

**ENVIRONMENTAL PROTECTION AGENCY
RADIOLOGICAL EMERGENCY RESPONSE PLAN**

- January 10, 2000 -



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

Forward

I hereby endorse and commend for use by the Environmental Protection Agency this Radiological Emergency Plan. It represents the EPA revised authorities, organization, capabilities and concept of operations for responding to actual or potential 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 the environment and in support of the Federal Radiological Emergency Response Plan and National Contingency Plan.

/s/ Carol W. Browner
Administrator

January 10, 2000
Date

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Disclaimer

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

Preface

The 1999 EPA Radiological Emergency Response Plan (EPA-RERP) is published by the Office of Radiation and Indoor Air (ORIA), [formerly, Office of Radiation Programs], to replace the 1986, EPA Radiological Emergency Response Plan. The EPA-RERP has been developed to reflect changes in EPA's programmatic and operational concepts for responding to radiological incidents and emergencies.

Programmatic changes include revisions of the National Oil and Hazardous Substances Pollution Contingency Plan of September 1994 (NCP), and legislative mandates of the Superfund and Atomic Energy Act. Operational concepts have been streamlined consistent with the May 1996 Federal Radiological Emergency Response Plan and the April 1999 Federal Response Plan (FRP). Additionally, the EPA-RERP incorporates the Presidential Decision Directive-39 (PDD-39) issued in 1995, and the more recent directives: for Combating Terrorism (PDD-62) and for Protecting America's Critical Infrastructure (PDD-63). Both PDD-62 and PDD-63 were issued in May 1998, to address federal response to terrorist incidents of weapons of mass destruction (nuclear, chemical and biological).

Overall, the EPA-RERP represents the Agency's integrated approach to management of radiological releases. Specifically, it integrates ORIA's Radiological Radiation Programs and the Federal Radiological Emergency Response Plan into the response structure established by the NCP, including headquarters and the ten regional Removal/Oil Response Programs and their respective predesignated Federal On-Scene Coordinators (OSCs). Both the Office of Emergency and Remedial Response (OERR) and Office of Chemical Emergency Prevention and Preparedness (CEPPO), including regional representatives, have participated in the development of this plan.

The EPA-RERP is to be used as a guide for planning and maintaining readiness to respond to those releases in accordance with EPA's mission to protect human health, welfare, and the environment. Furthermore, this Plan distinguishes between EPA's role as a Lead Federal Agency for response coordination under the FRERP, and its role as a lead agency for directing and managing an emergency response pursuant to the NCP. It also accents the EPA-OSC's role in managing/directing the emergency response actions as prescribed in the NCP.

ORIA is primarily responsible for the development of the EPA-RERP, with all other offices being principally responsible for respective organizational input and representation. Hence, ORIA would appreciate being informed of any errors/omissions so that they can be corrected in future editions. Comments should be addressed to Mr. Craig Conklin, Director, Center for Radiological Emergency Preparedness, Prevention and Response, EPA (6608J), 1200 Pennsylvania Ave., NW, Washington, DC 20460.

I. INTRODUCTION AND BACKGROUND

1.1 Introduction

This plan entitled the “Environmental Protection Agency Radiological Emergency Response Plan [“EPA-RERP”,or “Plan”],” supersedes the EPA Radiological Emergency Response Plan dated 1986. The Plan represents the 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), Federal Response Plan (FRP) revised, and issued in April, 1996 Federal Radiological Emergency Response Plan (FRERP), and the interagency Counter-Terrorism Concept of Operations Plan (CONPLAN), currently in draft.

The EPA-RERP establishes organizational focus for management of potential or actual radiological incidents and emergencies and coordination among the EPA On-Scene Coordinators, (OSCs) community, regional radiation programs, Office Emergency and Remedial Response (OERR), Chemical Emergency Prevention and Preparedness Office (CEPPO) and Office of Radiation and Indoor Air (ORIA), including the two radiation support laboratories. Recognizing that cross-agency consistency is critical for effective emergency response, this Plan does not preclude or supplant regional planning and preparedness. Rather it provides the flexibility to EPA regions to establish Regional Contingency Plans (RCPs) as required by the NCP, and to tailor their radiological response operations to reflect their priorities, specific organization structure and the regional/local conditions.

Within the EPA, the regional OSCs are responsible for *coordinating and managing* the emergency response under the NCP. For radiological response activities, however, a number of programs, teams and groups in EPA Headquarters and Regions are responsible for preparedness planning and response support involving potential or actual radiological releases at the national or international level. The NCP is EPA’s blueprint for emergency response guiding the funding authority and response mechanisms necessary for the Agency to meet its response obligations for releases of hazardous substances including radionuclide releases. The FRERP prescribes the federal lead and support roles and obligations within the Federal Government including EPA. The EPA-RERP integrates EPA’s commitments pursuant to the CONPLAN, FRERP/FRP, and the NCP. To this end, the Plan identifies EPA’s internal response structure, coordination of capabilities for regional and Headquarters response activities including the laboratories, in the event of peacetime radiological hazardous substance and technological emergencies, and nuclear terrorist incidents.

1.2 EPA Radiological Emergency Response Mission

The EPA mission in responding to radiological emergencies is subsumed in the Agency response to other hazardous substances, pollutants, or contaminants under the Superfund program

which has both enforcement and response responsibilities. In the event of technological emergencies, or incidents of terrorist attacks involving a potential or actual release of radionuclides, EPA may lead the response to ensure the protection of human health, welfare and the environment from the adverse impacts associated with exposure to radiation. Working with a broad spectrum of stakeholders, EPA may provide technical advice and response support to the state, tribal, and local governments (referred to as state and local), site or facility owner/operator, and other federal agencies. EPA has also the authority to order private party cleanup, and oversee and monitor emergency response by others. EPA achieves its mission by:

- evaluating the need for emergency, time-critical or non-time critical removal response to protect health and the environment pursuant to the NCP;
- evaluating the need for coordinating multi federal response pursuant to the FRERP;
- establishing and maintaining a high-level of readiness through planning, training, and drills/exercises;
- providing upon request effective and efficient emergency response management support to federal, state, Tribal, and local governments;
- conducting emergency, time-critical and non-time critical removal response action pursuant to the NCP;
- providing “Special Forces” emergency response radiological expertise and support to the On-Scene Coordinator for NCP removal responses through the Radiological Emergency Response Team (**RERT**) of ORIA and their labs;
- leading the FRERP response to radiological emergencies when assigned the Lead Federal Agency (**LFA**) role;
- developing Protective Action Guidance (**PAGs**) and providing incident-specific protective action recommendations;
- performing timely, and accurate environmental measurements and assessments of radiological conditions;
- providing threat assessment, technical support, and operational support to the LFA in potential or actual terrorist incidents; and
- assisting in preparing long-term environmental monitoring and area restoration plans, and recommended cleanup criteria.

1.3 Background

Radiological incidents or emergencies may occur at hazardous waste sites, fixed nuclear facilities (domestic and foreign), and may involve satellites, nuclear weapons and devices, transportation accidents, sabotage or nuclear terrorism. Incidents may also occur at smaller nuclear facilities such as hospitals, and from contaminated imports, or improper waste management and disposal anywhere in the United States (**US**). These situations may result in radionuclide releases with actual, potential, or perceived harm or consequences to human health and the environment within the US and its territories, possessions, or territorial waters.

State and local government officials have the primary responsibility for protecting the public during a radiological emergency. They must be prepared to respond during the first hours of a radiological emergency. Consistent with the NCP, state and local jurisdictions, as well as owners/operators of major nuclear facilities, should have compatible radiological emergency response plans that have been coordinated and tested for timely, effective emergency response. Federal assistance may be needed for emergencies that have the potential for significant offsite consequences such those involving multiple jurisdictions, or those that extend beyond several hours, and beyond the capabilities of the state/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 Decision Directives listed in Annex A.

1.4 Purpose

The purpose of this Plan is to describe EPA's concept of operations to implement the various actions, when responding to a threatened or actual radiological releases in emergencies and terrorist incidents. It identifies applicable response authorities and plans, the response frameworks for different releases, response coordination, and organizational responsibilities and resources required for effectively preparing and responding to peacetime radiological releases in the US and its territories. The Plan is intended to be used by, and provide coordination among EPA-OSCs, Regional Radiation Programs, EPA radiation labs, ORIA, OERR, and CEPPO.

1.5 Scope and Applicability

The scope of this Plan includes:

- domestic radiological incidents and emergencies occurring at, or involving hazardous waste sites, fixed nuclear facilities, domestic or foreign satellites, nuclear weapons and devices, accidents in transportation of radioactive materials, or incidents of sabotage and nuclear terrorism that have actual, potential, or perceived consequences to US and its territories; and
- international radiological emergencies such as the Chernobyl accident in the Ukraine, subject to the International Atomic Energy Agency (IAEA) "Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency."

The EPA-RERP applies to EPA radiological emergency response actions pursuant to the NCP, FRERP, CONPLAN, and/or FRP.

1.6 Plan Considerations

a. Federal Response Plans - NCP, FRP, FRERP, CONPLAN and RCPs

Details of the NCP, FRP, FRERP and CONPLAN are provided in Annex B. The EPA-RERP is a framework for the regional removal and radiation programs to develop their respective RCPs, and to integrate their radiological response resources within the operational structure(s) of the FRP, FRERP and CONPLAN. The relationship between these plans and the EPA-RERP, may be summarized as follows. The EPA-RERP provides the EPA OSCs and response teams with guidance for the integration of the federal response plans into a response directed and coordinated pursuant to the NCP. Current interagency agreements, Memoranda of Understanding or Agreement, Executive Orders, Presidential Decision Directives or statutory authorities are not superseded by the EPA-RERP.

Under the NCP, EPA is the lead response agency for releases of hazardous substances, including radionuclides, in the Inland Zone of the US, pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 “**CERCLA**” (Superfund), and excluding certain releases of radiological materials from Nuclear Regulatory Commission (**NRCCom**)¹ licensed nuclear reactors and from uranium mill tailing sites. Sections 300.130 (f), (g), (h), and (i) of the NCP incorporate by reference the FRERP and FRP provisions. The NCP specifically adopts the applicable FRERP notification and assistance procedures for radiological emergency response. Most radiological releases do not result in FRERP activation, and are handled in accordance with the NCP.

The FRERP describes how federal agencies including EPA, should coordinate their actions when responding to a peacetime radiological emergency that has actual, potential, or perceived radiological consequences within the US, its territories, possessions, or territorial waters that could require a response by several federal agencies. The FRERP is a federal agreement/plan that describes how, when and where the EPA radiological resources will be utilized. It however does not supersede NCP regulatory authorities.

The EPA-RERP recognizes that EPA must act consistently with the NCP when conducting FRERP response activities where CERCLA is applicable including all situations when EPA is the LFA for FRERP response. In these situations, the pre-designated EPA OSC has the authority to take response action accordingly, to ensure effective and adequate federal response. The Plan also recognizes that the EPA OSC is responsible for determining when a radiological incident or emergency warrants activation of a multi-agency response within his/her area of jurisdiction. ORIA provides the RERT as a “Special Force” under the NCP to assist federal OSCs during NCP emergency responses. Although the FRERP was originally developed to address large scale accidents at commercial nuclear power plants, it has been implemented in response to small radiological incidents.

¹For the purposes of this document only, the acronym “NRCCom” is used to refer to the Nuclear Regulatory Commission, where as the “NRC” is used to refer to the National Response Center.

The purpose of the FRP is to facilitate the delivery of all types of federal response assistance to states to help them deal with the consequences of significant disasters with or without Presidential Declaration. The Federal Emergency Management Agency (**FEMA**) is the lead agency for coordinating response activities that include 26 federal departments and agencies plus the Red Cross. Under the FRP, EPA is the Primary Agency responsible for coordinating preparedness and response activities for Emergency Support Function #10 (**ESF-10**), regarding hazardous materials including radiological releases, and leads ESF-10 responsibilities in dealing with counter-terrorism consequence management. The EPA-RERP recognizes that OSC(s) coordinate their response operations through the Federal Coordinating Officer (**FCO**), within the response community framework when responding to FRP incidents.

The CONPLAN establishes overall guidance concerning how the federal government responds to a potential or actual terrorist threat or incident that occurs in the US, particularly one involving weapons of mass destruction (**WMD**). The CONPLAN implements Presidential Decision Directives 39 and 62: United States Policy on Counter-terrorism, and Combating Terrorism (**PDD-39, PDD-62**), respectively. It also establishes conceptual guidance for assessing and monitoring a developing threat, notifying appropriate federal, state, and local agencies of the nature of the threat, and deploying the requisite advisory and technical resources to assist the LFA in executing a crisis and consequence management response to a threatened or actual terrorist incident. Lastly, it defines the structure under which the federal government will marshal resources to augment and support state and local governments in responding to a threatened or actual terrorist incident.

b. Roles of State, Tribal and Local Governments

The primary role of the state, Tribal and local governments is to provide for the health and safety of the public and protection of the environment. EPA provides recommendations to these governmental entities on actions to protect the health and safety of their communities. Using incident-specific information and EPA's protective actions recommendations, the state/local governments are responsible for determining which action(s) to implement. Protective actions may include evacuation, sheltering, relocation, distribution of potassium iodide, or restrictions on the consumption of water or certain foods, removal or control of the source, or decontamination, or taking whatever response actions are necessary to protect public health and the environment.

Although it may not be practical for state, Tribal and local government responders to maintain extensive radiological emergency response capabilities, they are always expected to respond during the initial hours of a radiological accident. However, they may likely need federal assistance for situations with potentially significant consequences requiring multi- jurisdictional response, or for those that extend beyond several hours, days, or weeks.

c. Notification and Activation

Typically, notifications of incident, spills and emergencies are made to EPA through the National Response Center (**NRC**) and Regional Response Centers (**RRC**). Notifications to the NRC, are relayed directly to the appropriate RRC. If notifications are made directly to ORIA or Regional Radiation Programs, they should immediately be relayed to the appropriate RRC. When notified of an EPA LFA incident, the lead EPA official (usually the OSC) will assess the situation (“site”) in order to determine if it is an emergency or otherwise requires EPA response action. When a situation is beyond the sole resources of the local and state jurisdiction and licensee (or responsible party), the EPA lead official will request appropriate EPA resources from the Regional Radiation Program, ORIA and/or Superfund Program, as appropriate.

In most EPA Regions, the OSC may approve the use of Superfund in the amount of \$200K in an emergency, or \$50K for non-emergency removal response and a Superfund account number will be established for travel and other response costs requested by the OSC. Or in the case of an incident that requires further assessment, the EPA OSC may conduct Superfund assessment activities for which a Superfund account will be established. The OSC or ORIA lead EPA official will request needed radiological resources based upon incident requirements, availability of resources, regional and national priorities and commitments, in consultation with regional and Headquarters radiation program managers. If EPA radiological resources are not available, the lead official may request radiological support from other agencies or from EPA contractors which support the National Response System and FRERP.

d. EPA Resources and Commitments

When notified of an emergency, EPA will assess the need for federal response pursuant to the NCP, and will respond according to this Plan. EPA resources are available for technical assistance and radiological response operations subject to prior commitments to fulfill other essential statutory and operational needs. The EPA regional emergency response program managers allocate available resources based on identified threats, jurisdictional/national priorities and in coordination with the corresponding Headquarters counterparts.

If radiological resources are unavailable in the affected state or from a region, EPA Headquarters will seek to provide an appropriate EPA alternative. ORIA serves as a central point for information/coordination of nationally available radiological resources. The ORIA Laboratories, the National Air and Radiation Environmental Laboratory (**NAREL**) and the Radiation and Indoor Environments National Laboratory (**R&IENL**), provide environmental monitoring, sampling and analysis support. The OSC may also consult with the Regional Response Team or National Response Team to obtain support from other member agencies.

e. EPA Radiological Capabilities

EPA has significant emergency response management and coordination capabilities, managed by each of the Regional Removal Managers, and overseen by the Headquarters **OERR**. In support of the National Response System (**NRS**) and EPA's emergency response program and to fulfill its unique responsibilities under the NCP and FRERP, EPA's radiological capabilities include trained responders, team commanders and specialists, and equipment and laboratory capabilities to:

- direct and conduct environmental monitoring activities and assess the environmental consequences of radioactivity releases.
- access response contractors, the Emergency Response Team, strike forces, RERT, and other special forces of the National Response System.
- analyze risk and recommend protective actions and other radiation protection measures.
- recommend acceptable emergency radiation levels in the environment.
- determine routes of exposure and estimate effects of radioactive releases on human health and environment.
- prepare health and safety advice and information for the public.
- provide nationwide environmental monitoring data from Environmental Radiation Ambient Monitoring Systems (**ERAMS**) for assessing the national impact of a release.
- assist in the preparation of long-term monitoring and area restoration plans; and recommend cleanup criteria.

f. Requests for Assistance and Response Assets

EPA may decide to mobilize onscene during an emergency or incident to determine if assistance is needed. Requests for EPA's assistance may come from a variety of sources including state, Tribal, and local governments, the owners and operators of radiological facilities, other federal agencies, or even the general public. Requests may be made directly to EPA Headquarters, regional offices, or laboratories, or through the NRC. Upon notification, the NRC first notifies the Federal OSC through the RRC, and then relays communications of incidents or emergencies to pre-designated EPA personnel, including the EPA OSC, and the RERT, On-Scene Commander (**OSCom**). It is important to note that pursuant to the NCP, EPA does not need a request from state or local officials to be a responder.

EPA responders work directly with their state and local counterparts to provide the required assistance. When necessary, EPA emergency response action may go beyond "assistance" to state and local jurisdiction, and may include Oil Pollution Act and/or CERCLA Federal-lead response actions consistent with the NCP. For all radiological incidents and emergencies, the affected EPA Region may provide regional OSC(s) and regional radiation

program specialist(s) to coordinate EPA response activities. If the incident is of major consequences or national/global significance, the EPA Headquarters organizations may provide response support such as mobilization of the RERT and coordination, in addition to programmatic and response guidance.

In all instances under the FRERP, the Department of Energy (**DOE**) has the lead responsibility for coordinating the Federal Radiological Monitoring and Assessment Center (**FRMAC**), for assistance during the early phase of the emergency. The FRMAC provides expertise and equipment to handle requests for specialized response assets. EPA also may be called upon to provide resources including personnel, equipment and laboratory support for sampling and analysis, to assist DOE. DOE FRMAC assets can be requested through the EPA RERT. During the intermediate and late phases of an emergency, EPA assumes control of the FRMAC.

In instances where the Department of Justice/Federal Bureau of Investigations (**FBI**) has the lead responsibility for coordinating a federal response to a radiological (terrorist) emergency, EPA may provide crisis management technical assistance and advice to the FBI, as requested, and to other federal agencies as well as to state and local responders. EPA also provides consequence management as the lead agency for ESF-10, Hazardous Materials Annex, and in support of other ESFs of the FRP.

g. EPA Coordination with other Federal Agencies

Under the AEA, **NRCCom** regulates certain nuclear material in the US. The NRCCom is LFA for NRCCom or Agreement States licensed materials. However, NRCCom does not have response funding or enabling legislative authority to fund or mount significant response actions should the Licensee be bankrupt, missing, unable or unwilling to respond in a timely manner. EPA may, at the OSC's discretion, undertake CERCLA response actions to control releases of hazardous substances, pollutants, or contaminants which pose a significant threat from NRCCom licensed facilities. Excluded by definition are radiological releases from NRCCom licensed nuclear reactors. Based on the exigency of the situation, and after NRCCom has taken reasonable steps to enforce a 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. Request for Superfund assistance by NRCCom should be made directly to the EPA Region or Federal OSC.

Under the NCP and CERCLA Executive Order 12580, DOD and DOE provide the OSC for releases from their facilities, and for technical support as may be requested by others. Consistent with section 300.135 of the NCP, the OSC's efforts are coordinated with other appropriate federal, state, local and private response agencies, including the Department of Health and Human Services and Occupational Safety and Health Administration in cases involving public health emergencies and worker health and safety issues.

Because of the relationship between NRC's regulatory authority and its responsibility as LFA, and EPA's CERCLA response authority, funding and resources, an NCP response will not be required if the radiological incident does not involve a listed radionuclide or the actual or potential release of a listed radionuclide exceeding the reportable quantity requirements. Hence, both organizations must coordinate closely to keep one another informed of all releases of radiological materials. Early coordination ensures timely and effective response, and transition of responsibilities from one agency to another, when necessary.

h. Reimbursement

EPA is responsible for all of its own costs incurred when responding to a radiological incident or emergency, regardless of whether activities are initiated by statutory responsibilities or at the request of another federal or state agency. This does not, however, preclude EPA from later seeking special appropriations to cover the response costs, or seek funds through enforcement actions against the responsible parties, where appropriate.

In the event of a FRP disaster declaration and issuance of a mission assignment, EPA will be reimbursed by FEMA in accordance with policies and procedures outlined in the Financial Management Annex of the FRP. Though each federal department and agency is responsible for providing its own financial services and support to its response operations in the field, FEMA may reimburse funds to cover eligible costs for response activities and, in special cases, may advance such funds.

EPA may expend Superfund monies to respond to releases of radiological materials pursuant to the NCP and FRERP. CERCLA authorizes EPA to recover from potentially responsible parties costs incurred for response actions, and trustee agencies may seek penalties and compensation for damages to natural resources.

i. Federal Lands

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

For radiological emergencies occurring on or with possible consequences to Indian tribal lands, the Department of Interior (DOI) will provide liaison between federally recognized Indian tribal governments and the FRERP designated LFA, state, and local agencies for coordinating the response and protective action(s) efforts. Additionally, DOI will advise and assist the FRERP-

designated LFA on economic, social, and political matters in the Virgin Islands and the Territories of Guam, American Samoa, and the Trust Territories of the Pacific Islands should a radiological emergency occur in these areas.

In the event of a radiological accident involving a nuclear weapon or special nuclear material (SNM), the owner of the weapon or material shall declare the area a National Defense Area (for Department of Defense “DOD”) or National Security Area (for DOE or National Aeronautics and Space Administration “NASA”), depending on the circumstances of the emergency. These areas are established only during the emergency to safeguard classified information and/or restricted data or equipment and material. Establishment of these areas may place non-federal lands under federal control. For emergencies involving DOD, or DOE, these agencies shall provide the OSCs, and be responsible for taking all response actions. In the case of NASA and other federal agencies, their OSCs will be responsible *only* for all response actions that are *not emergencies*. Otherwise, the EPA provides the OSC to manage and coordinate radiological emergency response for those agencies including NASA. It is possible that radioactive contamination and emergency response actions would extend beyond the boundaries of these areas. (NOTE: IN ACCORDANCE WITH APPROPRIATE NATIONAL SECURITY CLASSIFICATION DIRECTIVES, INFORMATION MAY BE CLASSIFIED CONCERNING NUCLEAR WEAPONS, TERRORIST THREATS, SPECIAL NUCLEAR MATERIALS AT REACTORS, AND CERTAIN FUEL CYCLE FACILITIES PRODUCING MILITARY FUEL.)

j. Enforcement Actions

EPA under certain circumstances will exercise its discretionary authority to undertake a radiological emergency response action pursuant to the appropriate enforcement provisions. EPA, state, or local legal actions will be taken to obtain compliance with environmental laws, rules, regulations, or agreements and/or 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. In other situations, if investigations by EPA and state agencies uncover willful violations, criminal prosecution may be sought through the Department of Justice. EPA's removal program (emergency response) prevents, limits, or mitigates threatening situations as quickly as possible at any emergency or incident involving uncontrolled CERCLA hazardous substances, pollutants or contaminants including radioactive materials. Enforcement actions are taken as time allows based on the incident specific threats.

k. 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 trans-boundary impact, the EPA will immediately notify the Department of State (DOS) which has responsibility for official notification of foreign governments. The DOS coordinates release notification and information gathering/exchange activities with foreign governments, except when existing bilateral agreements may permit direct communication. When EPA as the LFA has existing bilateral agreements

permitting direct exchange of information, the Agency will keep DOS informed of communications with their foreign counterparts. Agency officials should take care that consultations do not exceed the scope of the relevant agreements(s). The EPA will ensure any offers of assistance to or requests from foreign governments are coordinated with DOS.

1. NCP Special Teams

ORIA will coordinate the mobilization of the RERT, and may coordinate mobilization of the Department of Energy's Radiological Assistance Program (RAP), and FRMAC. It is important to note that the Radiological Assistance Teams (RATs) mentioned in §300.145 of earlier versions of the NCP are now called Radiological Emergency Response Teams (RERTs), and are organized in ORIA. OERR will coordinate mobilization of the Environmental Response Team (ERT) among other organizational response elements as appropriate. Requests for mobilization of these response elements can be made directly through the OSC, and/or the National Response Center, which would put the requester directly in communication with the requested Special Teams' representatives.

2. CONCEPT OF OPERATIONS

The concept of operations for radiological response is defined in terms of EPA's overall responsibilities, roles, response framework, regional and Headquarters coordination, and deactivation and recovery (termination). EPA's responsibilities for emergency response as outlined in section 2.1, are established by the Agency mission and are predicated on vested legislative authorities. Section 2.2 describes EPA roles established by the federal plans' provisions for emergency response. The response framework is designed to address four basic type of incidents to which EPA may respond as delineated in Tables 1 - 4 in section 2.3. Response coordination involving regional and Headquarters programs is discussed in section 2.4. Annex D identifies other response organizations with a key role in the Agency emergency response. Termination of EPA response; i.e., deactivation and recovery, is described in section 2.5.

2.1 EPA Responsibilities

In principle, during an emergency response to radiological releases, EPA's responsibilities may include:

- acting as a lead response agency, or as LFA,
- determining which plan structure is applied and organize accordingly,
- modifying and/or activate RRT members as appropriate
- determining the need for Superfund (aka CERCLA) response,
- undertaking and funding Superfund response actions,
- directing support to state, tribal or local governments, in response operations at radiological facilities,
- developing protective action guidance (PAGs),
- performing radiological measurements and assessments,
- providing information and outreach to the affected community,
- providing direct support to State, tribal or local governments, operators of radiological facilities, or the public,
- providing technical advice and assistance to the FRERP designated LFA, other lead agencies including State and local officials, and
- providing specialized radiological resources, representatives and assistance to other federal responders.

2.2 EPA Roles

Lead Response Role. EPA may be the FRERP designated LFA in a multi-agency response, or be the sole agency when responding to the following types of radiological incidents or emergencies:

- releases at a nuclear facility not licensed, owned, or operated by a Federal agency or an Agreement State. These include facilities that possess, handle, store, or process radium, other naturally occurring radiological material (NORM), accelerator-produced radioactive material, or radioactive materials not covered by existing regulations.
- releases from accidents during transportation of radiological materials unknown, not licensed, owned or operated by a Federal agency or an Agreement State - unless material could be traced to a specific licensee or claimed by a federal agency.
- releases from a foreign source that has actual, potential, or perceived radiological consequences in the US, its Territories, possessions, or territorial waters.

When responding to these types of incidents, EPA's responsibility is to:

- provide the RERT On-Scene Commander (OSCom) and/or NCP OSC (the OSC is an OSCom except in a multi-regional incident when ORIA assigns the FRERP OSCom);
- determine the nature and extent of release, and determine the need for EPA response,
- evaluate the need for and coordinating appropriate NCP response actions pursuant to CERCLA, as needed;
- assist State and local governments in determining measures to protect life, property, and the environment;
- ensure that FEMA and other Federal agencies assist the State and local government agencies in implementing protective actions when requested;
- coordinate Federal response activities from the onscene Joint Operations Center (JOC), or from its Headquarters' Emergency Operations Center (EOC);
- coordinate with DOI for advice and assistance on economic, social, and political matters in the US insular areas for incidents occurring on, or with possible consequences to, Indian tribal lands;
- oversee the onsite response; monitoring and supporting owner/operator (when available) activities or providing technical support to them if requested;
- provide a hazard assessment of onsite conditions which may have offsite impact, and onsite measures taken to mitigate offsite consequences;
- serve as the principal Federal source of information about onsite conditions; and
- convene and coordinate the FRMAC and/or Advisory Group on Environment, Food, and Health that includes representatives of the Departments of Agriculture, Health and Human Services, and EPA when needed to analyze data and make recommendations on protecting the environment, the food, and water supply, and public health.

Support Role. When EPA assumes a supporting role in a multi-agency response under the FRP, FRERP, or CONPLAN, EPA is responsible for :

- providing advice on protective actions to the LFA/states representatives,
- providing information on the status of its response and on technical information,
- assuming control for the FRMAC activities from DOE at a mutually agreeable time, and thereafter coordinate activities of assets assigned to the FRMAC from all federal agencies,
- assisting in the development and implementation of a long-term monitoring plan,
- providing technical advice and assistance to the FRERP-LFA, including monitoring, identification of radionuclides, sample collection and analysis, and decontamination activities, and
- providing nationwide environmental monitoring data from the ERAMS for assessing the national impact of an accident.

2.3 Response Framework

EPA's emergency response may proceed in five stages beginning with the notification and evaluation of a release, and ending with the response termination. A variation of these stages may occur depending on the extent of the response measures. Most frequent occurrences are four types of incidents or emergencies to which EPA may respond. Tables 1 - 4 illustrate the response framework for each, with examples provided in Boxes 2-a, 2-b, 2-c, and 2-d.

a) **Table 1** shows EPA's response to an emergency impacting only one EPA Region, involving radioactive material not licensed, owned, or operated by a federal agency or an Agreement State. Unknown sources of radioactive material refers to that material whose origin and/or radiological nature is not yet established. These types of sources include contaminated scrap metal or abandoned radioactive material. The Radium Chemical response illustrated in Box 2-a, is an example of this incident. This type of response is typically addressed under the NCP, and will not generally require FRERP activation; however, FRERP resources would be available if needed.

Box 2-a: EPA Response to Radium Chemical

State Inspections revealed continual violations of the law at Radium Chemical Company's Woodside, Queens, facility in New York, including lost radium shipments and excessive radiation levels in the plant. After efforts to bring the insolvent company's facility into compliance with State regulations failed, EPA's assistance was called in. Due to the potential to cause significant harm to the public, EPA secured the site, evaluated the need for removal/decontamination, removed dangerous radioactive material from the site and shipped it to a low-level radioactive waste disposal site. EPA's response assets remained near the site during cleanup, due to potential accidental release of materials. EPA also recommended that the State conduct a health survey of former Radium Chemical Company employees.

b) **Table 2** illustrates EPA's response to an incident impacting multiple EPA Regions, such as a foreign reactor (see EPA's response to Chernobyl summarized in Box 2-b), a spacecraft (e.g., the Soviet COSMOS satellite), radioactive fallout from atmospheric testing of nuclear devices. For these types of incidents, EPA responds as the LFA under the FRERP, as well as NCP OSC where "site" cleanup is needed, and provides all leadership and coordination for the multi-agency response activities.

Box 2-b: EPA Response to Chernobyl

In April 1986, the accident at the Chernobyl Nuclear Power Plant (in former Soviet Union) became the World's worst civil radiological accident, emitting large quantities of radioactive material. The White House designated EPA as the leader in coordinating the U.S. response to this global emergency. EPA began monitoring and assessing radioactivity in the United States, based in part on daily samples from its Environmental Radiation Ambient Monitoring System (ERAMS). In addition, EPA dispatched response personnel to Europe to monitor and assess the levels of radioactivity in the Black Sea and Kiev Reservoir under a cooperative agreement with the Soviet government.

c) **Table 3** illustrates EPA concept of response in supporting another lead response agency. This may include a nuclear facility licensed by the NRC or an Agreement State, or a facility owned or operated by DOD or DOE. During such incidents, EPA response activities include environmental monitoring and assessment analyses and protective action guidance in support of State and local governments and the LFA. EPA's response to Three Mile Island, an example of this type incident, is summarized in Box 2-c.

Box 2-c: EPA Response to Three Mile Island Accident

The FRERP was not yet in place when the accident at the Three Mile Island nuclear power plant occurred in 1979. During the initial response, EPA deployed offsite radiation monitoring and assessment teams from its labs, and provided onsite and Headquarters assistance to the Nuclear Regulatory Commission - the Lead Federal Agency for the response. For eight years after the incident, EPA maintained a continuous environmental radiation monitoring network in the area surrounding the plant. In 1988, Commonwealth of Pennsylvania took over the responsibility of maintaining the permanent radiation monitoring network.

d) **Table 4** illustrates EPA's response concept to nuclear sabotage and terrorism incidents. These incidents represent complicating dimensions of the types of radiological emergencies, and may warrant initialization of the CONPLAN, FRERP and NCP. CONPLAN invokes coordination of the Federal response including EPA in support of the LFA; i.e., FBI. Whereas the

FRERP would be used to coordinate consequence management activities under the lead of FEMA. However, under both consequences and crisis management phases, the NCP would govern specific field response and clean up activities by EPA in coordination with the FBI and FEMA. Exercises Gauged Strength in 1998 and Mirrored Image in 1996, summarized in Box 2.d below, exemplify this type of incident. The response activities undertaken for consequence management are essentially the same whether the release resulted from an accidental or deliberate act, since the response objective is the same - prevent, mitigate or contain a threatened or actual release of radioactive material. For incidents involving improvised nuclear or radiation dispersal devices, the response is further complicated by the magnitude of the threat and the need for specialized technical expertise/actions.

Box 2-d: EPA Response to Terrorist Incidents

Several counter-terrorism exercises (including Mirrored Image, which was conducted in preparation for the 1996 Olympic Games in Atlanta, Georgia, and the 1998 "Gauged Strength" exercise) have provided EPA the opportunity to examine its role in support of the FBI and FEMA in crisis and consequence management, respectively. These exercises have validated the notion that EPA's traditional response capabilities are well suited to responding to terrorist-related radiological incidents. EPA's traditional consequence management activities, were coordinated with the FEMA-led response, as in other radiological emergencies warranting FRERP response.

Table 4: Releases from Terrorist Incidents¹

How EPA receives and evaluates release or threat of release	Response determination	Response preparation	Response implementation	Response termination
<p>During the <i>crisis management</i>, the Federal Bureau of Investigation (FBI) is responsible for notifying the relevant agencies, *****</p>	<p>For terrorist incidents, the EPA supports the FBI during crisis management and FEMA during the consequence management phase. *****</p>	<p>Onscene, the EPA integrates its command post in the existing Incident Command System (ICS). OR May use the ISC/UC structure to establish an emergency response management organization. *****</p>	<p>The FBI is responsible for managing and directing the support agencies response. ***** The EPA OSC will activate the NCP contractual response operations in accordance with the situation at hand. *****</p>	<p>Termination of the response is determined by the FBI/FEMA in consultation with supporting agencies. *****</p>
<p>During the <i>consequence management</i>, the Federal Emergency Management Agency (FEMA) is responsible for notifying the relevant agencies/departments. Including EPA, DOD, DOE, and HHS.</p>	<p>As his or her capacity, the EPA-OSC evaluates the release to determine: • the size of the release, • the character of the release, and • the nature of the threat to public health, or welfare of the US. , and • address all parts of the national response strategy concurrently, giving safety and stabilization the highest priorities.</p>	<p>For incidents involving <u>nuclear</u> elements, the OSC works closely with ORIA in managing and coordinating EPA response. ORIA, through the RERT, may provide: • onsite radionuclides monitoring and analysis, • radiation health physics and risk assessment, and • can also provide onsite mobile laboratory for sampling and analyses.</p>	<p>During the transition period from crisis to consequence management phase, the Attorney General hands off to the Director of FEMA responsibilities for consequence management actions.</p>	<p>The lead agency and EPA OSCs complete and maintain documentation of all actions taken.</p>

1. For example, EPA participation as a support agency to the FBI during the 1994 Olympics in Atlanta, GA, illustrated in Box 2.D.

2.4 Response Coordination

Figure 1 below depicts the lead within EPA for coordination of a radiological response. The response coordination is presented as a dual function involving management and support roles determined by the magnitude of the incident or emergency. The Regions have the responsibility and authority to take emergency response actions deemed appropriate and consistent with the NCP. However, some response actions may go beyond the regional preparedness, capabilities and assets, warranting Headquarters involvement.

Headquarters Lead. For radiological incidents impacting one or more EPA Regions, ORIA in collaboration with OERR and other offices internal and external to EPA, leads the response coordination activities including mobilization of the radiological response teams and assets. ORIA's coordination will focus on mobilization of the RERT, Advisory Teams, the Scientific Support Coordinators (SSCs), and the Regional Radiation Program Managers (RRPMs). However, individual sites within each Region shall be managed under the direction and authority of the EPA/Federal OSC, as appropriate.

In the event of a radiological incident or release that crosses regional boundaries or that overwhelms the regional response capability, or if there is a significant threat to population or potential large damage to property or natural resources, ORIA, as a member, will assume primary responsibility for activating, convening and coordinating the National Incident Coordination Team (NICT) activities.

Regional Lead. For incidents impacting only one EPA Region, the regional response program as the lead response agency will assume the lead for coordinating and managing the response actions. In which case, the regional program office will assign an OSC to direct and manage EPA response operations. The OSC also determines the need to convene the NRT/RRT through the NCP authorities. The RRPM supports the OSC, and may assume the Scientific Support Coordinator (SSC) role providing radiological expertise in consultation with ORIA and the RERT.

For non-EPA, FRERP responses, national and regional coordination will involve the respective regional and Headquarters program staff jointly providing EPA radiological support to the LFA. The criteria for OSC-regional lead and the need for the NRT to convene are governed by the NCP.

2.5 Response Termination and Recovery

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

- the situation is stabilized,
- its statutory responsibilities have been fulfilled,
- other federal assistance is available, or
- EPA determines that its assistance is no longer required.

Prior to discontinuing its response operation, EPA will discuss its action with the State and local governments, the LFA, and FEMA, if applicable. Should EPA be managing the FRMAC, EPA will consult with the LFA, 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 State or 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 will be initiated at the request of the State(s), 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. The EPA will, on request, assist the State and local governments in developing off-site recovery plans prior to deactivation of the response. The LFA will coordinate the overall activity of Federal agencies involved in the recovery process.

The radiological monitoring and analysis activities will be terminated when the EPA, after consultation with the LFA 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 of the agencies involved to terminate the response.

