fall under the operational direction of DHS/FEMA during radiological emergencies. DHS indicates that it will fulfill its responsibility for deployment of EPA NIRT assets through the normal Federal Coordinating Officer issuance of Mission Assignments for appropriate radiological response, recovery, and related tasks under ESF # 10- Oil and Hazardous Materials Response Annex, the NRIA, or other applicable provisions of the FIOPs. EPA intends to maintain tactical control over all personnel and assets (e.g., personnel selection, personnel supervision, personnel tasking, technical oversight, health and safety).
- Terrorist Incidents. For incidents involving actual or suspected terrorist acts, EPA's Office of Homeland Security will work closely with managers and staff in the relevant Program Offices and Regions to share accurate and timely threat information and other intelligence while the NIC coordinates national EPA support to other federal agencies and national EPA policy and strategic decision-making. Because such an incident also is expected to be treated as a crime scene, EPA may respond with resources that are capable of handling not only the assessment and cleanup aspects of a response, but also the preservation of a potential crime scene. The NCERT may be activated to work closely with the FBI, EPA OSCs, and other responders to assist in the initial response and to conduct investigations of conventional, chemical, biological, or radiological terrorist or criminal attacks or threats pursuant to the FBI-EPA/OCEFT Weapons of Mass Destruction Memorandum of Understanding. In addition, pre-designated EPA response resources may be activated to serve on the DEST in support of the FBI. Note that DHS is the NRF NRIA coordinating agency for nuclear/radiological terrorist events.

2.3 Response Termination and Recovery

On an incident-specific basis, when leading the response, EPA is responsible for determining when to terminate the response. The following criteria provide the basis for such determination:

- The situation is stabilized,
- Other federal assistance is available, or
- EPA determines that its assistance is no longer required.

Prior to discontinuing its response operation, EPA expects to discuss its action with DHS, involved state and local governments, and the primary agency, if applicable. If EPA is providing support to DHS and/or another coordinating agency, EPA expects to consult with those agencies in determining when its support is no longer needed. For responses carried out under DHS/FEMA Mission Assignments, the Mission Assignment will also include a projected completion date. Note that while EPA may have completed its ESF #10 work during an NRF response, EPA may still continue providing other types of recovery assistance to state and local governments as appropriate under other ESFs, authorities or plans.

The state and local governments have the primary responsibility for planning the recovery of the affected area. (The term “recovery,” as used here, encompasses any action dedicated to the continued protection of the public and resumption of normal activities in the affected area.) Recovery planning is the responsibility of the state and local governments, but generally will not take place until after the initiating circumstances of the emergency have stabilized and immediate actions to protect public health and safety and property have been accomplished. EPA will, on request, assist the state and local governments in developing off-site recovery plans prior to deactivation of the response such as long-term state or local plans for environmental radiological monitoring.

Should EPA be managing the FRMAC, EPA will consult with the coordinating agency, DHS/FEMA, other participating federal agencies, and state and local officials to determine when a formal FRMAC structure and organization is no longer required. Normally, this will occur when operations move into the recovery phase and extensive federal multi-agency resources are no longer required to augment state and local radiological monitoring and assessment activities. The radiological monitoring and analysis activities will generally be terminated when EPA, after consultation with the coordinating agency and other participating federal agencies and state and local officials, determines that:

- There is no longer a threat to the public health and safety or to the environment,
- State and local resources are adequate for the situation, and
- There is mutual agreement among the agencies involved to terminate the response.

III. EMERGENCY PREPAREDNESS AND ADMINISTRATION

3.1 Preparedness

EPA stands ready 24 hours a day to respond quickly to protect the public and the environment whenever a hazardous substance, including radionuclides, is released. The responsibility for EPA's national preparedness to respond to environmental emergencies is divided up among several HQ organizations and the 10 EPA Regions. Radiological emergency preparedness is primarily shared between ORIA in OAR and OEM in OLEM and their regional program counterparts, with additional assistance from several other EPA organizations (see Annex A).

EPA Order 2071, National Approach to Response (November 2008) established an approach for a consistent and coordinated response among EPA response assets for a nationally significant incident, including those featuring radiation. Interoffice subgroups were set up to address a variety of issues related to improving national coordination and consistency. One of the subgroups focuses on radiation issues, and includes representatives from OEM, ORIA, and the Regions. EPA's Core National Approach to Response (Core NAR) program is an annual assessment of continuous improvement in EPA's preparedness.

EPA Regions are delegated the programmatic authority to manage as well as to plan emergency response actions and are provided with funding allocations accordingly. Each EPA Region is primarily responsible for EPA's emergency response resources, procedures, plans, functions and activities necessary for addressing all emergencies, in accordance with respective regional priorities and needs. Specifically, EPA Regions:

- Are delegated the Superfund funding authority and the regulatory authority and responsibility to conduct EPA emergency response actions and Superfund cleanups¹⁹.
- Are responsible for developing regional radiation programs and for pre-designating federal OSCs, including OSCs who focus on radiological/nuclear response.
- Are responsible for up-front planning of their radiological response resources and operations, including NCP RRTs and Area Committees as appropriate.
- Have contracting authority for emergency response and removal support.

¹⁹ Delegation 14-2 gives the response authority to the Assistant Administrator of OLEM and the Regional Administrators. For some large-scale responses, the Assistance Administrator of OLEM may fill this role.

ORIA is responsible for maintaining a state of readiness to respond to radiological incidents and emergencies.

ORIA's preparedness measures include:

- Coordinating emergency preparedness activities with other federal and state and local agencies within the context of the NRIA.
- Maintaining the EPA-RERP.
- Representing EPA at meetings of the Federal Radiological Preparedness Coordinating Committee.
- Supporting the OSCs' ability to maintain readiness and response capability through training and assistance.
- Operating the RERT, one of EPA's Special Teams for response.
- Developing PAGs.
- Performing resource assessments.
- Maintaining RadNet fixed and deployable stations.
- Performing and evaluating its foreign nuclear incident exercises.
- Identifying public and commercial radioanalytical laboratories available to perform radioanalyses on incident field samples from the incident.
- Identifying radioactive waste disposal locations or provide options for disposal and/or storage and decay on site (in coordination with OLEM).

OEM is responsible for the overall coordination of homeland security, domestic and international prevention and preparedness activities and emergency preparedness functions. OEM preparedness measures include:

- Providing the NIC, Chair for the NRT, and the HQ EOC for the Agency.
- Providing leadership for the NICT, which is EPA's intra-agency team organized to deal with regional requests for support/assets and policy coordination during significant emergency events. The NICT may also provide guidance to the RRTs and Area Committees on an incident-specific basis. The NICT role in preparedness includes providing national-level guidance and policy direction on response coordination and operational issues. The NICT meets on a quarterly basis but can be activated in preparation for and/or during an emergency situation of national or international significance.
- Operating the CBRN CMAD, one of EPA's Special Teams for response.

- Serving as the EPA national domestic emergency response program office. The EPA domestic emergency response program is implemented via delegated response authorities from the Administrator to the EPA Regions and OSCs.
- Overseeing CERCLA removal policy and procedures.
- Serving as the coordinator for EPA for the NRF ESF #10 – Oil and Hazardous Materials Response Annex.
- Providing technical assistance to the EPA regional and Headquarters offices, USCG District Offices, and other local, state and federal agencies and foreign governments in responding to environmental emergencies such as oil spills and hazardous substance releases and in assessing and cleaning up hazardous waste sites.
- Developing a weekly report for DHS on the status of key national assets for radiation response which may be called upon by the NIRT.
- Identifying viable clean-up techniques and tools and providing options for disposal and/or storage and decay on site.
- Operating the Environmental Response Laboratory Network.
- Managing DEST for EPA.

The **RERT**, within ORIA, contributes to Agency preparedness by:

- Maintaining a radiation emergency response team capable of promptly and effectively responding as mandated in this plan to foreseeable radiological emergencies.
- Identifying key RERT roles, identifying personnel competent to fill these roles, and providing adequate training both for these and for anticipated replacement personnel in a timely manner.
- Procuring and maintaining RERT equipment and vehicles, including upkeep and calibration of instruments and maintenance of up-to-date records of equipment inventories and status.
- Developing and updating emergency response monitoring, laboratory, and assessment methods and equipment to enhance RERT effectiveness.

The **CBRN CMAD**, within OEM, contributes to Agency preparedness by:

- Maintaining an emergency response team capable of promptly and effectively supporting an OSC by providing technical decontamination expertise at the scene for radiological contamination events, as well as advice on containment, cleanup, restoration and recovery for radiological and nuclear incidents.

- Identifying key CBRN CMAD roles, identifying personnel competent to fill these roles, and providing adequate training both for these and for anticipated replacement personnel in a timely manner.
- Procuring and maintaining CBRN CMAD equipment and vehicles, including upkeep and calibration of instruments and maintenance of up-to-date records of equipment inventories and status.
- Developing and updating emergency response methods and equipment, including the ASPECT and ground based assessment capability.
- Supporting the OSCs' ability to maintain readiness and response capability through training and assistance.
- Identification and review of vendor capabilities for sampling and decontamination technologies.
- Research on decontamination needs and implementation of newly developed methods and tools (in coordination with the NHSRC)
- Developing and implementing the Radiation Task Force Training (in coordination with ORIA).
- Developing tactical guidance for OSC response to INDs/RDDs.

The **ERT**, within OSRTI, also contributes to Agency preparedness by:

- Maintaining an emergency response team capable of promptly and effectively supporting an OSC by providing technical and logistical assistance in responding to environmental emergencies.
- Identifying key ERT roles, identifying personnel competent to fill these roles, and providing adequate training both for these and for anticipated replacement personnel in a timely manner.
- Procuring and maintaining ERT equipment and vehicles, including upkeep and calibration of instruments and maintenance of up-to-date records of equipment inventories and status.
- Offering an array of products to assist other environmental practitioners both in the field and in the office, including downloadable software packages, guidance related to a wide variety of environmental sampling procedures, analytical and quality assurance SOPs, fact sheets, and technical bulletins.
- Developing a variety of utilities and tools to assist OSCs and field personnel in managing and performing their site-related duties by automating specific manual processes and tasks related to the collection and management of environmental information.

- Offering more than 20 regular courses designed for personnel who respond to spill events or who investigate and clean up hazardous substances and pollutants or contaminants through the Environmental Response Training Program, covering topics such as safety and health as well as the various technical operations needed to identify, evaluate, and control hazardous substances and pollutants or contaminants that have been released.
- Maintaining the capacity to swiftly compile technically focused, topic-specific courses as responders need them, such as on air monitoring for first responders.

The other EPA offices involved in radiological emergency response (see Annex A) also contribute to their own and the Agency's preparedness:

- Within OECA, the Field Operations Program's Training Team provides training, including to members of NCERT, in environmental crime investigations. The training emphasizes forensics evidence collection techniques for crime scenes involving hazardous materials and drinking water and waste water infrastructure protection.
- Within OAR, the Office of Air Quality Protection and Standards develops and updates a variety of mathematical methods or models, each with specific data needs, to describe the multi-media transport and fate of pollutants released to the atmosphere.
- Within the Office of the Administrator, the OHS provides leadership and coordinates homeland security policy across the Agency, including EPA's planning, prevention, preparedness, and response for nationally-significant incidents. In addition, OHS advises the Administrator and other senior leadership on matters related to national security and intelligence; serves as the principal Agency liaison to the U.S. intelligence community; and coordinates with EPA Programs and Regions on matters related to classified and other sensitive information. Finally, OHS serves as primary liaison with senior officials in the White House's National Security Staff, DHS, other federal agencies, and our non-governmental partners. Also within the Office of the Administrator, OCIR coordinates all EPA interactions with Congress and certain other governmental bodies, and Office of Public Affairs develops and refines procedures for communicating with the public and media during radiation emergencies.
- The Office of Water provides guidance and expertise on water security, drinking-water protection, cleanup, and standards/goal setting in conjunction with HSPD-7. To prepare for an incident, the office is responsible for establishing, in cooperation with ORIA, emergency guidance for radioactivity in drinking water.
- The ORD NHSRC conducts research and development efforts focus on the areas of threat and consequence assessment, decontamination and consequence management, water infrastructure protection, response capability enhancement, and technology testing and evaluation.

- Within the OLEM, the Office of Resource Conservation and Recovery develops guidance on waste management, including treatment, storage, and disposal for hazardous waste, including some forms of potentially radioactive waste.
- To further its emergency response role of assisting in collecting, managing, analyzing, and providing/allowing access to environmental information, the Office of Environmental Information works closely with program offices to develop data management tools and processes, including geographic information systems tools and data, for use in emergency response.
- The Office of Administration and Resource Management Safety and Sustainability Division (SSD) provides guidance on routine radiation operations within the Agency and Agency radiation response operations, as well as management of the Agency's dosimetry program.

Together, EPA HQ and the 10 Regions are responsible for overseeing and implementing EPA's commitments regarding preparedness and response for natural and technological disasters addressed in the NCP and NRF. In that capacity, these organizations are also responsible for providing programmatic guidance and policy directives to the regional and field offices and facilitating coordination with other federal departments and agencies' headquarters and operation centers. All organizations, jointly and/or individually, collaborate with other response entities to maintain Agency readiness to respond and provide support to state and local governments and other federal agencies.

3.2 Implementing Plans and Procedures

The EPA-RERP will be maintained under the direction of the Director of ORIA, in consultation with OEM and other members of the NICT. As necessary, ORIA will update the EPA-RERP, in order to reflect recent experience and changes in the organization and responsibilities of emergency response assets both within and outside EPA.

Beyond the EPA-RERP, implementing plans and procedures need to be developed for EPA responders on a wide range of topics critical to radiological emergency response. In some cases, OEM will take the lead for development on behalf of the Agency. In other cases, individual program offices, programs, or Special Teams will develop documents on their area of expertise to share with other Agency resources (e.g., CBRN CMAD, ORIA, NHSRC, and SSD). Finally, many programs will need to develop internal documents. In many of the examples given here, multiple implementing plans and procedures will be written at multiple levels of the organization in order to ensure that requirements are established and incorporated.

Ideally, EPA radiological emergency response program assets should develop implementing procedures/guidance covering the following, as appropriate:

- Training and exercise requirements for radiological emergency response personnel.
- Concept of operations describing the approach to radiological emergency response.
- Radiological assessment capabilities (e.g., Data Quality Objectives for radiological monitoring and sampling in emergency response and the approach, including equipment that will be used to meet these objectives).
- Data management, interpretation and sharing.
- Notification and communication requirements.
- EPA personnel emergency response duties.
- Medical surveillance (including minimum medical monitoring requirements and any additional surveillance expected to be performed following potential exposure).
- Long-term environmental monitoring, consistent with applicable interagency guidance and EPA regulations.

To the maximum extent possible, Agency implementing procedures/guidance should be coordinated with all EPA radiological emergency responders and, if applicable, with EPA's interagency partners to ensure consistency of approach. Implementing procedures should be reviewed regularly and revised as necessary to incorporate changes to federal emergency response plans, the EPA emergency response mission, plans and procedures, or lessons learned from training exercises.

3.3 Training

Training is an essential component of the radiological response process. Each program office and region within EPA that has a significant role in responding to radiological incidents and emergencies should develop and implement a training plan to ensure that radiological emergency responders are trained by personnel experienced in radiological emergency response management. This training should provide detailed instruction relevant to the position in which staff members are employed or expected to be employed during any given incident. The training may be conducted by EPA staff, other federal agencies/departments, or private contractors. Less experienced workers should not be assigned unsupervised positions or activities. Seasoned employees should be encouraged to attend refresher courses to maintain a maximum level of readiness and competency, such as annual training on radiation basics, instrumentation, health and safety considerations, survey plans, and decontamination techniques.

OSCs are required to take Radiation – Basics, Radiation – Advanced, Radiation Detection Instrumentation, and Radiation Dosimetry (Thermoluminescent Detector) Awareness Training upon initial deployment, with refresher training on a biennial basis. Additional radiation training courses include (but are not limited to): Use of the Radiation Preliminary Remediation Goal Calculator, Multi-Agency Radiation Survey and Site Investigation Manual and its supplements, FRMAC Liaison, Assessment, and Operations Training, Radioactive Materials Shipping, Radiation Worker (I and II), Radiological Emergency Response Operations, and Applied Health Physics.

For field positions within the ICS structure, Incident Management Team Key Leadership Positions are filled by Agency personnel who have the appropriate training, applicable professional experience and possess the minimum core competencies for the position. OSCs with 5 years of experience performing OSC duties are considered to have met the “applicable professional experience” requirements for all of these ICS positions except for Public Information Officer and Finance Section Chief. Some OSCs, however, may have the applicable experience for those two positions as well. ICS training includes, but is not limited to, general training at four levels (I-100 through I-400), IS-700 and -800, position-specific training and IMT team training (EPA-420).

Some positions may require additional required training integral to EPA programs (e.g., Health & Safety, Hazardous Waste Operations and Emergency Response (HAZWOPER), Contract Management, and technical training specific to an EPA job function). OSCs will often participate in training with their planning partners. Local hazardous materials teams sponsor frequent training. Also, planning groups such as Local Emergency Planning Committees frequently offer training sponsored by emergency management agencies and private industry.

EPA ICS training is managed by the NIMS Integration Team (NIT) led by OEM, which has established a general, position-specific and team training curriculum based on NIMS. EPA courses are recommended; however, equivalent courses provided by FEMA’s Emergency Management Institute, the National Fire Academy, the National Wildfire Coordinating Group, and the USCG are acceptable alternatives, as are state and local courses that comply with the National Standard Curriculum Training Development Guidance provided by DHS. All ICS position-specific training is documented electronically in the Portal database under “Field Readiness”.

RSC members complete I-100 and -200, IS-700 and -800 and the RSC orientation. In addition, RSC members participate in periodic emergency response exercises to test and improve EPA’s overall readiness.

RTFLs complete a 10-day course managed by RERT and CBRN CMAD designed to prepare them to take on the administrative and leadership functions of a RTFL within an ICS. It includes technical topics, such as operating radiation surveying and monitoring equipment and collecting and managing radiation survey/monitoring field

data. RTFLs also participate in annual three-day refresher training required to maintain their qualifications/readiness to serve in this position.

3.4 Drills and Exercises

Exercises involving radiological materials are essential preparation for a response. They are inherent to EPA's planning and preparedness efforts and are included in EPA's Core NAR assessment program. EPA personnel involved in radiological response are expected to participate in available exercises to help improve EPA's preparedness. To this end, EPA participates in both internal and multi-agency exercises. EPA utilizes the DHS Homeland Security Exercise and Evaluation Program (HSEEP) to develop, plan, and implement internal exercises.

OLEM has the lead for maintaining a National Training and Exercise Plan for EPA drills and exercises designed to allow OEM, other EPA offices, regional offices, Special Teams, and other relevant organizations within EPA to test personnel, plans (including the NRF and the NCP), procedures, and equipment in responding to all incidents, including radiological emergencies. These activities may also involve others outside the Agency, such as other federal agencies, state and local governments, and foreign and international organizations, where appropriate. The drills and exercises may be targeted to practice one aspect of response, such as data sharing, or comprehensive, to cover response to an incident from notification through cleanup involving all potential parties. Following each exercise, OLEM will develop and maintain a Correction Action Program to identify corrective actions, assign responsibilities, and track implementation of improvement actions. Regions must also develop a region-specific exercise program that addresses regional needs, consistent with the national program. Individual EPA Offices, such as ORIA, and Special Teams may develop their own exercises and drills, and will coordinate their activities with the OLEM National Exercise Coordinator on a periodic basis.

One such exercise was Liberty RadEx, the first national Tier II²⁰ full-scale RDD exercise, held in Philadelphia and the surrounding area in April of 2010. Liberty RadEx was a national exercise sponsored and designed by EPA to practice and test federal, state, and local assessment and cleanup capabilities in the aftermath of an RDD incident in an urban environment. Liberty RadEx was unique in that participants practiced their "post-emergency" phase responsibilities and coordination, and worked with stakeholders and the public to plan for community recovery. Another such exercise was Empire 2009, conducted in Albany, NY, which exercised the use of numerous ICS positions, and the activation and integration of the FRMAC with many different

²⁰ FEMA's National Exercise Program consists of four tiers: Tier I are White House-directed full-participation strategy and policy exercises (one National Level Exercise and four Principals Level Exercises per year), Tier II are federal strategy and policy exercises with significant simulation (two-three exercises per year), Tier III are operational, tactical or organizational federal exercises with some simulation, and Tier IV are State, Local, Territorial, Tribal or Private Sector exercises.

agencies, including EPA, state, county, and local officials. Additional recent exercises include the Vibrant Response series, Southern Exposure 2015, and the upcoming Northern Lights 2016.

3.5 Plan Maintenance and Update

ORIA will review and update the EPA-RERP as needed to incorporate any changes in the NRF, FIOPs, and NRIA or in its implementation in any other plans and applicable procedures referenced in the EPA-RERP. ORIA will also be responsible for distribution of the EPA-RERP.

IV. ACRONYMS

AEA	Atomic Energy Act of 1954, as amended
ASPECT	Airborne Spectral Photometric Environmental Collection Technology
CBP	Customs and Border Patrol
CBRN	Chemical, Biological, Radiological, Nuclear
CBRNE	Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives
CMAD	Consequence Management Advisory Division
CCMRF	CBRNE Consequence Management Response Force
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CERFP	CBRNE Enhanced Response Force Packages
CFR	Code of Federal Regulations
CST	Civil Support Team
DEST	Domestic Emergency Support Team
DHS	Department of Homeland Security
DoD	Department of Defense
DOE	Department of Energy
DOI	Department of Interior
DOS	Department of State
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
EPA-RERP	EPA Radiological Emergency Response Plan
ERT	Environmental Response Team
ESF	Emergency Support Function
FBI	Federal Bureau of Investigation
FIOP	Federal Interagency Operational Plan
FCO	Federal Coordinating Officer
FEMA	Federal Emergency Management Agency

FRMAC	Federal Radiological Monitoring and Assessment Center
HAZWOPER	Hazardous Waste Operations and Emergency Response
HHS	Department of Health and Human Services
HSEEP	Homeland Security Exercise and Evaluation Program
HSPD	Homeland Security Presidential Directive
IAEA	International Atomic Energy Agency
IC	Incident Commander
ICP	Incident Command Post
ICS	Incident Command System
IMAAC	Interagency Modeling and Atmospheric Assessment Center
IMH	Incident Management Handbook
IND	Improvised Nuclear Device
JFO	Joint Field Office
JIC	Joint Information Center
JOC	Joint Operations Center
LANL	Los Alamos National Laboratory
NAR	National Approach to Response
NARAC	National Atmospheric Release Advisory Center
NAREL	National Analytical and Radiation Environmental Laboratory, Montgomery, AL
NASA	National Aeronautics and Space Administration
NCERT	National Criminal Enforcement Response Team
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NCRFO	National Center for Radiation Field Operations
NDRF	National Disaster Recovery Plan
NICT	National Incident Coordination Team
NIMS	National Incident Management System
NIRT	Nuclear Incident Response Team
NIT	NIMS Integration Team
NNSA	National Nuclear Security Administration
NOC	National Operations Center

NRC	National Response Center
NRCC	National Response Coordination Center
NRCCom	Nuclear Regulatory Commission
NRF	National Response Framework
NRF-CIS	National Response Framework Catastrophic Incident Supplement
NRIA	Nuclear/Radiological Incident Annex
NRITF	Nuclear/Radiological Incident Task Force
NRS	National Response System
NRT	National Response Team
OAQPS	Office of Air Quality Protection and Standards
OAR	Office of Air and Radiation
OCEFT	Office of Criminal Enforcement, Forensics and Training
OECA	Office of Enforcement and Compliance Assurance
OEM	Office of Emergency Management
OHS	Office of Homeland Security
ORIA	Office of Radiation and Indoor Air
OSC	On-Scene Coordinator
OLEM	Office of Land and Emergency Management
OSRTI	Office of Superfund Remediation and Technology Innovation
PAGs	Protective Action Guides
PHSA	Public Health Service Act
PKEMRA	Post-Katrina Emergency Management Reform Act
PPE	Personal Protective Equipment
RDD	Radiological Dispersal Device
REOC	Regional Emergency Operations Center
RERT	Radiological Emergency Response Team
RIC	Regional Incident Coordinator
RICT	Regional Incident Coordination Team
RRCC	Regional Response Coordination Center
RRSOP	Radiological Response Standard Operating Procedure
RRT	Regional Response Team

RSC	Response Support Corps
RTFL	Radiation Task Force Leader
SME	Subject Matter Expert
SSD	Safety and Sustainability Division
SOP	Standard Operating Procedure
USCG	U.S. Coast Guard

V. AUTHORITIES AND REFERENCES

The following statutes, rules, agreements, memoranda of understanding, executive orders, and Presidential decision directives, comprise some, but not all, of the authorities relied upon by EPA for its emergency response activities for radiological incidents.

1. Reorganization Plan No. 3 of 1970, 35 Fed. Reg. 15623 (October 6, 1970). (<https://www.gpo.gov/fdsys/pkg/USCODE-2011-title5/pdf/USCODE-2011-title5-app-reorganiz-other-dup92.pdf>, retrieved June 9, 2016)
2. Atomic Energy Act of 1954, as amended, 42 § U.S.C. 2011 et seq. (<https://www.gpo.gov/fdsys/pkg/USCODE-2010-title42/html/USCODE-2010-title42-chap23-divsnA.htm>, retrieved June 9, 2016)
3. Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended, 42 U.S.C. § 5121 et seq. (<https://www.gpo.gov/fdsys/pkg/USCODE-2014-title42/pdf/USCODE-2014-title42-chap68-subchapV-sec5208.pdf>, retrieved June 9, 2016)
4. Public Health Service Act, as amended, 42 U.S.C § 241 et seq. (http://legcounsel.house.gov/Comps/PHSA_CMD.pdf, retrieved June 9, 2016)
5. Clean Water Act, as amended, 33 U.S.C. § 1251 et seq. (<https://www.gpo.gov/fdsys/pkg/USCODE-2014-title33/html/USCODE-2014-title33-chap40.htm>, retrieved June 9, 2016)
6. Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. § 9601 et seq. (<https://www.gpo.gov/fdsys/pkg/USCODE-2011-title42/html/USCODE-2011-title42-chap103.htm>, retrieved June 9, 2016)
7. The Price-Anderson Amendments Act of 1988, Public Law 100-408, 102 Stat. 1066 (1988) (amending the Atomic Energy Act of 1954 and codified at 42 U.S.C. §§ 2014, 2210, 2273, 2282a (2003)). (<https://www.gpo.gov/fdsys/pkg/USCODE-2010-title42/html/USCODE-2010-title42-chap23-divsnA.htm>, retrieved June 9, 2016)
8. Oil Pollution Act of 1990, 33 U.S.C. § 2701 et seq. (<https://www.gpo.gov/fdsys/pkg/USCODE-2010-title33/html/USCODE-2010-title33-chap40.htm>, retrieved June 9, 2016)
9. Clean Air Act, as amended, 42 U.S.C. § 7401 et seq. (<https://www.gpo.gov/fdsys/pkg/USCODE-2014-title42/pdf/USCODE-2014-title42-chap68-subchapV-sec5208.pdf>, retrieved June 9, 2016)

10. Safe Drinking Water Act, as amended, 42 U.S.C. § 300f et seq. (<https://www.gpo.gov/fdsys/pkg/USCODE-2011-title42/pdf/USCODE-2011-title42-chap6A-subchapXII.pdf>, retrieved June 9, 2016)
11. The Homeland Security Act of 2002, as amended, 6 U.S.C. § 101 et seq. (<http://uscode.house.gov/view.xhtml;jsessionid=DC3C35913678FAD582FB04795712185A?hl=false&edition=2014&req=granuleid%3AUSC-2014-title6->, retrieved June 9, 2016)²¹
12. The Post-Katrina Emergency Management Reform Act of 2006 (Public Law 109-295). (<https://www.congress.gov/109/plaws/publ295/PLAW-109publ295.pdf>, retrieved August 31, 2016).²²
13. National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300. (http://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr300_main_02.tpl, retrieved June 9, 2016)
14. Radiological Emergency Planning and Preparedness, 44 C.F.R. Part 351. (<https://www.gpo.gov/fdsys/pkg/CFR-2015-title44-vol1/pdf/CFR-2015-title44-vol1-chapl-subchapF.pdf>, retrieved June 9, 2016)
15. Radionuclide Reportable Quantity Adjustment Rulemaking (40 C.F.R. Part 302), 54 F.R. 22524, May 24, 1989. (<https://www.epa.gov/epcra/reportable-quantity-rq-adjustment-methodology#radionuclides>, and <https://www.epa.gov/epcra/cercla-and-epcra-continuous-release-reporting>, retrieved June 13, 2016)
16. Environmental Protection Agency List of lists, Appendix B Radionuclides listed under the Comprehensive Environmental Response, Compensation, and Liability Act, 2013 (www.epa.gov/sites/production/files/2013-08/documents/list_of_lists.pdf, retrieved June 13, 2016)
17. Executive Order 12148, “Federal Emergency Management,” July 1979. (www.archives.gov/federal-register/executive-orders/carter.html, retrieved June 9, 2016)
18. Executive Order 12656, “Assignment of Emergency Preparedness Responsibilities,” November 18, 1988, as amended by Executive Order 13286, “Amendment of Executive Orders, and Other Actions, in Connection With the Transfer of Certain Functions to the Secretary of Homeland Security,” February 28, 2003. (www.archives.gov/federal-register/executive-orders/reagan.html, retrieved June 9, 2016)

²¹ The Homeland Security Act of 2002, referred to in text, is [Pub. L. 107–296, Nov. 25, 2002, 116 Stat. 2135](#) as amended. Title V of the Act is classified generally to subchapter V (§311 et seq.) of chapter 1 of this title. For complete classification of this Act to the Code, see Short Title note set out under section 101 of this title and Tables.)

²² This Act, referred to in text, means title VI of [Pub. L. 109–295, Oct. 4, 2006, 120 Stat. 1394](#), known as the Post-Katrina Emergency Management Reform Act of 2006. For complete classification of this Act to the Code, see Short Title and References in Pub. L. 109–295 notes set out under section 701 of this title and Tables.)

19. Executive Order 12657, "Federal Emergency Management Agency Assistance in Emergency Preparedness Planning at Commercial Nuclear Power Plants," November 18, 1988, as amended by Executive Order 13286, "Amendment of Executive Orders, and Other Actions, in Connection With the Transfer of Certain Functions to the Secretary of Homeland Security," February 28, 2003. (www.archives.gov/federal-register/executive-orders/reagan.html, retrieved June 9, 2016 and <http://www.archives.gov/federal-register/executive-orders/2003.html>, retrieved August 31, 2016)
20. Presidential Decision Directive No. 62, "Combating Terrorism," May 1998. (www.dtic.mil/get-tr-doc/pdf?AD=ADA473949, retrieved June 9, 2016)
21. Homeland Security Presidential Directive – 5, "Management of Domestic Incidents," February 28, 2003. (www.dhs.gov/publication/homeland-security-presidential-directive-5 and www.gpo.gov/fdsys/pkg/PPP-2003-book1/pdf/PPP-2003-book1-doc-pg229, retrieved June 9, 2016)
22. Homeland Security Presidential Directive – 7, "Critical Infrastructure Identification, Prioritization, and Protection," December 17, 2003. (www.dhs.gov/homeland-security-presidential-directive-7 and www.gpo.gov/fdsys/pkg/PPP-2003-book2/pdf/PPP-2003-book2-doc-pg173, retrieved June 9, 2016)
23. Homeland Security Presidential Directive – 8, "National Preparedness," December 17, 2003. (www.dhs.gov/presidential-policy-directive-8-national-preparedness and www.gpo.gov/fdsys/pkg/PPP-2003-book2-doc-pg1745, retrieved June 9, 2016)
24. "National Response Framework, 2nd ed.," Department of Homeland Security, May 2013. (www.fema.gov/media-library-data/20130726-1914-25045-1246/final_national_response_framework, retrieved June 13, 2016)
25. "National Disaster Recovery Framework," Department of Homeland Security, September 2011. (http://www.fema.gov/media-library-data/20130726-1820-25045-5325/508_ndrf.pdf, retrieved June 13, 2016)
26. "Response Federal Interagency Operational Plan, Second Edition," Department of Homeland Security, August 2016. (http://www.fema.gov/media-library-data/1471452095112-507e23ad4d85449ff131c2b025743101/Response_FIOP_2nd.pdf, retrieved August 31, 2016)
27. "Recovery Federal Interagency Operational Plan, Second Edition," Department of Homeland Security, August 2016. (http://www.fema.gov/media-library-data/1438548239946-77122527f13b1514954db41dceeeb2d0/Recovery_FIOP_SecondEdition_July_2015.pdf, retrieved August 31, 2016)

28. "Nuclear/Radiological Incident Annex to the Response and Recovery Federal Interagency Operations Plans", Department of Homeland Security, Final, October 2016.
29. "National Incident Management System," Department of Homeland Security, March 1, 2004. (http://www.fema.gov/pdf/emergency/nims/NIMS_core.pdf, retrieved June 13, 2016)
30. "Convention on Early Notification of a Nuclear Accident," and "Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency," International Atomic Energy Agency (1986).
31. EPA-400-R-92-001, "Manual of Protective Action Guides and Protective Actions for Nuclear Incidents," Environmental Protection Agency, 1992. (<http://www2.epa.gov/sites/production/files/2014-11/documents/pag-manual-interim-public-comment-4-2-2013.pdf>, retrieved June 9, 2016)
32. EPA's "Emergency Responder Health and Safety Manual: Chapter 2, Health and Safety Training Program, Radiation Health and Safety Implementation Plan, Draft, Version 1.0" Environmental Protection Agency, March 2005. (https://www.epaossc.org/sites/2810/files/rad_chapter3_mar05.pdf, accessed 8/31/16.)
33. EPA Order 2030.1A, "Continuity of Operations (COOP) Policy," Environmental Protection Agency, April 27, 2005. (https://www.epa.gov/sites/production/files/2013-1/documents/disaster_response_coop_procedures.pdf, retrieved June 9, 2016)
34. EPA Order 2071, "National Approach to Response," Environmental Protection Agency, November 12, 2008. (<http://intranet.epa.gov/ohr/rmpolicy/ads/orders/2071.pdf>, retrieved June 9, 2016)
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(https://emp.epa.gov/empadmin/dynamicContent/centralrepo/EMP/Incident%20Management%20Handbook_IMH.pdf, retrieved June 9, 2016)

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40. "OSC Radiological Response Guidelines," Environmental Protection Agency, October 2006.
41. "Foreign Nuclear Incident Handbook," Environmental Protection Agency, February 2012.
42. "Guidance Document for the Transfer of Operational Control of the Federal Radiological Monitoring and Assessment Center (FRMAC) for the U.S. Department of Energy to the U.S. Environmental Protection Agency," Interim Version, Department of Energy and Environmental Protection Agency, September 2012.

VI. DEFINITIONS

Advisory Team for Environment, Food and Health (The A-Team)— A team of representatives from the US Environmental Protection Agency, the Dept. of Agriculture (USDA), the Food and Drug Administration (FDA), the Centers for Disease Control and Prevention (CDC) and other Federal Agencies. The A-Team is convened and activated by the US Department of Health and Human Services' Centers for Disease Control and Prevention when the radiological emergency has the potential for public health consequences. The A-Team is expected to integrate into the Planning Section to provide technical expertise to the Incident Command/Unified Command and coordinating agency. It may also provide liaisons to and/or coordinate with the Joint Field Office and state and local government Emergency Operations Centers (EOCs), as needed. The primary function of the A-Team is to provide timely interagency advice and recommendations to the coordinating agency and the state and local governments in the following areas:

- Environmental assessments (field monitoring) required for developing recommendations.
- Advice on Protective Action Guides and their application to the emergency.
- Advice on protective actions using data and assessment from the FRMAC.
- Advice on protective actions to prevent or minimize contamination of milk, food, and water and to prevent or minimize exposure through ingestion.
- Recommendations regarding the disposition of contaminated livestock and poultry.
- Recommendations for minimizing losses of agricultural resources from radiation effects.
- Availability of food, animal feed, and water supply inspection programs to ensure wholesomeness.
- Relocation, reentry, and other radiation protection measures prior to recovery.
- Recommendations for recovery, return, and cleanup issues.
- Health and safety advice or information for the public and for workers.
- Estimates of effects of radioactive releases on human health and the environment.

- Guidance on the use of radio-protective substances (for example, thyroid blocking agents), including dosage and projected radiation doses that warrant the use of such drugs.
- Other matters, as requested by the coordinating agency.

Agreement State—A state that has entered into an Agreement under the Atomic Energy Act of 1954, as amended, in which the Nuclear Regulatory Commission has delegated to such states certain regulatory authorities over source, byproduct, and special nuclear material in quantities not sufficient to form a critical mass. The Nuclear Regulatory Commission retains responsibility for oversight of all commercial nuclear power plants regardless of whether the plant is located in an agreement state.

Area Command (Unified Area Command)—In accordance with the NIMS, an organization established (1) to oversee the management of multiple incidents that are each being handled by an Incident Command System (ICS) organization or (2) to oversee the management of large or multiple incidents to which several Incident Management Teams have been assigned. Area Command has the responsibility to set overall strategy and priorities, allocate critical resources according to priorities, ensure that incidents are properly managed, and ensure that objectives are met and strategies followed. Area Command becomes a Unified Area Command when incidents are multi-jurisdictional. Area Command may be established at an EOC facility or at some location other than an Incident Command Post (ICP).

Area Committee – Under the NCP, the entity appointed by the President consisting of members from qualified personnel of federal, state, and local agencies with responsibilities that include preparing an Area Contingency Plan for the area designated by the President. The Area Committee may include ex-officio (i.e., non-voting) members (e.g., industry and local interest groups).

Catastrophic Incident—Under the NRF, any natural or man-made incident, including terrorism that results in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions. A catastrophic event could result in sustained national impacts over a prolonged period of time; almost immediately exceeds resources normally available to state, local, territorial, tribal, and private-sector authorities in the impacted area; and significantly interrupts governmental operations and emergency services to such an extent that national security could be threatened. The U.S. Department of Homeland Security would most likely lead the federal response under the NRF for catastrophic events.

Chemical, Biological, Radiological and Nuclear Consequence Management Assistance Division – The CMAD is available to support On-Scene Coordinators (OSCs) and other homeland security customers by providing leadership and

coordination of remediation policy, science, and engineering, bringing the latest science and technology to operational response. With six geographic locations, the CMAD is dedicated to providing 24/7 scientific and technical expertise for all phases of CBRN consequence management. Working closely with the National Homeland Security Research Center, EPA Special Teams, and other Federal agencies and research organizations, CMAD provides scientific support and technical expertise specifically for characterization, decontamination, clearance, and waste management of buildings and building contents, public infrastructure, transportation systems, and outdoor spaces. To continuously advance EPA's understanding and ability to recover from a CBRN incident, CMAD regularly engages in evaluating, advising, and/or leading or collaborating on various applied research projects that can be scaled from the bench to the field. Specialized expertise and cutting-edge response assets such as the Airborne Spectral Photometric Environmental Collection Technology (ASPECT) (the only airborne stand-off chemical and radiological detection, infrared and photographic imagery platform) and the Portable High Throughput Integrated Laboratory Identification Systems (PHILIS), designed to detect chemical warfare agents and toxic industrial chemicals, are available to assist local, national, and international agencies supporting hazardous substance response and CBRN incidents.

Emergency—For the purposes of Stafford Act implementation, “any occasion or instance for which, in the determination of the President, federal assistance is needed to supplement state and local efforts and capabilities to save lives and to protect property and public health and safety, or to lessen or avert the threat of a catastrophe in any part of the United States.”

EPA Emergency Operations Center (EOC)—The dedicated center located at EPA Headquarters where EPA coordinates its national-level activities for significant incidents.

Emergency Support Function (ESF)—Under the NRF, a grouping of government and certain private-sector capabilities into an organizational structure to provide the support, resources, program implementation, and services that are most likely to be needed to save lives, protect property and the environment, restore essential services and critical infrastructure, and help victims and communities return to normal, when feasible, following domestic incidents. The ESFs serve as the primary operational-level mechanism to provide assistance to state and local governments or to federal departments and agencies conducting missions of primary federal responsibility.

Environmental Response Team (ERT)—Established by EPA, supports the EPA On-Scene Coordinators (OSCs) for non-emergency and emergency response site work, including terror incidents. Disciplines available include biology, chemistry, hydrology, geology, and engineering. The ERT provides technical advice to the OSC for both planning and response to discharges of oil and releases of hazardous substances into the environment. The ERT can provide expertise in air monitoring, radiation detection

and quantification, contamination containment, dispersion modeling, environmental monitoring, sampling design and implementation, isotopic characterization, and personnel monitoring and decontamination. It is managed within the Office of Superfund Remediation and Technology Innovation (part of the Office of Land and Emergency Management).

Federal Coordinating Officer (FCO)—Under the NRF, the federal officer who is appointed by the President to manage federal resource support activities related to Stafford Act disasters and emergencies. The FCO is a senior Federal Emergency Management Agency (FEMA) official responsible for coordinating the timely delivery of federal disaster assistance resources and programs to the affected state and local governments, individual victims, and the private sector. The FCO represents the FEMA Administrator in the field to discharge all FEMA responsibilities for the response and recovery efforts underway. In Stafford Act incidents, the FCO is the focal point of coordination within the Unified Coordination Group, ensuring overall integration of federal emergency management, resource allocation, and seamless integration of federal activities in support of, and in coordination with, state and local requirements. The FCO's responsibilities include tasking other federal departments and agencies with mission assignments.

Federal Interagency Operational Plans (FIOPs)--Describe the concept of operations for integrating and synchronizing existing national-level Federal capabilities to support local, state, tribal, territorial, insular area, and Federal plans, and are supported by Federal department-level operational plans, where appropriate. The FIOPs build upon the National Planning Frameworks, which set the strategy and doctrine for how the whole community builds, sustains, and delivers the core capabilities identified in the National Preparedness Goal. There is one FIOP for each of the five preparedness mission areas: Prevention Federal Interagency Operational Plan; Protection Federal Interagency Operational Plan; Mitigation Federal Interagency Operational Plan; Response Federal Interagency Operational Plan; and Recovery Federal Interagency Operational Plan.

Federal Radiological Monitoring and Assessment Center (FRMAC)—The FRMAC is responsible for coordinating all environmental radiological monitoring, sampling, and assessment activities for the response. The FRMAC is a DOE-led interagency asset that is available on request to respond to nuclear/radiological incidents. DOE leads the FRMAC for the initial response, then transitions FRMAC leadership to EPA to support subsequent response. The FRMAC is established at or near the incident location in coordination with DHS, the coordinating agency, other federal agencies, and state local authorities.

FRMAC Director—The person designated by U.S. Department of Energy/National Nuclear Security Administration (DOE/NNSA) or EPA to manage operations of the FRMAC.

Federal Radiological Preparedness Coordinating Committee—An interagency body consisting of the primary agencies discussed in the Nuclear/Radiological Incident Annex, chaired by DHS/FEMA, to coordinate and develop national-level radiological prevention and preparedness policies and procedures.

Federal Resource Coordinator—Under the NRF, the federal official appointed by DHS to manage federal resource support activities related to non-Stafford Act incidents when a federal department or agency acting on its own authority requests the assistance of the Secretary of Homeland Security to obtain support from other federal departments and agencies. The Federal Resource Coordinator coordinates this support using interagency agreements and memoranda of understanding.

Hazardous Material—For the purposes of the NRF's ESF #10 regarding oil and hazardous materials, intended to mean hazardous substances, pollutants, and contaminants as defined by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

Hazardous Substance—As defined by the NCP, any substance designated pursuant to section 311(b)(2)(A) of the Clean Water Act; any element, compound, mixture, solution, or substance designated pursuant to section 102 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (but not including any waste the regulation of which under the Solid Waste Disposal Act (42 U.S.C. § 6901 et seq.) has been suspended by act of Congress); any toxic pollutant listed under section 307(a) of the Clean Water Act; any hazardous air pollutant listed under section 112 of the Clean Air Act (42 U.S.C. § 7521 et seq.); and any imminently hazardous chemical substance or mixture with respect to which the EPA Administrator has taken action pursuant to section 7 of the Toxic Substances Control Act (15 U.S.C. § 2601 et seq.).

Incident Command System (ICS)—In accordance with NIMS, a standardized on-scene emergency management construct specifically designed to provide for the adoption of an integrated organizational structure that reflects the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries. ICS is a management system designed to enable effective incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, designed to aid in the management of resources during incidents. It is used for all kinds of emergencies and is applicable to small as well as large and complex incidents. It is also used by various jurisdictions and functional agencies, both public and private, to organize field-level incident management operations.

Improvised Nuclear Device (IND) Incident—An event resulting from a deliberate act involving nuclear weapons or nuclear materials that includes the sabotage, seizure, theft, loss or detonation of a nuclear weapon or radiological nuclear weapon component or the fabrication and employment of an IND or credible threat of either.

Incident Management Assistance Team—An interagency national- or regional-based team composed of subject-matter experts and incident management professionals make preliminary arrangements to set up Federal field facilities and initiate establishment of the Joint Field Office.

Incident Management Team—An incident command organization made up of the Command and General Staff members and appropriate functional units of an ICS organization. The 11 Key Leadership Positions identified as essential to EPA operations are Incident Commander, Safety Officer, Public Information Officer, Liaison Officer, Operations Section Chief, Planning Section Chief, Logistics Section Chief, Finance Section Chief, Situation Unit Leader, Environmental Unit Leader, and Resource Unit Leader.

Interagency Modeling and Atmospheric Assessment Center (IMAAC)—The interagency center responsible for production, coordination, and dissemination of consequence predictions for an airborne hazardous material release. The IMAAC generates the single federal prediction of atmospheric dispersions and their consequences using the best available resources from the federal government.

Joint Field Office (JFO)—Under the NRF, a temporary, federal facility established locally to provide a central point for federal, state, and local executives with responsibility for incident oversight, direction, and/or assistance to effectively coordinate protection, prevention, preparedness, response, and recovery actions. The JFO will combine the traditional functions of the Joint Operations Center (JOC), the Federal Emergency Management Agency (FEMA) Disaster Field Office, and the Joint Information Center (JIC) within a single federal facility.

Joint Information Center (JIC)—A center established to coordinate the federal public information activities at the scene. 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 as well as from participating state and local agencies assemble at the JIC.

Joint Operations Center (JOC)—The focal point for all federal investigative law enforcement activities during a terrorist or potential terrorist incident, or any other significant criminal incident. The Senior Federal Law Enforcement Official manages the JOC, which becomes a component of the JFO when the response falls under the NRF.

License—An authorization issued to a facility owner or operator by the Nuclear Regulatory Commission pursuant to the conditions of the Atomic Energy Act of 1954, as

amended, or issued by an agreement state pursuant to appropriate state laws. The Nuclear Regulatory Commission licenses certain activities under section 170(a) of the Atomic Energy Act.

Local Government—Any county, city, village, town, district, or political subdivision of any state; any Indian tribal agency or authorized tribal organization; or any Alaskan Native village or organization, including any rural community or unincorporated town or village or any other public entity.

Major Disaster— For purposes of Stafford Act implementation, any natural catastrophe (including any hurricane, tornado, storm, high water, winddriven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, or drought), or, regardless of cause, any fire, flood, or explosion, in any part of the United States, which in the determination of the President causes damage of sufficient severity and magnitude to warrant major disaster assistance under this chapter to supplement the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby.

Mission Assignment—The vehicle used by DHS/FEMA to support federal operations in a Stafford Act major disaster or emergency declaration. It orders immediate, short-term emergency response assistance when an applicable state or local government is overwhelmed by the event and lacks the capability to perform, or contract for, the necessary work.

Monitoring—The use of sampling and radiation detection equipment to determine the levels of radiation or the presence of radioactive material.

National Criminal Enforcement Response Team (NCERT)—Managed within the Field Operations Program of EPA's Office of Criminal Enforcement, Forensics and Training to provide law enforcement response personnel and support for incidents or sites that contain or may contain chemical, biological, or radiological hazards to support Criminal Investigation Division Special Agents, OSCs, and other EPA Special Teams.

National Defense Area—An area established on non-federal lands located within the United States, its possessions or territories, for safeguarding classified defense information or protecting U.S. Department of Defense (DoD) equipment and/or material. Establishment of a National Defense Area temporarily places such non-federal lands under the effective control of DoD and results only from an emergency event. The senior DoD representative at the scene shall define the boundary, mark it with a physical barrier, and post warning signs. The landowner's consent and cooperation is obtained whenever possible; however, operational necessity dictates the final location, shape, and size of the National Defense Area.

National Disaster Recovery Framework—A guide that enables effective recovery support to disaster-impacted States, Tribes, Territorial and local jurisdictions. It provides a flexible structure that enables disaster recovery managers to operate in a unified and collaborative manner. It also focuses on how best to restore, redevelop and revitalize the health, social, economic, natural and environmental fabric of the community and build a more resilient Nation.

National Incident Coordination Team (NICT)—EPA's intra-Agency team, composed of representatives from all Headquarters offices, that brings together EPA's technical, policy, program, and communications expertise and serves as a focal point within EPA for overall coordination efforts for preparedness and response to significant events and situations that occur outside of routine operations.

National Incident Coordinator (NIC)—Senior EPA employee appointed on an incident-by-incident basis who: provides overall management of the incident at the national level; serves as the primary headquarters point of contact for the Regional Incident Coordinator; works under the direction of the Assistant Administrator for the Office of Land and Emergency Management and the Associate Administrator for Homeland Security; chairs the National Incident Coordination Team, and facilitates the resolution or elevation of significant issues to EPA senior management.

National Incident Management System (NIMS)—In March 2004, in compliance with Homeland Security Presidential Directive (HSPD)-5, the Department of Homeland Security issued the NIMS and required all federal agencies to implement it. The NIMS represents a core set of doctrine, concepts, principles, terminology, and organizational processes to enable effective, efficient and collaborative incident management at all levels. A key component of NIMS is the ICS.

National Operations Center (NOC)—Under the NRF, the primary national hub for domestic incident management operational coordination and situational awareness that is located in the Office of Operations Coordination at DHS. The NOC, which operates 24 hours/7 days per week, 365 days per year, is an interagency organization fusing law enforcement, national intelligence, emergency response, and private-sector reporting. The NOC facilitates homeland security information sharing and operational coordination with other federal, state, local, territorial, tribal, and non-governmental EOCs. The NOC integrates representatives from DHS and other federal departments and agencies to support steady-state threat-monitoring requirements and situational awareness, as well as operational incident management coordination. The organizational structure of the NOC is designed to integrate a full spectrum of interagency subject matter expertise and reach-back capability to meet the demands of a wide range of potential incident scenarios.

National Response Framework (NRF)—Guides how the Nation conducts all-hazards response. The NRF documents the key response principles, roles, and structures that

organize national response. It describes how local and state governments, the federal government, and private-sector and nongovernmental partners apply these principles for a coordinated, effective national response. It also describes special circumstances where the federal government exercises a larger role, including incidents for which federal interests are involved and catastrophic incidents where a state or local government would require significant support. It allows first responders, decision-makers, and supporting entities to provide a unified national response.

National Response System (NRS)—The National Response System (NRS) is described in the NCP and routinely and effectively responds to a wide range of oil discharges and hazardous substance releases. It is a multi-layered system of individuals and teams from local, state, and federal agencies, industry, and other organizations that share expertise and resources to ensure that spill control and cleanup activities for both oil and hazardous substances are timely and efficient, and that they minimize threats to human health and the environment.

National Response Coordination Center (NRCC)—Under the NRF, a multi-agency center that provides overall federal response coordination for significant incidents and emergency management program implementation. DHS/FEMA maintains the NRCC as a functional component of the NOC in support of incident management operations.

National Response Team (NRT)—As described in the NCP, consists of 15 federal agencies chaired by EPA and vice-chaired by the USCG with interests and expertise in various aspects of emergency response to oil and hazardous substance incidents. The NRT oversees the Nation's ability to respond effectively and efficiently to incidents by coordinating federal activities under the NCP, CERCLA, and ESF #10. NRT assistance usually takes the form of technical advice, access to additional resources or equipment, or coordination with the EPA RRTs.

National Security Area—An area established on non-federal lands located within the United States, its possessions, or territories for safeguarding classified information and/or restricted data or equipment and material belonging to DOE or the National Aeronautics and Space Administration (NASA). Establishment of a National Security Area temporarily places such non-federal lands under the effective control of DOE or NASA and results only from an emergency event. The senior DOE or NASA representative having custody of the material at the scene defines the boundary, marks it with a physical barrier, and posts warning signs. The landowner's consent and cooperation is obtained whenever possible; however, operational necessity dictates the final location, shape, and size of the National Security Area.

Nuclear Facilities—Installations that use or produce radioactive materials in their normal operations.

Nuclear Incident Response Team (NIRT)—Created by the Homeland Security Act and PKEMRA to provide DHS with a nuclear/radiological response capability. When activated, the Nuclear Incident Response Team consists of specialized federal response teams drawn from DOE/NNSA and/or EPA. These teams may become DHS operational assets providing technical expertise and equipment when activated during a crisis or in response to a nuclear/radiological incident as part of the DHS federal response. While DHS/FEMA will provide strategic guidance and coordination, tactical control over EPA NIRT personnel and assets will remain with EPA.

Nuclear/Radiological Incident Task Force (NRITF)--An interagency group that convenes within the National Response Coordination Center to provide standardized radiological/nuclear incident subject matter expertise in support of national level incident planning and whole community core capability delivery.

Nuclear Weapon Accident—An unexpected event involving nuclear weapons or nuclear components that results in any of the following:

- Accidental or unauthorized launching, firing, or use by U.S. forces or U.S.-supported allied forces of a nuclear-capable weapons system.
- An accidental, unauthorized, or unexplained nuclear detonation.
- Non-nuclear detonation or burning of a nuclear weapon or nuclear component.
- Radioactive contamination.
- Jettisoning of a nuclear weapon or component.
- Public hazard, actual or perceived.

On-Scene Coordinator (OSC)—The federal official pre-designated to coordinate and direct oil spill responses and removal actions related to hazardous substances, pollutants, or contaminants under the NCP. For radiological removal action, EPA, the U.S. Coast Guard, DoD, or DOE may provide the OSC, depending upon the location of the incident, ownership, operation, or jurisdiction. Other federal agencies are responsible for providing the OSC to coordinate and direct actions at their respective agency facilities for all removal actions that are not emergencies.

Owner or Operator—The organization that owns or operates the nuclear facility, carrier, or cargo that causes the radiological emergency. The owner or operator may be a federal agency, a state or local government, or a private business.

Primary Agency—Under the NRIA, the agency with primary authority (statutory or regulatory) to provide the leadership, expertise, and authority to implement and facilitate

critical and specific nuclear/radiological aspects of the Response and Recovery Mission Areas in accordance with those authorities and capabilities.

Protective Action Guide—A radiation exposure or contamination level or range established by appropriate federal or state or local agencies at which protective actions should be considered during an emergency.

Public Information Officer—Official at headquarters or in the field responsible for preparing and coordinating the dissemination of public information in cooperation with other responding federal, state, and local agencies. The Headquarters EOC Public Information Officer works with the National Incident Coordinator in the EOC and other staff, such as the Liaison Officer, and serves as the primary coordination point in the EOC for the Office of Public Affairs. The Field Public Information Officer represents and advises the Incident Commander on all public information matters related to the management of the incident. The Field Public Information Officer is also responsible for coordinating public information at or near the incident site and serving as the on-scene link to the JIC.

Radiological Dose Assessment—The evaluation and interpretation of radiological measurements and other information to provide a basis for decision making. Assessment can include projections of offsite radiological impact to human health.

Radiological Emergency—For the purposes of this plan, a radiological incident that poses an actual, potential, or perceived hazard to public health or safety, the environment, or loss of property.

Radiological Emergency Response Team (RERT)—A team provided by EPA's Office of Radiation and Indoor Air (ORIA) to support and respond to incidents or sites containing radiological hazards. This team provides expertise in radiation monitoring, radionuclide analyses, health physics, and risk assessment. The RERT can provide mobile laboratory support during a response and serve as a liaison to fixed laboratory capability.

RadNet—The upgraded EPA Environmental Radiation Ambient Monitoring System, which monitors radiation in air, drinking water, precipitation, and pasteurized milk. Upgrades include more air monitoring stations with near-real-time data reporting, added measurement capabilities, and a deployable air monitoring component, which can be set up in the field as needed to measure radiation levels around an incident site. To reflect these new capabilities, the name has been changed to "RadNet."

Recovery—In this document, includes all types of actions dedicated to promoting the resumption of normal activities in the affected area.

Recovery Plan—Under the NDRF/NRIA, a plan developed by each state, with assistance from the responding federal agencies, for restoration of the affected area.

Regional Incident Coordination Team (RICT)—The analog to EPA Headquarters NICT in each regional office. The RICT is an intra-Agency team, composed of representatives from all regional program offices, that brings together EPA's technical, policy, program, and communications expertise and serves as a focal point within the EPA Region for overall coordination efforts during significant events and situations that occur outside of routine operations.

Regional ORIA Program Manager—A designated program manager and/or unit supervisor responsible for the radiation program activities in the EPA regional office. Each of the EPA Regions has assigned a Regional ORIA Program Manager who is responsible for the Regional Radiation Program activities and coordinates with ORIA, the National Analytical Radiation Environmental Laboratory, and the National Center for Radiation Field Operations.

Regional Response Coordination Center (RRCC)—Under the NRF, at the regional level, provides interagency resource coordination and multi-agency incident support. It coordinates regional response efforts, establishes federal priorities, and implements local federal program support until a JFO is established.

Regional Response Teams (RRTs)—Regional counterparts to the NRT described in the NCP. The RRTs comprise regional representatives of the federal agencies on the NRT and representatives of each state within the region. The RRTs serve as planning and preparedness bodies before a response, and provide coordination and advice to the federal OSC during response actions.

Reportable Quantity—CERCLA requires that persons in charge of vessels or facilities from which a hazardous substance, including any radionuclide, has been released within a 24-hour period in a quantity equal to or greater than its reportable quantity immediately notify the National Response Center of the release. Reportable quantities for radionuclides are specified in 40 CFR 302.4, Appendix B.

Senior Official—Under the NRF, an individual representing a federal department or agency with primary statutory responsibility for incident management. Senior officials use existing authorities, expertise, and capabilities to aid in management of the incident, working in coordination with other members of the Joint Field Office Unified Coordination Group. (The EPA Senior Representative in the FRMAC should not be confused with this position.)

Subject-Matter Expert—An individual who is a technical expert in a specific area or in performing a specialized job, task, or skill.

Transportation of Radioactive Materials—The loading, unloading, movement, or temporary storage during the movement process of radioactive materials.

United States – For the purposes of this plan, the 50 States and the territories, possessions, and territorial waters of the United States.

ANNEX A

EPA ORGANIZATIONS WITH KEY ROLES

During radiological emergencies, a large number of U.S. Environmental Protection Agency (EPA) offices fill key roles in the Agency's response to radiological emergencies.

- The Office of Land and Emergency Management (OLEM) provides policy, guidance, and direction for the agency's solid waste and emergency response programs, including the land disposal of hazardous wastes, underground storage tanks, solid waste management, encouragement of innovative technologies, source reduction of wastes, and the Superfund Program. The Assistant Administrator for OLEM oversees the National Incident Coordinator (NIC) and ensures the effectiveness of the response to meet Agency objectives. Two offices within OLEM have a significant role in radiological emergencies:
 - The Office of Emergency Management (OEM) sets policy for the EPA emergency preparedness and response program. OEM is responsible at the national level for oversight, support and operations of regional oil and hazardous substance, pollutant, and contaminant response personnel and activities and for coordination of response funding, guidance, training, and other activities. OEM is in charge of emergency response under the Comprehensive Environmental Response, Compensation, and Liability Act and the National Oil and Hazardous Substances Contingency Plan (NCP) and under the National Response Framework Emergency Support Function #10 regarding oil and hazardous materials, including response to radiological emergencies under these authorities. All on-site NCP activities are directed by the On-Scene Coordinator (OSC) when operating under the authority of the NCP. OEM also houses the Chemical, Biological, Radiological and Nuclear Consequence Management Advisory Team, an EPA Special Team, and the Airborne Spectral Photometric Environmental Collection Technology fixed-wing air monitoring system. The Office Director of OEM serves as the National Incident Coordinator for most incidents.
 - The Office of Superfund Remediation and Technology Innovation leads the Superfund Remedial Program and houses the Environmental Response Team, an EPA Special Team.
- The Office of Air and Radiation (OAR) provides policy, guidance, and direction for radiation protection, radiological emergency response and air quality measurement and standards. Two offices within OAR fill this role:

- The Office of Radiation and Indoor Air (ORIA) provides expertise in all aspects of radiation and radiological emergency response. The Radiological Emergency Response Team, an EPA Special Team, resides within ORIA. In addition, ORIA is responsible for RadNet, which monitors for radiation in air, drinking water, precipitation, and pasteurized milk. The system includes a deployable air monitoring component, which can be set up in the field as needed to measure radiation levels around an incident site. ORIA personnel are expected to coordinate Agency activities with the Federal Radiological Monitoring and Assessment Center along with OEM, and to provide the co-lead Agency Official for incidents that do not create a specific site within the U.S.
 - The Office of Air Quality Protection and Standards (OAQPS) may provide assistance in modeling plume releases during a radiological incident. OAQPS has a variety of mathematical methods or models, each with specific data needs, available or under development, to describe the multi-media transport and fate of pollutants released into the atmosphere. OAQPS also has air monitoring capabilities through its Ambient Air Monitoring Program, which collects air quality data to judge compliance with ambient air quality standards. The monitoring program also provides the data needed to activate emergency control procedures that prevent or alleviate air pollution episodes. State and local governments operate monitoring stations across the Nation to collect direct measurements of pollutants in the air, the vast majority of which represent the country's heavily populated urban areas.
- The EPA Administrator or their designee is responsible for the overall EPA radiological incident/emergency response. The Administrator may choose to convene an Executive Policy Coordinating Committee consisting of appropriate Assistant Administrators and regional Administrators to address significant intra-agency and inter-agency national policy issues. Within the Office of the Administrator, three offices in particular coordinate closely with ORIA and OLEM for homeland security and radiological/nuclear emergencies:
 - The Associate Administrator of the Office of Homeland Security is responsible for EPA's planning, prevention, preparedness and response to nationally significant incidents and provides agency-wide policy, guidance and direction, and recommendations for resources on matters of homeland security. The Associate Administrator serves as an advisor and works with the OLEM and OAR Assistant Administrators and other senior administration officials to keep appropriate decision makers informed and to resolve policy issues. The Office provides leadership and

- coordinates homeland security policy across the Agency, including EPA's planning, prevention, preparedness, and response for nationally-significant incidents. In addition, OHS advises the Administrator and other senior leadership on matters related to national security and intelligence; serves as the principal Agency liaison to the U.S. intelligence community; and coordinates with EPA Programs and Regions on matters related to classified and other sensitive information. Finally, OHS serves as primary liaison with senior officials in the White House's National Security Staff, DHS, other federal agencies, and our non-governmental partners.
- The Office of Congressional and Intergovernmental Relations coordinates all EPA interactions with Congress, including those related to emergency response. The office coordinates all direct EPA contacts with members of Congress and congressional staff. It also coordinates with the Department of Homeland Security/Federal Emergency Management Agency and the lead/primary agency to arrange EPA participation in congressional interaction during multi-agency federal responses, although this does not preclude direct communication between congressional representatives and EPA on issues pertaining to EPA responsibilities or authorities.
 - The Office of Public Affairs leads EPA's communications with the public during a radiological emergency. When EPA is the coordinating agency for an incident, the office assists responding offices in arranging and conducting local media briefings and preparing local news releases. For multi-agency responses, the Office of External Affairs and Environmental Education will provide representatives in support of Emergency Support Function #15.
 - The Office of Enforcement and Compliance Assurance provides capability in responding to an incident area as a crime scene. The Office of Criminal Enforcement, Forensics and Training (OCEFT) houses the National Criminal Enforcement Response Team, an EPA Special Team, in its Field Operations Program. The team works closely with the Federal Bureau of Investigation, EPA OSCs, and other responders to conduct investigations and ensure that the area is preserved as a crime scene as it is also being assessed and cleaned up. The OCEFT also has a signed Memorandum of Understanding with the Federal Bureau of Investigation Weapons of Mass Destruction Directorate regarding mutual support during suspected Weapons of Mass Destruction incidents/emergencies.
 - The Office of Water provides guidance and expertise on water security; water sector preparedness, response and recovery; and drinking water protection, cleanup, and standards/goal setting in conjunction with Homeland Security Presidential Directive - 7. The office has the lead in

coordinating and assisting in protecting the Nation's drinking water and wastewater critical infrastructure for all hazards. It provides tools, training and exercises to utilities and other water sector stakeholders to improve sector resiliency. It serves as a support agency to the US Army Corps of Engineers under Emergency Support Function #3 (Public Works and Engineering) in fulfilling missions associated with water infrastructure. The Office of Water may work directly with the regions, OEM, OSRTI, ORIA and the Special Teams on issues related to drinking water and wastewater, including sampling and analysis to determine extent of contamination and applicable treatment methodologies. Such activities include (1) establishing, in cooperation with ORIA, emergency guidance for radioactivity in drinking water; (2) providing data on public water systems to identify and notify affected licensees and states; (3) providing technical assistance to states or licensees concerning water treatment techniques, bypass procedures, alternate sources, and other activities related to maintaining drinking water and wastewater services; (4) assisting on-scene personnel in coordinating activities to minimize the adverse impact of drinking contaminated water; and (5) assisting state and local governments (in states that have not accepted primary enforcement responsibility) in implementing plans and activities to identify alternate potable water supplies. The Office of Water has established Water Teams, which may serve as liaisons to the state primacy agencies/permitting authorities during incidents.

- The Office of Research and Development provides technical expertise related to risk assessment, geographic information systems, and response activities. Within the office, the EPA National Homeland Security Research Center manages, coordinates, and supports a wide variety of homeland security research and technical assistance efforts assigned to EPA related to risks posed by chemical, biological, and radiological terror attacks. The center provides state-of-the-art scientific knowledge and technology to emergency responders, building owners, drinking and wastewater utility operators, health departments, and others to enhance their ability to quickly detect contamination and respond effectively. Research and development efforts focus on the areas of threat and consequence assessment, decontamination and consequence management, water infrastructure protection, and technology testing and evaluation.
- The Office of Environmental Information provides guidance to assist EPA in collecting, managing, analyzing, and providing/allowing access to environmental information. It may also play a role in an emergency in helping ORIA manage, integrate, and share data.
- The Office of Administration and Resource Management Safety, Health, and Environmental Management Division provides guidance on routine

radiation operations within the Agency and Agency radiation response operations, as well as management of the Agency's dosimetry program.

EPA has also established agency coordination teams to support radiological emergency response:

- The National Incident Coordination Team (NICT) is a Headquarters-level standing team of senior representatives from each EPA program office. It is the intra-Agency mechanism for sharing information and requesting assistance among EPA Headquarters program offices during emergencies. The NICT role in preparedness includes providing national-level guidance and policy direction on response coordination and operational issues. The NICT is a standing organization that meets on a semi-monthly basis and is chaired by the OEM Director or a designee. ORIA has a primary and alternative representative on the NICT. When ORIA is the co-lead for coordinating the EPA response, ORIA co-chairs the NICT with OEM for radiological incidents. The Director of ORIA or his/her designee is a member of the NICT and can co-convene a NICT meeting at any time to discuss a radiological incident and to request assistance from other EPA offices. The NICT is generally activated when an incident exceeds the capabilities of the affected Region. It can be activated in preparation for and/or during an emergency situation of national or international significance.
- Depending on the nature of the event and the staffing needs for both the Headquarters Emergency Operations Center (EOC) and the regional response, the NICT Chair may decide to activate the Response Support Corps (RSC). The affected Regions contact the EOC with their requests for technical assistance. These requests are forwarded to NICT members and RSC points of contact, who work together to identify available RSC members and provide this information to the EOC Resources Unit. The EOC Resources Unit then confirms the positions with the selected RSC members. The RSC members may be used for various emergency response tasks, including community outreach and setting up and taking down RadNet deployable stations.
- Similarly, each Region maintains a Regional Incident Coordination Team (RICT) in parallel with the NICT. The RICTs are standing teams with representatives from regional program offices. The RICTs provide policy and resource coordination, information sharing, technical assistance, and issue resolution to support OSCs conducting emergency response activities.

ANNEX B

OTHER FEDERAL DEPARTMENTS AND AGENCIES

A number of other federal entities have radiological response duties under the National Response Framework (NRF), National Disaster Recovery Framework (NDRF), and Federal Interagency Operational Plans (FIOPs), National Oil and Hazardous Substances Pollution Contingency Plan (NCP), and other plans, including the following entities:

- Department of Homeland Security (DHS) including key components Customs and Border Patrol (CBP), Domestic Nuclear Detection Office (DNDO), Federal Emergency Management Agency (FEMA), and United States Coast Guard (USCG).
- Department of Agriculture.
- Department of Commerce.
- Department of Defense (DoD).
- Department of Energy/National Nuclear Security Administration (DOE/NNSA).
- Department of Health and Human Services (HHS).
- Department of Housing and Urban Development.
- Department of the Interior.
- Department of Justice.
- Department of State.
- Department of Transportation.
- Department of Veterans Affairs.
- Federal Bureau of Investigation (FBI).
- General Services Administration.
- National Aeronautics and Space Administration (NASA).
- Nuclear Regulatory Commission.

This appendix presents brief descriptions of the radiological response roles of these entities. Note that the support described for some of these entities may not be directly related to EPA's mission.

B.1 Department of Homeland Security

DHS consolidates approximately 21 federal organizations into three directorates for the purpose of protecting the United States against terrorist attacks:

- National Protection and Programs
- Management
- Science and Technology.

The Environmental Protection Agency (EPA) is likely to work with the following assets under DHS during emergency responses—CBP, DNDO, FEMA, USCG, and the Domestic Emergency Support Team (DEST).

The Secretary of DHS shall coordinate the Federal Government's resources utilized in response to or recovery from terrorist attacks, major disasters, and other emergencies if and when one of the following four criteria are met:

1. A federal department or agency acting under its own authority has requested the assistance of the Secretary;
2. The resources of State or Local authorities are overwhelmed and federal assistance has been requested by the appropriate State or Local authorities;
3. More than one federal department of agency has become substantially involve in responding to the incident; or
4. The Secretary has been directed to assume responsibility for managing the domestic response by the President.

The Domestic Emergency Response Team (DEST) is a specialized, rapidly deployable interagency team that augments the FBI's Joint Operations Center. As part of its mission, the DEST supports the FBI On-Scene Commander to integrate and prioritize consequence management decisions.

See the DHS Web site: <http://www.dhs.gov> for more information.

Customs and Border Protection

CBP coordinates the federal response for incidents involving the inadvertent import of radioactive material. For incidents at the border, CBP maintains radiation detection equipment and nonintrusive inspection technology at ports of entry and Border Patrol checkpoints to detect the presence of radiological substances transported by persons, cargo, mail, or conveyance arriving from foreign countries.

Domestic Nuclear Detection Office

DNDO supports the deployment of an enhanced global nuclear detection architecture to detect and report on attempts to import, possess, store, transport, develop, or use an unauthorized nuclear explosive device, fissile material, or radiological material in the United States. Through the Office's Joint Analysis Center, DNDO provides a coordinated technical adjudication of a nuclear/radiation detection alarm, and recommends technical federal asset responses as required.

See the DNDO Web site: <http://www.dhs.gov/about-domestic-nuclear-detection-office> for more information.

Federal Emergency Management Agency

The Robert T. Stafford Disaster Relief and Emergency Assistance Act created the system in place today by which a presidential declaration of a major disaster or an emergency triggers financial and physical assistance through FEMA.

FEMA is the lead agency for implementing the NRF, NDRF, and FIOPs. FEMA performs the following emergency response functions as an independent agency under DHS:

- Keeping the coordinating agency informed of state requests for assistance.
- Coordinating non-radiological response operations as mandated by the NRF and Response FIOP.
- Coordinating National Incident Response Team (NIRT) activities with EPA and DOE.
- Coordination of the Interagency Modeling and Atmospheric Assessment Center (IMAAC).
- Establishing a Joint Field Office to manage onsite operations when acting as the coordinating agency.
- Establishing an interagency Joint Information Center to function as an information clearinghouse.
- Operation of the National Response Coordination Center.
- Effective support of all Emergency Support Functions, including #10 – Oil and Hazardous Materials
- Effective support of the Nuclear/Radiological Incident Task Force (NRITF)

EPA's radiological emergency response assets may also be considered part of DHS/FEMA's NIRT assets. While not a "response team" per se, the NIRT is, rather, a collection of specialized federal teams and equipment from DOE/NNSA and the EPA that are designed to provide a rapid response capability to nuclear accidents or incidents. While DHS/FEMA will provide strategic guidance and coordination, tactical control over EPA NIRT personnel and assets will remain with EPA.

The DHS/FEMA IMAAC is an interagency center responsible for production, coordination, and dissemination of the federal consequence predictions for an airborne hazardous material release. Through a partnership of DHS, DOE/NNSA, Department of Defense, and Department of Commerce (through the National Oceanic and Atmospheric Administration), EPA, NASA, and Nuclear Regulatory Commission, the IMAAC provides the single federal atmospheric prediction of hazardous material concentration to all levels of the Incident Command. The IMAAC is an offsite resource that supports the incident response remotely. The DOE/NNSA NARAC provides atmospheric predictions for nuclear and radiological incidents on behalf of the IMAAC.

The NRITF is an interagency group that convenes within the NRCC to provide standardized nuclear/radiological subject matter expertise in support of national level incident planning and Whole Community core capability delivery. The task force is scalable, based on the size, scale, and type of incident, and comprised of, but not limited to the A-Team, DOC/NOAA, DoD, DOE/NNSA, Department of Labor, EPA, FEMA, HHS-Office of the Assistant Secretary for Preparedness and Response, NRC, USDA, and other government, nongovernmental, or private organizations as needed.

See the FEMA Web site: <http://www.fema.gov> for more information.

United States Coast Guard

The USCG is a multi-mission maritime service. Its mission is to protect the public, the environment, and U.S. economic interests in the nation's ports and waterways, along the coast, on international waters, or in any maritime region as required to support national security. The USCG is the Vice-Chair of the National Response Team and provides On-Scene Coordinators for radiological incidents that occur in certain areas of the coastal zone. It also has several Special Teams listed in the NCP, including the National Strike Force Coordination Center, the Atlantic, Pacific, and Gulf Strike Teams, the Public Information Assist Team, Scientific Support Coordinators, and the National Pollution Funds Center. The NRC, staffed by the USCG, is a 24-hour sole federal point of contact for reporting all hazardous substances releases and oil spills that trigger federal notification requirements under several laws. Reports to the NRC activate the NCP and the federal government's response capabilities.

See the USCG Web site: <http://www.uscg.mil> for more information.

B.2 Department of Agriculture

The Department of Agriculture performs the following emergency response functions:

- Collecting agricultural samples and assisting in determining the impact of the emergency on agriculture.
- Providing emergency communications help to the agricultural community via the State Research, Education and Extension Services e-mail system.
- Providing advice and recommendations as a member of the Advisory Team for Environment, Food and Health.
- Providing support and advice on screening and decontamination of pets and farm animals, and assists in planning and operations of animal carcass disposal.

See the Department of Agriculture Web site: <http://www.usda.gov> for more information.

B.3 Department of Commerce

The National Oceanic and Atmospheric Administration, part of the Department of Commerce, prepares weather forecasts specifically to support emergency response operations. It has established a special collection of meteorological data from national observation systems applicable to emergency response efforts. The information provided in the collection allows emergency responder organizations to obtain up-to-date meteorological and trajectory data in an affected region of the country. It also provides assistance for collection and monitoring for marine and estuarine contamination assessment. Finally, under an International Atomic Energy Agency convention, its National Centers for Environmental Prediction provide modeling for international nuclear incidents.

See the Department of Commerce Web site: <http://www.doc.gov> for more information.

B.4 Department of Defense

DoD serves as the NRIA-designated primary agency for any emergency incident involving materials licensed, owned, or operated by DoD. In addition, DoD has a number of command and control elements that provide direct support to a FRMAC related event, including:

- Joint Nuclear Accident Incident Response Team
- Office of the Secretary of Defense Crisis Coordination Group
- Joint Nuclear Accident Coordination Center
- U.S. Northern Command
- Joint Task Force Civil Support

Many types of DoD response organizations and assets can be requested from the DoD to provide logistics and telecommunications resources, advise on medical treatment of contaminated personnel, and provide airlift assistance. A non-comprehensive list of DoD assets includes:

- Consequence Management Advisory Team
- Medical Radiobiology Advisory Team
- Radiation Assistance Medical Team
- Air Force Radiation Assessment Team
- Navy Forward Deployable Preventive Medicine Unit
- Navy Supervisor of Salvage Special Team

DoD units possess varying levels of radiological and nuclear consequence management capabilities; however, response times and resources vary. Additionally, some capabilities may be committed to potential or current military operations worldwide. Chemical, Biological, Radiological, Nuclear, and High-Yield Explosives (CBRNE) Consequence Management Response Force (CCMRF) is a DoD unit that provides the sustained military response to a CBRNE event. The CCMRF capability areas can be broadly grouped functional areas including marking hazardous areas, extraction (including search and rescue), decontamination, medical, logistics (including transportation), communications, and aviation. CCMRF elements are deployed in force packages within which capabilities are grouped in order of expected need.

National Guard Civil Support Teams (CSTs) are 22-person teams with robust chemical, biological, radiological, and nuclear response capabilities. Capable of deploying from their home station in as little as four hours, CSTs have communications platforms that enable them to communicate with almost any federal, state, or local agency. Additionally, CSTs provide: hazard prediction modeling; advanced nuclear, chemical, and biological detection and mobile laboratory sample analysis; and the ability

to operate in contaminated environments for extended periods of time. Civil Support Teams are state National Guard assets controlled by the governors of their home state, unless they are activated to Title 10 status by the Secretary of Defense. All states and territories currently have at least one fully trained and certified CST.

The Defense Threat Reduction Agency (DTRA) reachback watch office serves as the IMAAC 24/7 Operations Center. The reachback watch office will receive activation calls for IMAAC, relay information to modelers at the DOE/NNSA NARAC, and post IMAAC predictions to the Homeland Security Information Network for sharing with responders.

CBRNE Enhanced Response Force Packages (CERFP) will respond to a Chemical, Biological, Radiological, Nuclear, or high yield Explosive (CBRNE) incident and supports local, state, and federal agencies managing the consequences of the event. The CERFP is composed of four elements staffed by personnel from already established National Guard units. The elements are search and extraction, personnel decontamination, medical, and command and control.

The U.S. Army Corps of Engineers (USACE), which can be accessed directly also provides disaster response assistance under the NRF, and can provide support for EPA missions under the NCP and the NRF Emergency Response Function #10 – Oil and Hazardous Materials Response Annex. With regard to radiological incidents, USACE support may include radiological survey functions, gross decontamination, site characterization, contaminated water and debris management, and site remediation.

See the DoD Web site: <http://www.dod.gov> for more information.

B.5 Department of Energy/National Nuclear Security Administration

DOE/NNSA serves as the NRIA-designated primary agency for any radiological incident involving materials licensed, owned, or operated by DOE. DOE/NNSA radiological response functions include the following:

- Serving as lead technical agency for terrorist incidents involving radiation as directed by Homeland Security Presidential Directive (HSPD)-7, in support of the FBI and FEMA.
- Directing operations of the Federal Radiological Monitoring and Assessment Center (FRMAC) during the emergency phase of a radiological incident.

- Transferring management of the FRMAC to the EPA after an initial emergency has been stabilized and the other criteria established by the Nuclear/Radiological Incident Annex have been met.
- Providing specialized search teams for locating radioactive materials.
- Interpreting monitoring data for the coordinating agency and involved state and local response organizations.
- Providing personnel and equipment to perform radiological monitoring and assessment, including predictive modeling.
- Participating in making recommendations to state and local governments regarding protection of affected populations from exposure to increased radiation levels.
- Advising on medical treatment of personnel exposed to, or contaminated by, radioactive materials through its Radiological Emergency Assistance Center.
- Organizing, training, equipping, and using DOE/NNSA entities in the Nuclear Incident Response Team when not operating as a unit under the control of DHS.

Aerial Measuring System

DOE/NNSA Aerial Measuring System aircraft carry radiation detection systems that provide near real-time measurements of ground and airborne contamination, even very low radiation levels. This system can also provide detailed aerial photographs and multi-spectral imagery and analysis of an accident site. The Aerial Measuring System provides a rapid response to radiological emergencies with helicopters and fixed-wing aircraft equipped to detect and measure radioactive material deposited on the ground and to sample and track airborne radiation. This asset supports the FRMAC.

Federal Radiological Monitoring and Assessment Center

The FRMAC is an operations center usually established near the scene of a radiological emergency from which the federal field monitoring and assessment assistance is directed and coordinated. It provides expertise and equipment to handle requests for specialized response assets. In all instances under the Nuclear/Radiological Incident Annex, DOE/NNSA has the lead responsibility for coordinating the FRMAC for monitoring assistance during the early or emergency phase of the emergency. The DOE FRMAC Director and the Senior EPA Representative to the FRMAC will agree on a time to transition the coordination responsibility to EPA. This will most likely occur during the recovery phase of the response, but, depending on the situation, could be in the latter stages of the response phase.

See the FRMAC Web site: <http://www.nv.doe.gov/nationalsecurity/homelandsecurity/frmac/default.htm> for more information.

National Atmospheric Release Advisory Center

The DOE/NNSA National Atmospheric Release Advisory Center (NARAC) provides a computer-based emergency preparedness and response predictive modeling capability to map the probable spread of hazardous material accidentally or intentionally released into the atmosphere. The center, which supports the incident response remotely, provides real-time atmospheric plume predictions (updated as measurement data become available) so that an emergency manager can decide whether taking protective action is necessary to protect the health and safety of people in affected areas, including downwind. The NARAC is a national support and resource center for planning, real-time assessment, emergency response, and detailed studies of incidents involving a wide variety of hazards, including nuclear, radiological, chemical, biological, and natural emissions. The NARAC currently serves as the provider for radiological and nuclear incident predictions on behalf of the DHS IMAAC.

Accident Response Group

The DOE/NNSA Accident Response Group is composed of scientists, technical specialists, crisis managers, and equipment ready for short-notice dispatch to the scene of a nuclear accident. The group is coordinated through the DOE/NNSA Joint Nuclear Accident Coordinating Center. The Accident Response Group is deployed to manage or support the successful resolution of a U.S. nuclear weapons accident anywhere in the world.

The group's advance team consists of a Senior Energy Official, Senior Scientific Advisors, Weapon Recovery Director, Logistics Coordinator, Hazards Assessment Director, and Public Affairs Officer. The advance team is deployed to the scene usually within a few hours after notification. The advance team determines the type and number of personnel required and the equipment needed for the response.

Nuclear Emergency Support Team

The DOE/NNSA Nuclear Emergency Support Team is a program for preparing and equipping specialized response teams to deal with the technical aspects of nuclear or radiological terrorism. NEST capabilities include search and identification of nuclear materials, diagnostics and assessment of suspected nuclear devices, technical operations in support of render safe procedures, and packaging for transport to final disposition.

Radiological Assistance Program

The DOE/NNSA Radiological Assistance Program teams may be the first NNSA responder for assessing a radiological emergency situation and deciding what further steps are necessary to minimize the hazards of a radiological emergency. There are eight Radiological Assistance Program Teams, located in: Aiken, SC; Albuquerque, NM; Argonne, IL; Idaho Falls, ID; Livermore, CA; Long Island, NY; Oak Ridge, TN; and Richland, WA.

Radiation Emergency Assistance Center/Training Site

The DOE/NNSA Radiation Emergency Assistance Center/Training Site provides treatment and medical consultation for injuries resulting from radiation exposure and contamination. It also serves as a training facility.

See the DOE/NNSA Web site: <http://www.nnsa.doe.gov> for more information.

B.6 Department of Health and Human Services

HHS performs the following emergency response functions:

- Helping assess the effects of radiological incidents on the health of affected populations.
- Collecting agricultural samples to help in determining the needed actions to protect affected populations.
- Leading or actively participating with EPA and the Department of Agriculture on the Advisory Team for Environment, Food and Health, when convened.

See the HHS Web site: <http://www.hhs.gov> for more information.

Agency for Toxic Substances and Disease Registry

The Agency for Toxic Substance and Disease Registry (ATSDR) is directed by congressional mandate to perform specific functions concerning the effect on public health of hazardous substances in the environment. These functions include public health assessments of waste sites, health consultations concerning specific hazardous substances, health surveillance and registries, response to emergency releases of hazardous substances, applied research in support of public health assessments, information development and dissemination, and education and training concerning hazardous substances.

See the ATSDR Web site: <http://www.atsdr.cdc.gov> for more information.

Centers for Disease Control and Prevention

The Centers for Disease Control and Prevention (CDC) provide assistance in collecting appropriate environmental and biological specimens and performing laboratory tests to identify any chemical or biological contaminants released during an emergency. As a member of the Advisory Team for Environment, Food and Health, CDC will examine the human health effects of radiological contamination.

See the CDC Web site: <http://www.cdc.gov> for more information.

Food and Drug Administration

The Food and Drug Administration (FDA) establishes and implements the Food Protective Action Guides (PAGs) and is a member of the Advisory Team for Environment, Food and Health. In addition, FDA establishes guidance on the use of radiophylactics during radiation emergencies.

See the FDA Web site: <http://www.fda.gov/> for more information.

B.7 Department of Housing and Urban Development

The Department of Housing and Urban Development's Emergency Planning and Management Division plans and implements programs that respond to a wide variety of disasters and other emergencies. It coordinates the Department's emergency response program and heads its mission under the NRF which ensures effective delivery of federal assistance for the consequences of a major disaster or emergency declared under the Stafford Act.

See the Department of Housing and Urban Development Web site: <http://www.hud.gov> for more information.

B.8 Department of the Interior

The Department of the Interior performs the following emergency response functions:

- Advising on emergency operations on federal lands and in federal natural resource facilities through the National Park Service as outlined in the NRF and FIOPs.
- Advising on the protection of natural and cultural resources and historic properties resources prior to, during, and/or after a nationally significant incident.

- Assisting other federal agencies responding to radiological emergencies on Indian lands through the Bureau of Indian Affairs.
- Providing personnel and equipment for hydrologic monitoring, equipment, and laboratory support.
- Helping to evaluate the effects of radioisotopes in soil.
- Helping to develop geographic information for analyzing and assessing contaminated areas.
- Advising on and assisting in assessing the economic, social, and political impacts of a radiological emergency on natural resources.

See the Department of the Interior Web site: <http://www.doi.gov> for more information.

B.9 Department of Justice

According to HSPD-5, the Department of Justice Attorney General has lead responsibility for criminal investigations of terrorist acts or terrorist threats, as well as for related intelligence collection activities within the United States. Generally acting through the FBI, the Attorney General coordinates the activities of the other members of the law enforcement community to detect, prevent, preempt, and disrupt terrorist attacks against the United States.

See the Department of Justice Web site: <http://www.usdoj.gov> for more information.

Federal Bureau of Investigation

The overall role of the FBI in emergencies involving possible criminal activity is to verify the accuracy of the threat notification, initiate the threat assessment process, and to notify other federal, state, and local agencies as appropriate.

The FBI also has operational control over the DEST. This DHS asset is a rapidly deployable, interagency team responsible for providing the FBI with expert advice and support concerning the U.S. Government's capabilities in resolving a terrorist threat or incident. This advice and support includes crisis and consequence management assistance, technical or scientific advice, and contingency planning guidance tailored to situations involving chemical, biological, or nuclear/radiological weapons.

See the FBI Web site: <http://www.fbi.gov> for more information.

B.10 Department of State

The Department of State is the point of contact for notifying and communicating with foreign governments. Except when existing bilateral agreements may permit direct communication, the Department of State coordinates radiological release notification, information gathering, and exchange activities with foreign governments. EPA will work with the Department of State for emergency response activities, such as a Japan-type radiological release, that occur overseas.

See the Department of State Web site: <http://www.state.gov> for more information.

B.11 Department of Transportation

The Department of Transportation coordinates the provision of emergency civil transportation support to state and local governments. It also provides technical advice and assistance on complying with Department regulations covering how radioactive materials are supposed to be transported, packaged, and labeled. The Federal Aviation Administration under the Department controls airspace restrictions that might be needed during an emergency response operation.

See the Department of Transportation Web site: <http://www.dot.gov> for more information.

B.12 Department of Veterans Affairs

The Department of Veterans Affairs protects the life and safety of people in Department facilities by developing and implementing a comprehensive emergency management program and plan. The Department may also provide assistance, under applicable authorities, to other federal agencies, and affected state and local jurisdictions. This may include emergency medical treatment provided to injured persons regardless of statutory eligibility, as necessary to save lives and prevent suffering.

See the Department of Veterans Affairs Web site: <http://www.va.gov> for more information.

B.13 General Services Administration

The General Services Administration Office of Emergency Management promotes unified planning and coordination of disaster mitigation, preparedness, response, and recovery against natural or man-made incidents that threaten lives and properties before, during, and after a major emergency or disaster. The Interagency Response Branch works with FEMA to coordinate resources to respond to and recover from national disasters and emergencies.

See the General Services Administration Web site: <http://www.gsa.gov> for more information.

B.14 National Aeronautics and Space Administration

NASA provides information on tracking spacecraft carrying nuclear materials and serves as the NRF-designated coordinating agency for radiological incidents involving the radioactive materials it controls (for example, within U.S. spacecraft). In the event of a radiological accident, as an NRIA-designated primary agency, NASA can declare a National Security Area.

See the NASA Web site: <http://www.nasa.gov> for more information.

B.15 Nuclear Regulatory Commission

The Nuclear Regulatory Commission serves as the NRIA-designated primary agency for any incident involving a radiological release from a nuclear facility licensed, owned, or operated by the Nuclear Regulatory Commission or by an agreement state.

See the Nuclear Regulatory Commission Web site: <http://www.nrc.gov> for more information.