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Modification to List of Attachments

Attachment 4

Hanford Emergency Response Plan, DOE/RL-94-02
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Hanford Emergency Response Plan

Date Published
May 1995

Approved for Use and Application by:

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Prepared for the U.S. Department of Energy

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Department of Energy
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ACRONYMS

AIHA	American Industrial Hygienists Association
BED	Building Emergency Director
BHI	Bechtel Hanford Inc.
BW	Building Warden
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
DOE	U.S. Department of Energy
DOE-HQ	U.S. Department of Energy, Headquarters
EAL	emergency action level
EAS	Emergency Alert System
Ecology	Washington State Department of Ecology
EDF	Emergency Decontamination Facility
EDO	Emergency Duty Officer
ENS	Emergency Notification System
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
EPZ	emergency planning zone
ERAP	Emergency Readiness Assurance Plan
ERO	emergency response organization
ERPG	Emergency Response Planning Guideline
FAA	Federal Aviation Administration
FBI	Federal Bureau of Investigation
FDA	Food and Drug Administration
FDH	Fluor Daniel Hanford, Inc.
FEMA	Federal Emergency Management Agency
FRERP	Federal Radiological Emergency Response Plan
HEHF	Hanford Environmental Health Foundation
HCC	Health Care Center
IC	Incident Commander
ICP	Incident Command Post
JIC	Joint Information Center
LFA	Lead Federal Agency
MOU	memoranda of understanding
ONC	Occurrence Notification Center
PAG	Protective Action Guideline
PAR	protective action recommendation
PCB	Polychlorinated biphenyl
PNNL	Pacific Northwest National Laboratory
POC	Patrol Operations Center
PSO	Program Secretarial Officer
RAP	Radiological Assistance Program
QSH	Quality, Safety, and Health Program Division
RCRA	Resource Conservation and Recovery Act
RL	U.S. Department of Energy, Richland Operations Office

ACRONYMS (cont)

SAR	Safety Analysis Report
SARA	Superfund Amendment and Reauthorization Act of 1986
SAS	Safeguards and Security
SMT	Site Management Team
SRG	Scenario Review Group
Supply System	Washington Public Power Supply System
TEDE	total effective dose equivalent
TEP	Transportation Emergency Preparedness
TOC	Tactical Operations Center
TSD	Treatment, Storage, and Disposal
UDAC	Unified Dose Assessment Center
USCG	U.S. Coast Guard
WNP-2	Washington Nuclear Project 2

HANFORD EMERGENCY RESPONSE PLAN

1.0 INTRODUCTION

1.1 PURPOSE

The *Hanford Emergency Response Plan* for the U.S. Department of Energy (DOE), Richland Operations Office (RL), incorporates into one document an overview of the emergency management program for the Hanford Site. The program has been developed in accordance with DOE Orders, and state and Federal regulations to protect worker and public health and safety and the environment in the event of an emergency at or affecting the Hanford Site.

This plan provides a description of how the Hanford Site will implement the provisions of DOE 5500 series and other applicable Orders in terms of overall policies and concept of operations. It should be used as the basis, along with DOE Orders, for the development of specific RL and site contractor implementing procedures.

This plan, together with the *Hanford Emergency Response Plan* implementing procedures and each treatment, storage, and/or disposal (TSD) unit-specific plan and/or procedures, meets the WAC 173-303 requirements for a contingency plan. Applicability of this plan to Hanford Site activities is described in the Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit, Dangerous Waste Portion, General Condition II.A. General Condition II.A applies to Hanford Site activities at operating TSD units, TSD units undergoing closure and/or post-closure activities, and to transportation incidents on the site in accordance with the applicability matrix delineated in Attachment 3 of the Hanford Facility RCRA Permit. For interim status TSD units and 90-day accumulation areas, these activities will be consistent with emergency preparedness policy and implementation techniques required by the Hanford Facility RCRA Permit, General Conditions II.A and II.B. The contingency plan requirements are met in Hanford Site documentation through the crosswalk matrix delineated in Appendix A.

In addition, this plan, together with the *Hanford Emergency Response Plan* implementing procedures and each Polychlorinated biphenyl (PCB) temporary accumulation area plan and/or procedures, meets the requirements for a Spill Prevention Countermeasures and Control (SPCC) Plan and the notifications required by 40 CFR 761.

RL is currently in the process of implementing DOE P 450.2A, "Identification, Implementation and Compliance With Environmental, Safety and Health Requirements," prior to changing contracts to require compliance with DOE O 151.1, "Comprehensive Emergency Management System," which will replace many of the DOE 5500 series Orders. Site contractors continue to comply with DOE 5500 series Order requirements until DOE O 151.1 is contractually implemented. RL has, however, provided formal direction to Fluor Daniel Hanford, Inc. to revise emergency classification procedures to the extent that offsite RL shipment accidents involving radiological or nonradiological hazardous materials be categorized in accordance with criteria stated in DOE O 151.1, Chapter 5, section 2.d, "Offsite DOE Transportation Activities."

1.2 SCOPE

Event response is governed by an emergency preparedness documentation hierarchy shown in Figure 1-1. This hierarchy generally follows an integrated contingency plan approach. In such an approach, one set of documentation responds to a number of requirements (e.g., environmental regulations and DOE Orders). For example, the crosswalk contained in Appendix A illustrates which portions of this plan address the specified requirements.

The *Hanford Emergency Response Plan* describes the overall emergency organization, authorities, and responsibilities for response to and mitigation of emergency events involving facilities and activities on the Hanford Site. These events include the full spectrum of operational emergencies, natural phenomena, transportation events, and safeguard and security emergencies. The plan also describes the authorities, responsibilities, and agreements for response to offsite and near-site facility emergencies that have the potential for detrimentally affecting the health of personnel and safety of operations at the Hanford Site.

The RL and each site contractor shall develop and maintain procedures or other documents necessary to implement the emergency management program described in the *Hanford Emergency Response Plan*. Procedures must be consistent and compatible with the emergency plan and shall contain detailed information and the specific instructions, including response actions, associated precautions and prerequisites, and identification of responsible individuals, needed to carry out the emergency plan during a drill, exercise, or actual emergency.

For the Hanford Site, these procedures shall include, but are not limited to the following.

- RL site-wide emergency procedures used by RL and site contractors that delineate:
  - the operation of the Hanford incident command system;
  - the responsibilities for the RL Emergency Operations Center (EOC), which includes the Policy Team, Site Management Team (SMT), and the Joint Information Center (JIC);
  - recognition, classification, and notification of emergencies and other incidents;
  - protective action recommendations (PARs);
  - response to nonradiological hazardous substance spills or releases during transportation incidents occurring on the Hanford Site not covered by TSD unit-specific contingency plans or building emergency plans;

    NOTE: The term hazardous substances is defined in WAC 173-303-040 as: "any liquid, solid, gas, or sludge, including any material, substance, product, commodity, or waste, regardless of quantity, that exhibits any

of the physical, chemical or biological properties described in WAC 173-303-090 or 173-303-100." Whenever the term hazardous substances is used in this document to denote the WAC 173-303 definition, the term will be referred to as "WAC hazardous substance." Otherwise, a hazardous substance will mean those regulated by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

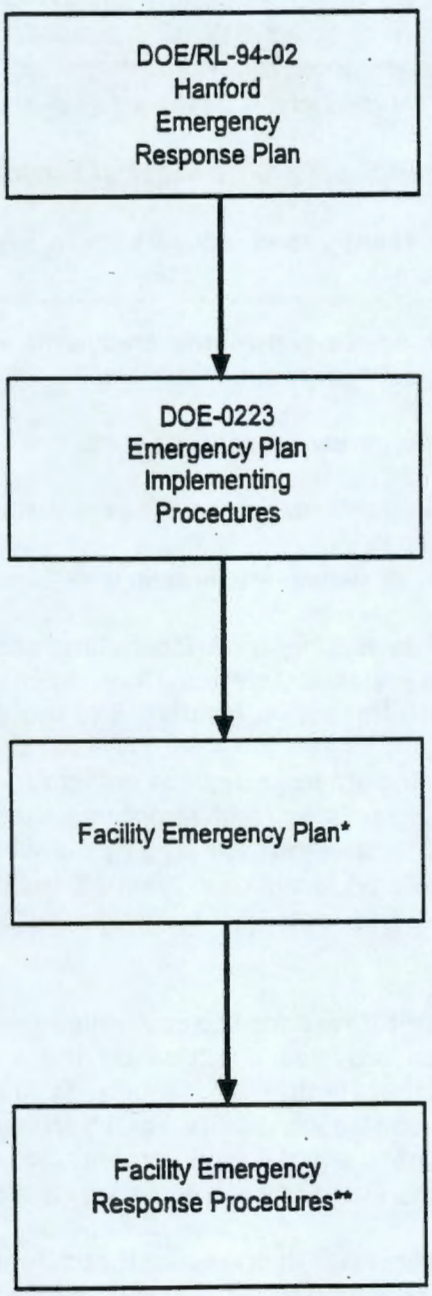
- response to PCB spills or releases in accordance with 40 CFR 761;
- termination, reentry, and recovery for RCRA and DOE Order emergencies; and
- response to onsite and offsite shipments of RL-owned radiological and nonradiological hazardous materials.

- Site contractor emergency procedures that:
  - enable the implementation of the responsibilities of the site contractors;
  - supplement, as necessary, implementation of RL emergency procedures;
  - include facility and organizational plans and procedures for response to, and recovery and restoration from, specific emergency conditions, to include bomb threats, at Hanford Site facilities; and
  - include building emergency plans and/or procedures which are required for all buildings, facilities, and structures that are defined as a nuclear or reactor facility, that are regulated by the Washington State Department of Ecology (Ecology) Dangerous Waste Regulations, or that are regulated by the U.S. Environmental Protection Agency (EPA) Toxic Substances Control Act.

In addition to the program for response to and mitigation of emergencies, the *Hanford Emergency Response Plan* also provides direction on the activities necessary to ensure emergency preparedness on the Hanford Site such as training, drills, exercises, and assessments. The authority and responsibility for interfaces with offsite organizations responsible for protecting the public and the environment, including those agencies that may provide or request support in the event of an emergency, is also delineated.

The RL responsibility to provide, upon request, radiological advice and assistance to other Federal, tribal, state, or local governments under the Radiological Assistance Program (RAP) is defined in the *U.S. Department of Energy Region 8 Radiological Assistance Program Plan* (DOE/RL 1992) (DOE/RL-92-49).

Figure 1-1. Emergency Preparedness Documentation Hierarchy.



* Facility Emergency Plans can include Building Emergency Plans, Supplemental Contingency Plans, or Facility Emergency Information Boards.

** In some facilities, plan and proedures are integrated.

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1.3 CONCEPT OF OPERATION

The Hanford Site Emergency Management Program provides the final barrier for ensuring the safety and health of workers and the public, and for protecting property and the environment in the event of an emergency. The emergency management program prepares the Hanford Site emergency organizations to respond to an emergency in a timely, efficient, and effective manner resulting in improved mitigation of consequences. The Hanford Site Emergency Management Program is developed and maintained to ensure adequate response to a broad range of potential scenarios and to provide the framework for responding to scenarios not specifically considered.

The Hanford Site Emergency Management Program elements include the following.

- Planning: Includes identification of hazards and threats, the development and preparation of emergency plans and procedures, and the identification of necessary personnel and resources to provide an effective response.

- Preparedness: Includes the training of personnel; acquisition and maintenance of resources; and exercising of the plans, procedures, personnel, and resources essential for emergency response.

- Response: Represents the implementation of the planning and preparedness during an emergency involving the effective decisions, actions, communications, and application of resources that must be accomplished to mitigate consequences to workers, the public, the environment, or national security; and recover from an emergency.

1.3.1 Hanford Site Emergency Management Program Basis

The Hanford Site Emergency Management Program is based on, and is commensurate with, the hazards and consequences associated with the facilities and activities on the Hanford Site, offsite facilities that may impact the site, and onsite and offsite RL transportation emergency preparedness (TEP) activities involving radioactive and nonradioactive hazardous materials.

Hazards assessments provide the technical basis for the emergency management program. The extent of planning and preparedness directly corresponds to the type and scope of hazards present and the potential consequences of events. Hazards assessments prepared for Hanford Site hazardous facilities include identification of hazards and targets unique to a facility, analysis of potential events, and evaluation of potential event consequences. While not every conceivable situation will be analyzed, the hazards assessments will provide the framework for response planning for virtually any emergency. Hazards assessments are discussed in section 4.0 of this plan.

Using the accident scenarios and consequences identified in a facility hazards assessment, the observable methods of detecting or recognizing an emergency can be identified. These indicators, called emergency action levels (EALs), are used to determine the emergency class. The emergency class is used to trigger specified, preplanned responses and protective actions. Emergency classes and EALs are described in section 4.0 of this plan.

For each emergency class there shall be predetermined protective actions. These actions shall include those steps necessary to protect workers, equipment, and the environment. They shall also include recommended actions for the protection of offsite populations. The Hanford Site Emergency Response Organization (ERO) shall be formed, trained, and tested to ensure the recognition and classification of emergencies, and the implementation of protective actions. This is described further in section 5.0 of this plan.

1.3.2 Hanford Site Emergency Response

This section provides an overview of how the Hanford Site responds to events. It covers the actions to be taken for an event by the event discoverer, the facility staff, and by agencies such as the Hanford Fire Department and/or Hanford Patrol.

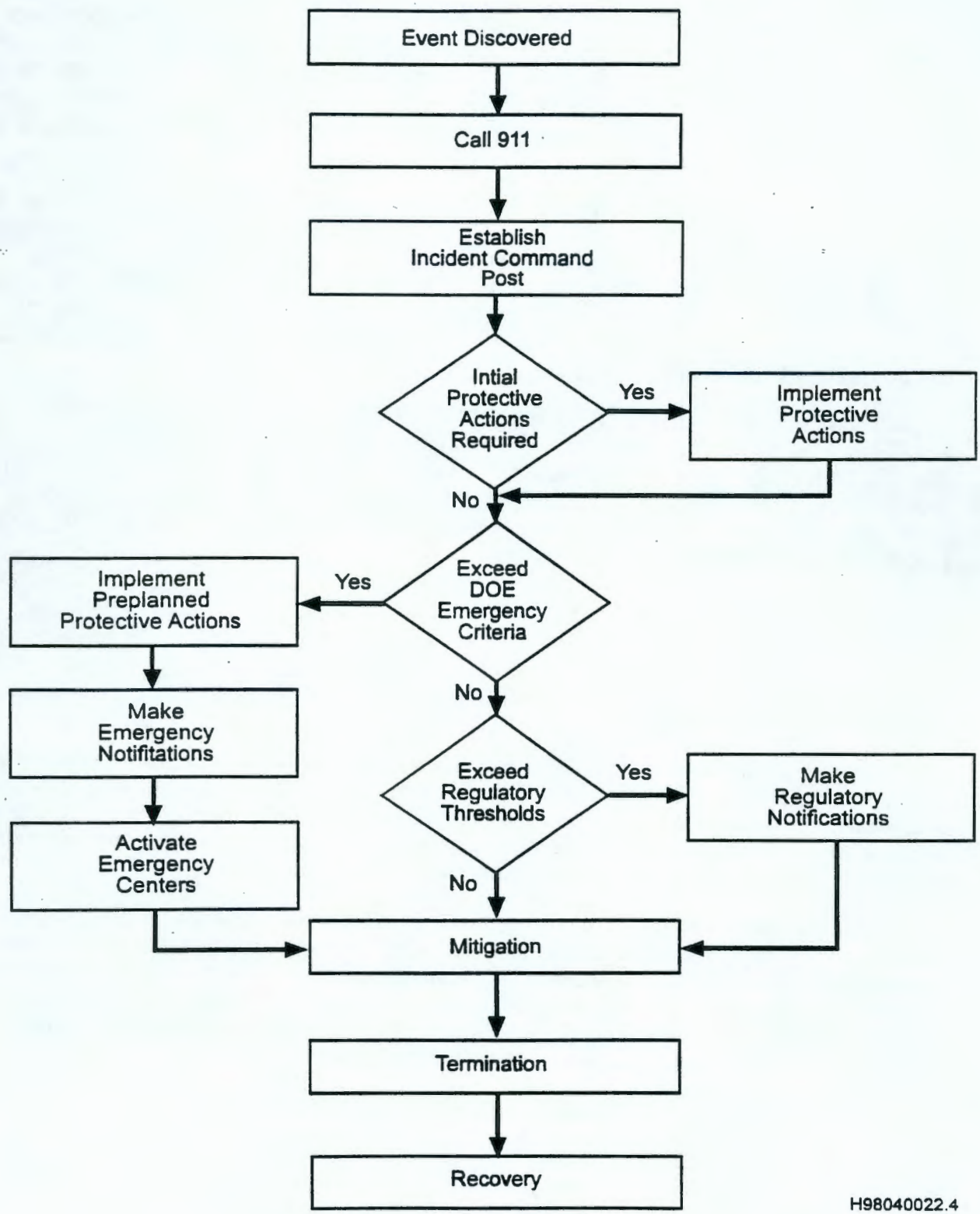
The Hanford Site has a diverse array of facilities and processes. A graded approach is used to respond to an event depending upon the nature of a facility and/or the severity of the event. There are a number of events to which the site has to be ready to respond, including releases, spills, operational events, fires, natural phenomenon, and security events.

The discoverer of an event (e.g., fire, release, spill, transportation event, etc.) initiates response to the event. For some events, specific response actions to mitigate the event by the discoverer and/or facility staff may be appropriate. In such cases, actions include shutting down systems, isolating materials, or other facility specific response actions when appropriate. In addition, the facility procedures may direct protective actions for personnel.

In other cases resources outside the facility are required. In these cases, the general response approach is outlined in Figure 1-2, and requires the discoverer to notify 911. Upon being contacted, 911 notifies the primary response agency - the Hanford Fire Department - who responds and establishes an Incident Command Post (ICP). The ICP is where actions are coordinated and all responders including the facility response organization (i.e., Building Emergency Director, Building Warden, etc.) locate. The senior Hanford Fire Department official becomes the Incident Commander (IC), unless the event is determined to primarily be a security event, in which case the Hanford Patrol senior officer becomes the IC.

When the ICP is established, a coordinated effort to plan and implement additional mitigative activities commences. In addition, the consequences of the event are further analyzed and, if additional protective actions are determined necessary, they are implemented through the use of emergency signals, crash alarm telephone systems, and barricades.

Figure 1-2. Emergency Response.



Whenever there is an event at Hanford, depending upon the type and severity of the event, certain notifications are required. These notifications would include management notifications, activation of emergency response personnel and offsite agency notifications as necessary. These notifications are performed primarily by the Occurrence Notification Center (ONC) and site contractor environmental single points-of-contact. For events that do not meet emergency criteria, but could cause public concern or media interest, the local and state emergency management agencies are notified, as well as state regulatory agencies for information purposes. If the event exceeds regulatory criteria, the appropriate regulatory agencies are notified immediately.

Concurrent with the immediate notifications to the appropriate regulatory agencies, if the event is severe enough to be classified as a DOE-declared emergency (i.e., Alert, Site Area Emergency, or General Emergency), state and county agencies are notified within 15 minutes of declaration of the emergency. This notification allows them to implement protective actions for their populations if necessary and to begin mobilization of resources. In addition, preplanned protective actions are implemented for site personnel, and the RL-EOC is activated to coordinate interface with offsite agencies and to support the ICP.

Upon mitigation of the event to the point the situation is stabilized and ensuring that actions have been taken to prevent reoccurrence, the event is terminated and the recovery effort begins. Recovery is the process of planning for and implementing actions to return the facility/process to pre-event conditions. This would include activities such as equipment repair, decontamination, proper storage of waste generated, and providing any follow-up reporting to appropriate regulatory agencies.

1.4 SITE DESCRIPTION

1.4.1 Overview Site Description

The 1,500-square-kilometer (560-square-mile) Hanford Site was originally acquired by the Federal government in 1943 for the construction and operation of facilities to produce plutonium that was used to help end the Second World War. In 1989, the Hanford Site mission changed from one of national defense production to waste management, environmental restoration, and technology development.

The site contains several types of complex facilities, including retired nuclear reactors, retired and active chemical processing facilities, nuclear waste storage tanks, and research laboratories. There are approximately 600 buildings on the site with an infrastructure of utilities and transportation necessary to support an operation employing approximately 15,000 workers. The worker population is currently decreasing, however, as RL and site contractor work force restructuring phases are completed.

The Hanford Site is also defined as a single *Resource Conservation and Recovery Act of 1976* facility, identified by the EPA/State Identification Number WA7890008967, that consists of over 60 TSD units. This area consists of the contiguous portion of the Hanford Site that contains these TSD units and, for the purposes of the RCRA, is owned and operated by the U.S. Department of Energy (excluding lands north and east of the Columbia River, river

islands, lands owned or used by the Bonneville Power Administration, lands leased to the Washington Public Power Supply System, and lands owned by or leased to the state of Washington).

1.4.1.1 Hanford Site Facilities/Activities. The major facilities and activities on the Hanford Site, that are DOE-owned and contractor-operated, are grouped together in the following major areas.

- 100 Areas: The 100 Areas are located along the Columbia River in the northern portion of the Hanford Site and contain nine former plutonium production reactors. These facilities are currently being prepared for permanent disposal. Worker population is approximately 700.

- 200 East and 200 West Areas: These areas lie on a plateau near the center of the site some 40 kilometers (25 miles) north of Richland, Washington. The 200 Areas are dedicated to waste management activities, laboratory support, waste characterization, and environmental restoration. Worker population is approximately 4,800.

- 300 Area: The 300 Area is approximately 8 kilometers (5 miles) north of Richland, Washington. Major activities in the 300 Area are nuclear research and development. Worker population is approximately 1,650.

- 400 Area: This area, approximately 15 kilometers (9 miles) north of Richland, Washington, contains the Fast Flux Test Facility (in transition to shutdown) and related support facilities formerly involved in the liquid metal reactor program. Worker population is approximately 450.

- 600 Area: The 600 Area includes all of the Hanford Site not occupied by the other listed areas. Land uses include the 310-square-kilometer (120-square-mile) Fitzner/Eberhardt Arid Lands Ecology Reserve, a U.S. Fish and Wildlife Refuge, and a recreational game site leased to the Washington State Department of Game. Worker population is approximately 400.

The site also contains facilities that are not owned and/or operated by RL and its site contractors. These facilities include the following.

- A publicly owned commercial nuclear power plant, Washington Nuclear Power Plant No. 2 (WNP-2), operated by the Washington Public Power Supply System (Supply System) on lands leased from the Federal government on the eastern side of the site, near the Columbia River and about 15 kilometers (9 miles) north of Richland. This facility is operated in accordance with U.S. Nuclear Regulatory Commission licensing requirements and rules.

- A low-level radioactive waste disposal site located near the 200 Areas, on land that the state of Washington has leased from the Federal government. This facility is commercially operated by the US Ecology Company in accordance with state and Federal licenses and permits.

- A metalworking facility, Richland Specialty Extrusions, designed to manufacture aluminum products for commercial markets. This facility is located in the 313 Building of the 300 Area, which is leased from the Federal government until a permanent facility, to be located in Richland, can be completed.

- A commercial incubator project, administered by the Port of Benton, which will lease up to 22 excess site buildings adjacent to the 400 Area for private-sector businesses.

- An observatory to monitor the earth's gravitational waves, Laser Interferometer Gravitational Observatory (LIGO), which is currently under construction in the northern part of the 600 Area.

The RL and its site contractors also lease facilities off the Hanford Site in the cities of Richland and Kennewick. These areas, designated as the 1100, 3000, and 700 Areas, contain site-related office and warehouse facilities that could not generate an Alert-level or higher emergency.

1.4.1.2 Hazards. Activities at the Hanford Site involve both radiological and nonradiological hazardous materials. Major hazardous materials emergencies are associated with the potential for fire, explosion, or dispersion of radiological or toxic chemicals.

A significant hazard requiring emergency planning on the Hanford Site stems from the presence of large quantities of radioactive materials from the various separations, waste storage, research, and previous production and manufacturing materials. These materials, although contained, could affect worker and public health and the environment in the event of dispersion during a major accident.

In addition to radiological hazards, large quantities of various nonradiological hazardous materials are stored and used in chemical processing and other operations at the Hanford Site. Hazardous materials are routinely transported by truck and rail to and around the site and are stored at various onsite locations. State Route 240, a main public highway that runs through the site, is used for transporting a wide range of chemicals, including agricultural chemicals to farms and orchards in the surrounding area.

Typically, hazardous materials of concern for emergency planning purposes include petrochemicals, explosives, toxic chemicals and chemical products, and fuel gases (e.g., propane and butane). Hazardous chemicals of particular concern are those with the potential for forming large, toxic airborne clouds that may travel long distances before dispersing. These chemicals include ammonia, chlorine, hydrogen fluoride, liquified petroleum gas, fuming acids, and others.

For purposes of emergency planning, facilities on the Hanford Site are described as either hazardous, nonhazardous, or administrative.

1.4.1.3 Contractors. The Hanford Site contractors, responsible in their respective capacities for the operation or management of the Federal facilities, include the following.

- Fluor Daniel Hanford, Inc. (FDH): Manages the Project Hanford Management Contract (PHMC) that integrates a full range of work to support cleanup of the site. In addition, FDH has contracts with other companies to manage projects and perform site-wide services such as security and fire protection services. References to FDH in this plan is all inclusive of work performed by FDH and its subcontractors.

- Pacific Northwest National Laboratory (PNNL): Operates DOE's Hanford Site research and development laboratory, and performs environmental monitoring.

- Bechtel Hanford Inc. (BHI): Manages the Environmental Restoration Contract (ERC) directing the cleanup of the Hanford Site which encompasses all phases of the investigation, decontamination and decommissioning, and restoration and remediation of Hanford's inactive radioactive and/or hazardous waste disposal facilities or release sites.

- Hanford Environmental Health Foundation (HEHF): Provides occupational health services to Hanford Site employees.

1.4.2 Physical Attributes of the Hanford Site

The Hanford Site is located in the southeastern area of the state of Washington. The site covers approximately 1,500 square kilometers (560 square miles) located in Benton, Franklin, and Grant Counties just northwest of the cities of Richland, Kennewick, and Pasco (Tri-Cities).

For the purposes of emergency preparedness, the Hanford Site is defined as the near (south and west) bank of the Columbia River from the intersection of the existing western most site boundary and the Columbia River, following the Columbia River to the south boundary of the 300 Area, and proceeding west and north along the existing site boundary (see Figure 1-3). Based on this definition, portions of the existing Hanford Site that fall within Grant and Franklin Counties are considered outside of the site boundary.

The Columbia River runs across the northern half of the site then flows south across the eastern side of the site. The Yakima River borders part of the southern boundary of the site and joins the Columbia River below the city of Richland. A worse-case flood of the Columbia River or catastrophic breach of Grand Coulee Dam could impact parts of the 100 and 300 Areas but the central portion of the site would remain unaffected.

The Hanford Site and surrounding area has a semiarid climate with a sparse covering of vegetation. The terrain of the central and eastern parts of the site is relatively flat. Rattlesnake Mountain, the Yakima Ridge, and the Umtanum Ridge continue onto the site from the west and form the southwestern and western boundary. Two small east-west ridges, Gable Butte and Gable Mountain, rise above the plateau of the central part of the site. It is an area of low seismicity in which moderate level earthquakes can occur.

The area has moderate winters and hot summers. Severe thunderstorms are rare, although the site is vulnerable to lightning strikes causing grass fires. Formation of a severe tornado is highly unlikely.

Primary land uses of the surrounding areas are irrigated and nonirrigated farming, residential living, and state- and Federal-controlled lands.

Because of the size of the site, there may be differences in the specific physical attributes in the vicinity of each hazardous facility. Detailed discussions and analysis of the local geography, geology, seismology, meteorology, and hydrology in the area of each hazardous facility are contained in Safety Analysis Reports (SARs).

1.4.2.1 Population. The permanent population within the 50-mile (80-kilometer) ingestion exposure emergency planning zone (EPZ) of the Hanford Site, which is centered on WNP-2, is approximately 270,000 (Figure 1-4). The maximum transient population within the ingestion EPZ, including Hanford Site workers, offsite workers, and recreationists, is approximately 17,000.

The plume EPZ populations for Hanford Site EPZs are as follows.

- 100 Area: A small portion of a sparsely populated area of southern Grant County consisting of a permanent population of approximately 150 residents, a transient population of seasonal employees, and no special populations.

- 200 Areas: A small portion of a sparsely populated area of northwestern Benton County consisting of a permanent population of less than 50 residents and no transient or special populations. Also, a small portion of northwestern Franklin County that is leased to the Washington State Department of Game consisting of no permanent, transient, or special populations.

- 300 Area: A portion of western Franklin County consisting of a permanent population of approximately 750 residents, a transient population of seasonal employees, and no special populations. Also, a portion of the northern section of the city of Richland consisting of a permanent population of approximately 12,750 residents, a transient population of seasonal employees, and special populations consisting of four schools and three pre-schools.

- 400 Area: No offsite impact. There are no permanent or special populations.

During the summer months, recreationists may be using the section of the Columbia River between Richland and Vernita.

The EPZs are discussed further in section 5.0 of this plan.

1.4.2.2 Transportation System. Hundreds of miles of roads are maintained on the Hanford Site. State Routes 240 and 24 and site roads are used by many types of vehicles including commercial trucks and private vehicles.

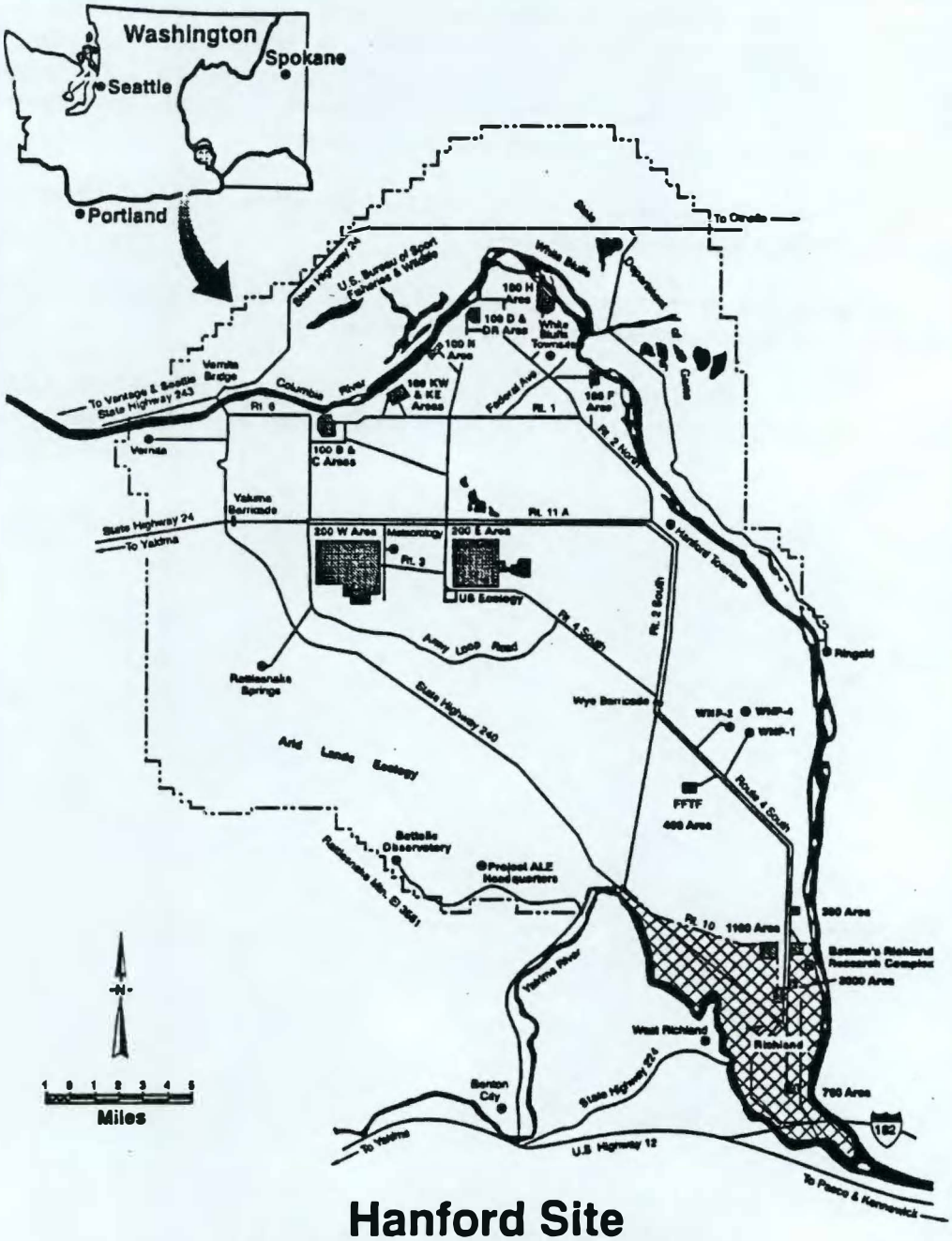
In addition to private vehicles, government vehicles are available to provide transportation in the event of an emergency. Traffic engineering studies are conducted annually to ensure that an adequate employee-to-vehicle ratio is maintained to provide a timely and safe evacuation of personnel. The current ratio is approximately 1.6 employees to every vehicle. Should the ratio increase to four employees to every vehicle, alternative methods for providing adequate evacuation methods will be developed.

The site railroad system consists of 169 kilometers (105 miles) of track used to transport commercial and nuclear material.

The Richland Airport, nearest to the Hanford Site, is a small, general utility airport. The Tri-Cities Airport (Pasco) is used by regional carriers.

The section of the Columbia River that flows near the Hanford Site is used mainly by recreationists. Barge traffic does not operate on the stretch of the river that goes through the site.

Figure 1-3. Hanford Site Map.



Hanford Site
Department of Energy

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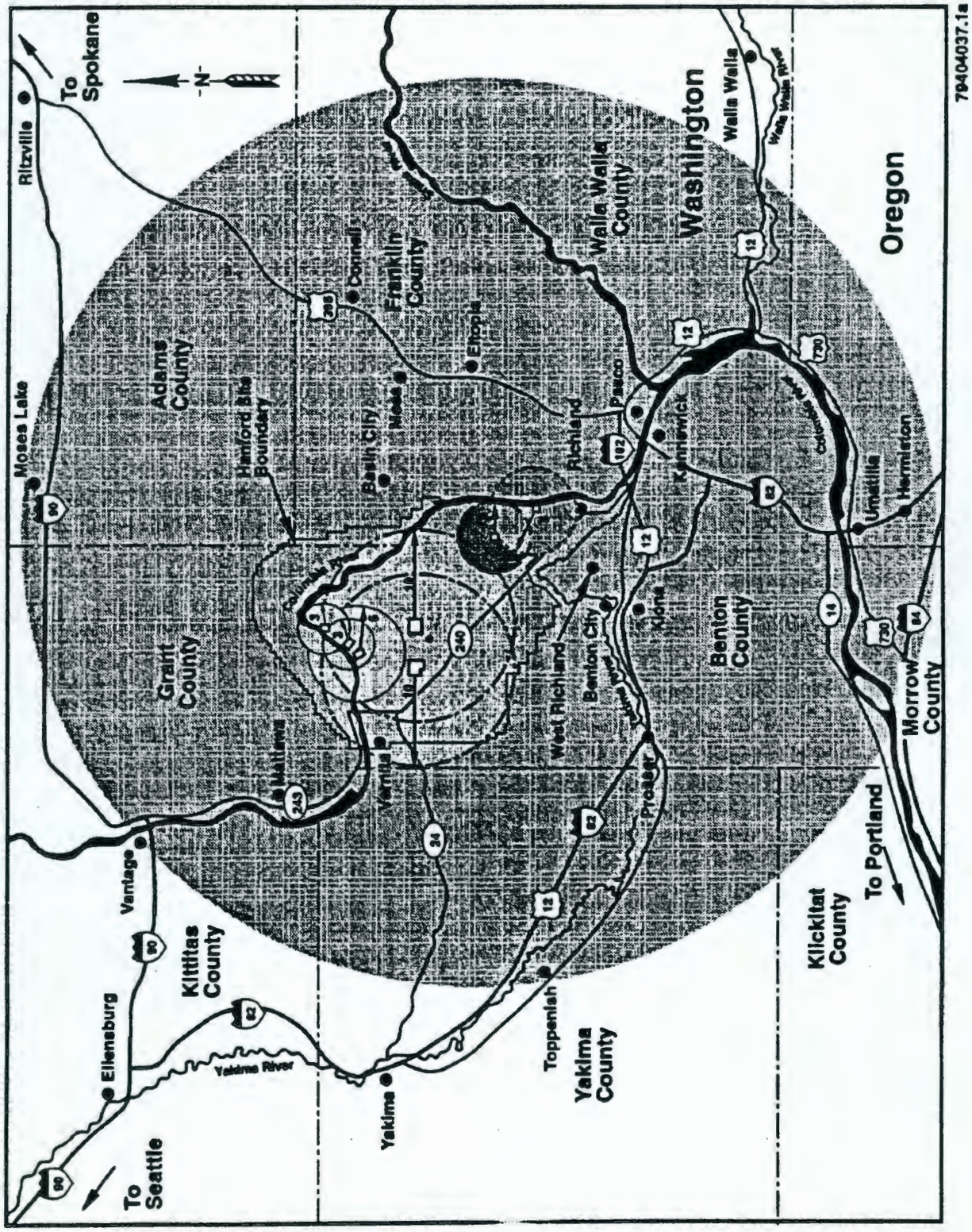
Figure 1-4. Hanford Site Emergency Planning Zones.



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2.0 EMERGENCY RESPONSE ORGANIZATION (INTERNAL)

The mission of the Hanford Site ERO is to ensure that, in the event of an emergency, actions will be taken to prevent or minimize impacts to workers, the public, site, facilities, and the environment. The ERO shall be structured and staffed with adequate, trained personnel, including designated alternates, to enable the most timely and effective response possible, while meeting the requirements as set forth in the DOE 5500 series Orders and other applicable state and Federal regulations. Emergency response responsibilities and tasks shall be assigned to individuals identified by name, title, or position.

2.1 ORGANIZATION STRUCTURE

While RL maintains the option to assume overall management, direction, and control of any Hanford Site emergency, the Hanford Site ERO has been developed to allow the site contractors to continue their management and operational roles in the event of an emergency.

The Hanford Site ERO has three components. The first component, the building emergency organization, consists of individuals with emergency response activities at the event facility. The second component, the Incident Command Post (ICP), consists of site contractor emergency response personnel with the responsibility for on-scene mitigation of an emergency on the site. The third component, the RL-EOC, has the responsibility to oversee and provide support for the onsite response, assess the offsite impacts, and interface with offsite agencies and the public.

2.1.1 Hanford Site Contractors

Hanford Site contractors operate facilities and provide site services for RL. Site contractors shall coordinate with one another to ensure development of an emergency response and management capability that meets the mission of the Hanford Site ERO.

2.1.1.1 Event Contractor. The site contractor that maintains responsibility for the facility or activity with the emergency is designated as the event contractor. The event contractor responsibilities include:

- prompt and accurate categorizing of all occurrences in accordance with DOE Order 232.1A (DOE 1997);
- initially classifying the emergency;
- assisting, as necessary, in mitigating the emergency situation;
- initiating actions to protect workers within their geographic area of responsibility;
- contacting the Patrol Operations Center (POC) and providing initial emergency information;
- requesting support from nonevent site contractors as necessary;

- establishing an ICP to include staffing as delineated in Table 2-1 and radiological control technicians as available;
- providing personnel to staff the RL-EOC to include senior management staff and technical representatives;
- providing event status information to the RL-EOC;
- ensuring proper cleanup, transportation, and storage of hazardous materials generated as a result of the event; and
- providing funding for performance of emergency response and recovery duties and replacement of supplies used by other contractors for event response.

Other site contractors shall provide support to the event contractor for actions related to the services they provide on the site, such as notifications, fire, security, or medical services.

2.1.1.2 Fluor Daniel Hanford, Inc. In addition to event contractor responsibilities for the Hanford Site facilities it operates, FDH emergency responsibilities include:

- fire protection, rescue, and emergency medical services provided by the Hanford Fire Department;
- site security, access control, emergency service call answering and dispatching, and transportation emergency response contact provided through the Hanford Patrol;
- emergency communications including onsite and offsite notifications provided by the ONC;
- staffing of a 24-hour Emergency Duty Officer (EDO) position;
- management and staffing of the RL-EOC;
- onsite radiation monitoring;
- environmental radiation sampling and monitoring;
- laboratory services;
- transportation;
- services in support of reentry and recovery operations, such as decontamination, engineering, equipment maintenance, utilities, procurement, and waste disposal; and
- radio, telecommunications, computer, and audio/visual services; and

- managing sitewide radiological tasks which includes plume assessment and tracking; large group personnel survey, sort, and decontamination; survey of individuals evacuated from the Columbia River at the Vernita bridge and White Bluffs; and radiological control support (e.g., radiological control technicians, supervisory personnel, exposure evaluators as agreed upon by PNNL) during medical care of radiation accident patients at the local hospitals.

2.1.1.3 Pacific Northwest National Laboratory. In addition to event contractor responsibilities for the Hanford Site facilities it operates, PNNL emergency responsibilities include:

- weather information from the Hanford Site meteorology station;
- health physics technical support;
- control of nonmedical radiological operations of the Emergency Decontamination Facility (EDF);
- evaluation of radiological doses to personnel in the event of a criticality emergency; and
- senior management and technical staff support to the RL-EOC.

2.1.1.4 Bechtel Hanford Inc. In addition to event contractor responsibilities for the Hanford Site facilities it manages, BHI emergency responsibilities include senior management and technical staff support to the RL-EOC.

2.1.1.5 Hanford Environmental Health Foundation. HEHF has no event contractor responsibilities as delineated in section 2.1.1.1. However, emergency services provided by HEHF include:

- minor emergency medical care and consultation;
- medical support for radiologically contaminated patients;
- medical staffing and operation of the EDF;
- hostage negotiation support;
- coordination with and support to community medical services; and
- senior management and technical staff support to the RL-EOC.

2.1.2 U.S. Department of Energy, Richland Operations Office

2.1.2.1 RL Manager. The RL Manager has the ultimate responsibility and authority for all Hanford Site emergency response activities and ensuring that effective management is provided for response to emergencies. The RL Manager is responsible for overseeing the performance of all onsite activities necessary to place the site in a safe condition and to minimize or terminate uncontrolled releases of hazardous materials. The RL Manager is also responsible for interfaces with offsite agencies and the public.

The RL Manager shall ensure fulfillment of his or her responsibilities through direction of the Policy Team and RL representatives assigned to offsite emergency centers. The responsibilities and staffing of the Policy Team are described in Section 2.2.3.1.1.

2.1.2.2 RL Senior Management. As designated by the RL Manager, senior management personnel or their designees shall fill ERO positions which include:

- members of the Policy Team;
- representatives to the Site Management Team;
- representatives to state and county EOCs;
- spokesperson in the JIC;
- liaisons to Federal assets; and
- representative to DOE Headquarters (HQ), as requested.

2.1.2.3 RL Facility Representative. The RL Facility Representative is responsible for responding to the ICP to provide RL overview of emergency response activities. During declared emergencies, the RL Facility Representative reports to the Safety Oversight Director in the RL-EOC.

2.1.2.4 RL Chief Counsel. The Chief Counsel is responsible for advising the RL Emergency Manager regarding all legal matters associated with the emergency, using all required legal resources, and administering the contractual affairs and the legal agreements required by the emergency.

2.1.2.5 Chief Financial Officer. The Chief Financial Officer is responsible for:

- reviewing the current budget and reallocating available funds, if required;
- reconstructing financial status as of the date of an emergency;
- administering the emergency account and payroll activities;
- managing all matters related to the payment of claims under nuclear liability insurance coverage;
- arranging payment for, or otherwise resolving, expenses incurred by DOE activities associated with implementing the Emergency Planning, Preparedness, and Response Program; and
- arranging for emergency travel and providing subsistence to personnel from the RL in responding to emergency assistance.

2.1.2.6 Director, Procurement Division. The Procurement Division Director is responsible for procuring all required supplies and services.

2.1.2.7 Director, Site Infrastructure Division. The Site Infrastructure Division Director is responsible for:

- coordinating power distribution in the event of a power failure;
- reallocating office space, if required;
- coordinating all communications to include interfacing with the U.S. West Telephone Company to implement the emergency communications plan; and
- ensuring that vital records are available and accessible.

2.1.2.8 Director, Human Resources Division. The Human Resources Division Director is responsible for supplying all additional manpower required during the emergency.

2.1.2.9 Director, Project Management Division. The Project Management Division Director is responsible for:

- coordinating the combined efforts of the nuclear, mechanical, electrical, and civil engineers to provide technical design information for special tools, equipment, shielding, storage facilities, and other devices that may be essential during the emergency;
- assessing the extent of structural damage to DOE facilities; and
- providing liaison with onsite and offsite architectural, engineering, and construction contractors that may be called for assistance during the emergency.

2.2 EMERGENCY DIRECTION AND CONTROL

Emergency response on the Hanford Site is in accordance with the Incident Command System, which is an integrated emergency management system with clearly defined responsibilities and communication pathways that allows predesignated and trained individuals to jointly determine and implement incident mitigation strategies.

There are three components in the ERO with emergency direction and control responsibilities: the building emergency organization, the ICP, and the RL-EOC. The ERO is depicted on Figure 2-1.

For nonhazardous and hazardous facilities with a Building Emergency Director (BED) or Building Warden (BW) on the premise at the time of the incident, the BED/BW shall be responsible for implementing appropriate emergency response procedures (e.g., protective actions, event classification, notification). Upon arrival of the Hanford Fire Department, the BED shall retain responsibility for configuration control over facility systems and components while the IC assumes the overall management strategy associated with the incident and ensures that all functional areas are appropriately staffed and working cohesively towards mitigation of the incident.

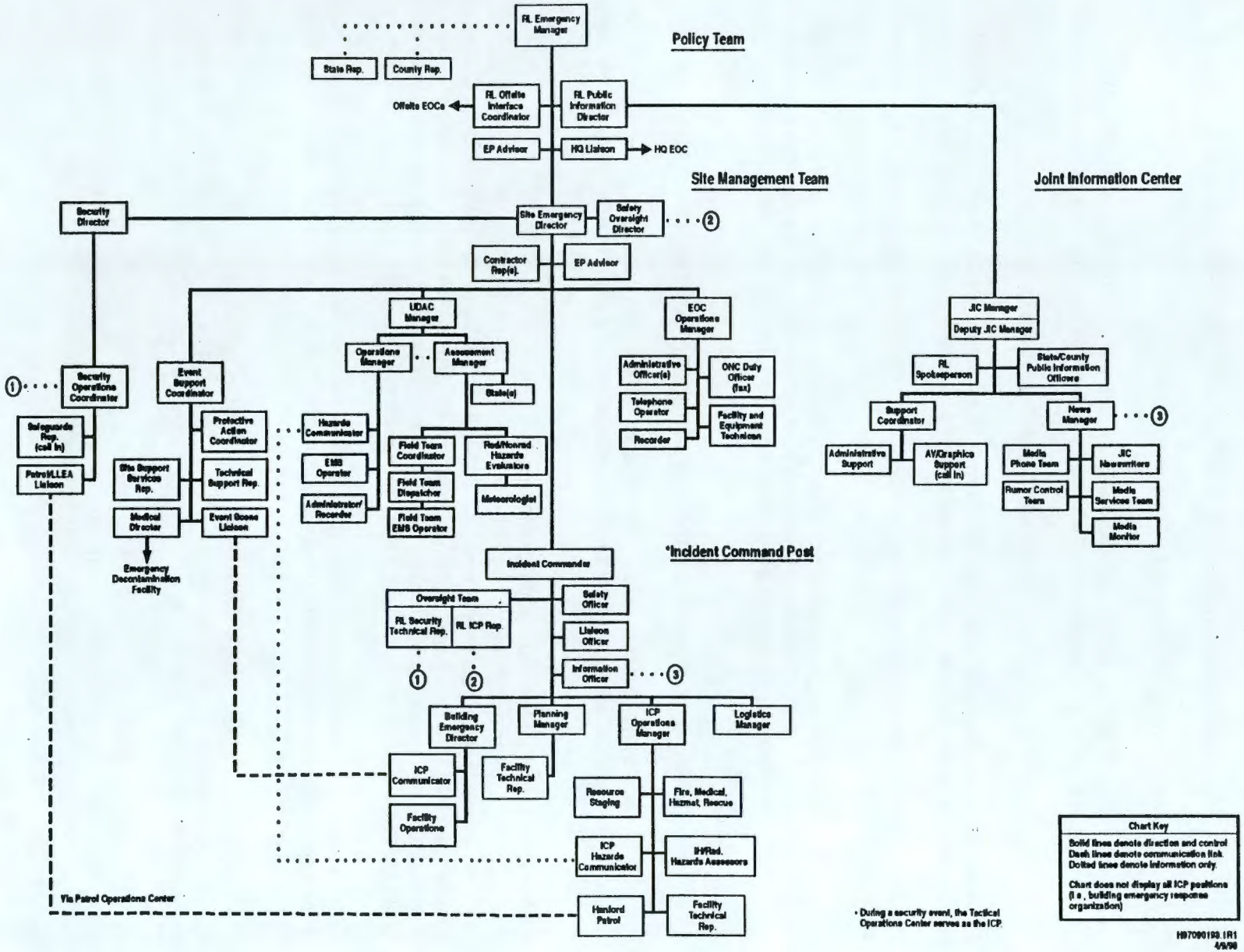

Figure 2-1. Hanford Site Emergency Response Organization.

If the BED/BW is not at the nonhazardous or hazardous facility at the time of an incident (e.g., during off shift hours), the IC shall perform the duties of the BED/BW in addition to his/her own duties. The respective on-call BED/BW shall be summoned to the scene based upon the listing of BEDs/BWs maintained at the POC or PNNL Control Room. Upon arrival of the BED/BW at the scene, the IC will turn over the remaining BED/BW duties.

In the event of a transportation incident occurring on the Hanford Site, the IC shall be responsible for coordinating and performing the response activities. After the immediate threat of a release has been stabilized or eliminated, remaining duties will be delegated from the IC to the organization that offered the hazardous substance for transportation.

In all events, the Incident Command System staff shall have the authority to commit the resources needed to carry out the emergency response and be thoroughly familiar with applicable plans and procedures, operations and activities at the facility, location and properties of all wastes handled, location of all records within the facility, and the layout of the facility.

2.2.1 Building Emergency Organization

Hanford Site facilities are divided into one of three types - administrative, nonhazardous, and hazardous - depending on the hazards associated with the facility. Initial direction and control of emergency response at a facility, prior to establishment of an ICP, is the responsibility of the building emergency organization.

A list of all BEDs and BWs assigned to nonhazardous and hazardous facilities shall be maintained in accordance with the Hanford Facility RCRA Permit (DW Portion) General Condition II.A.4 to ensure that these individuals can be reached 24 hours per day.

2.2.1.1 Administrative Facilities. Administrative facilities are defined as onsite office buildings or general purpose facilities.

The building organization for administrative facilities shall assign a BW or BED who shall direct an emergency organization made up of individuals within the building who will assist in the protection of personnel and property. Responsibilities of the BW or BED shall include, as applicable:

(a) assigning and training of the building emergency organization;

(b) maintaining the facility emergency response information boards/building emergency procedures;

(c) activating internal facility alarms or communications systems, where applicable, to notify building occupants of protective actions to be taken;

(d) ensuring that a 911 telephone call is made when emergency assistance is required;

(e) assisting the IC, as necessary, in mitigating emergencies within the assigned building; and

(f) ensuring that building occupants take appropriate protective actions in response to events occurring in other onsite geographic areas or adjacent facilities.

2.2.1.2 Nonhazardous Facilities. Nonhazardous facilities are defined as onsite facilities which can not create an Alert, Site Area, or General Emergency but display hazards not found in administrative facilities. These facilities include, but are not limited to, radiological facilities, industrial class facilities, laboratory spaces, TSD units, waste accumulation areas (90-day accumulation areas), and PCB temporary accumulation areas.

The building organization for nonhazardous facilities shall assign a BW or BED who shall direct an emergency organization made up of individuals within the building/facility who will assist in the protection of personnel and property. The BED/BW is responsible for emergency response at the event scene until arrival of the IC.

Responsibilities of the BED/BW shall include, as applicable:

(a) assigning and training of the building emergency organization to fill appropriate incident command positions;

(b) maintaining the facility emergency response information boards/building emergency procedures;

(c) maintaining applicable facility-specific emergency response procedures in accordance with section 13.3.1 of this plan;

(d) ensuring that facility personnel are aware of hazards;

(e) ensuring that facility personnel are trained to respond to emergencies;

(f) determining when an event has occurred or a condition exists that requires response in accordance with applicable state and Federal regulations;

(g) activating internal facility alarms or communications systems, where applicable, to notify building occupants of protective actions to be taken;

(h) ensuring that a 911 telephone call is made when emergency assistance is required;

(i) reporting events or conditions in accordance with applicable state and Federal regulations;

(j) assisting the IC, as necessary, in the mitigation of emergencies within the assigned building by:

- identifying the character, exact source, amount, and areal extent of any released materials;

- assessing possible hazards to human health and the environment that may result from the release, fire, or explosion;

- taking reasonable measures (e.g., stopping processes/operations, collecting/containing released waste, removing/isolating containers) necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other dangerous waste; and

- monitoring for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, as appropriate; and

(k) ensuring that building occupants take appropriate protective actions in response to events occurring in other onsite geographic areas or adjacent facilities.

2.2.1.3 Hazardous Facilities. Hazardous facilities are defined as facilities capable of creating an Alert, Site Area, or General Emergency as defined by DOE Orders. Facilities in this group include reactor or nuclear facilities, or non-nuclear hazard facilities. TSD units containing quantities of wastes or materials capable of creating an Alert or higher emergency will also be categorized as a hazardous facility.

The building emergency organization in hazardous facilities is responsible for emergency response at the event scene until arrival of the IC. A BED shall be assigned to direct an emergency organization made up of individuals who will assist in the protection of personnel, property, and the environment. The positions and responsibilities shall be outlined in specific building emergency plans and/or procedures. The content, distribution and organizational approval of the building emergency plan and/or procedures shall be determined by the respective contractor emergency preparedness organization.

The responsibilities of the BED shall include:

(a) assigning and training of the building emergency organization to fill appropriate incident command positions;

(b) maintaining, reviewing, and revising the building emergency plan and applicable facility-specific emergency response procedures in accordance with section 13.3.1 of this plan;

(c) ensuring that facility personnel are aware of hazards;

(d) ensuring that facility personnel are trained to respond to emergencies;

(e) determining when an event has occurred or a condition exists that requires appropriate emergency event classification;

(f) activating internal facility alarms or communications systems, where applicable, to implement actions to protect workers within their respective geographic area of responsibility as defined in the building emergency plan or procedures;

(g) contacting the POC, via 911, and providing initial emergency and classification information in accordance with established procedures;

(h) reporting events or conditions in accordance with applicable state and Federal regulations;

(i) establishing an ICP in accordance with established procedures; and

(j) assisting the IC, as necessary, in the mitigation of emergencies within the assigned building by:

- identifying the character, exact source, amount, and areal extent of any released materials;

- taking reasonable measures (e.g., stopping processes/operations, collecting/containing released waste, removing/isolating containers) necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other dangerous waste; and

- monitoring for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, as appropriate; and

(k) ensuring that building occupants take appropriate protective actions in response to events occurring in other onsite geographic areas or adjacent facilities.

NOTE: Building emergency plans are not required for unoccupied hazardous facilities. However, BEDs shall be identified and trained to implement initial emergency response procedures.

2.2.2 Incident Command Post

The ICP provides a graduated response mechanism for unusual conditions and emergencies on the Hanford Site. An ICP shall be established when it is determined that an incident has occurred or is underway which requires a structured emergency response. The ICP shall be established in a safe location near the incident scene.

In its most basic form, the ICP may be staffed in its entirety by facility or process personnel as deemed necessary by the BED or BW. In these instances, the BED or BW coordinates emergency response efforts at the scene to include oversight of mitigation efforts, use of appropriate personal protective equipment, local protective actions, and relevant notifications. Examples of when ICP implementation may be carried out at this level are during small releases of known substances when mitigation can be accomplished by trained on scene personnel, minor first aid cases, non-injury contaminations, and non-emergency plant responses.

Incidents that require the response of emergency personnel beyond the incident scene are reported to the POC via 911 and automated alarm systems, where applicable. This level of response requires the designation of an IC. The senior responding Hanford Fire Department

officer for events involving fire, medical, hazardous materials, or rescue shall be the IC. The Hanford Patrol Shift Commander will act in the capacity of the IC during security incidents.

For events that require establishment of an ICP, organizations supporting the ICP co-locate with the IC and retain responsibility for managing their technical operations and personnel. The IC is responsible for the health and safety of all personnel at the event scene (i.e., the impacted area under his/her direct control) and for the overall management strategy associated with the incident to ensure that all functional areas are appropriately staffed and working cohesively towards mitigation of the incident.

The elements of the ICP, which are staffed by preappointed and trained individuals, are delineated in Table 2-1.

Table 2-1. Incident Command Post Components.

POSITION	RESPONSIBLE STAFFING
Incident Commander	Hanford Fire Department/Hanford Patrol
Building Emergency Director	Affected facility
Information Officer	FDH or appropriate contractor personnel
Liaison Officer	Emergency Duty Officer
Safety/Health Officer	Hanford Fire Department
ICP Communicator	Affected hazardous facility
ICP Hazards Communicator	Affected hazardous facility
Facility Technical Representatives	Affected facility
Hanford Fire Department Operations	Hanford Fire Department
Security	Hanford Patrol
ICP Radiological Hazards Assessor	Affected facility radiological control manager (or equivalent)
ICP Industrial Health Hazards Assessor	FDH
Communications Specialist	FDH
Planning Manager	Hanford Fire Department or affected facility
Logistics Manager	Affected facility, Hanford Fire Department, or the on-call Logistics Coordinator

Personnel working in support of ICP operations delineated in Table 2-1 must complete initial, annual and ongoing training on the roles, responsibilities, and authorities within the ICP. The Hanford Site integrated drill and exercise program is used to provide a format for ICP responders to demonstrate their proficiency in operating as part of the ICP.

Contractor personnel shall provide a BED or BW for the purpose of staffing an ICP as soon as possible. In the event of full implementation of the ICP, additional facility personnel shall be available to complete required ICP staffing.

2.2.2.1 Hanford Fire Department. The Hanford Fire Department Operations Division is the emergency response element of the department and is responsible for actions to confine and control the full range of potential fire emergencies to include radiological, structural, and wildland fire emergencies within the Hanford Site boundaries.

The Hanford Fire Department is the designated incident command agency for control of all hazardous materials incidents on the site and, as such, controls the fire, hazardous materials and/or personnel rescue response activities associated with an emergency.

The Hanford Fire Department also monitors facility fire alarm systems and coordinates and provides emergency medical services on the Hanford Site.

2.2.2.2 Hanford Patrol. The Hanford Patrol monitors alarm systems and provides security services including coordination of the movement of emergency personnel through security gates, evacuation assistance, and barricade establishment where needed. Additional law enforcement is available through agreements with local and Federal agencies at the request of RL. The Hanford Patrol is the designated incident command agency for security emergencies.

Additionally, the POC, a 24-hour operational facility, is responsible for emergency functions which include:

- acting as the single point-of-contact to initiate emergency response by
  - notifying the BED/BW (when not on the premises)
  - requesting response from the Hanford Fire Department
  - notifying appropriate on-call personnel
  - activating or requesting activation of appropriate alarm signals;

  NOTE: PNNL uses 375-2400 as single point-of-contact

- activating the ONC conference call upon notification of a declared emergency and implementing onsite protective actions by activating warning sirens and crash alarm telephone systems; and

- receiving emergency response telephone calls during offsite shipments of RL-owned hazardous materials.

During an RL-declared security event, the Hanford Patrol establishes a Tactical Operations Center (TOC), which serves as the ICP and directs response and control of the security event through direction from the RL-EOC. The TOC is established at a location that provides communications, protection of the team from event activities, and the capability to monitor the activities associated with the event.

Functions performed at the TOC include:

- directing Hanford Patrol forces at the event scene;
- coordinating Hanford Patrol resources;
- communicating with the RL-EOC for event status and direction; and
- hostage negotiation activities.

2.2.3 U.S. Department of Energy Richland Operations Office Emergency Management Center

The RL-EOC is an emergency response facility maintained by RL for the purpose of providing an area where personnel may convene during emergency conditions to provide essential response functions. These functions include public information, offsite protective action recommendations, field monitoring and sampling, hazard assessment, oversight of onsite mitigative activities, and oversight of onsite protective actions.

The RL-EOC shall be activated and operational within one hour upon declaration of an Alert level or higher emergency.

The RL-EOC may also be fully or partially activated in the following situations.

- As directed by the RL Manager, Deputy Manager, or Assistant Managers when events occur that are not classified as an Alert level or higher emergency but where action to provide monitoring or assistance to the event scene or other agencies, is requested. Such events may include:
  - Hanford Site emergency conditions that potentially involve significant onsite or offsite consequences
  - RL-declared security events (RL takes control of the emergency until relieved of law enforcement responsibilities by the Federal Bureau of Investigation)
  - natural disasters (i.e., earthquake, tornado) that could or does result in significant onsite or offsite public or environmental impact
  - requests from other government agencies for support of regional emergencies

- threats or acts of terrorism, or when a national emergency is declared by the President of the United States or the United States Congress.

- As directed by the RAP team leader to support a RAP response.

- In response to non-DOE emergencies that affect the Hanford Site.

- In response to TEP events involving the offsite shipment of RL-owned hazardous materials.

The RL-EOC is made up of several organizations which are responsible for implementing defined emergency response tasks. These organizational areas are defined in the following subsections.

Detailed procedures for the activation, staffing, and operation of the RL-EOC are contained in DOE-0223, *U.S. Department of Energy, Richland Operations Office Emergency Plan Implementing Procedures* (DOE 1992a).

2.2.3.1 Policy Team. The primary functions of the Policy Team are the oversight of onsite activities, approval and communication of offsite protective action recommendations, approval of reclassification recommendations, approval and communication of RL requests for Federal assets, oversight of public information activities, and coordination with offsite agencies.

The Policy Team is staffed by the RL Emergency Manager, Public Information Director, Emergency Preparedness Advisor, Offsite Interface Coordinator, DOE-HQ Liaison, and the responding State and County representatives.

During RL-declared security events, RL is responsible for all decisions that address mitigation of the security event. This involves direction and control of Hanford Site security and patrol forces, and coordination of facility response. However, the Federal Bureau of Investigation (FBI) may exercise the option to take command of security events involving the violation of the Atomic Energy Act of 1954 or other Federal statutes. Associated response by site contractor personnel for personnel and operational safety rests with the IC and the BED.

2.2.3.1.1 Policy Team Staffing and Responsibilities. The RL Manager shall be the RL Emergency Manager. In the absence of the RL Manager, the RL Deputy Manager shall act as RL Emergency Manager. The RL Emergency Manager is responsible for oversight operations of the RL-EOC and for ensuring implementation of the responsibilities of RL as Lead Federal Agency (LFA). In consultation with the RL-EOC staff, the RL Emergency Manager approves emergency reclassification and termination, offsite PARs, and notifications.

Once operational, general functions of the Policy Team include:

- overviewing onsite response and mitigation actions, and providing assistance to the event contractor as needed;

- providing offsite notifications and PARs to state, local, and Federal agencies, and continuous updates to the state/counties about conditions;

- notifying the cognizant DOE-HQ Program Senior Official and the DOE-HQ Emergency Management Team if facility operations were shut down as a part of the protective action response;
- providing direction and control, as appropriate in an RL-declared security event (security declaration takes precedence in combined security/safety events);
- reclassifying or terminating the emergency;
- directing the activities of the JIC in providing timely and accurate release of information to the public and media, including approval of all RL news releases;
- requesting additional Federal assets as needed;
- providing liaisons to offsite emergency centers and responding Federal assets;
- providing a representative to DOE-HQ as requested; and
- designating a recovery organization.

2.2.3.2 Joint Information Center. The primary function of the JIC is the dissemination of accurate and timely information to the public and employees about RL activities during declared emergencies. The JIC is staffed by RL, contractor, State, and County communication professionals responsible for coordinating the release of information to the public and media.

One or more Newswriter(s) reside next to the Policy Team area in order to obtain the most current information for the development of draft press releases. Once developed, the Newswriter(s) ensures that the releases are reviewed for technical accuracy and security sensitivities prior to approval by the RL Public Information Director. Upon approval, the press releases are sent to the JIC for dissemination.

The JIC provides a single location where RL and site contractors can coordinate the release of information with other Federal agencies, state, and local jurisdictions. The JIC operates under the direction of the RL Public Information Director and is managed and staffed by RL and site contractor personnel. Provisions shall be made at the JIC for representatives from the states of Washington and Oregon, plume EPZ counties, and other Federal agencies who may be involved in the emergency response.

The functions performed at the JIC include:

- preparing and coordinating information released to the public and media;
- answering questions of the public and media; and
- rumor control.

2.2.3.3 Site Management Team. The primary functions of the SMT are to provide support to the ICP by providing additional resources not easily obtained by the IC; tracking the status of onsite protective actions; developing and directing implementation of additional onsite protective actions away from the event scene (i.e., the area not under the direct control of the IC) as required; and providing communications support. The SMT is also responsible for hazards assessment activities, developing additional offsite protective action recommendations, record keeping, and overall operation of the center. The SMT is made up of four support organizations that are responsible for implementing defined emergency response tasks. These organizations are defined below.

2.2.3.3.1 Executive Team and Support Staff. The Site Emergency Director is responsible for the coordination of all SMT activities. In this role, the Site Emergency Director is responsible for the activities of the Event Support Coordinator, EOC Operations Manager, and the Unified Dose Assessment Center (UDAC) Manager. Since RL has an operational function over Hanford security forces, the Security Director is responsible for the activities of the Security Operations Coordinator. The Security Director will receive information from and provide direction to the security forces. The Security Director will communicate planned actions of security forces to the Site Emergency Director and Safety Oversight Director to ensure all safety and security issues are addressed and coordinated. The Site Emergency Director, in conjunction with the Security Director and Safety Oversight Director, is responsible for periodically providing status information to the RL Emergency Manager on the Policy Team. The Contractor Representative and SMT Emergency Preparedness Advisor provide support to the Site Emergency Director.

2.2.3.3.2 Security and Event Support. As part of the SMT staff, the Security Operations Coordinator's primary functions are security operations, which include interface with local law enforcement agencies, coordination with the FBI, and oversight of onsite patrol activities. In this role, the Security Operation Coordinator reports directly to the Security Director.

The Event Support Coordinator is responsible for event support activities to include site support services, technical support, communications with the event scene, and coordination with the Emergency Decontamination Facility. In this role, the Event Support Coordinator reports directly to the Site Emergency Director.

2.2.3.3.3 Unified Dose Assessment Center. As part of the SMT, the primary UDAC functions are monitoring and evaluating existing emergency conditions in order to develop additional protective action recommendations. The UDAC is responsible for field team activities to include plume tracking, monitoring, and sampling.

Representatives from the states of Washington and Oregon participate in the development of recommendations and provide direction for offsite environmental monitoring. The UDAC is operated by site contractor personnel with knowledge in the technical areas of meteorology, toxicology, industrial hygiene, and health physics. The UDAC Manager is responsible for all UDAC activities. In this role, the UDAC Manager reports directly to the Site Emergency Director.

Specific UDAC responsibilities include:

- acquiring necessary data and measurements to evaluate personnel radiation doses and chemical exposures resulting from the event;
- assessing the potential for onsite and offsite consequences of a release of radioactive or nonradioactive materials based on meteorological conditions, source term, location and dispersal of the hazardous material;
- assisting the event contractor or other Hanford Site contractors in onsite hazard assessment or development of onsite protective actions;
- analyzing the consequences associated with evacuating versus remaining in a take cover situation for onsite personnel and recommending appropriate additional protective actions if necessary;
- developing offsite PARs in coordination with representatives from the states of Washington and Oregon; and
- coordinating and directing emergency environmental monitoring teams that are not assigned to the event facility. This may include state field teams performing offsite monitoring if requested by the states.

2.2.3.3.4 RL-EOC Operations. As part of the SMT, the primary functions of the RL-EOC Operations team are administration, record keeping tasks, and dissemination of information to offsite agencies (i.e., RL Notification Form, UDAC products, etc.). The EOC Operations Manager is responsible for these activities. In this role, the EOC Operations Manager reports directly to the Site Emergency Director.

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3.0 OFFSITE RESPONSE INTERFACES

3.1 OVERVIEW

Interfaces and coordination with offsite agencies are important in all phases of the emergency management program -- planning, preparedness, response, and recovery. The RL shall interface with Federal, tribal, state, local, and private organizations, such as the following:

- Agencies that have a responsibility to protect the public and environment within the EPZs of the Hanford Site
- Agencies with which RL supports as the Regional Coordinating Office for Region 8 (Oregon, Washington, and Alaska)
- Agencies with which RL has entered into special agreements for assistance.

Where appropriate, RL shall develop and maintain agreements to formalize areas of understanding, cooperation, and support with offsite agencies.

3.1.1 Planning and Preparedness

The modes of interface for planning and preparedness activities, as is determined beneficial by the parties, may include:

- Coordination of emergency plans and procedures
- Periodic meetings to share information and coordinate activities
- Training opportunities related to offsite responsibilities
- Development of agreements for support to and from offsite agencies
- Participation in annual exercises
- Development of public information programs.

3.1.2 Response and Recovery

In the event of an emergency on or affecting the Hanford Site, RL shall interface with offsite agencies to ensure coordination and support of response and recovery activities. These interfaces include:

- Notification and periodic updates to local jurisdictions within the plume EPZ, states that contain portions of the ingestion EPZ, and other agencies that may be requested to provide assistance (see Section 6.0)
- Communication and coordination with DOE-HQ
- RL representation in appropriate offsite emergency centers

- Offsite representation in the RL-EOC
- PARs to offsite agencies
- Event scene interface with offsite responders.

Communications with state and local EOCs are depicted on Figure 3-1.

3.2 FEDERAL AGENCIES

3.2.1 Department of Energy-Headquarters

The DOE-HQ Program Secretarial Officers (PSO) are responsible to ensure the preparation and maintenance of plans, procedures, and capabilities for responding to emergencies affecting their areas of cognizance. The RL shall submit the *Hanford Emergency Response Plan* to the cognizant PSO for review and final approval, with the DOE-HQ Director of Emergency Operations providing concurrence.

In the event of an emergency, a DOE-HQ Emergency Management Team is convened to:

- Provide overall guidance and direction for the DOE-HQ emergency response
- Monitor field response activities
- Provide support to the field in conducting their response activities
- Coordinate deployment of DOE emergency response assets
- Notify and coordinate with other DOE elements, the White House, Congress, other Federal agencies, and the national news media, as appropriate.

The RL shall notify and provide information to the DOE-HQ-EOC. Written reports shall be provided to the DOE-HQ-EOC as soon as practical, but within 24 hours of emergency classification. A DOE-HQ Site representative will respond to the RL-EOC to provide liaison with the DOE-HQ-EOC. Upon request of DOE-HQ, RL shall dispatch a liaison to support activation of the DOE-HQ-EOC.

3.2.2 Federal Bureau of Investigation

The role of the FBI is to serve as the primary U.S. Law Enforcement Agency responsible for investigating alleged or suspected violations of the Atomic Energy Act of 1954, as amended, and other Federal statutes. All emergencies of national consequence occurring at the Hanford Site and within the jurisdiction of the U.S. Department of Justice will be communicated to the FBI.

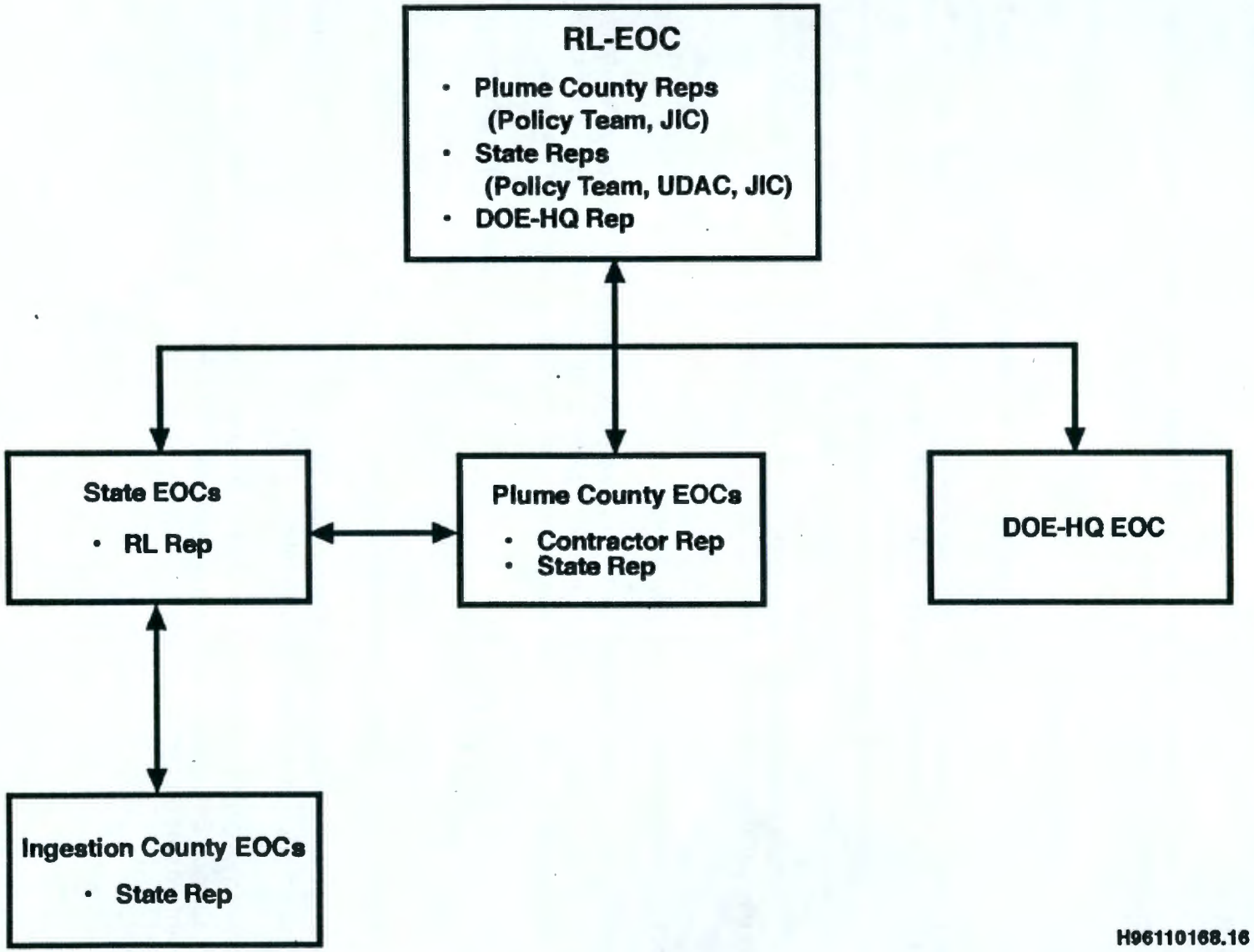

Figure 3-1. Lines of Communication Between Emergency Centers.

Command of FBI response activities, including plant security forces deployed at the event scene, will be the responsibility of the FBI Special-Agent-in-Charge when a declared security event has occurred. The RL will retain command and control of a declared security event until the FBI assumes this responsibility.

The RL Safeguards and Security (SAS) Branch shall interface and maintain a memorandum of understanding with the FBI.

3.2.3 U.S. Coast Guard

The U.S. Coast Guard (USCG) (through the Thirteenth District Commander in Seattle, Washington and the Captain of the Port in Portland, Oregon) may regulate activities on navigable waters within the Hanford Site, when necessary, to prevent harm to persons, property, and the environment in or on those waters.

When notified of a Site Area or General Emergency, the USCG will close the appropriate portion of the Columbia River and make a broadcast to mariners.

In the event of an emergency, the ONC will make notifications and provide information to the USCG in Portland, Oregon.

3.2.4 U.S. Environmental Protection Agency

Under the provisions of the Federal Radiological Emergency Response Plan (FRERP), the U.S. Environmental Protection Agency (EPA) shall assume the LFA responsibility for coordinating the intermediate and long-term offsite radiation monitoring activities.

In the event of an emergency, the RL-EOC shall notify and provide information to the EPA Region 10 in Seattle, Washington.

3.2.5 Federal Aviation Administration

The Federal Aviation Administration (FAA) may make flight restrictions for aircraft under their jurisdiction over the Hanford Site.

The ONC will notify and provide information to the FAA Seattle Center. At a Site Area or General Emergency the ONC may request the FAA to impose flight restrictions over the Hanford Site.

3.2.6 Federal Emergency Management Agency

The Federal Emergency Management Agency (FEMA) is responsible for coordinating Federal assistance (other than monitoring resources) to the states if requested. Under the provisions of the FRERP, FEMA coordinates the offsite (nontechnical) response.

At the time of a declaration of an emergency, the RL-EOC notifies and provides information to the FEMA Region 10 office in Bothell, Washington.

3.3 STATE GOVERNMENT

States, along with local governments, share the responsibility for the protection of the public and the environment. The responsibilities and concept of operations for state agencies are described in the emergency response plans of each state.

The RL shall work with the states of Washington and Oregon to assist in development of their program and response plans for an emergency at the Hanford Site. Periodic meetings will be conducted with the states to coordinate plans and share information. General descriptions of emergency responsibilities, and areas of cooperation and understanding between RL and the states, are delineated in memoranda of understanding (MOU) (see Appendix B).

3.3.1 The State of Washington

The Governor of Washington is responsible for command and control of state resources to maintain and preserve life, property, and the environment in Washington. The lead agency for emergency planning and response activities is the Emergency Management Division of the Military Department. Other state agencies that participate in the planning process and have emergency response roles include the following:

- Department of Health
- Department of Agriculture
- State Patrol
- Department of Ecology
- Department of Transportation.

The *Washington State Hanford Emergency Response Plan* is maintained by Emergency Management Division and describes the concept of operations, and roles and responsibilities of state agencies. Emergency procedures are maintained by each state agency.

Responsibilities of the state of Washington include the following:

- Providing a 24-hour single point of contact for the receipt of emergency notifications from RL

- Disseminating information to potentially affected counties within the plume and ingestion EPZs
- Coordinating ingestion protective action decisions and public information with the counties, the state of Oregon, and RL
- Providing assistance to counties as requested
- Evaluating offsite emergency PARs made to plume EPZ counties
- Making protective action decisions to protect public health from ingestion-related impacts, such as contamination of the food chain
- Performing field environmental radiological monitoring and dose assessments
- Providing guidance on emergency worker exposure and authorizing emergency workers to exceed protective action guides
- Implementing food, milk, and animal-feed control measures
- Requesting Federal assistance, as required.

3.3.2 The State of Oregon

The Governor of Oregon is responsible for directing and controlling all state activities to protect the lives and property of Oregon citizens. The lead agency for Hanford Site emergency planning is the Oregon Department of Energy. Other state agencies that participate in the planning process and have emergency response roles include the following:

- State Public Information Officer
- Health Division
- Emergency Management Division
- Department of Agriculture
- Oregon State University Radiation Center
- Military Department
- State Police
- State Highway Division.

The *Oregon State Hanford Emergency Response Program* for DOE facilities is maintained by the Oregon DOE and describes the concept of operations and roles and responsibilities of state agencies. Emergency procedures are maintained by each state agency.

Responsibilities of the state of Oregon include the following:

- Providing a 24-hour single point of contact for the receipt of emergency notifications from RL

- Making protective action decisions for the state of Oregon
- Coordinating protective action decisions and public information with counties, the state of Washington, and RL
- Coordinating state and local emergency response within the state of Oregon
- Performing field environmental radiological monitoring and dose assessments
- Providing guidance on emergency worker exposure and authorizing emergency workers to exceed protective action guides
- Providing assistance to Oregon counties within the ingestion EPZ
- Implementing food, milk, and animal-feed control measures
- Requesting Federal assistance, as required.

3.4 LOCAL ORGANIZATIONS

Cities and counties are responsible for protecting the lives and property of their residents. The responsibilities and concept of operations for local governments are described in the emergency response plans of each jurisdiction.

The RL shall work with local emergency response organizations through the county and state emergency management organizations. Generally, RL shall interface directly with emergency response and planning organizations providing service to those areas within a plume EPZ of a Hanford Site facility. Interface with those jurisdictions within the ingestion EPZ generally shall be accomplished through the state emergency management organization. To accomplish the necessary close coordination with local agencies, periodic meetings shall be conducted to share information and discuss concerns.

3.4.1 Plume Emergency Planning Zone Counties

Portions of Benton, Franklin, and Grant Counties are within plume EPZs of a Hanford Site facility. The Boards of County Commissioners are responsible for making emergency protective action decisions and implementing emergency response actions, as necessary, to protect their residents outside the Hanford Site boundary. The lead agency for emergency planning and coordination of emergency response is the county emergency management agency. County emergency response plans and procedures are developed by the emergency management agencies, working with county, city, and volunteer emergency response agencies, such as the following:

- Law Enforcement
- Fire and Emergency Medical
- Public Works/Road Departments

- Hospitals
- American Red Cross.

The emergency responsibilities of the plume EPZ counties include the following:

- Making and implementing protective action decisions to protect citizens who live within the plume EPZ
- Implementing protective action decisions, made by the state of Washington, for ingestion-related impacts to residents within the ingestion EPZ
- Disseminating alert and warnings to the public and providing emergency public information
- Coordinating response actions and public information with neighboring counties, the state of Washington, and RL.

The RL maintains agreements with Benton, Franklin, and Grant Counties that outline the areas of responsibility and cooperation (see Appendix B).

3.4.1.1 Law Enforcement. The RL SAS interfaces with local law enforcement agencies for support to the Hanford Site during emergencies. Via a contractual agreement, the Benton County Sheriff's Office provides law enforcement on the Hanford Site (i.e., traffic enforcement and criminal investigation), and assists in access control; and, as such, coordinates activities with RL SAS and the Hanford Patrol.

The RL SAS maintains memorandums of understanding with the law enforcement agencies of Kennewick, Richland, West Richland, Benton County, Franklin County, and the state of Washington.

3.4.1.2 Fire and Emergency Medical. The Hanford Fire Department is signatory to the Tri-Cities Mutual Aid Agreement for fire agencies. The agreement, signed by 11 local fire agencies, provides mutual aid for fire or medical emergencies.

The Hanford Fire Department meets regularly with local fire agencies. The Hanford Fire Department and HEHF Representatives meet routinely with emergency medical services agencies to coordinate and share information.

3.4.1.3 Hospitals. The RL maintains agreements with the following local hospitals, which provide for the care of injured, contaminated (chemical or radiological) Hanford Site personnel:

- Our Lady of Lourdes Health Care Center
- Kennewick General Hospital
- Kadlec Medical Center.

The RL shall provide for training and exercise support, as needed, related to the services provided to the Hanford Site. The HEHF shall provide expertise on radiological decontamination or chemical exposure and treatment, as requested.

3.4.2 Ingestion Emergency Planning Zone Counties

Counties within the ingestion EPZ of the Hanford Site are responsible to implement measures to protect their residents from potential ingestion related impacts. In the state of Washington, the counties of Adams, Benton, Franklin, Grant, Kittitas, Klickitat, Walla Walla, and Yakima are within the 50-mile (80-kilometer) ingestion EPZ. In the state of Oregon, the counties of Morrow and Umatilla are included. Ingestion EPZ counties have emergency response plans that describe their responsibilities in the event of an emergency at the Hanford Site.

The RL shall coordinate emergency planning and preparedness for ingestion counties through the Washington State Emergency Management and the Oregon Department of Energy.

Ingestion county responsibilities include the following:

- Coordinating with the state and implementing decisions regarding protective measures for its residents within the ingestion EPZ
- Consulting with the respective state EOC on the identification of access control points, food control areas, food control stations, and strategies for relocation, restoration, and recovery in contaminated areas.

3.5 TRIBAL ORGANIZATIONS

RL shall provide appropriate information to the impacted tribal organizations to coordinate planning for ingestion-related response actions of the tribe(s).

3.6 PRIVATE ORGANIZATIONS

The Hanford Site emergency management program shall address private facilities on or near the site. These facilities may be impacted by an emergency at the Hanford Site, or may impact Hanford Site facilities if they experience an emergency.

The RL shall coordinate emergency planning and preparedness activities with onsite private facilities (namely WNP-2, U.S. Ecology, and Richland Specialty Extrusions). In the event of an emergency at a Hanford Site facility, onsite private facilities will receive notifications and information from RL.

Where emergencies at facilities operated by private organizations may impact the Hanford Site, RL shall ensure that the emergency management program addresses actions that must be taken to protect site workers and facilities.

Areas of cooperation with private organizations shall be documented in memorandums of understanding.

3.7 MEMORANDA OF UNDERSTANDING

The RL shall enter into agreements with offsite organizations to document areas of cooperation and assistance, when appropriate, and as identified in Federal, state, and local regulations (see Table 3-1).

The RL Quality, Safety, and Health Program Division (QSH) is responsible for executing and maintaining MOU related to emergency preparedness. RL SAS and the Hanford Fire Department shall execute and maintain MOUs within their areas of responsibility. MOUs shall be reviewed annually and revised as needed.

Copies of MOUs shall be provided to the cognizant PSO through their inclusion in the *Hanford Emergency Response Plan* (see Appendix B).

Table 3-1. Memorandums of Understanding.

PARTIES	SERVICES/AREAS OF COOPERATION	POINTS OF CONTACT	CONSTRAINTS	DATE	EXPIRATION DATE	WHERE ON FILE
State of Washington	Document areas of cooperation between the parties in the planning for and response to emergencies at the Hanford Site.	Washington Emergency Management Division	None	09/10/96	Continue until canceled by either party upon 30 days written notice to the other.	RL QSH
Benton and Franklin Counties	Document areas of cooperation between the parties in the planning for and response to emergencies at the Hanford Site.	Benton County Emergency Management Franklin County Emergency Management	None	03/11/92	Continue until canceled by either party by written notice to the other.	RL QSH
Grant County	Document areas of cooperation between the parties in the planning for and response to emergencies at the Hanford Site.	Grant County Emergency Management	None	10/04/94	Continue until canceled by either party by written notice to the other.	RL QSH
Supply System	Document areas of cooperation between the parties in the planning for and response to emergencies at the Hanford Site.	Supply System Emergency Preparedness	The specific areas of assistance will be provided based upon availability, and are limited to those emergency actions necessary to protect onsite personnel, the public health and safety, and the environment in the event of a major emergency at the Hanford Site or WNP-2.	10/30/95	Continue until canceled by either of the parties upon 30 days written notice to the other party.	RL QSH
Siemens Power Corporation	Establishes means by which RL can provide consequence assessment and meteorological information to Siemens Power Corporation during an emergency at the Siemens plant site in Richland, Washington.	Siemens Power Corporation	Emergencies effecting the Hanford Site or Hanford facilities takes precedence over all other uses of the UDAC facilities and/or staff.	01/19/95	Remain in effect for five years from effective date, at which time it shall be reviewed and renegotiated, reissued, or terminated. Either party may withdraw upon 30 days written notice.	RL QSH
Supply System and HEHF	Treatment of a significantly contaminated and injured person.	Supply System Emergency Preparedness and HEHF	None	11/02/95	Continue until canceled by one or more of the parties upon 30 days written notice to the other(s).	HEHF
HEHF and Siemens Power Corporation	Treatment of a significantly contaminated and slightly injured person.	HEHF and Siemens	Siemens Power Corporation agrees to undertake all costs and expenses incurred that directly result from this agreement.	02/25/96	Continue until canceled by one or more of the parties by written notice to the other(s).	HEHF
National Weather Service	Sharing Meteorological Information.	NWS Western Regional Headquarters.	None	10/05/94	Agreement may be terminated by either party upon thirty days written notice to the other party.	RL QSH

Table 3-1. Memorandums of Understanding.

PARTIES	SERVICES/AREAS OF COOPERATION	POINTS OF CONTACT	CONSTRAINTS	DATE	EXPIRATION DATE	WHERE ON FILE
Our Lady of Lourdes Hospital Pasco, Washington	Significantly injured, contaminated persons will be admitted to facility for appropriate medical care.	Our Lady of Lourdes Administrator	The responsibilities of Our Lady of Lourdes will be limited to activities performed at the hospital.	09/27/94	Arrangements may be terminated by Our Lady of Lourdes or by RL upon written notice to the other, which notice shall not become effective for at least 30 days after the date thereof.	RL QSH
Kadlec Medical Center Richland, Washington	Significantly injured, contaminated persons will be admitted to facility for appropriate medical care.	Kadlec Administrator	Kadlec Medical Center will be limited to activities performed at the hospital and at the Emergency Decontamination Facility.	09/30/94	Arrangements may be terminated by Kadlec Medical Center or by RL upon written notice to the other, which notice shall not become effective for at least 30 days after the date thereof.	RL QSH
Kennewick General Hospital Kennewick, Washington	Significantly injured, contaminated persons will be admitted to facility for appropriate medical care.	Kennewick General Administrator	Kennewick General will be limited to activities performed at the hospital.	09/29/94	Arrangements may be terminated by Kennewick General or by RL upon written notice to the other, which notice shall not become effective for at least 30 days after the date thereof.	RL QSH
State of Oregon	Document areas of cooperation between the state of Oregon and RL in the planning for and providing notification and interface in the event of an incident on the Hanford Site.	Oregon Department of Energy	None	12/02/86	Continue until canceled by either party by written notice to the other Amendments or modifications to this Agreement my be made upon written agreement by both parities to the Amendment.	RL QSH
Tri-Cities Mutual Aid Agreement	Provide mutual aid to parties hereto desire to augment the fire and emergency medical protection available in their establishments, districts, agencies, and municipalities in the event of large fires or conflagrations or other disaster.	Richland Fire Department	Assistance under the agreement is not mandatory.	04/26/85	Remain in full force and effect until canceled by mutual agreement of the parties hereto or by written notice by one party to the other party giving ten (10) days notice of said cancellation.	Richland Fire Department
Richland Police Department	Mutual law enforcement assistance.	Richland Police Department	Assistance will be provided subject to the provision of the agreement and any other conditions as the parties may agree.	07/18/84	Indefinite duration.	RL SAS

Table 3-1. Memorandums of Understanding.

PARTIES	SERVICES/AREAS OF COOPERATION	POINTS OF CONTACT	CONSTRAINTS	DATE	EXPIRATION DATE	WHERE ON FILE
West Richland Police Department	Mutual law enforcement assistance.	West Richland Police Department	Assistance will be provided subject to the provision of the agreement and any other conditions as the parties may agree.	03/27/86	Indefinite duration.	RL SAS
Kennewick Police Department	Mutual law enforcement assistance.	Kennewick Police Department	Assistance will be provided subject to the provision of the agreement and any other conditions as the parties may agree.	09/26/85	Indefinite duration.	RL SAS
Benton County Sheriff	Mutual law enforcement assistance.	Benton County Sheriff	Assistance will be provided subject to the provision of the agreement and any other conditions as the parties may agree.	07/10/87	Indefinite duration.	RL SAS
Franklin County Sheriff	Mutual law enforcement assistance.	Franklin County Sheriff	Assistance will be provided subject to the provision of the agreement and any other conditions as the parties may agree.	12/22/92	Indefinite duration.	RL SAS
Washington State Patrol	Mutual law enforcement assistance.	Washington State Patrol	Assistance will be provided subject to the provision of the agreement and any other conditions as the parties may agree.	07/25/89	Indefinite duration.	RL SAS

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4.0 ASSESSMENT AND CLASSIFICATION

This section describes hazards assessment, the methods that shall be used to detect and recognize emergencies, and the initial and continuous consequence assessments that are necessary to protect workers, the public, and the environment.

4.1 HAZARDS ASSESSMENT

Hazards assessments shall be prepared and maintained for each hazardous facility (i.e., facilities that could generate an Alert-level or higher emergency) and shall be used for emergency planning purposes. Hazards assessments provide the technical basis for the emergency management program and shall include information sufficient to determine the scope and extent of the program elements comprising the emergency management program. The extent of planning and preparedness directly corresponds to the type and scope of hazards present and the potential consequences of events. Hazards assessments shall be derived from information provided by the assessment of the potential hazards and targets and shall be performed in compliance with existing DOE requirements. Special handling may be required when using sensitive or classified information.

The Hanford Site hazardous facilities assessments shall identify and characterize the hazards relevant to potential operational emergencies at a facility. This shall include determination of:

- the broad range of initiating events;
- accident mechanisms;
- equipment or system failures;
- event indications;
- contributing events;
- source terms;
- material release characteristics;
- topography;
- environmental transport and diffusion; and
- exposure considerations.

The hazards assessment shall characterize the potential consequence on workers, the public, and the environment for each postulated accident and determine the size of the EPZ.

A spectrum of potential accidents ranging from minor to beyond-the-design basis shall be postulated and realistically analyzed. While not every conceivable situation will be analyzed, the hazards assessments will provide the framework for response to virtually any declared emergency.

The methodology, assumptions, models, and evaluation techniques used in the hazards assessment shall be documented. Hazards assessments shall be reviewed and updated, as necessary, whenever the facility configuration changes, source terms change, or the operations of the facility are modified, and be maintained in accordance with site contractor document control requirements.

4.1.1 Hazards Assessment Development

There are six steps in the hazards assessment development process.

Step 1: Define and describe the facility and its operations. This is accomplished through review of SARs or other documented analyses prepared for the subject facility.

Step 2: Identify and screen the hazards (both radiological and nonradiological). Threshold values of radiological and nonradiological materials are reviewed to determine those materials that exceed established criteria. These lists of materials are obtained from documents such as SARs, Safety Assessments, Facility Hazards Classification documentation, Superfund Amendment and Reauthorization Act of 1986 (SARA) Title III inventories, and inventories of dangerous or mixed waste.

Step 3: Characterize the hazards remaining after the screening process.

Step 4: Develop event scenarios.

Step 5: Estimate the consequences of events.

Step 6: Compare the consequences to the emergency classification criteria.

4.2 EMERGENCY CLASSIFICATION

This section describes parallel decision flow paths for evaluating and classifying an incident. DOE Orders and WAC 173-303-360 require incident classification. The definition of emergencies according to DOE Orders differs from the definition contained in WAC 173-303. Because of this, a dual incident classification decision path is necessary to meet both DOE Order and WAC 173-303 requirements.

4.2.1 Resource Conservation and Recovery Act Emergency Classification

A RCRA emergency is defined as a release, fire, or explosion that threatens human health or the environment. Based upon an evaluation and assessment, the BED/BW/IC, in consultation with the respective site contractor environmental single point-of-contact, shall determine whether the incident is classified as a RCRA emergency. It is the responsibility of the BED/BW/IC to classify the incident even though they consult with the site contractor environmental single point-of-contact. When this occurs, notifications delineated in section 6.1.2 of this plan shall be performed. Notifications described in section 6.1.1 of this plan may also be required for a RCRA emergency and are determined on a case-by-case basis by the BED/BW/IC.

The BED/BW/IC ensures that trained personnel identify the character, source, amount, and areal extent of the release, fire, or explosion to the extent possible. Identification of waste can be made by activities which can include, but are not limited to, visual inspection of involved containers, sampling activities in the field, reference to inventory records, or by consulting with facility personnel. Samples of materials involved in an emergency might be taken by qualified personnel and analyzed as appropriate. These activities must be performed with a sense of immediacy and shall include available information.

After gathering appropriate event information, the hazards posed by the event to human health and the environment must be assessed. The assessment must take into consideration the direct, indirect, immediate, and long-term effects of the incident. The assessment should include sources such as Material Safety Data Sheet toxicity and health information, and results from any personnel monitoring examinations conducted at medical facilities. These are the types of tools which will aid in ascertaining the extent in which human health and the environment were threatened.

If assessment of all available information does not yield a definitive assessment of the danger posed by the incident, a worst-case condition will be presumed and appropriate protective actions and notifications will be initiated. The BED/BW/IC is responsible to initiate any protective actions based on their best judgement of the incident.

4.2.2 Operational Emergency Classification

An operational emergency is defined as one of the three categories of emergencies described in DOE Order 5500.2B (DOE 1991a). Operational emergencies are significant accidents, incidents, events, or natural phenomena that seriously degrade the safety or security of DOE facilities. Operational emergencies apply to DOE reactors and other DOE facilities (nuclear and nonnuclear) involved with hazardous materials; DOE-controlled nuclear weapons, components, or test devices; DOE SAS events; and onsite transportation accidents involving RL-owned hazardous materials. These operational emergencies are further classified into one of three emergency event classes by degree of severity depending on the actual or potential consequence of the emergency situation. The three emergency event classes - Alert, Site Area Emergency, and General Emergency - are described in the subsequent section.

Offsite transportation events involving RL-owned hazardous materials are categorized as operational emergencies and do not require classification within one of the three emergency event classes.

Notification requirements are delineated in section 6.1.1 of this plan.

Pre-emergency conditions that warrant increased SAS measures shall be reported in accordance with DOE Order 232.1A.

4.2.2.1 Emergency Classes.

4.2.2.1.1 Alert. An emergency class within the Operational Emergency category of emergency. Within the Operational Emergency category, an Alert represents events that are in progress or have occurred that involve an actual or a potential substantial degradation of the level of safety at a facility. Any environmental releases of hazardous materials are expected to be limited to fractions of the appropriate Protective Action Guideline (PAG) (> = 100 mrem total effective dose equivalent [TEDE]) or Emergency Response Planning Guideline (ERPG) (> = ERPG-1 but < ERPG-2) at the facility boundary. See Table 4-1.

Additionally, an Alert represents an event where the entire Hanford Site emergency response organization is required to provide more than event monitoring or minimal assistance to the facility organization.

At an Alert, the Hanford Site emergency response organization shall:

- activate all onsite affected emergency centers;
- provide continuous assessment of pertinent information for site contractor and DOE decision-makers, offsite authorities, the public, and other appropriate entities;
- conduct appropriate assessments, investigations, or preliminary or confirmatory sampling and monitoring;
- mitigate the severity of the occurrence or its consequences;
- establish communication, consultation, and liaison with offsite authorities; and
- prepare for other response actions should the situation become more serious (requiring emergency response organizations to mobilize or activate resources).

4.2.2.1.2 Site Area Emergency. An emergency class within the Operational Emergency category. Within the Operational Emergency category, a Site Area Emergency represents events that are in progress or have occurred that involve actual or likely major failure(s) of facility safety or safeguards systems needed for the protection of onsite personnel, the public health and safety, the environment, or national security. Any environmental releases of hazardous materials are expected to exceed the appropriate PAG (1 rem TEDE) or ERPG (ERPG-2) exposure levels at the facility boundary, but is expected to be less than these values at the Hanford Site boundary (refer to site boundary definition in section 1.4.2 of this plan). See Table 4-1.

At a Site Area Emergency, the Hanford Site emergency response organization shall:

- activate the response centers and other emergency assets to provide continuous assessment of information;
- provide continuous assessment of pertinent information for site contractor and DOE decision-makers, offsite authorities, and other appropriate entities;

- establish communications, consultation, and liaison with onsite organizations and personnel;
- establish communications, consultation, and liaison with offsite authorities;
- provide information to onsite personnel and organizations and the public through onsite and offsite authorities and the media;
- conduct or assist in any evacuations and sheltering;
- conduct appropriate assessments, investigations, or sampling and monitoring;
- mitigate the severity of the actual or potential consequences; and
- mobilize appropriate emergency response groups or security forces for immediate dispatch should the situation become more serious.

4.2.2.1.3 **General Emergency.** An emergency class within the Operational Emergency category. Within the Operational Emergency category, a General Emergency represents events that are in progress or have occurred that involve actual or imminent catastrophic failure of facility safety systems with potential for loss of confinement integrity, catastrophic degradation of facility protection systems, or catastrophic failure in safety or protection systems threatening the integrity of a weapon or test device, which could lead to substantial offsite impacts. Any environmental releases of hazardous materials can reasonably be expected to exceed the appropriate PAG (1 rem TEDE) or ERPG (ERPG-2) exposure levels at or beyond the Hanford Site boundary (refer to site boundary definition in section 1.4.2 of this plan). See Table 4-1.

At a General Emergency, the Hanford Site emergency response organization shall:

- activate the response centers and other emergency assets to provide continuous assessment of information;
- establish communications, consultation, and liaison with offsite authorities and recommend protective actions for the public;
- provide information to onsite personnel, the public, offsite authorities, and the media;
- conduct or assist evacuations and sheltering;
- conduct appropriate assessments, investigations, or sampling and monitoring;
- mitigate the severity of the actual or potential consequences; and
- mobilize and dispatch appropriate emergency response groups or security forces.

Table 4-1. Summary of Emergency Classes.

EMERGENCY CLASS	FACILITY	SAFEGUARDS & SECURITY	ONSITE TRANSPORTATION EVENT
Alert	Substantial actual/potential degradation of level of safety. Releases not expected to exceed PAG/ERPG levels at facility boundary.	Substantial actual/potential degradation of level of protection or the loss or potential loss of special nuclear material (SNM). Releases not expected to exceed PAG/ERPG levels at facility boundary.	Substantial actual/potential degradation of the safety of the shipment. Exposures in excess of PAG/ERPG levels only expected for personnel engaged in cleanup, recovery and investigation.
Site Area Emergency	Actual/potential major failures of functions needed for protection of workers and public. Releases could exceed PAG/ERPG levels onsite, but not offsite.	Actual malevolent acts resulting in major failures of protective systems. Releases could exceed PAG/ERPG beyond facility boundary but not offsite.	Actual/potential major reduction in safety of a shipment. Onsite, release may exceed PAG/ERPG levels beyond "exclusion zone"[1] onsite but not at nearest Site boundary.
General Emergency	Actual/imminent catastrophic reduction of safety systems with potential or actual loss of hazardous material. Releases reasonably expected to exceed PAG or ERPG levels offsite.	Malevolent action resulting in catastrophic degradation of protection systems that could lead to substantial offsite impacts.	Actual/imminent catastrophic reduction in safety of a shipment. Onsite, releases expected to exceed PAG/ERPG levels offsite.

[1]Exclusion zone = the immediate vicinity of the accident.

4.3 EMERGENCY ACTION LEVELS

The EALs are specific, predetermined, observable criteria used to detect, recognize, and determine the classification of Operational Emergencies identified by the hazards assessment. The EALs typically are identified as either event-based or symptom-based. The distinction arises from the available methods of detecting and recognizing the initiating conditions of the event. The development of symptom-based EALs is the preferred approach, recognizing that there usually will be some initiating conditions that require an event-based approach. Initiating conditions must be identified specifically in procedures and must be observable and recognizable in a timely manner by responsible personnel.

Facility-specific EALs shall be developed for all Hanford Site DOE hazardous facilities in accordance with DOE Order 5500.2B. Additional guidance for developing EALs can be found in the *Emergency Management Guide* (DOE 1991b) regarding Hazards Assessment and Event Classification.

The definitions delineated in Table 4-1, used in conjunction with Table 4-2 below, depict the criteria used at the Hanford Site to classify emergency events. Site contractor facility managers or BEDs are responsible for making initial classification of emergency events in accordance with RL and site contractor procedures.

Event classification using EALs also forms the basis for notification and participation of offsite organizations and for determining what and when protective actions will be implemented. As such, EALs and related information must be consistent and integrated with the emergency plans and procedures of offsite Federal, tribal, state, and local organizations and should be reviewed annually, as appropriate by all parties involved in response activities.

Table 4-2. Hanford Site Emergency Event Classification Criteria.

ALERT	SITE AREA EMERGENCY	GENERAL EMERGENCY
> = ERPG[1]-1 & < ERPG-2 at the facility boundary[2].	> = ERPG-2 at the facility boundary.	> = ERPG-2 at the Hanford Site boundary.
> = 100 mrem TEDE[3] at the facility boundary.	> = 1 rem TEDE at the facility boundary.	> = 1 rem TEDE at the Hanford Site boundary.

[1] Appropriate ERPG values or equivalent as stated in the Hazards Assessment Guidance Document. Solubility class "D" uranium compounds are limited by chemical toxicity.

[2] Facility boundary is defined as the property-protected area perimeter fence when present or a distance of 200 meters from the release location unless otherwise specified in the hazards assessment documentation.

[3] The TEDE includes the summation of the doses delivered from plume submersion, ground shine, and inhalation from accidental releases.

4.3.1 Symptom-Based Emergency Action Levels

Symptom-based EALs are dependent on one or more observable conditions or parameter values (i.e., symptoms) that are measurable over some continuous spectrum. The EALs should be the same indicators as those used to monitor routine facility operation. The level of severity indicated by these symptoms is directly related to the failure of or challenge to the facility's hazardous materials confinement barriers, other symptoms or events that occur simultaneously, and the ability of personnel to gain control and bring the indicator(s) back to safe levels.. The resulting facility-specific EALs shall consist of specific quantified values (e.g., alarms and control instrument readings) that require no additional interpretation by the user. By comparing the observed value to the EALs in event classification procedures, the correct emergency class can be readily determined.

4.3.2 Event-Based Emergency Action Levels

Event-based EALs address the occurrence of discrete events with potential safety significance. The level of severity is determined by the degree to which hazardous material confinement barriers are either failed or challenged as a result of the event, and the ability of personnel to gain control of the situation. Event classification requires the interpretation of one or more qualitative conditions or discrete observable indicators to determine if the existing situation matches the descriptions contained in the event classification procedure.

4.3.3 Emergency Action Level Development

The methodology for development of Hanford Site EALs is described in the following steps.

Step 1: Using the hazards assessment as the technical basis, identify the accident scenarios and consequences.

Step 2: Identify initiating conditions, barrier failures, system failures, contributing events and accident mechanisms for the scenario.

Step 3: Use the information developed in step 2 to identify specific equipment or other methods of detection.

Step 4: For detection and recognition methods that correlate directly to consequences, specific values for each emergency class are developed as necessary. These are symptom-based EALs.

Step 5: If there are no readily available methods to confirm a release, but the situation has the potential to exceed emergency criteria, the recognition of the event becomes the EAL. These are event-based EALs.

4.3.4 Use of Emergency Action Levels

On determination that an event has occurred at or affecting a Hanford Site facility, the BED shall promptly assess the conditions, compare the indications to the facility EAL set, and determine the appropriate emergency class. Then, immediate protective and mitigative actions, activation of the emergency response organization, and appropriate notifications are carried out.

The RL-EOC is responsible for ensuring that the emergency has been classified appropriately by the BED by reviewing facility EALs to determine that the correct emergency classification has been selected.

4.4 CONSEQUENCE ASSESSMENT

Consequence assessments evaluate and interpret radiological or other hazardous materials measurements or other information during a declared emergency to provide a basis for decision-making. In this context, planning includes:

- developing and preparing postulated scenarios for onsite and offsite consequence projections for development of PARs; and
- identifying personnel and resources to provide an effective response.

4.4.1 Consequence Assessment Requirements

The Hanford Site consequence assessment activities shall adequately assess the actual or potential onsite and offsite consequences of an emergency and provide for:

- timely initial assessment of the actual or potential consequences of an emergency, including the integration of consequence assessment process with the process for categorization of an event as an emergency;
- monitoring and evaluation of the specific indicators necessary to continually assess the consequences of the emergency;
- continuous, in-depth assessment of conditions throughout an emergency;
- integration of the consequence assessment process with the process for determining the appropriate emergency class;
- monitoring and evaluation of specific indicators related to safety, health, environmental, and security conditions that may affect or exacerbate the emergency;
- projection of potential consequences both onsite and offsite;

- integration of the consequence assessment process with the process for determining protective action recommendations; and
- coordination with Federal, tribal, state, and local organizations to:
  - locate and track hazardous materials released to the environment;
  - estimate the integrated impact of such releases on the public and the environment; and
  - locate and recover materials.

The airborne release pathway typically represents the most time-urgent situation, requiring a rapid, coordinated response. Releases to aquatic and ground pathways may not have the same time-urgency, however considerations of these pathways shall be a part of the consequence assessment activities at the Hanford Site.

4.4.1.1 Meteorological Monitoring. Representative collection of meteorological data currently is required to support environmental monitoring activities for ensuring that Hanford Site operations involving airborne releases of hazardous material comply with applicable Federal, state, and local environmental protection laws and regulations, executive orders, and internal department policies. Characterization of atmospheric transport and diffusion conditions (e.g., wind speed, wind direction, stability) in the vicinity of the Hanford Site facilities is essential for consequence assessments of airborne releases of hazardous materials. Other meteorological conditions (e.g., precipitation, temperature, and atmospheric moisture) are important to environmental surveillance activities (both routine and nonroutine) such as air concentration and ground deposition monitoring.

4.4.1.2 Water/Groundwater Monitoring. The water/groundwater monitoring and environmental surveillance programs required by DOE Order 5400.1 (DOE 1990) shall be used to characterize transport and diffusion of accidental releases of hazardous materials to aquatic pathways in the vicinity of a Hanford Site facility.

4.4.2 Event Scene Consequence Assessments

These assessments will be conducted at the event scene by the ICP staff. The ICP staff should continuously evaluate the environmental conditions for inhabitants of the command post and relocate the command post as necessary.

4.4.3 Area Consequence Assessments

It is necessary to evaluate the consequences of releases of radioactive and nonradioactive materials at locations beyond the immediate vicinity of the event scene. This is typically within a defined Hanford Site area (100K, 300, 400 Area, etc.) and includes all areas outside of the event scene and within the immediately affected area. The types of evaluations that should be conducted are those that affect the ability of operations staff to safely shutdown operational facilities and those that affect the ability of residents to take

protective actions. This activity typically is performed by the UDAC for impacts to other Hanford Site populations.

4.4.4 Coordination of Consequence Assessment Results

The UDAC has the primary responsibility for overall onsite and offsite consequence assessment for the Hanford Site. The UDAC staff shall continuously assess event conditions which may include:

- release source terms;
- mitigation efforts;
- onsite and offsite field team data; and
- meteorological conditions.

Modeling tools shall be used to predict the consequences of a release of hazardous materials. The results of these calculations are shared with onsite and offsite emergency responders and appropriate PARs are disseminated to affected individuals.

RL shall make provisions for representatives from Washington and Oregon to participate in the consequence assessment, field team coordination, and the offsite PAR development process.

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5.0 PROTECTIVE ACTIONS

An important part of the emergency management program at the Hanford Site is the planning for physical measures that may be needed to protect workers and the public from adverse health affects resulting from the release of hazardous materials. The initial response to any emergency will be to immediately protect the health and safety of persons in the immediate area. Identification of released material is essential to determine appropriate protective actions. Containment, treatment, and disposal assessment will be the secondary responses. This section describes the areas that may be impacted and the protective actions that may be needed.

5.1 EMERGENCY PLANNING ZONES

Emergencies at the Hanford Site facilities may require actions only on the Hanford Site or may affect offsite areas. The Hanford Site emergency management program uses the EPZ concept to focus emergency planning activities. The EPZs are designated areas, based upon hazards assessments, in which predetermined protective actions may be required.

The extent of a planning zone is based on the distance that a particular substance could expect to be dispersed in a particular form. The two types of exposure "pathways" for both radiological and nonradiological hazardous materials are delineated below.

- Plume Exposure Pathways: Exposure to a passing cloud, or plume, of the substance resulting in direct contact of the substance with the exterior of the body or through inhalation of the substance.

- Ingestion Exposure Pathway: Dispersal of the substance to various internal organs following the ingestion (eating or drinking) of contaminated foodstuffs or water.

The RL shall develop EPZs, as determined necessary by hazards assessments, and submit them to affected states and counties for their use in emergency planning. Additionally, EPZs shall be submitted to the cognizant Program Senior Official for approval.

5.1.1 Plume Exposure Pathway Emergency Planning Zones

The extent of the plume exposure EPZ for radiological hazards is based on the area within which there would be the potential for exposure by the:

- inhalation exposure from the passing radioactive plume; and/or

- whole body external exposure to beta or gamma radiation from the plume and from deposited radioactive material.

The extent of the plume exposure EPZ for nonradiological hazardous materials is based on the area within which there would be the potential for exposure by:

- inhalation from the plume; and/or
- skin or eye contact with the plume.

Either of these exposure routes could dominate, depending upon the toxicological and physicochemical characteristics of the hazardous material.

The plume exposure pathway EPZ includes the area of the hazardous material spill, areas immediately surrounding the spill or release, and downwind areas projected to receive significant concentrations of hazardous materials. The plume exposure EPZs are described in Table 5-1.

Table 5-1. Hanford Site Emergency Planning Zones.

LOCATION	TYPE OF HAZARD (RADIOLOGICAL with SOURCE; or TOXICOLOGICAL with CHEMICAL)	RADIUS OF ZONE
*100K Area	Radiological (K-Basins)	8.0 kilometers/5.0 miles
*100N Area	Toxicological (chlorine)	5.0 kilometers/3.0 miles
*100D Area	Toxicological (sodium)	5.0 kilometers/3.0 miles
200E/W Area	Radiological (waste tank)	16 kilometers/10 miles
*300 Area	Toxicological (chlorine)	8.0 kilometers/5 miles
400 Area	Radiological (reactor)	7.2 kilometers/4.5 miles
*For the purposes of EPZ definition, the receptor location is defined as the south and/or west shore of the Columbia River.		

Figure 5-1 shows the EPZs for geographical areas on the Hanford Site with potential offsite consequences.

5.1.2 Ingestion Exposure Pathway Emergency Planning Zone

The ingestion exposure pathway EPZ for radiological and nonradiological incidents for all Hanford Site facilities corresponds to the 50-mile (80-kilometer) EPZ for Supply System WNP-2. The principal exposure from this pathway would be from ingestion of contaminated water or foods such as milk, fresh vegetables, or aquatic foodstuffs. Facility, onsite, and offsite populations may be subject to exposure through the ingestion exposure pathway. The ingestion EPZ is shown on Figure 5-1.

Offsite protective actions within the ingestion exposure pathway EPZ are the responsibility of the counties and the states. The states of Washington and Oregon are responsible for developing and applying derived intervention levels for implementation of protective actions within the ingestion planning zone.

Figure 5-1. Hanford Site Emergency Planning Zones.

[COLOR MAP]

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These intervention levels are based on Food and Drug Administration (FDA) guidelines and are described in the states procedures. The intervention levels are stated in terms of concentrations of radioactivity on the ground, in the soil, and in vegetation, milk, and water, which guide emergency responders in implementation of interdiction of foodstuffs to preclude exceeding appropriate PAGs.

5.2 PROTECTIVE ACTIONS

Protective actions are those actions taken to preclude or reduce the exposure of individuals to hazardous materials following an accidental release at the Hanford Site. Protective actions may be required onsite and offsite, and include:

- evacuation;
- sheltering;
- decontamination;
- relocation;
- access control;
- food control;
- personal protective equipment; and
- administration of medications.

5.2.1 Protective Action Guides

PAGs are used to determine the appropriate PAR. The RL directs the use of the PAGs adopted by the states of Washington and Oregon, which are based on the PAGs published in the EPA 400 manual, Manual of Protective Action Guides and Protective Actions For Nuclear Incidents (EPA 1992). These PAGs are intended to apply to projected doses from exposures from airborne releases of radioactive materials and subsequent depositions during the early, intermediate, and late phases of an accident. The pathways considered include external gamma and beta dose from direct exposure to airborne materials and from deposited material, and the committed dose to internal organs from inhalation of radioactive material.

The projected dose values for initiating protective actions (evacuation or sheltering) specified by the states of Washington and Oregon is 1 rem TEDE, where the projected dose represents the sum of the effective dose equivalent resulting from exposure to external sources and the committed effective dose equivalent from all significant inhalation pathways during the early phase. The PAG values for committed dose equivalent to the thyroid and the skin are 5 and 50 times larger, respectively.

The EPA PAGs are stated in terms of committed dose. Dose incurred prior to initiation of protective action (and after the early phase of an event) normally are not included when considering whether or not to take protective actions. In other words, it is intended that the PAG values be compared to the dose that can be avoided by taking protective actions.

The acronym "PAG" used in this plan shall mean:

- where the total effective dose equivalent of 1 rem to standard man is the sum of the effective dose equivalent from exposure to external sources and the committed effective dose equivalent from inhalation during the early phase.

Response levels corresponding to these PAGs shall be derived for the specific radionuclides, foodstuffs, and animal feeds of interest according to the FDA recommendations.

5.2.2 Emergency Response Planning Guidelines for Nonradiological Releases

The Hanford Site has adopted the ERPGs developed and approved by the American Industrial Hygienists Association (AIHA). The ERPGs shall be used to determine the appropriate emergency class for exposures to nonradiological releases. Those chemicals for which no ERPG value is assigned by the AIHA will have Hanford Site-specific ERPG values assigned by HEHF, as necessary. Within the ERPG system, the three values are defined below for each material.

5.2.2.1 Emergency Response Planning Guidelines (ERPG-1). The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing other than mild transient adverse health effects or perceiving a clearly defined objectionable odor.

5.2.2.2 Emergency Response Planning Guidelines (ERPG-2). The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms that could impair their abilities to take protective action.

5.2.2.3 Emergency Response Planning Guidelines (ERPG-3). The maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing life-threatening health effects.

For purposes of applying the DOE Order 5500.2B emergency class definitions, the terms, "ERPG" and "appropriate ERPG exposure levels" shall mean: *a peak concentration of the substance in air that equals or exceeds the published ERPG-2 value for that substance.*

If ERPG or the Hanford Site ERPG values have not been published for a substance of interest, a hierarchy of concentrations shall be developed and documented in site contractor procedures.

For the purpose of onsite protective actions in response to nonradiological releases, the protective actions prescribed in the 1996 North American Emergency Response Guidebook shall be implemented as applicable.

5.2.3 Onsite Protective Actions

5.2.3.1 RL Emergency Operations Center. RL-EOC emergency procedures shall detail response actions to be taken in order to prevent or reduce exposures.

These procedures shall include provisions for:

- emergency communications to site personnel;
- decontamination of personnel and equipment, including those evacuated from the site, as appropriate;
- determination of the area surrounding the affected facility; and
- area or site evacuation planning.

5.2.3.2 Facilities.

5.2.3.2.1 Administrative Facilities. Administrative facilities shall maintain an emergency response capability that enables them to implement appropriate protective actions when ordered and to respond to standard facility emergencies (e.g., fires). These capabilities shall include provisions for:

- facility take cover to include shutdown of heating, ventilation, and air-conditioning systems;
- facility evacuation including persons with permanent or temporary disabilities;
- emergency communications to facility personnel;
- identification of potentially exposed personnel and ensuring they receive appropriate follow-up evaluation;
- predetermined facility evacuation routes, staging areas, and transportation in the event of an area or site evacuation; and
- personnel accountability per section 5.2.3.4 of this plan.

Each employee is responsible for his/her own health and safety and for taking appropriate actions in accordance with emergency signals and/or instructions.

5.2.3.2.2 Nonhazardous and Hazardous Facilities. Site contractor emergency procedures for nonhazardous and hazardous facilities shall provide for the immediate actions to be taken to prevent or reduce exposures. These procedures, which are implemented by the BED/BW or IC, shall include provisions for:

- facility take cover to include shutdown of heating, ventilation, and air-conditioning systems;

- facility evacuation including persons with permanent or temporary disabilities;
- ensuring that facility emergency personnel are equipped with adequate dosimetry equipment to allow for the accurate evaluation of their exposures;
- controlling and monitoring radiation and hazardous material exposures to facility emergency personnel as low as reasonably achievable (ALARA);
- emergency communications to facility personnel;
- informing the POC whenever facility take cover or evacuation sirens are activated;
- shutdown of operations or other operating actions;
- identification of essential personnel;
- identification of potentially exposed personnel and ensuring they receive appropriate follow-up evaluation;
- predetermined facility evacuation routes, staging areas, and transportation in the event of an area or site evacuation;
- protective equipment, monitoring, and decontamination capabilities for hazardous materials present at the facility;
- access control; and
- personnel accountability per section 5.2.3.4 of this plan.

Each employee is responsible for his/her own health and safety and for taking appropriate actions in accordance with emergency signals and/or instructions.

5.2.3.2.3 Lockdown. Lockdown is a security term and is not an action designed to protect personnel. The intent of a lockdown is to enable security forces to better protect special nuclear materials in the event that a security barrier has been compromised. Currently, implementation of a lockdown is only applicable to the Plutonium Finishing Plant complex. Lockdown does not preclude implementation of protective actions. Protective actions during lockdown activities shall be coordinated between the BED and security forces. If the take cover alarm sounds during a lockdown, all personnel, including security personnel without proper personal protective equipment, will move to an indoor location and a security perimeter will be established.

5.2.3.3 Remote Locations. Site contractors shall ensure processes are established to effectively communicate protective actions to personnel assigned to work in remote locations (e.g., personnel in vehicles or at locations without alarm/siren capabilities).

5.2.3.4 Personnel Accountability. Facilities on the Hanford Site shall provide for an accountability system commensurate with the hazards associated with the facility.

At the affected hazardous facility, accountability shall be conducted following implementation of evacuation protective actions to ensure that all employees are properly accounted for. Accountability shall be conducted within 30 minutes following implementation of evacuation protective actions (not to exceed 45 minutes).

5.2.3.5 Access Control. During an emergency, access will be controlled to impacted areas. Procedures shall be maintained to allow emergency personnel access to controlled areas as necessary. Access to the ICP requires the approval of the IC.

Site contractors shall maintain access control procedures that include logging entries, providing dose assessments, and maintaining exposure records for all emergency workers.

5.2.3.6 Area or Site Take Cover. RL-EOC emergency procedures shall be maintained to provide instructions when implementing an area or site take cover. These procedures shall include, as a minimum, criteria for the implementation, notification, and termination of an area or site take cover.

5.2.3.7 Area or Site Evacuation. RL emergency procedures shall be maintained to provide instructions when implementing an area or site emergency evacuation. These procedures shall include, as a minimum, criteria for establishing an evacuation plan, determining the evacuation routes (primary and alternate), notifying facilities, and coordinating and conducting the actual evacuation. Evacuation routes for the Hanford Site are shown in Figure 5-2. Specific routes will be determined at the time of the event based on event magnitude, location, and meteorology.

5.2.4 Offsite Protective Actions

Initial PARs appropriate for each emergency classification have been predetermined by the RL and adjacent counties. These initial, preplanned PARs, as indicated by the event classification and location, shall be included in the initial notification to offsite agencies. The determination for the need for additional PARs shall be based on consequence assessments that indicate when a PAG or ERPG value may be exceeded at the Hanford Site boundary. The RL shall notify the state and the counties adjacent to the site within 15 minutes of events categorized as emergencies. The notification shall include PARs, as appropriate.

Immediate protective actions decisions within the plume exposure pathway are the responsibility of the appropriate county. Protective action decisions by offsite authorities within the plume EPZ may include access control, sheltering, and evacuation.

Notification to populations within the plume EPZ is the responsibility of the counties and is primarily provided using the Emergency Alert System (EAS). Benton and Franklin County residents within the radiological plume EPZs receive the EAS messages via tone alert radios in their homes. Grant County residents within the radiological plume EPZs are notified to tune to the EAS via telephone calls from the Hanford Site automated ENS. Persons on or along the Columbia River are alerted by sirens or boat patrols. County emergency plans and procedures

address protective action decisions, public warning, evacuation routes, and assistance centers.

Protective action decisions for the ingestion exposure EPZ are the responsibility of the state. The RL shall provide the states with hazards assessment data necessary to identify areas where persons must be relocated or where food control is necessary. The states will coordinate implementation of the protective action with the impacted counties. Notification to populations with the ingestion EPZ shall be accomplished by affected counties and the states using the EAS, as appropriate, and news media reports.

State and county emergency workers shall follow protective guidance as established by the states.

5.2.5 Protective Equipment and Supplies

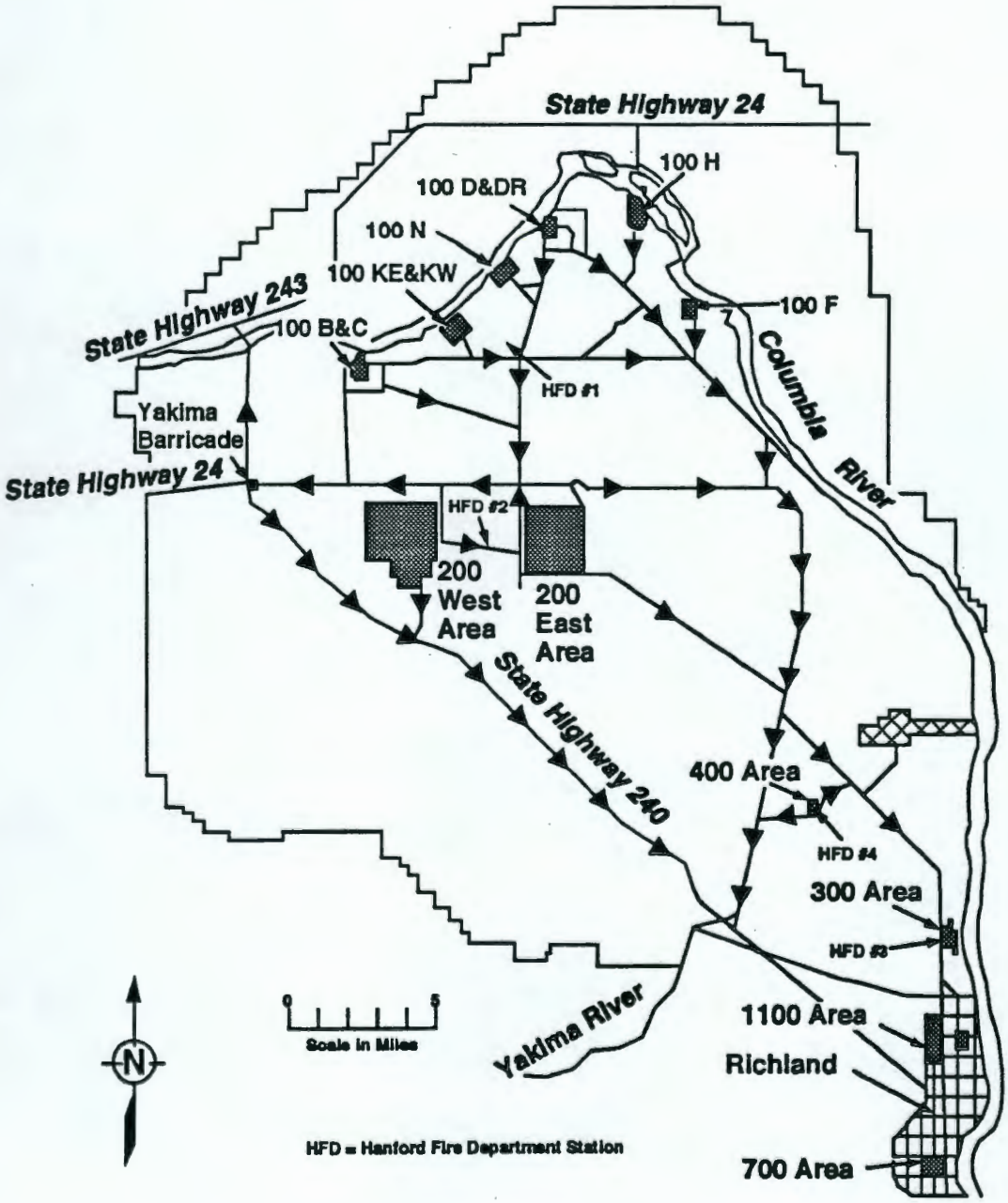
Protective responses for minimizing radiological exposure and contamination include the use of protective clothing and respiratory equipment. As applicable, each site contractor shall develop procedures to identify the location, issuance and use of emergency equipment.

Additionally, HEHF shall be responsible for obtaining and approving the use of a thyroid blocking agent -- such as potassium iodide -- which may be used by Hanford emergency workers in the event of a release of radioiodine from WNP-2. Each site employer shall determine their need for the use of a thyroid blocking agent and, as applicable in coordination with the Site Medical Director, develop procedures for acquiring and administration of the agent during WNP-2 events involving the need for radioiodine protection.

5.2.6 Termination of Protective Actions

The relaxation or lifting of protective actions generally shall be based on facility conditions and consequence assessments. The Policy Team will decide when onsite protective actions can be modified, after consultation with the SMT. The Policy Team will provide recommendations to affected counties and states for the relaxation of offsite emergency protective actions (i.e., evacuation or sheltering within the plume EPZ). The states shall be responsible for decisions on relaxation of ingestion protective actions, based on data provided by the UDAC.

Figure 5-2. Hanford Site Evacuation Routes.



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6.0 NOTIFICATIONS AND COMMUNICATIONS

6.1 NOTIFICATIONS

There are three types of notifications made for events on the Hanford Site - emergency, environmental, and non-emergency notifications. Notifications shall be made in order of urgency: emergency notifications shall be performed first, environmental notifications performed second, and non-emergency notifications performed last. Contractors shall maintain procedures to ensure that notification and reporting requirements are made in accordance with:

- DOE 5500.2B and DOE O 232.1A;
- applicable Federal, state, or local requirements such as the State of Washington Department of Ecology (Ecology) Dangerous Waste Regulations; the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); the Emergency Planning and Community Right-to-Know Act (EPCRA); and county emergency plans (Benton/Franklin/Grant); and
- special agreements with local, state or Federal agencies or tribal governments.

Classified and/or controlled information shall be handled in accordance with established procedures and DOE requirements. Offsite transportation events involving RL-owned hazardous materials shall be reported in accordance with DOE O 151.1 and 49 CFR 171.15.

6.1.1 Emergency Notifications

Prompt and accurate emergency notifications are essential to mitigating consequences and for protecting the health and safety of workers and the public. The Hanford Site emergency notification procedures shall be developed and maintained to provide timely notice to the emergency response organizations, site and facility workers, and offsite agencies under the most limiting set of conditions. The RL shall oversee the site contractor notifications to DOE-HQ, and state, tribal, local, and regional Federal authorities.

The following notifications shall be made quickly and accurately to:

- augment the site and facility operating staff with personnel in designated response roles to respond to the emergency;
- activate emergency centers;
- facilitate public notification by offsite authorities and agencies that have decision-making authority for directing protective actions (e.g., evacuation of local areas); and

- protect site and facility personnel and emergency workers through the provision of information necessary to implement accountability and protective actions such as sheltering, decontamination, and evacuation.

The emergency notification process is outlined in Figure 6-1.

6.1.1.1 **Initial Notifications.** For events on the Hanford Site which meet DOE Operational Emergency (i.e., Alert, Site Area, or General Emergency) classification criteria in section 4.2.2 of this plan, the initial event classification shall be made by the BED or IC in accordance with established procedures. The BED/IC shall initiate immediate notifications via the 911 emergency telephone line to request emergency response assistance and to notify onsite personnel within their geographic area of responsibility via sirens, the onsite crash alarm telephone system, or plant telephone so that they can take appropriate protective actions.

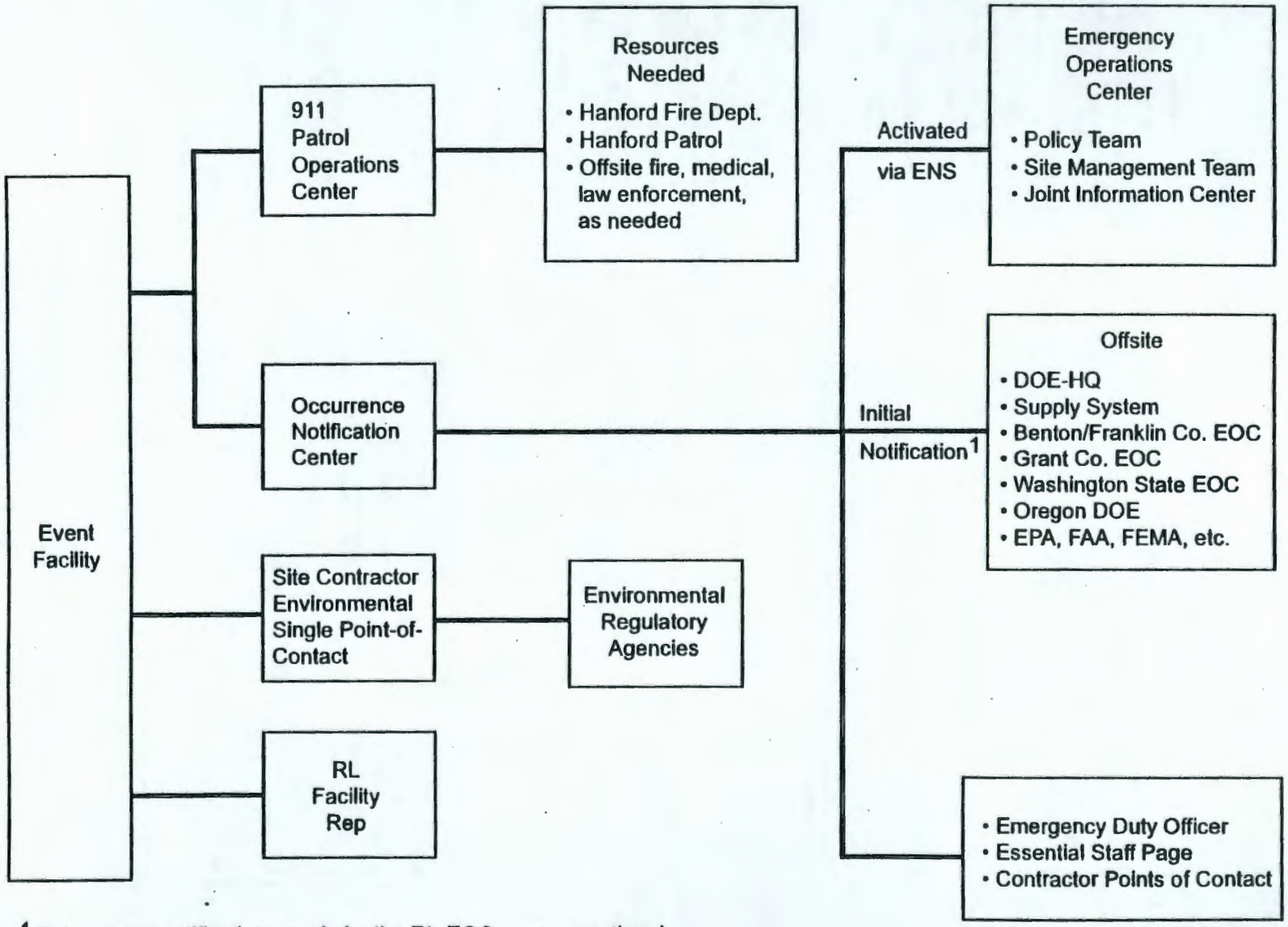
Additionally, the BED/IC or delegate shall complete the RL Notification Form (Figure 6-2) and transmit the form via facsimile to the ONC. Subsequently, the BED/IC shall provide notification to the POC and ONC via the 911 emergency telephone line to ensure that the ONC has received a legible copy of the notification form. If a facsimile machine is not available, the BED/IC or delegate shall read the information on the completed notification form to the ONC. The ONC shall then make initial offsite and additional onsite notifications as delineated in the following subsections.

For events on the Hanford Site which meet RCRA emergency criteria, personnel shall classify the event in accordance with section 4.2.1 of this plan and perform notifications in accordance with section 6.1.2 of this plan.

For offsite transportation events involving RL-owned hazardous materials, event categorization shall be made by the EDO. Additionally, the EDO shall provide notification to the ONC via the 24-hour business telephone number 376-2900. The ONC then shall make initial notification to the DOE-HQ-EOC within 30 minutes.

6.1.1.1.1 **Offsite Notifications.** Upon notification from the BED/IC via the 911 emergency telephone line regarding the declaration of an emergency event classified as Alert, Site Area Emergency, or General Emergency, the ONC Duty Officer and available staff shall make offsite notifications within 15 minutes to:

- DOE-HQ
- DOE Crash Alarm Telephone System (hot line), which includes:
  - Supply System (WNP-2)
  - Benton/Franklin County EOC (dispatch)
  - Grant County EOC
  - Washington State EOC
- Oregon DOE.



[1] Subsequent notifications made by the RL-EOC once operational.

Figure 6-1. Emergency Notifications.

Figure 6-2. RL Notification Form.

RL-F-5540.1
(02/96)

U.S. DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE

Approved _____
Time _____

NOTIFICATION FORM | Notification No.

1. NOTIFICATION PROVIDED BY: Name: _____ Phone: _____
2. AREA AND FACILITY: _____
3. TYPE EVENT: a. ☐ Emergency b. ☐ Exercise/Drill
4. DATE/TIME:

	Classification Status	Date	Time
a. ☐	Initial Classification		
b. ☐	Reclassification		
c. ☐	Termination		
d. ☐	PAR Change/Additions		
e. ☐	Information		

5. EMERGENCY CLASSIFICATION LEVEL AND OFFSITE PROTECTIVE ACTION RECOMMENDATIONS:

AREA	a. ☐ ALERT LEVEL EMERGENCY	b. ☐ SITE AREA EMERGENCY	c. ☐ GENERAL EMERGENCY
☐ 100K/100N	Evacuate Columbia River from White Bluffs to Vernita Bridge.	Evacuate Columbia River from White Bluffs to Vernita Bridge.	• Evacuate Columbia River from White Bluffs to Vernita Bridge. • Evacuate Section 5, east of Hwy. 24.
☐ 100D	Evacuate Columbia River from White Bluffs to Vernita Bridge.	Evacuate Columbia River from White Bluffs to Vernita Bridge.	Evacuate Columbia River from White Bluffs to Vernita Bridge.
☐ 200	None	Evacuate Columbia River from Vernita to Leslie Groves Park.	• Evacuate Columbia River from Vernita to Leslie Groves Park. • Evacuate Sections 5, 6, and 7.
☐ 300	Evacuate Columbia River from White Bluffs to Howard Amon Park.	Evacuate Columbia River from White Bluffs to Howard Amon Park.	• Evacuate Columbia River from White Bluffs to Howard Amon Park. ☐ Evacuate 5 mile radius - non-rad event ☐ Evacuate 3 mile radius - rad event
☐ 400/Others	None	None	None

6. TYPE(S) OF INCIDENT:
a. ☐ Fire/Explosion b. ☐ Radiological c. ☐ Security d. ☐ Hazardous Materials e. ☐ Electrical
f. ☐ Other _____ EAL Used for Classification _____
Description of Incident: _____
Automatic Onsite PAs Initiated? ☐ YES ☐ NO

7. RELEASE INFORMATION:
a. ☐ No Release
b. ☐ Airborne Release
c. ☐ Waterborne Release
d. ☐ Unknown
e. ☐ Release Terminated
Estimated Start Time of Release _____
Assumed Duration of the Release _____

8. METEOROLOGICAL DATA:
Wind Speed _____ mph
Wind Direction: from _____ to _____
Precipitation: ☐ Yes ☐ No
Stability Class:
A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐

9. PROGNOSIS OF SITUATION:
a. ☐ Unknown b. ☐ Stable c. ☐ Escalating d. ☐ Improving

10. ADDITIONAL OFFSITE PROTECTIVE ACTION RECOMMENDATIONS:
_____

11. BASIS FOR ADDITIONAL OFFSITE PROTECTIVE ACTION RECOMMENDATIONS:
a. ☐ Security c. ☐ Hazardous Material Release
b. ☐ Facility Condition d. ☐ Other _____

Additionally, the ONC Duty Officer and available staff shall make the following offsite notifications as soon as practical after event classification, as applicable:

- Federal Aviation Administration
- U.S. Coast Guard
- Siemens Nuclear Power Corporation
- Federal Emergency Management Agency (Region 10)
- U.S. Environmental Protection Agency (Region 10)
- Washington State Department of Ecology (local office)
- Bonneville Power Administration
- US Ecology Company
- U.S. Fish and Wildlife Services.

Required environmental notifications are made as described in section 6.1.2 of this plan.

6.1.1.1.2 **Onsite Notifications.** Upon notification from the BED/IC via the 911 emergency telephone line regarding the declaration of an emergency event classified as Alert, Site Area Emergency, or General Emergency, the ONC Duty Officer and available staff shall initiate the ENS to activate the RL-EOC and make onsite notifications, as appropriate, to the:

- Emergency Duty Officer (FDH);
- essential staff;
- PNNL single point-of-contact;
- BHI single point-of-contact; and
- HEHF single point-of-contact.

The BED/IC is responsible for making notifications for the purpose of onsite protective actions. The protective actions include, as applicable, actuating appropriate facility sirens, notifying the POC to actuate additional sirens, and/or initiating crash alarm telephone system notifications.

6.1.1.2 **Follow-up Notifications.** Reclassification of rapidly escalating emergencies shall be made by the BED/IC until the RL-EOC is declared operational. The BED/IC shall provide immediate appropriate protective action notification to onsite personnel within their respective geographic area of responsibility and also provide notification to the POC and ONC via the 911 emergency telephone line regarding the reclassification. The ONC then shall notify the offsite emergency response organizations of the event reclassification.

Upon declaration of their operability, the RL-EOC shall have the responsibility for reclassifying or terminating emergencies, disseminating additional protective action decisions to onsite personnel, and performing offsite notifications which includes protective action recommendations.

The same offsite notifications, notification systems, and requirements, as listed in subsection 6.1.1.1 of this plan, apply anytime an event is reclassified.

6.1.1.3 U.S. Department of Energy Assets.

6.1.1.3.1 Radiological Assistance Program. Notifications for response to a request for radiological assistance are described in the *Radiological Assistance Program Plan - Region 8*.

6.1.1.3.2 U.S. Department of Energy National Assets. It is the responsibility of the RL-EOC to determine if any national DOE assets are needed during an emergency, or to coordinate with the states if they are requesting a DOE asset. Requests for an asset will be accomplished by contacting and requesting the asset through the DOE-HQ-EOC.

6.1.2 Environmental Notifications

There are numerous environmental notifications that must be made, either verbally or in writing, dependent on the event type. In many cases, notification requirements are based upon the quantity and location of a spill or release.

Site contractors shall maintain procedures to ensure implementation of environmental notifications in accordance with Federal, state or local requirements and agreements. Since events relating to spills or releases usually do not meet criteria for a DOE Order defined emergency, contractors must ensure that environmental notification procedures are consistent with the environmental notification process depicted in Figure 6.3.

6.1.2.1 Initial/Verbal Notifications. For any incident which involves a spill, release, fire, explosion, or environmental permit exceedence, the respective site contractor environmental single point-of-contact shall be notified to determine applicability of requirements and perform appropriate environmental notifications.

The respective site contractor environmental single point-of-contact shall notify the appropriate Federal, state and/or local agencies. Additionally, the ONC shall be notified in order to determine if "Not Classified" event notifications are also required as delineated in section 6.1.3.1 of this plan.

6.1.2.2 Written Reports. The respective site contractor shall develop any necessary written reports and submit to RL for review and concurrence. RL shall submit written reports to the appropriate Federal, state or local agencies within the required time frames.

6.1.2.3 Resumption of Operations. The respective site contractor environmental single point-of-contact shall notify the appropriate Federal, state and/or local agencies that the facility is in compliance with cleanup activities described in section 8.3.3 of this plan before operations are resumed.

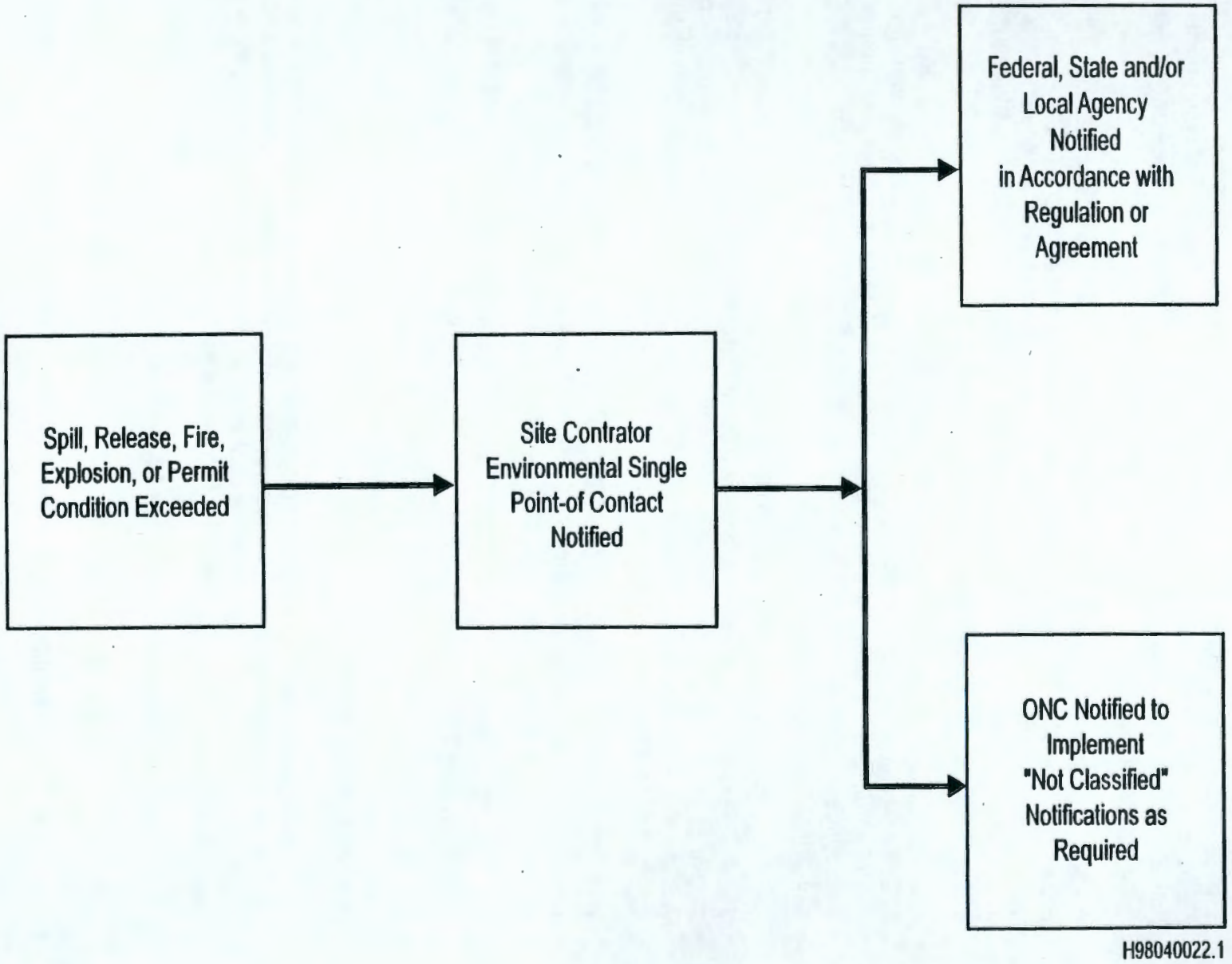


Figure 6-3. Environmental Notifications.

6.1.3 Non-Emergency Notifications

Notifications and reports are also provided for some incidents that do not meet emergency or environmental notification criteria. The non-emergency notification and the reporting process, including not classified and occurrence notification reporting described below, is further delineated in the RL implementing directive RLID 232.1A, *Occurrence Reporting and Processing of Operations Information.*

6.1.3.1 Not Classified Notifications. There are a variety of events or situations that may occur on the Hanford Site that, while not creating or indicating an emergency condition, may generate public concern or media interest. Local, state and tribal entities need timely information on these events in order to reassure the public that these situations do not threaten their health or safety.

RL shall maintain a process to advise offsite entities of situations - termed Not Classified - that may generate public concern or media interest. RL will work with appropriate offsite entities to maintain the criteria to be used to initiate the Not Classified notifications, the notification procedure, and a list of entities to be notified. Additionally, RL shall notify the site contractors when criteria changes.

Site contractors are responsible to ensure that events meeting the Not Classified criteria at their respective facilities are promptly reported to the ONC. The ONC will initiate Not Classified notifications when notified of a situation which meets the agreed upon criteria. Additionally, offsite agencies will notify the ONC if public or media inquiries indicate the need to initiate notifications.

6.1.3.2 Occurrence Reporting. Under DOE O 232.1A, an occurrence report is required for incidents that have significant impact or potential for impact on safety, environment, health, security, or operations or for significant deviation from normal operations.

Notifications and written reports of incidents meeting occurrence reporting criteria are made to DOE-HQ and also to offsite entities as requested. RL shall maintain a listing of offsite agencies who are to receive the occurrence reports.

6.2 COMMUNICATIONS

Primary and back-up means of communications shall be established and maintained to enable timely dissemination of notifications and information to onsite personnel and offsite agencies. To minimize the potential for confusion in disseminating information, the simplest, most direct system for communications should be established.

The communications system shall provide for:

- designated point(s) of contact for receipt of notifications;
- compatibility with other Federal, tribal, state, and local response organizations; and

- rapid dissemination of information received, to provide for timely and effective response actions.

6.2.1 Telephone Number 911

The Hanford Site emergency telephone number for requesting emergency response is 911. This number shall be monitored (and recorded) at all times by the Hanford Patrol at the POC. When emergency conditions exist that require responses from the Hanford Patrol, Hanford Fire, Ambulance, or Hazardous Materials Response Team, and whenever there is any doubt as to the conditions present, 911 shall be notified.

6.2.2 Telephone Number 373-3800

This is the 24-hour business telephone number for the POC. Additionally, this number is used as the Hanford Site single point-of-contact number for notification of offsite transportation events involving RL-owned hazardous materials shipments or as the onsite emergency notification where cellular telephone is the only method of communication.

6.2.3 Telephone Number 376-2900

This is the Hanford Site telephone number for reporting occurrences to the ONC in accordance with occurrence reporting requirements. This number shall be monitored at all times by ONC personnel.

6.2.4 Site Contractor Environmental Single Point-Of-Contact

Each site contractor shall maintain a communications mechanism (e.g., telephones, pagers) in order to perform the notifications described in section 6.1.2 of this plan.

6.2.5 Onsite Crash Alarm Telephone System

The crash alarm telephone system is composed of dedicated telephones (red in color) which are activated through a conference bridge to provide a quick, reliable, and interactive medium for simultaneously disseminating emergency messages, protective actions, and information to key personnel at various, individual locations. The system is activated by the POC at the direction of the BED or the IC.

Independent crash alarm telephone systems provide coverage for the 100B/C, 100DR, 100K, 100N, 200, 300, and 400 Areas.

6.2.6 Emergency Notification System

The ENS provides a medium for rapidly relaying emergency messages and information to key emergency personnel by the use of a computerized calling and message-delivery system, with the capability to record selected responses. The ENS is used to notify/activate emergency center response personnel. The ENS shall be initiated by the ONC.

6.2.7 Priority Message System

The priority message system or management bulletin is a network of cc:Mail and/or facsimile machines used to disseminate information to Hanford Site employees. Priority messages will be developed and disseminated by public affairs personnel.

6.2.8 Radios

Multiple radio systems and frequencies are available for emergency communications. A repeater station located on Rattlesnake Mountain provides sitewide communications capability.

Radio transmissions, as well as mobile telephone communications, are conducted over frequencies monitored not only by Hanford Site contractors, but also by non-DOE personnel and the general public. Extra precautions shall be taken to prevent communication of sensitive information during regular and emergency communications (such as names and speculative information).

6.2.9 Incident Command Post Communications

The ICP shall have communications to facilities outside of the affected event scene. Methods of communication include the use of:

- commercial telephone (adjacent buildings should be identified where commercial telephones are available);
- cellular telephone; and
- portable and/or fixed radio with capability to transmit on the Hanford Site safety network, Hanford Patrol, or Hanford Fire frequencies.

6.2.10 U.S. Department of Energy Richland Operations Office Emergency Operations Center Communications

The RL-EOC shall have appropriate methods of communications including backup communications. These shall include:

- commercial telephone;
- cellular telephone; and

- portable and/or fixed radio with capability to transmit on the Hanford Site safety network, Hanford Patrol, or Hanford Fire frequencies.

Additionally, the following two dedicated networks will be maintained.

- The DOE Crash Alarm Telephone System which establishes a conference bridge with the:

  - Supply System (WNP-2);
  - Benton/Franklin County EOC (dispatch);
  - Grant County EOC;
  - Washington State EOC;
  - Oregon State EOC;
  - Hanford POC;
  - ONC; and
  - RL-EOC.

  NOTE: This system will be used by the ONC to make initial notifications of emergency classification and PARs, and by the RL-EOC to make subsequent notifications of emergency classifications or reclassification, PARs, and emergency termination.

- The ERO Communications Line which establishes a conference bridge and is the primary method to communicate event information between the RL-EOC and the ICP.

6.2.11 Secure Communications

Secure communications in the RL-EOC shall be accomplished, as necessary, using the Secure Telephone Unit III (STU-III) telephone system. This system enables establishment of a secure, closed network for voice communications.

6.2.12 Emergency Signals

Table 6-1 lists the standard Hanford Site emergency signals, their meanings, and normal response actions.

Table 6-1. Standard Emergency Signals.

SIGNAL	MEANING	ACTIONS
Gong/electronic chime	Fire	Vacate building; proceed to staging area.
Steady tone on whistle, Klaxon horn, or siren	Area evacuation	Vacate building; proceed to evacuation staging area. Personnel in vehicles shall proceed to the nearest facility staging area and report to the staging area manager.
Wavering siren or short blasts on whistle, klaxon horn or siren	Shelter (take cover)	Proceed to shelter or stay indoors. Close all exterior doors, turn off all intake ventilation (as applicable), and notify manager of whereabouts. Personnel in vehicles shall proceed to the nearest occupied facility and report to facility management.
AH-00-GA horn (howler) or flashing blue light (in high noise areas)	Nuclear criticality	Run at least 100 feet from building; proceed to staging area.
Red light with ringing bell	Air contamination	Stop work activities; immediately exit the area; notify Radiological Control personnel.
Ringing of a red crash alarm telephone	Emergency communications	Lift receiver, do not speak, listen to caller, and relay message(s) to the BED/BW and the building occupants.

7.0 EMERGENCY MEDICAL SUPPORT

7.1 INTRODUCTION

This section describes the emergency medical responsibilities and actions for injuries that may occur on the Hanford Site and illustrates the interfaces that exist between Hanford and offsite medical facilities.

The RL shall ensure that capabilities exist on the Hanford Site for emergency medical aid, triage, and decontamination. Because of the potential for injuries to be accompanied by radiological contamination, agreements with offsite facilities shall be maintained to ensure provision of emergency medical services not provided on the site (see Table 3-1).

7.2 EMERGENCY MEDICAL RESPONSIBILITIES

Hanford Site organizations are authorized by RL to provide the medical response to onsite emergencies. Their roles and responsibilities are outlined in the following subsections. Specific procedures related to each major organization involved in site emergencies are located within documentation maintained by the respective organization.

A Hanford Site medical emergency is defined as any medical incident that results in the activation on the 911 emergency response system.

A mass casualty incident is defined as a medical incident that initially overwhelms the ability of the responders and/or medical care facilities to initially provide normal levels of care to injured victims.

7.2.1 Hanford Fire Department

The Hanford Fire Department, which includes emergency medical technicians and paramedics, is the lead agency for responding to medical emergencies. In this capacity, the Hanford Fire Department is responsible for:

- operating according to the Mid-Columbia Emergency Medical Services and Trauma Council and their medical program director;
- meeting the requirements outlined in the *Hanford Fire Department Emergency Medical Services Program Plan* and the patient care guidelines of *Mid-Columbia Guidelines for Patient Care*. These requirements include, but are not limited to:
    - patient care;
    - triage at the site;

- ambulance transport of injured or ill employees to medical facilities and, if available, arrange for air transport directly from the site in extreme medical situations; and

- notification and activation of mutual aid assistance that may be needed during the emergency or who require notifications

- implementing the Incident Command System to manage and control major medical incidents;

- requesting assistance from HEHF when additional medical support is needed; and

- coordinating a temporary morgue for Hanford fatalities.

7.2.2 Hanford Environmental Health Foundation

The primary roles of the HEHF during onsite medical emergencies are to activate and operate the Emergency Decontamination Facility (EDF) and to provide support to the IC as requested. In this capacity, HEHF is responsible for:

- directing medical treatment activities of patients taken to the EDF;

- providing medical support, treatment, and facilities (e.g., on-call physicians, physician assistants, occupational health nurses, behavioral health clinicians, industrial hygienists, and other related medical support staff) for emergencies in support to the IC;

- providing support for the medical treatment of employees who have received internal or external contamination from radionuclides;

- maintaining an appropriate supply of pharmaceuticals for use in Hanford emergencies;

- reviewing Medical Incident Report forms;

- coordinating the site medical activities with the medical program director of Mid-Columbia Emergency Medical Services and Trauma, local hospitals, and other medical organizations as appropriate; and

- managing and providing staffing for the Health Care Centers (HCCs) and the EDF.

7.2.3 Hanford Patrol

Patrol Operations Center (POC) operates the site 911 emergency response system. As part of the medical response, the POC is responsible for:

- contacting the Hanford Fire Department when a request for fire and/or emergency medical services has been received;
- performing emergency medical dispatch activities according to the guidelines of the South Central Emergency Medical Services and Trauma Care Council and those in *Criteria Based Dispatch*;
- contacting the HEHF on-call provider for medical incidents involving radiological or chemical exposures; and
- providing information regarding onsite medical emergencies to appropriate contractor organizations.

7.2.4 Hanford Internal and External Dosimetry and Whole Body Counting Programs

During medical emergencies that involve internal or external radionuclide contamination, these programs provide support (e.g., *in vivo* radio assays, bioassay program, exposure evaluators) to HEHF and other medical personnel to help determine the appropriate medical treatment.

7.2.5 Other Hanford Site Contractors

Site contractor health physics and radiation protection technologists and/or industrial hygienists provide decontamination for injuries, as appropriate. Hanford Site contractors also provide support for transportation, security, notifications, communications, etc., as described in Section 2.0.

7.2.6 Local Hospitals

Through memorandums of understanding with RL, Kadlec Medical Center in Richland, Kennewick General Hospital, and Our Lady of Lourdes Health Center in Pasco provide emergency health care for patients delivered by the Hanford Fire Department. This care includes:

- accepting patients transported by Hanford Fire Department as the result of Hanford emergencies;
- assuming responsibility for patient care once patient arrives at the hospital; and

- coordinating with Mid-Columbia Emergency Medical Services, Tri-City Trauma Services, and other agencies for support and air transport as needed.

7.3 MEDICAL EMERGENCY FACILITIES AND EQUIPMENT

7.3.1 Health Care Centers

The HCCs are located in various areas throughout the Hanford Site. HEHF operates the HCCs to treat patients with occupational injuries or illnesses that do not require hospitalization. The HCCs are routinely staffed by occupational health nurses; however, some HCCs have physicians or physician assistants in addition to the occupational health nurses. Initial treatment for minor medical emergencies may be provided at these centers before transport to a local hospital.

7.3.2 Emergency Decontamination Facility

The EDF, located north of Kadlec Medical Center in Richland, is operated for RL by the HEHF. The EDF is an unoccupied, hardened facility designed to be used for patient decontamination, treatment of internal contamination, and minor medical treatment for persons who are radiologically contaminated and have minor injuries.

7.3.3 Site Decontamination Equipment

Decontamination equipment is available at a number of locations on the Hanford Site. Equipment or facilities range from eye washes, showers, and skin decontamination kits, to a mobile hazardous materials decontamination unit operated by the Hanford Fire Department.

7.3.4 Medical Emergency Equipment

Equipment for cardiopulmonary resuscitation, cardiac defibrillation, and advanced cardiac life support; supplies and equipment for the management of trauma; and equipment to support rescue and/or extrication of casualties is maintained by the Hanford Fire Department. Supplies for triage are available on board each Hanford Fire Department ambulance.

7.3.5 Medical Emergency Transportation

Ambulances shall be maintained and operated by the Hanford Fire Department. Provisions shall be made for air transportation of contaminated patients to medical facilities for specialized medical treatment in conjunction with the Aviation Safety Committee. Transportation support beyond that provided by the Hanford Fire Department shall be coordinated according to mutual aid and trauma service agreements.

7.3.6 Offsite Medical Facilities

The three local hospitals, Kadlec Medical Center in Richland, Kennewick General Hospital, and Our Lady of Lourdes Health Center in Pasco, provide treatment for emergency patients from the Hanford Site; however, because of proximity, Kadlec Medical Center is the facility most often used by the site. These hospitals have combined to provide Level Three trauma care for the community.

Memorandums of understanding with each hospital are maintained by RL (see Appendix B). Other offsite medical facilities may be involved in Hanford medical emergencies through agreements with the local hospitals.

The RL shall ensure the provision of training and exercise support related to the services provided to the site. The HEHF shall provide medical expertise on radiological and chemical exposure decontamination and treatment, as requested.

7.4 MEDICAL EMERGENCY COMMUNICATIONS

The communications process during a Hanford medical emergency is illustrated in Figure 7-1.

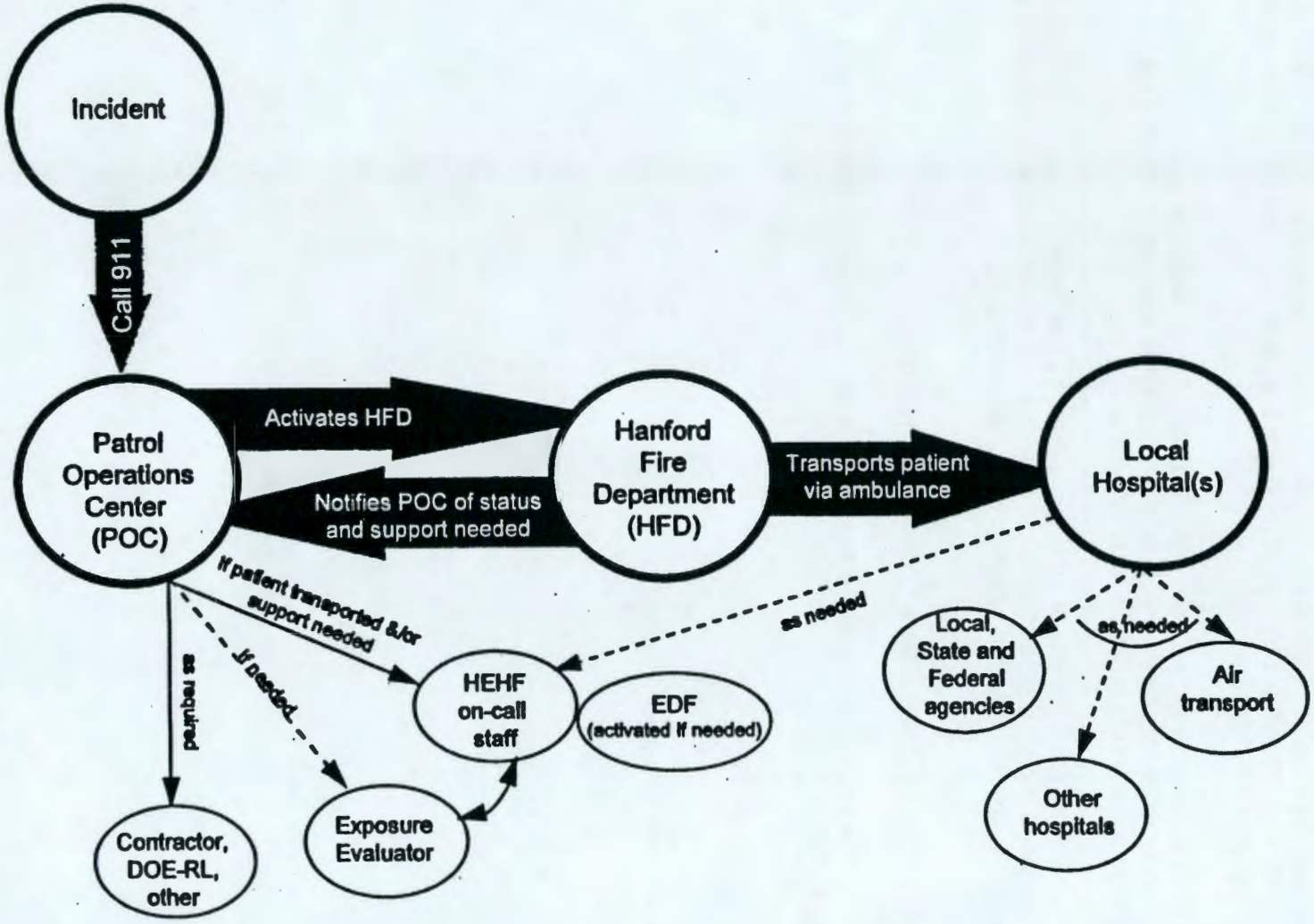


Figure 7-1. Medical Emergency Response Communications.

8.0 RECOVERY AND REENTRY

This section describes the responsibilities for termination, reentry, and recovery planning and operations.

8.1 TERMINATION OF THE EMERGENCY

When the emergency has been stabilized onsite, releases have been terminated, and protective actions have been implemented, the emergency officially can be terminated.

It is the function of the BED/BW/IC to declare the termination of an event. However, in an event where the RL-EOC has been activated, termination occurs after all applicable criteria has been met and concurrence between the event contractor and RL has been obtained. The BED, IC, and Site Emergency Director must confer and agree that termination can be declared and the Site Emergency Director shall communicate the information to the RL Emergency Manager.

The RL Emergency Manager will coordinate the termination recommendation with the state and county representatives and make the official emergency termination declaration. The Policy Team will proceed with official notification to local, state, and Federal offsite emergency agencies that the emergency is terminated and the recovery phase has been initiated. Notification will be done through the RL-EOC emergency communications network. The criteria for the termination decision and the basis for relaxing offsite PARs, as applicable, will be included in the notification, as appropriate. Press releases will be prepared and disseminated through the JIC.

8.2 REENTRY

Reentry is the act of reentering an evacuated area for the purpose of performing emergency activities or to assess facility damage for the purpose of determining if the emergency can be terminated and/or for determining the extent of required recovery activities. Reentry can be performed at any time before termination of the emergency and during recovery activities.

Prior to termination, the BED and IC will be responsible for determining appropriate protective measures for personnel reentering the event facility or area, ensuring that the reentry team receives a safety briefing, and authorizing reentry.

The event contractor will determine the accessibility of the site areas during and after the emergency and evaluate the advisability of reentry operations as required. Current operating records and other essential information for evaluating the emergency may be used in making these decisions.

During recovery, the Onsite Recovery Manager is responsible for reentry authorization.

8.2.1 Reentry Exposure Considerations

The means must exist for estimating dosage and for protecting workers and the general public from hazardous exposure during recovery and reentry activities.

The guiding principle is to minimize the risk of injury to those persons participating in the rescue and recovery activities; however, this principle must be balanced against the immediate objective of retrieving a deceased victim, protecting property, saving lives, or mitigating a secondary event.

Individuals responsible for authorizing reentry must carefully examine any proposed actions involving further hazardous or radioactive material exposure by weighing the risks of exposure, actual or potential, against its benefits. Exposure probability, the biological consequences related to dose, and the number of people exposed are the essential elements to be evaluated in making a risk determination.

Emergency situations involving the saving of lives require separate criteria than those actions required to retrieve deceased victims or to save property. The limits for radiation exposure for reentry activities shall be in accordance with the *Hanford Site Radiological Control Manual* (HSRCM-1) (DOE 1992b). Limits for nonradiological hazardous materials will be established using the lowest limits of:

- OSHA permissible exposure limits;
- American Conference of Governmental Industrial Hygienists Threshold Limit Values; and
- specific Washington State Department of Labor and Industries permissible exposure limits mandated by RL (e.g., asbestos).

8.3 RECOVERY PLANNING

Upon termination of the emergency event, onsite and offsite emergency organizations must develop and implement plans necessary to return the affected facility and surrounding areas to normal. Restart of operations is performed in accordance with the approved plans. The RL shall direct recovery planning for Hanford Site facilities and support the offsite recovery efforts of Federal, state, and local agencies.

The RL Emergency Manager shall ensure that recovery planning includes coordination of necessary investigations of the event root causes and corrective actions to prevent recurrence, in accordance with RLIP 5484.1A, *Environmental Protection, Safety, and Health Protection Information Reporting Requirements* (DOE/RLIP 1981).

8.3.1 Planning and Operations for Onsite Recovery

The RL Emergency Manager shall designate a Manager of Recovery Operations. This manager will assess the extent of recovery actions necessary and determine the organization needed to implement recovery operations.

The RL recovery organization shall be comprised of two teams: The Recovery Support Team and the Onsite Recovery Team.

8.3.1.1 Recovery Support Team. The Manager of Recovery Operations shall appoint a Recovery Support Team to provide oversight for the onsite recovery effort, and information and assistance to the offsite agencies.

The Recovery Support Team should consist of sufficient staff to perform functions as applicable to the situation. Initial staff may be members of the RL-EOC, since activities performed during the recovery phase closely parallel many of the activities performed during the emergency. Responsibilities of the Recovery Support Team include:

- discussing and coordinating recovery issues with offsite agencies;
- coordinating response to requests for offsite assistance;
- providing input to and review of Onsite Recovery Plan;
- responding to technical questions from DOE-HQ and offsite authorities;
- reviewing UDAC data and providing late phase onsite PARs to the Onsite Recovery Team for inclusion in Site Recovery Plan;
- requesting offsite Federal assistance after consultation with the state;
- reviewing assessment data and recommendations to formulate offsite intermediate and late phase PARs, as requested by the states;
- coordinating press information for release to the public through the JIC or RL Office of External Affairs;
- reviewing and coordinating employee information releases, including general information and specific information for displaced workers;
- providing information on recovery activities to DOE-HQ, state and county EOCs; and
- making emergency procurement arrangements for offsite assistance or to implement the Site Recovery Plan when directed by Manager of Recovery Operations.

8.3.1.2 Onsite Recovery Team. The Contractor Representative for the SMT shall appoint an Onsite Recovery Manager, who is responsible for appointing members of the Onsite Recovery Team. The Onsite Recovery Team is responsible for the development and implementation of the Onsite Recovery Plan. The team should consist of sufficient staff to perform the functions as applicable to the situation.

The Onsite Recovery Team consists of the following functions as applicable.

- Recovery Planning: Proposes and evaluates courses of action and address other major aspects of the recovery operation.

- Task Management/Scheduling: Identifies and plans specific tasks for implementation of the Site Recovery Plan. Monitors and coordinates the status of tasks.

- Engineering Support: Provides the support for procedure preparation, data analysis, technical support to the operations staff, and other tasks related to the technical support of recovery. Provides engineering design, materials, and the construction support needed to implement any required modification of plant structures or systems.

- Plant Operations: Routine performance of plant operations functions for the duration of the recovery.

- Safety: Assesses the extent of contamination of buildings and systems. Establishes processing and decontamination priorities based on this assessment, performs surveys, releases areas, provides radiological support for maintenance and operations, and maintains radiological and exposure records. Provides for the monitoring of hazardous chemicals. Ensures work is performed in accordance with company safety requirements and procedures.

- Operations Support: Supports the recovery efforts in areas such as personnel, communications, transportation, and temporary office space when required. Coordinates logistical support to displaced workers as detailed in the Site Recovery Plan.

- Communications: Prepares releases for employee information, including general information and specific information for displaced workers. Provides information to the RL Public Information Director for use in dissemination to the public.

- Recorder: Maintains the Onsite Recovery Log, which will serve as a chronological record of the recovery efforts. Ensures that all records and plant data are stored in accordance with site contractor records procedures.

The Onsite Recovery Manager shall direct development of a detailed Site Recovery Plan. The plan shall outline the Onsite Recovery Organization, objectives, facilities available to the organization, a schedule, disposition of displaced workers, cost estimates, and recovery actions.

The Manager of Recovery Operations shall approve the Site Recovery Plan after review by the Recovery Support Team. The Site Recovery Plan can be submitted in phases to allow initial recovery activities to take place during planning.

As recovery activities decrease, the Manager of Recovery Operations should reduce the number of personnel involved in recovery activities by combining positions. If minimal activities are taking place, consideration should be made for assigning functions to site organizations as part of normal activities.

8.3.2 Planning and Operations for Offsite Recovery

The states of Washington and Oregon are responsible for determining when the relaxation of protective measures can begin, and will make all offsite reentry and recovery decisions. The states shall coordinate all recovery activities with the affected counties, who will coordinate local public health actions and disaster assistance. Recovery actions also will be coordinated with RL. The major areas of effort for offsite recovery include:

- maintenance of access and traffic control of contaminated areas until cleanup is accomplished;
- imposition of control measures on possibly contaminated food and dairy products until radioactivity or chemical contaminant levels are deemed acceptable or the products are decontaminated or destroyed;
- dissemination of public health advice for individuals with noncommercial sources of food and dairy products;
- direction of decontamination activities, by way of natural radioactive decay, contamination removal, burial, treatment, or dilution;
- determination of radioactivity or chemical contaminant levels by field and laboratory analysis;
- documentation of population doses, individual doses, and environmental radioactivity or chemical contaminant levels; and
- dissemination of public information through press releases and other means.

The RL shall provide representatives to state recovery task forces, as may be established, if determined necessary by the RL Emergency Manager or Manager of Recovery Operations.

A major event at the Hanford Site affecting offsite populations could involve the implementation of the FRERP and the Federal Response Plan (FRP). Implementation of these plans would activate several Federal agencies including the FEMA, the EPA, Department of Agriculture, and many other agencies (including DOE) to support state and local relief and recovery efforts. Overall coordination of activities under these plans is the responsibility of FEMA.

For an event involving a facility on the Hanford Site owned by DOE, RL will become the LFA. The FRERP details the responsibilities of the LFA which include:

- assessing the emergency and providing notification to the appropriate Federal, state, and local governments;
- providing offsite monitoring, assessment, and PARs;
- providing for the release of public information on the emergency; and
- providing initial support to the state and local governments on recovery monitoring and decontamination activities. The EPA will assume these responsibilities for the long-term after receiving a pledge of support from DOE.

8.3.3 Incompatible Waste

After an event, the BED/BW and/or Onsite Recovery Manager and staff shall provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility. The BED/BW and/or Onsite Recovery Manager and staff shall further ensure that no waste that might be incompatible with the released material is treated, stored, and/or disposed of until cleanup is completed.

Cleanup actions are taken by trained site personnel. Actions that may be taken include, but are not limited to:

- neutralization of corrosive spills;
- chemical treatment of reactive materials to reduce hazards;
- overpacking or transfer of contents from leaking containers;
- use of sorbents to contain and/or absorb leaking liquids for containerization and disposal;
- decontamination of solid surfaces impacted by released material, e.g., intact containers, equipment, floors, containment systems, etc.;
- disposal of contaminated porous materials that cannot be decontaminated and any contaminated soil;
- containerization and sampling of recovered materials for classification and determination of proper disposal technique; and
- follow up sampling of decontaminated surfaces to determine adequacy of cleanup techniques as appropriate.

Waste from cleanup activities shall be designated and managed as newly generated waste. A field check for compatibility before storage shall be performed, as necessary, to ensure that incompatible wastes are not placed in the same container and containers of waste are placed in storage areas appropriate for their compatibility class.

If it is determined that incompatibility of waste was a factor in the incident, the BED/BW and/or Onsite Recovery Manager and staff ensures that the cause is corrected. Examples would be modification of an incompatibility chart or increased scrutiny of waste from a generating unit when incorrectly designated waste caused or contributed to an incident.

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9.0 PUBLIC INFORMATION

Public information is an integral part of the emergency management program at the Hanford Site. Information must be provided to the public and employees before, during, and after an emergency. The RL, and state and local governments share the responsibility to provide this information. The RL shall develop a public information program, including methods and procedures, to provide for the:

- Education of the public and employees on what to do in the event of an emergency
- Dissemination of accurate, timely information during any level of emergency
- Dissemination of information to help the public and employees recover after an emergency.

Coordination with offsite agencies that have the responsibility to provide emergency warning, instructions, and information to the public is key to the success of the public information program. The RL Office of External Affairs shall have the lead in coordinating the RL public information program with offsite agencies. Interfaces and assistance provided to offsite agencies related to public information shall be documented in memorandums of understanding, as outlined in Section 3.0, are found in Appendix B.

9.1 EMERGENCY PUBLIC INFORMATION ORGANIZATION

The Emergency Public Information organization shall be activated upon declaration of an emergency, activation of the RL-EOC, or as otherwise directed by the RL Manager or RL Office of External Affairs Director. Notification to Hanford Site personnel is accomplished via the automated ENS or a call tree fan-out, as back-up. Emergency public information support to offsite responses under the RAP is addressed under the U.S. DOE Region 8 RAP Plan (DOE/RL-92-49).

The Emergency Public Information organization shall be made up of site contractor and RL personnel working under the direction of the RL Office of External Affairs Director. Personnel assignments shall correspond as closely as possible to normal duties. Two components within the RL-EOC have responsibilities for emergency public information: the Policy Team and the JIC.

9.1.1 Policy Team

The Policy Team has overall responsibility for emergency public information. The RL Public Information Director provides direction to the Emergency Public Information organization and reports to the RL Emergency Manager.

The RL Public Information Director and RL-EOC Newswriter work in the RL-EOC. Communications with the JIC are accomplished by telephone and computer, with facsimile equipment also available. A closed circuit television system enables the RL-EOC to watch news conferences as they are conducted. Cable television service also is available in the RL-EOC for viewing of local and national news reports.

9.1.1.1 Responsibilities. The RL Office of External Affairs Director serves as the RL Public Information Director and is responsible for:

- Timely and accurate release of information to the public and media
- Advising the RL Emergency Manager on actions and responses that will reduce public uncertainty
- Approving the release of emergency public information
- Informing DOE-HQ of emergency public information actions
- Minimizing liabilities
- Protecting the organization's image/credibility as they relate to emergency responses, control, and recovery.

The RL-EOC Newswriter is responsible for writing the primary emergency news releases, which are approved by the RL Public Information Director.

9.1.2 Joint Information Center

Public information activities at the Hanford Site are coordinated with offsite agencies through a JIC. The Hanford Site JIC is located at the Federal Building (Rooms 157 and 158), 825 Jadwin Avenue, Richland, Washington. Upon activation, the JIC may also use the Federal Building auditorium and portions of the lobby.

9.1.2.1 Information Release. Information is released in a variety of ways from a number of official sources. The emergency public information program at the Hanford Site is designed with the JIC as the single point from which emergency information is released. This allows RL, Hanford Site contractors, and offsite agencies to coordinate the accurate and timely release of public information. The JIC also coordinates the release of information with DOE-HQ.

The RL shall encourage the participation of impacted offsite agencies in the JIC. In addition to RL and Hanford Site contractors, the states of Washington and Oregon, and the counties within the plume EPZs of the Hanford Site have included this participation in their emergency plans. The JIC is the sole source of information to the public on the event, corrective actions and potential ramifications. Additionally, local authorities utilize the JIC as their means to provide information to the media and the public. State agencies may release information directly from the state EOC, however, it will be coordinated through and simultaneously released at the JIC.

The information release functions of the JIC include:

- Coordination of news releases with affected agencies
- Conducting news conferences with participation from RL, site contractors, and offsite agencies
- Rumor control
- Response to telephone inquiries from the public and media
- Information to employees.

9.1.2.1.1 News Releases. Each agency shall develop and approve their own news releases. However, copies of proposed news releases shall be shared with all agencies to ensure accuracy and consistency of information being released. News releases then will be released to the media from the JIC.

The RL shall provide the initial news release within one hour of the emergency classification. The RL shall provide copies of all releases to DOE-HQ.

9.1.2.1.2 News Conferences. News conferences will be conducted from the JIC with spokespersons from local, state, and affected Federal agencies, and RL and site contractors. Conferences will be conducted, as the situation warrants, to provide an opportunity for the media to ask questions of responding agencies.

9.1.2.1.3 Rumor Control. Rumors may be identified by any member of the onsite or offsite emergency response organization. Within the JIC, the telephone teams and the media monitor are the primary identifiers of rumors. Any misinformation identified will be corrected as soon as possible through news releases, news conferences, and the telephone teams.

9.1.2.1.4 Telephone Teams. Telephone teams, staffed by RL and site contractor personnel, will answer questions from the public and media. Telephone teams will utilize news releases, emergency broadcast messages, fact sheets, and contacts with agency JIC representatives to provide information necessary to respond to inquiries.

9.1.2.1.5 Media Tours. Media tours of the affected area may be provided, if appropriate.

9.1.2.1.6 Information to Hanford Site Personnel. Information regarding work schedules, route closures, and other critical information is provided to all site personnel, as priority messages from the RL Emergency Manager, via electronic mail. Information to be provided to off-duty personnel shall be provided through the media.

9.1.2.2 Staff Work Areas and Communications. The Joint Agency News Coordination Team, JIC Newswriters, Rumor Control, and Media Telephone Teams utilize Rooms 157 and 158 for a work area. Access to this area will be controlled once the JIC is activated. Equipment necessary for the coordination, development, and dissemination of press releases also is available in this work area. This includes computers, facsimile, and duplicating equipment.

Communications to site personnel, via priority messages using the site computer system, originates from a facility two blocks north of the JIC.

Coordination and dissemination of information to DOE-HQ is provided via telephone and facsimile.

9.1.2.3 Media Work Areas, Briefing Areas, and Communications. Portions of the Federal Building lobby shall be used as a work area for the media. Telephones will be connected in the work area for the use of the media.

News conferences will be conducted in the Federal Building auditorium. Audio and visual equipment will be available for use in the news conferences. News conferences are transmitted via closed circuit television to the JIC staff work area and RL-EOC.

The media is provided information using telephone notifications, facsimile transmission of news releases, JIC distribution of news releases and news conferences, affected areas tours (if possible), and the media telephone team.

9.1.2.4 Staffing and Responsibilities. The JIC staff shall receive initial training on the concept of operations of the JIC and their specific tasks. Retraining shall be provided annually. Additionally, team members shall participate in one exercise annually. Offsite agencies that participate in the JIC also are given the opportunity to participate in training and drills related to their functions at the JIC. Offsite agency participation is requested for two exercises per year.

The JIC staffing shall be outlined in JIC procedures and shall provide the following functions:

- The timely release of accurate and understandable information to the public and media, and for responses to public inquiries
- Providing technical or risk-related information to spokespersons
- Conducting news conferences with participation from RL, Hanford Site contractors, and appropriate offsite agencies
- Providing graphic, photographic, and video support for use in news conferences and by the media
- Recording television and radio station broadcasts, and reviewing broadcasts for inaccuracies
- Identifying and correcting rumors and inaccuracies
- Producing written announcements, fact sheets, and news releases
- Relaying press announcements to the media, providing updates to the media not present at the JIC, and providing responses to incoming media phone queries

- Arranging for authorized media tours during the incident
- Reviewing, as necessary, all information released to the media or the public for classified information
- Transmitting emergency releases, bulletins, and updates to all employees.

The Joint Agency News Coordination Team is composed of Public Information Office representatives of Benton, Franklin, and/or Grant Counties, the states of Washington and Oregon, and involved Federal agencies. The basic function of the team is to jointly coordinate releases of information to the media and to provide accurate and timely information to the public regarding operations in their jurisdictions. They will have the opportunity to participate in all news conferences.

9.2 PUBLIC EDUCATION

RL shall assist the jurisdictions within Hanford Site EPZs with the development and implementation of programs to educate their residents on the actions to take in the event of an emergency at the Hanford Site.

RL shall participate in public meetings, sponsored by state, tribal, or local emergency management officials, to make the public aware of DOE activities in the region, the potential risk from these activities, and the Hanford Site emergency preparedness program. RL shall coordinate the provision of information on the emergency management program to the media with offsite agencies.

RL shall provide information to the public and the media for each major exercise in order to educate the local community on Hanford Site activities to test the emergency preparedness program. This information will be coordinated with local emergency management officials.

9.2.1 Plume Emergency Planning Zone Public Education

The state of Washington and Benton, Franklin, and Grant Counties have instituted a public education program to ensure that the members of the public within a plume EPZ of the Hanford Site are aware of the proper actions to take following notification of an emergency. The counties' programs have been identified in their emergency plans. These plans, developed cooperatively with RL and the Supply System, include the following:

- Annual distribution of an emergency information calendar for residents within the plume EPZs
- Distribution of a brochure for farmers and growers
- Distribution of information for special audiences such as boaters or spanish-speaking residents
- Public public meetings

- Annual surveys to determine the effectiveness of these programs.

Information provided to residents includes the following:

- Description of the hazards
- How they will be notified
- Protective actions they may be asked to take (i.e., sheltering or evacuation)
- Evacuation routes and where to go if they are asked to evacuate
- Special provisions for schools or other special facilities
- How those with special needs can get help.

9.2.2 Ingestion Emergency Planning Zone Public Education

The states of Washington and Oregon, affected tribal organizations, and counties are responsible to provide education to residents within the ingestion EPZ. Information may include the following:

- Description of the potential impact of an emergency on residents and the agriculture community

- Preventive measures to help avoid or reduce the impact if a release occurs

- Actions to take during and after a release.

Information may be provided through the dissemination of printed materials to target audiences, conducting public meetings and providing information to the media.

9.3 SITE PERSONNEL EDUCATION

All RL and site contractor personnel are provided annual training on basic emergency preparedness response procedures. Additionally, site personnel are provided information on the specific emergency plans of their building. An emergency response guide also is provided to each employee, which describes the emergency signals, basic instructions, and the emergency response structure. By telephone, site personnel can hear a recording of the emergency signals. Drills and exercises provide additional training for site personnel on the specific actions of their building.

Visitors, vendors, subcontractors, consultants, and regulatory agency personnel are provided safety, security, and emergency preparedness information before badging.

See Sections 11.0 and 12.0 for more information on site personnel education.

10.0 EMERGENCY FACILITIES AND EQUIPMENT

This section identifies and describes the emergency facilities and equipment used or maintained by the RL and the Hanford Site contractors.

10.1 EMERGENCY FACILITIES

This section contains a description of the RL and site contractor facilities that have been equipped for emergency control, operations, and coordination. Figure 10-1 depicts the geographical location of the primary and alternate RL-EOC, the POC, and the Hanford fire stations. The functions, staffing, and activation criteria of the RL-EOC are described in section 2.0 of this plan.

10.1.1 U.S. Department of Energy, Richland Operations Office Emergency Operations Center

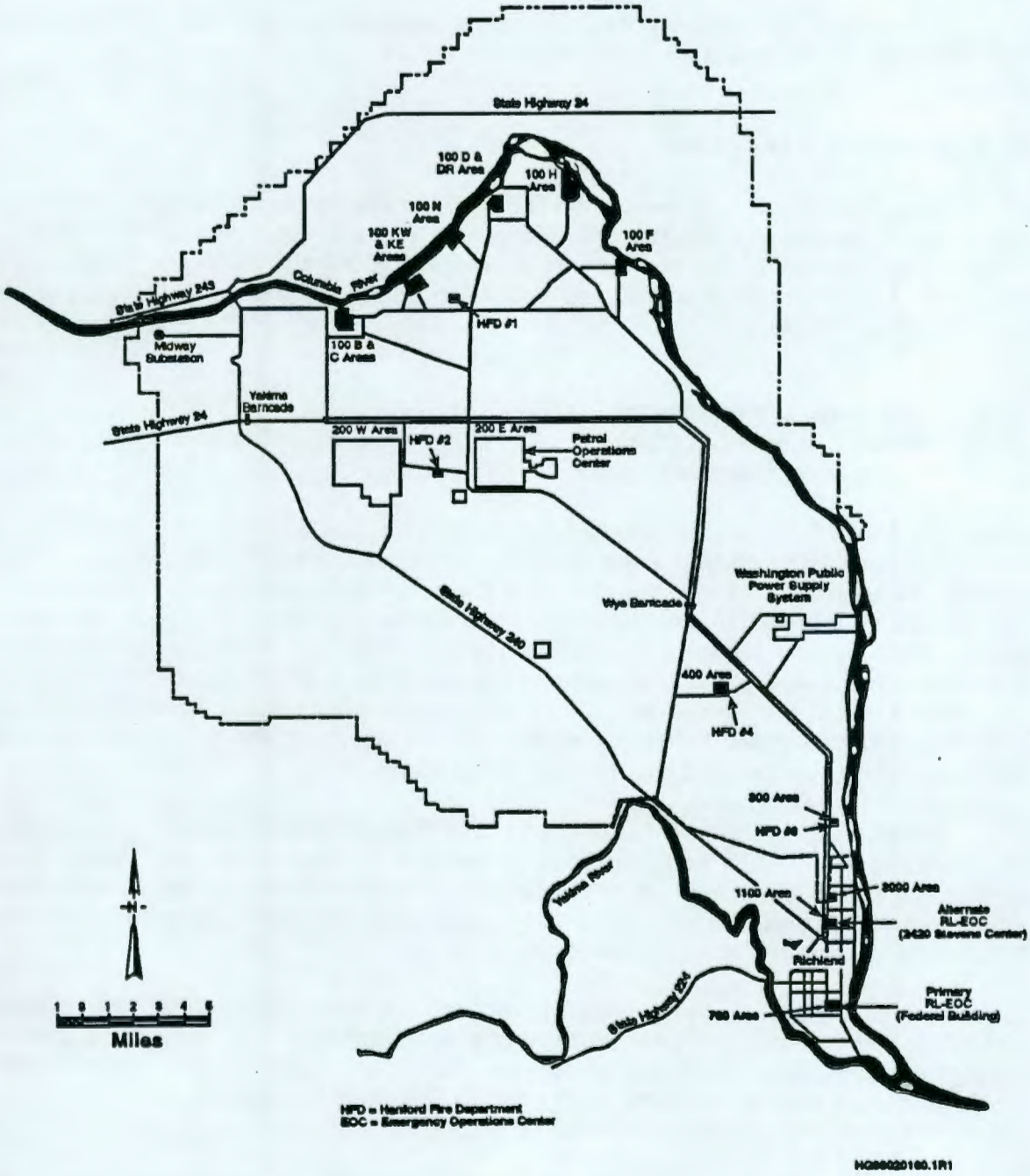
The RL-EOC, which consists of the Policy Team, SMT, and the JIC, is located in the Federal Building, 825 Jadwin Avenue, Richland, Washington. The Policy Team and SMT workrooms are dedicated facilities located in the basement of the Federal Building. The JIC is a dedicated facility located on the main floor in Rooms 157 and 158. Telecommunications, word processing, and duplication equipment is provided to support JIC-participating agencies and the media. The JIC may also dedicate the use of the auditorium, portions of the lobby, and other areas in the Federal Building for JIC purposes, as needed. The RL-EOC location provides favorable proximity to the emergency management and response staff, the RL Communications Center, and to additional office space.

The RL-EOC is outside of the plume EPZs of Hanford Site facilities thus ensuring a high probability of the RL-EOC being habitable following an emergency on the Hanford Site. An emergency power generator, routinely serviced and maintained by the General Services Administration, is available to supply power to essential emergency equipment in the Federal Building in the event of loss of normal power.

The RL-EOC shall be equipped in accordance with standardized communication, photo/video, and automatic data processing support specified by the DOE-HQ Director of Emergency Operations. Additionally, primary and backup means of communication shall be available and capable of operating with other DOE elements, and with other Federal, tribal, state, and local response organizations, as applicable.

An alternate RL-EOC has been established at the 2420 Stevens Center Building in the 1100 Area. The criteria for abandonment of the primary RL-EOC will be when radiation monitoring at the RL-EOC shows whole body dose rates (beta plus gamma) exceeding 0.1 rem/hr for greater than 1 hour or the RL-EOC becomes uninhabitable for any other reason (e.g., earthquake or a security breach).

Figure 10-1. Hanford Site Emergency Centers and Fire Stations.



The primary RL-EOC may be reactivated following abandonment if the radiation dose rates decrease or other conditions change to the point where, in the opinion of the RL Emergency Manager, it is safe to reoccupy the primary RL-EOC.

Procedures for the operation of the alternate RL-EOC are found in DOE-0223.

10.1.2 Hanford Patrol Operations Center

The POC is located in the 2721-E Building in the 200 East Area. The POC monitors the emergency response number (911) and business number (373-3800), and acts as the single point of contact for RL.

The POC notifies and/or dispatches the:

- Hanford Fire Department, including ambulance and the Hazardous Material Response Team;
- Hanford Patrol;
- Transportation and Packaging on-call representative;
- EDO; and
- Benton County Sheriff personnel assigned to Hanford Site.

The POC also is responsible for alarm monitoring; activation of crash alarm telephone systems and sirens; and assisting in dispatch and radio communications for emergency responders.

10.1.3 Occurrence Notification Center

The ONC, located in the basement of the Federal Building, is a 24-hour operational facility equipped to communicate information regarding occurrences at or affecting the Hanford Site to RL, site contractors, and state and local emergency management organizations. The ONC is responsible for:

- activating the Hanford Site emergency response organization via the automated ENS;

- providing initial notifications via the automated ENS to Grant County residents within the Hanford EPZs; and

- providing notifications to the DOE-HQ EOC and state and local emergency management agencies.

ONC notification responsibilities are covered further in section 6.0 of this plan. Specific operational desk instructions shall be maintained by the ONC.

10.1.4 Medical Emergency Facilities

Capabilities for medical aid, triage, and personnel decontamination shall be available onsite. Emergency Medical Support is described in section 7.0 of this plan.

Medical emergency facilities include the following.

- Health Care Centers: HCCs are located in various areas throughout the Hanford Site and are occupied on day shift Monday through Friday, excluding holidays. The HCCs shall contain sufficient medical supplies to treat patients with occupational illnesses or injuries who do not require hospitalization. Ambulance service is provided by the Hanford Fire Department.

- Site Decontamination Facilities: Personnel decontamination sites are located in several locations in the 100, 200, 300, and 400 Areas.

- Emergency Decontamination Facility: The EDF is located north of Kadlec Medical Center. The EDF is a dedicated, hardened facility designed to accommodate nonserious or nonlife-threatening radiologically contaminated injuries.

Agreements shall be in place between the RL and local hospitals for backup medical treatment (see Appendix B of this plan).

10.1.5 Protective Clothing Cleaning

Interstate Nuclear Services provides laundry services for the Hanford Site. The laundry facility is located in the Science and Technology Park south of the site. The laundry manages protective clothing, including cleaning both radioactively contaminated laundry and non-contaminated laundry.

10.1.6 State and County Emergency Operations Centers

The Benton County EOC is located at 651 Truman Ave., Richland, Washington. Benton and Franklin Counties operate from the Benton County EOC during an emergency at the Hanford Site or WNP-2.

The Grant County EOC is located at 6500 32nd Ave. NE, Moses Lake, Washington.

The Washington State EOC is located in the office of the Washington State Emergency Management Division, 4220 East Martin Way, Olympia, Washington.

The Oregon State EOC is in the office of the Oregon Emergency Management Division, located at 595 Cottage Street Northeast, Salem, Oregon.

10.2 EMERGENCY EQUIPMENT

Adequate equipment and supplies must be available and operable for emergency response personnel to carry out their respective duties and responsibilities.

Emergency and backup equipment (including monitoring devices) shall be located in readily accessible areas away from the scene of the potential accident. Equipment shall be available, as appropriate, to provide functions for the potential, credible emergencies such as:

- emergency dosimetry;
- personnel protection;
- monitoring of personnel, facilities, and the environment onsite and offsite;
- emergency medical treatment onsite;
- meteorological evaluation;
- handling of personnel contaminated with radioactive or toxic materials, and fatalities;
- supplying emergency power, water, and sanitation;
- emergency transportation for personnel evacuation;
- movement of earth or heavy loads; and
- emergency communications, including portable and secure communications equipment, as required.

To ensure equipment reliability, emergency equipment should, to the extent practical, be the same equipment used for routine operations. The RL and the site contractors maintain a variety of light and heavy equipment and supplies that could be diverted from routine use to emergency use, if needed.

All equipment that could be used in an emergency response is listed in the RL Property System data base, which can be quickly accessed to determine the current status of each piece of equipment. This system is maintained and operated by the Resource Allocation and Management group of the operating contractor.

As applicable, the BED/BW/IC and/or the Onsite Recovery Manager and staff shall ensure that all equipment is cleaned and fit for its intended use before operations are resumed. This may include actions to ensure that depleted stocks of neutralizing and absorbing materials are replenished, self-contained breathing apparatus are cleaned and refilled, fire extinguishers are recharged or replaced, and protective clothing is cleaned (or disposed of) and restocked.

10.2.1 Assessment Equipment

Emergency equipment shall be available, as appropriate, to allow an early and reliable determination of the seriousness of an accident. The equipment for both emergency and continuing assessment of the facilities and environment at the Hanford Site consists of dosimeters, criticality detectors and alarms, and effluent and environmental monitoring equipment. Each building having a potential for a nuclear accident has a list of dosimeters, criticality detectors, and alarms, as well as a drawing showing their location in relation to prominent facility features.

Arrangements are in place with the Aerial Measuring System (DOE Nevada Operations Office) for aerial surveillance and monitoring through UDAC.

10.2.1.1 Nuclear Accident Dosimeter. The Hanford Site nuclear accident dosimeter is a stationary device that provides neutron and gamma dose information following a criticality or high-level radiation event. The dosimeter satisfies the requirements for an emergency dosimetry system by providing a system capable of determining the:

- neutron dose (in rads);
- photon dose in the presence of neutrons (from 10 to 10,000 rads); and
- neutron flux in each of five energy intervals, which permits calculation of the neutron dose equivalent in rem.

These dosimeters are recovered only when directed by RL. PNNL maintains a current list of nuclear accident dosimeter locations in PNL-MA-583 (PNL 1994). Instructions for recovery of these dosimeters are contained in site contractor emergency procedures.

10.2.1.2 Emergency Instrumentation. Under emergency conditions, many needed supplies and equipment would be drawn from the instrument and equipment pool used for normal operations at the Hanford Site. This ensures that multiple sources of supplies are available and that the equipment is calibrated, maintained, and ready for use by personnel involved in controlling the emergency.

10.2.2 Fire Control Equipment

Buildings shall be equipped with fire control equipment, such as automatic fire suppression (sprinkler) systems and portable fire extinguishers, in accordance with National Fire Protection Association safety codes. Where equipped, portable fire extinguishers must comply with the National Fire Code standards and be inspected monthly with inspections recorded on tags attached to each extinguisher.

10.2.3 Personal Protective Equipment

Buildings shall have safety showers and eyewash stations, located as necessary, in accordance with applicable regulations. Drainage from these stations shall be contained. In addition to these stations, portable eyewash equipment shall be maintained at protective storage areas as necessary. The eyewash and shower stations shall be inspected regularly.

Protective clothing and respiratory protective equipment shall be maintained for use during both routine and emergency operations. Equipment not provided by the Hanford Fire Department shall be identified in nonhazardous and hazardous facility documentation.

10.2.4 Spill Control and Contamination Supplies

Spill control and contamination supplies shall be located in facilities as necessary. Supplies may include sorbent materials for organic or inorganic materials; diatomaceous earth for liquid waste spills; neutralizing sorbents for response to acid or caustic spills; containers and salvage containers (e.g., overpacks); and brooms, shovels, and miscellaneous spill response supplies.

10.2.5 Decontamination Operation Equipment

The 221-T Building in the 200 West Area provides equipment decontamination services for the Hanford Site.

10.2.6 Evacuation Vehicles

The BEDs shall ensure that vehicles are available to move all personnel from their facility. This may be accomplished by a combination of government-owned and private vehicles. If insufficient vehicles are available, the BED can coordinate the response of additional transportation assets through the RL-EOC.

10.2.7 Hanford Patrol

Hanford Patrol maintains a large inventory of security response equipment, including transportation, weaponry, protective equipment, and communication.

10.2.8 Hanford Fire Department

The Hanford Fire Department maintains a large inventory of fire-fighting, hazardous-material-response, and rescue equipment. The Hanford Fire Department also operates the site ambulance service from the various area fire stations. Mutual aid agreements with local fire departments provide additional backup capabilities.

A description of equipment for hazardous material responses available through the Hazardous Materials Response Team is delineated in Appendix C of this plan. Locations of the four fire stations on the Hanford Site are shown in Figure 10-1.

10.3 MAINTENANCE AND TESTING OF ALARM AND COMMUNICATION SYSTEMS

The facility manager or BED shall ensure that preventive maintenance is performed on facility emergency sirens/alarms by the responsible maintenance organizations in accordance with the established preventative maintenance procedures.

FDH Emergency Preparedness shall ensure that preventive maintenance is performed on area and river sirens.

Facility and area sirens/alarms not heard in offsite, permanently populated areas shall be audibly tested at a predesignated time each month in accordance with contractor preventive maintenance procedures.

Where facility and area sirens/alarms may be heard in offsite, permanently populated areas, audible testing shall be conducted on an annual basis and must be coordinated with offsite emergency authorities. Silent testing shall be used if more frequent tests are necessary to assure operability. Site contractors responsible for these sirens will coordinate audible tests and necessary offsite notifications with RL Emergency Preparedness.

The site contractor responsible for the sirens/alarms to be tested is responsible to ensure appropriate notification to workers through such means as announcements over the crash alarm telephone system, public address system, and/or cc: Mail. Sitewide information sources, such as the POC and Hanford Telephone Operator, should also be notified of any audible facility or area siren/alarm test.

Communication systems testing shall include:

- monthly testing of area crash alarm telephone systems (100K, 100N, 200 East, 200 West, 300, and 400 Areas) by the responsible site contractor;
- monthly testing of the RL-EOC radios by FDH Emergency Preparedness; and
- quarterly testing of the ENS by the ONC.

10.4 INVENTORY OF EMERGENCY EQUIPMENT

Contractor emergency equipment shall be inventoried periodically, in accordance with site contractor inventory control procedures, to ensure availability in the event of an emergency.

A quarterly inventory of emergency equipment in emergency centers shall be conducted and the records of these inventories maintained for one year by the site contractor responsible for emergency center maintenance. An implementing procedure for conducting emergency center inventories shall be maintained and corrected within 30 days of an inventory change.

11.0 TRAINING

In addition to training that site personnel receive on their day-to-day functions, an emergency preparedness training program shall be established and structured to ensure Hanford Site emergency response organization readiness.

11.1 TRAINING REQUIREMENTS

The emergency preparedness training program shall include a mix of classroom instruction, tabletop exercises or walk-throughs, and drills. A formal training program shall be in place for the instruction and qualification of all personnel (primary and alternate) who comprise the Hanford Site emergency response organization to include initial training and annual retraining for both onsite incidents and offsite incidents that impact the site, including transportation incidents. Training programs shall be systematic and performance based (i.e., based on an analysis of tasks to be performed during an emergency) and developed using performance objectives that place emphasis on team training and facility-specific emergency response scenarios.

Annual retraining for all emergency response organizations shall include lessons learned from past drills and exercises, changes to plans and procedures, and lessons learned from emergencies at DOE and other industrial facilities.

11.1.1 U.S. Department of Energy Richland Operations Office Emergency Operations Center Staff Training

Personnel assigned to the RL-EOC shall receive training prior to assignment to an activation list and at least annually thereafter.

11.1.2 Building Emergency Response Organization Training

The primary BED/BW shall ensure that their emergency response organization is trained in accordance with the following requirements:

- All designated BEDs/BWs, and their alternates, shall attend training prior to assignment and at least annually thereafter
- The BED/BW shall provide documented training for the building emergency response organization prior to assignment and at least annually thereafter. The annual retraining requirement may be met by drill/exercise participation or classroom training.

11.1.3 General Employee Training

Training shall be provided annually to workers who may have to take protective actions in the event of an emergency. This may be provided through general employee training and participation in drills/exercises.

11.2 TRAINING PROGRAM EVALUATION

Emergency preparedness training programs shall include evaluation methods to ensure that all emergency response personnel are trained in the program elements pertinent to their position and are able to respond effectively in an emergency.

The effectiveness of the emergency preparedness training program shall be evaluated during the conduct of drills and exercises. Performance shall be documented as part of the drill and exercise critiques and will be used for program improvements.

The programs also shall contain self assessment activities that analyze overall training program effectiveness. Results of self assessment activities will be utilized to upgrade and improve the emergency preparedness training program.

11.3 EMERGENCY PREPAREDNESS COURSES

Emergency preparedness training courses conducted at the Hanford Site are identified in Table 11-1.

11.4 RECORD KEEPING

The emergency preparedness training programs for the Hanford Site will include a consistent, auditable method for maintaining training records. The system will include a means for tracking attendance, and a system for reminding employees when training is needed.

The system will be incorporated into site contractor/site central training record organizations, when possible.

11.5 VISITORS/VENDORS/SUBCONTRACTORS/CONSULTANTS/ REGULATORY AGENCY PERSONNEL

All visitors, vendors, subcontractors, consultants, and regulatory agency personnel must receive an orientation regarding safety, security, and emergency preparedness requirements while on the Hanford Site each time a security badge is issued. A security badge will not be issued unless compliance with this requirement is met.

Visitors to the site will also view a video or receive a brochure containing safety, security, and emergency preparedness information when the security badge is issued.

Table 11-1. Emergency Preparedness Training Courses.

TRAINING COURSE	FREQUENCY	COURSE SUMMARY
RL Emergency Operations Center Training	Before assignment; annually thereafter[1]	Training provides an overview of the emergency response organization and specific emergency center operation for staff assigned to the RL-EOC.
Building Emergency Response Organization Training	Before assignment; annually thereafter	Training addresses emergency procedures, responsibilities, and command and control for members of the building emergency response organization (i.e., BED/BW and support staff).
General Employee Training	Annually	Training provides basic emergency preparedness response procedures to all DOE and site contractor employees.
Visitor, Vendor, Subcontractor, Consultant, and Regulatory Agency Personnel Training	Before badging	Training provides safety, security, and emergency preparedness information to visitors,vendors, subcontractors, consultants, and regulatory agency personnel.

[1] Applicable only to Hanford Site personnel with designated positions in the RL-EOC. Offsite personnel with designated positions in the RL-EOC receive initial orientation training as requested.

11.6 OFFSITE TRAINING SUPPORT

No offsite training support has been identified to substitute existing emergency preparedness training courses. However, emergency response personnel shall participate in training opportunities offered by other field elements or offsite agencies that may benefit the emergency response organization.

11.7 OFFSITE PERSONNEL TRAINING

The RL will offer training programs to offsite organizations that perform emergency tasks described in this plan, as appropriate. Training may include facility-specific orientations, hazards information, transportation information, and emergency response procedures. The training will be provided in support of and in conjunction with the counties, tribes, and states at their request. Information on hazards and emergency response procedures also shall be provided to the media and the public, as appropriate.

Area hospitals and local ambulance providers receive training on the handling and care of radiologically contaminated patients from Supply System and county emergency management organizations.

11.8 INSTRUCTOR TRAINING AND QUALIFICATION

The emergency preparedness training programs shall identify and document instructor qualifications for their courses. Emergency preparedness program managers have the responsibility for qualification of instructors for each course offered. The qualification process shall identify both experiential and/or academic requirements for instructors.

12.0 DRILLS AND EXERCISES

Drills and exercises will be used to train workers and validate the emergency management program. Each member of the Hanford Site emergency response organization shall participate in a drill or exercise at least annually to demonstrate proficiency in response duties.

Emergency management improvements and corrective actions identified during actual emergencies or during drills and exercises shall be incorporated into the Hanford Site emergency management program as appropriate.

12.1 DRILLS

Drills are supervised hands-on instruction and applications sessions for individuals or teams. These sessions provide an opportunity to demonstrate and maintain individual and organizational proficiency. In order to ensure response proficiency is maintained, drills will be assessed and/or graded to identify and document training needs and areas of less than adequate performance.

12.1.1 Drill Definitions

There are three types of drills conducted at the Hanford Site - operational, emergency preparedness, and functional. Each drill is defined in the following sections.

12.1.1.1 Operational Drill. An operational drill involves hazardous and nonhazardous facility response personnel only. The drill focus is on an event that can be mitigated through the use of plant response procedures and allows for the demonstration of non-emergency notifications. An operational drill may also include the use of the *Hanford Emergency Response Plan* implementing procedures and be performed using a tabletop format. Drills should be performed at the direction of the facility/building manager and documented to include concerns or demonstrated lack of knowledge regarding action(s) taken. Examples of an operational drill include alarm response, emergency response team, contamination spread, and other applicable operating functions.

12.1.1.2 Emergency Preparedness Drill. An emergency preparedness drill at hazardous facilities involves designated facility emergency response personnel and the incident command system. Drills could include tabletop drills, walk-through training drills (controller interaction with players as coaches or instructors), and evaluated drills (no controller interaction with players for coaching or instruction). The type of drill to be conducted shall be clearly communicated to all participants, observers, and evaluators.

Emergency preparedness drills require the use of the *Hanford Emergency Response Plan* implementing procedures and, at a minimum, should demonstrate:

- implementation and coordination of facility and/or area (i.e. 200 East, 200 West, 300 Area, etc.) protective actions such as take cover or evacuation;

- event recognition and classification;
- event mitigation;
- emergency and environmental notifications and communications; and
- interface with the Hanford Incident Command System and other affected facilities.

NOTE: Facility personnel in administrative and nonhazardous buildings located within an EPZ or those that meet life-safety code requirements shall participate in one protective action drill annually (evacuation to a staging area or take cover).

12.1.1.3 Functional Drill. A functional drill involves a specific function of the emergency response organization not normally associated with a specific facility. Examples of a functional drill include field team dispatch and control, Columbia River alerting, RL-EOC, area evacuation and take cover drills, ONC staff, POC staff, Emergency Duty Officers, and Hanford Fire Department responders.

12.1.2 Drill Development and Conduct

Drills should be of sufficient scope and frequency to ensure an adequate and trained emergency response organization. Drills should be designed to demonstrate proficiency for as many of the following items, as appropriate, for the facility being drilled:

- notification (hazardous and nonhazardous facilities);
- response to fire (all facilities);
- medical emergencies (all facilities);
- response to spills and releases of hazardous materials including the detection and monitoring of such releases (hazardous and nonhazardous facilities);
- personnel accountability (all facilities);
- protective actions (hazardous and nonhazardous facilities);
- event classification (hazardous and nonhazardous facilities);
- activation of the ICP (hazardous and nonhazardous facilities); and
- personnel decontamination (hazardous and nonhazardous facilities).

Contractors with facilities that can create an Alert or higher emergency or a RCRA emergency reportable event shall establish a drill program to ensure adequate training and proficiency for all emergency response personnel. Each contractor shall identify drill coordinators who have successfully completed drill coordinator training or demonstrated equivalent training or experience.

The designated emergency preparedness coordinator is responsible for the design and execution of the facility drill program. The emergency preparedness coordinator shall approve the grade assigned to the drill, sign the drill report and forward to the facility/building manager. The emergency preparedness coordinator is responsible for entering deficiencies into the appropriate commitment tracking system. The emergency preparedness coordinator will insure the adequacy of the drill package, including the scenario and will select the drill control organization. The emergency preparedness coordinator should serve as the lead controller for drills whenever possible.

Drills shall be conducted by a qualified, trained, and experienced control organization. Drill controllers shall be qualified to control areas of performance assigned and for emergency preparedness and functional drills shall have attended drill controller/evaluator training. (NOTE: Site contractors may authorize equivalent training.)

A graded approach to the number, type, and extent of facility and functional drills shall be based on the hazards present in the facility or those to which the functional organization would be expected to respond. Each contractor required to conduct drills shall develop an annual drill schedule.

Drill packages contain, as a minimum,:

- objectives, scope and limitations;
- scenario;
- technically data (e.g., realistic plant conditions, proper source terms, etc.);
- evaluation criteria; and
- a narrative summary of the conduct of the drill.

Operational and/or emergency preparedness drills shall be conducted with a frequency sufficient to provide proficiency and complete confidence in response capability. Personnel assigned emergency duties should participate in drills covering emergency events or hazardous conditions in their respective facility (e.g., fire, injury, spill, radiological release, loss of power, loss of ventilation, etc.) Where proficiency is not achieved, more than one drill per event or hazardous condition should be considered.

12.1.3 Emergency Preparedness and Functional Drill Evaluation

For emergency preparedness and functional drills, each drill objective and the overall drill shall be graded. Each drill and objective should be graded on a scale of 1 to 5; however, site contractors may substitute an equivalent evaluation process. The definitions of each grade is delineated in this section.

A participant critique shall be conducted immediately following the drill to provide preliminary feedback on objectives and to allow participants to conduct a self-assessment. Areas of inadequate response or improvement should also be addressed.

In a separate controller critique, following the participant critique, the controllers will determine the grade on each objective and on the overall drill. The primary method will be consensus. The lead controller will determine when consensus is reached and will document the grade. No minority opinions will be published. Controllers who disagree with the final grade shall address their concerns to the emergency preparedness coordinator.

The emergency preparedness coordinator is responsible for the drill and will receive the report from the lead controller.

1	Excellent: Standards of performance are very high. The minimum requirements are exceeded in most areas. Performance and programmatic improvements may be needed in very few areas.
2	Meets Expectations: Standards of performance are high. The minimum requirements are met, and in some areas, exceeded. Performance and programmatic improvements are needed in a few areas.
3	Meets Minimum Requirements: Standards of performance are acceptable. The minimum requirements are met. Performance and programmatic improvements are needed in some areas.
4	Below Expectations: Standards of performance are marginal and need to be raised. The minimum requirements are generally met in most areas. Performance and programmatic improvements are needed in many areas. Increased management attention and emphasis on facility self-assessment efforts is warranted to ensure deficiencies are identified and corrected.
5	Significantly Below Expectations: Standards of performance are not acceptable and need to be raised significantly. The minimum requirements are not met in some areas. Performance and programmatic improvements are needed in most areas. The margin of operational safety is low and the lack of program implementation could lead to a significant event. Immediate and decisive action is needed to correct identified deficiencies. Increased management attention and emphasis on facility self-assessment efforts is required to ensure deficiencies are identified and corrected.

12.2 EXERCISES

Exercises provide the opportunity for participants to demonstrate their proficiency in assigned emergency response duties. Exercises are used to validate the adequacy of emergency procedures, facilities, equipment, training and personnel response. Exercises may be either announced or unannounced (i.e., date and time will not be provided to participants).

Contractors with facilities that can create an Alert or higher emergency, RCRA emergency, or have organizations and functions that respond to events shall:

- comply with annual exercise schedule issued by RL QSH;
- support development, conduct, and evaluation of exercises at their facility or involving their functional areas;
- provide members to participate in scenario development groups when their facility or function is involved;
- provide controllers and or evaluators for conduct and evaluation of exercises; and
- require participation by their appropriate staff in exercise and associated training.

12.2.1 Exercise Definitions

There are four types of exercises conducted at the Hanford Site - functional, limited tabletop, and field. Each exercise is defined in the following sections.

12.2.1.1 Functional Exercise. A functional exercise tests and validates the response of the ICP personnel, to include facility personnel, Hanford Fire Department, and Hanford Patrol. Communication links, at a minimum, will include the:

- POC;
- ONC;
- ICP Communication to Event Scene Liaison;
- ICP Hazards Assessor to the UDAC; and
- IC to the Site Emergency Director.

Full participation of the RL-EOC is not required. Control cell actors can be used to simulate RL-EOC participation.

A functional exercise can also test and validate a specific function of the emergency response organization not normally associated with a specific facility. Examples of a functional exercise include field team dispatch and control, Columbia River alerting, RL-EOC, ONC staff, POC staff, Emergency Duty Officers, and Hanford Fire Department responders.

12.2.1.2 Limited Exercise. A limited exercise tests and validates the responsibilities of ICP personnel, POC, ONC, and the RL-EOC staff. There is no offsite involvement.

12.2.1.3 Tabletop Exercise. A tabletop exercise allows the Hanford Site Emergency Response Organization and designated offsite responders to work through a scenario in one room, under tabletop conditions, to demonstrate how each facet of a major response organization contributes to an emergency response.

12.2.1.4 Field Exercise. A field exercise tests and validates the responsibilities of all aspects of the Hanford ERO, which includes ICP personnel, POC, ONC, and the RL-EOC. Offsite involvement may include DOE-HQ, state and county EOCs, and supporting staff such as radiological field teams.

12.2.2 Exercise Development and Conduct

The Hanford Site exercises shall be of sufficient scope and frequency to ensure the development and maintenance of an adequate response capability.

The Hanford Site Emergency Exercise Program organization shall be responsible for:

- developing and maintaining procedures to implement the requirements of the exercise program;
- developing, maintaining, and communicating a five year and annual schedule of exercises;
- developing and maintaining an exercise objectives matrix that identifies the elements to be tested during the conduct of exercises and determining appropriate objectives based on approved procedures to be tested and verified; and
- providing controller/evaluator training to ensure trained controllers/evaluators are available for exercises.

Proposed goals and objectives shall be provided to RL QSH for review before a field, tabletop, and limited exercise. A scenario shall be developed to ensure that events occur to address the objectives. Each major exercise "draft" package shall be submitted to RL QSH for review, comment, and approval.

The Hanford Site Emergency Exercise Program organization shall conduct exercises on a minimum frequency as listed in Table 12-1.

Table 12-1. Exercise Frequency.

EXERCISE	FREQUENCY	INITIATED BY/ EVALUATED BY	ORGANIZATIONAL PARTICIPANTS
Tabletop/Field	The Hanford Site shall conduct one tabletop and one field exercise per year. The Hanford Site Emergency Preparedness Program organization shall conduct three limited exercises per year and a sufficient number of functional exercises to exercise the remainder of the site's hazardous facilities every two years. Each site hazardous facility shall participate in one of the three listed types of exercises at least every two years.	Site Emergency Preparedness	Facility ERO, ICP, POC, ONC, RL-EOC, Hanford Patrol, Hanford Fire Department, radiation control, industrial hygiene, UDAC field teams, first response organizations, affected offsite agencies, etc.
Limited		Site Emergency Preparedness	As noted above in tabletop/field exercise except for offsite agencies.
Functional		Site Emergency Preparedness	Facility ERO, ICP components, POC, ONC, and the RL-EOC as appropriate.

12.2.3 Exercise Evaluation and Corrective Action

The Hanford Site Emergency Exercise Program organization shall ensure that an evaluation for each exercise is conducted.

Exercise evaluation criteria will be based on the *Hanford Emergency Response Plan, Emergency Plan Implementing Procedures,* and site-specific criteria. An overall graded evaluation of the exercise will be scored as either satisfactory or unsatisfactory.

A system to formally track exercise deficiencies and weaknesses to completion shall be maintained. Improvement items will be provided to the appropriate organization for implementation as required. A system to provide trending and lessons learned shall also be maintained for exercises.

Quarterly reports shall be provided to RL QSH on the status of all formally tracked corrective actions.

12.2.4 Offsite Coordination

Offsite agencies, including DOE-HQ, tribal, state and local organizations, and appropriate Federal organizations, shall be asked to participate in the annual field exercise and preparatory tabletop exercises. Participation by offsite agencies is dependent upon the scenario and the agencies desired level of participation. When offsite groups respond affirmatively, they shall be accommodated.

Coordination of offsite participation shall be accomplished through a Scenario Review Group (SRG), which shall meet periodically prior to an exercise to develop the exercise scenario package. Exercise needs of offsite agencies shall be discussed with the SRG and included in the scenario, to the extent possible, without compromising the onsite exercise requirements.

13.0 EMERGENCY MANAGEMENT PROGRAM ADMINISTRATION

The basic purpose of program administration is to establish and maintain effective organizational management and control of the emergency management program. The RL shall oversee, coordinate, and assess the emergency management programs of the Hanford Site contractors and will ensure the preparation and maintenance of plans and procedures necessary for RL to carry out its responsibilities during an emergency.

13.1 EMERGENCY MANAGEMENT PROGRAM ADMINISTRATOR

The RL Manager has the responsibility for administering the emergency management program for the Hanford Site. The RL Manager has delegated the authority to develop, implement, and maintain the emergency management program to the Director, Office of Environment, Safety and Health. The RL Emergency Preparedness staff of the QSH Division carry out these responsibilities.

Each site contractor shall designate an administrator who shall be responsible for the company emergency management program and assessing the emergency program of the building emergency organizations. Each facility shall designate BEDs or BWs who are responsible for the facility emergency program. The RL Emergency Preparedness staff shall oversee, coordinate, and assess the activities of the Hanford Site contractor emergency management program administrators.

13.1.1 Emergency Management Functions at the U.S. Department of Energy, Richland Operations Office

The RL Emergency Preparedness staff functions related to overseeing site contractor emergency preparedness programs include:

- ensuring that hazards assessments are adequately performed, documented, and updated;
- reviewing and recommending approval of the annual Hanford Site Emergency Readiness Assurance Plan (ERAP) developed by site contractors and RL, which shall describe the overall program and summarize the programs of the facilities;
- assessing facility emergency preparedness programs to verify compliance with appropriate Federal and state directives and policy, and providing the results/conclusions to the cognizant DOE-HQ Program Support Office;
- as necessary, submitting DOE Order requirement exemption requests to the cognizant Program Senior Official who documents the basis for each exception, and who establishes and justifies alternatives equivalent to or exceeding the Order;

- reviewing and approving the Hanford Site emergency exercise program, and reviewing written critiques of exercises and quarterly reports on corrective action status; and

- reviewing written reports of evaluations of declared events.

Emergency Preparedness functions to ensure that RL can carry out its responsibilities in an emergency include:

- ensuring that annual budgets and mission and function statements reflect implementation policies and decisions;

- serving on the Emergency Management Advisory Committee;

- revising and updating the *Hanford Emergency Response Plan* and RL emergency implementing procedures in accordance with DOE Order 5500.3A and other appropriate Federal and state regulations, and ensuring integration within the overall emergency management program;

- interfacing with Federal, tribal, state, and local emergency management organizations;

- maintaining and negotiating agreements with state and county response agencies, Federal assistance agencies, and maintaining agreements with medical and fire support agencies;

- providing training to state and local emergency response personnel, as requested;

- recruiting and training staff for the RL-EOC;

- maintaining the RL-EOC facility and equipment; and

- maintaining the DOE Region 8 RAP.

13.2 EMERGENCY READINESS ASSURANCE PROGRAM

13.2.1 Hanford Emergency Readiness Assurance Plan

Based upon the organization and management of the Hanford Emergency Preparedness Program, individual facility ERAPS are not provided. Rather, RL and site contractor Emergency Preparedness personnel participate in the preparation of a consolidated Hanford ERAP.

The Hanford ERAP shall serve as the baseline document for emergency readiness assurance evaluations, and as a planning tool to identify and develop needed resources and improvements. Annual updates to the Hanford ERAP will contain the same types of information and have the same structure as the initial plan. All updated plans shall highlight

any changes in planning bases, organizations, exemptions, etc., from previous Hanford ERAPs, as well as compare actual achievements to goals, milestones, and objectives.

The Hanford ERAP shall contain information and specific sections as directed in DOE Order 5500.10 and the Emergency Management Guide. Additionally, each section should be organized so as to separate information such as:

- background material and procedures not subject to change from year to year, unless the facility, operation, or activity changes; and
- annually updated information containing reports on the activities and accomplishments of the past year and plans, schedules, and budgets for the next five fiscal years.

Site contractor Emergency Preparedness personnel shall submit initial or updated information, as indicated above, to RL QSH by September 30 each year for review and inclusion in the Hanford ERAP. The information shall cover the five-fiscal-year period beginning the next October 1.

The RL Emergency Preparedness staff shall prepare, finalize, and transmit the Hanford ERAP, and annual updates, to the PSO by October 31 each year.

13.2.2 Emergency Readiness Assurance Assessments/Appraisals

An annual appraisal of the emergency management program shall be conducted to assess the adequacy of site contractor and RL emergency preparedness and compliance with DOE directives, the ERAP, and other requirements such as the CERCLA, the RCRA, and the EPCRA. Appraisals shall be scheduled, conducted and reported in accordance with DOE Orders 5500.10, 5482.1B (DOE 1986), and 5500.3A. Management controls shall be implemented for evaluation and correction of assessment results. These assessments shall be conducted by personnel not directly responsible during an emergency for performing the functions being assessed.

Conclusions of assessments shall be provided to the cognizant PSO through their inclusion in the ERAP.

Hanford Site contractors shall maintain internal self-assessment programs including order compliance assessment, drills, exercises, integrated audits and appraisals, and surveillances, commensurate with their hazards. Audits and appraisals of hazardous facility emergency preparedness programs shall be conducted annually, with the documented results provided to RL. Corrective actions shall be tracked and status reports shall be provided to RL.

13.3 DOCUMENT CONTROL

The *Hanford Emergency Response Plan* and RL and site contractor implementing procedures shall be controlled distribution documents. The RL and site contractors shall use a document control system to ensure that controlled copies are up to date, and are available

at locations where they may be needed in an emergency. The RL and site contractors shall determine the internal and external controlled copy distribution of the emergency plan and respective implementing procedures.

13.3.1 Review and Update of the Hanford Emergency Response Plan and U.S. Department of Energy, Richland Operations Office and Site Contractor Implementing Procedures

The *Hanford Emergency Response Plan* and RL implementing procedures will be reviewed annually by the RL and the appropriate response organizations and agencies. The QSH is responsible for the coordination of this review and any resulting actions. The QSH will identify specific changes deemed necessary and will ensure implementation of the revisions.

Revising and updating of the *Hanford Emergency Response Plan* and RL procedures may be initiated at any time deemed necessary by QSH. Changes and/or amendments shall be concurred upon by site contractors, approved by the RL Manager or his designee, and incorporated by the QSH.

The *Hanford Emergency Response Plan* and RL procedures will be provided to the DOE-HQ Office of Environmental Restoration and Waste Management for initial review and approval. Subsequent revisions shall be approved by the RL Manager. Copies of the approval/disapproval actions shall be provided to DOE-HQ. A controlled copy will be provided to the HQ-EOC.

Site contractor emergency plans (e.g., building emergency plans) and implementing procedures shall be reviewed at least annually or as necessary when:

- applicable regulations are revised;
- the building emergency plans or procedures fail in an emergency;
- the facility changes (e.g., design, operation, maintenance, etc.) in a way that materially increases the potential for fires, explosions, or releases of dangerous waste or dangerous waste constituents, or in a way that changes the response necessary in an emergency; or
- the list of emergency equipment changes.

Appropriate procedures shall be provided, through respective site contractor intermediate-level line management organization, if any, to QSH for review and concurrence.

13.3.2 Review of Agreements

Agreements with local, state, and Federal officials and agencies (contained in Appendix B) are maintained by QSH and are reviewed and/or updated at least annually. Updates may be initiated either by the RL or by the agreement official or agency. Updates are

documented by amendment marks on individual pages of the agreement unless comprehensive amendments are required. The agreements that have been reviewed, but not updated, will be designated by the signature of the reviewer and the review date.

13.3.3 Classified Information

The RL and site contractors shall ensure that emergency preparedness documents, such as plans, procedures, scenarios, and assessments are reviewed for classified and unclassified controlled nuclear information, as necessary.

13.3.4 Supporting Documents

The QSH shall maintain copies of documents and records that support the emergency management program (i.e., technical data, hazards assessments, ERAPs, and plans and procedures). Records of training, drills, and exercises shall be maintained to document status of the program and provide direction for improvements.

Hanford Site contractors shall maintain records that will provide documentation of the facility emergency preparedness program and to support the preparation of the ERAP, work plans, etc.

Arrangements have been made with the FDH Microfilm Section, Federal Building, to keep a current file of plot and floor plans that may be required during an emergency. Requests for this service during an emergency will be through the RL director of the Office of Human Resources and Administration.

13.3.5 Vital Records

The vital records program at the RL ensures the protection and availability of information critical to effective emergency response management, and the protection of the legal rights and interests of citizens, the Federal government and its employees, and DOE contractors and site personnel. The RL Site Infrastructure Division Director is responsible to ensure that a vital records program for the Hanford Site is in place.

The vital records program is administered by the operating contractor and is reviewed annually for effectiveness. The RL and all site contractors annually shall review their respective records indicated on the vital records submittal listing and determine necessary additions to or deletions from the list. The QSH shall ensure that the retrieval process for vital records is evaluated annually as part of a Hanford sitewide emergency exercise.

Each site contractor and RL shall provide designated storage locations for vital records, as appropriate. RL and site contractor documents identified as vital records, such as the *Hanford Emergency Response Plan*, emergency procedures, and building emergency plans, shall be stored at emergency centers in paper form so they can be used without reliance on mechanical equipment. Other emergency operating records and rights and interests records designated as vital need not be kept at emergency centers.

13.3.6 Emergency Records

The RL and site contractor emergency procedures shall provide for documentation of emergency records that contain information for review and reconstruction of major communications and actions taken during an emergency. These records include logs and documentation produced by the respective emergency response organization. The QSH shall maintain emergency records.

In addition, provisions shall be in place for the control, monitoring, and maintenance of records of onsite personnel exposures to hazardous materials in response to emergency conditions. Maintenance of permanent records of internal and external radiological exposure shall be the responsibility of the Hanford Site Radiological Records Program, administered by PNNL. Site contractors shall maintain records of exposure to nonradiological hazardous materials. Exposure records shall be stored in accordance with existing site records retention requirements.

13.3.7 Plan Locations

Copies of this plan are maintained at:

- Each occupied hazardous and occupied nonhazardous facilities;
- Hanford Fire Department (area fire stations);
- Occurrence Notification Center;
- RL Emergency Operations Center (primary and alternate);
- Patrol Operations Center;
- Kennewick Police Department;
- West Richland Police Department;
- Washington State Patrol;
- Pasco Fire Department;
- Richland Fire Department;
- City of Kennewick;
- Kadlec Medical Center;
- Our Lady of Lourdes Health Center;
- Benton County Emergency Management Center;
- Franklin County Emergency Management Center; and
- Grant County Emergency Management Center.

14.0 REFERENCES

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APPENDIX A

DOCUMENTATION CROSSWALK MATRIX

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APPENDIX A
DOCUMENTATION CROSSWALK MATRIX

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	HOW DOES REQUIREMENT APPLY TO HANFORD?	WHERE IS REQUIREMENT MET IN DOCUMENTATION?
WAC 173-303-340 Introduction	Preparedness and prevention. Facilities must be designed, constructed, maintained and operated to minimize the possibility of fire, explosion, or any unplanned sudden or nonsudden release of dangerous waste or dangerous waste constituents to air, soil, or surface or ground water which could threaten the public health or the environment. This section describes preparations and preventive measures which help avoid or mitigate such situations.	Under the Dangerous Waste Regulations (State authorized RCRA program), the Hanford Site is a singular facility with over 60 TSD units and many more generating units. For the purposes of these regulations: Facility = Hanford Site	N/A
WAC 173-303-340(1)	Required equipment. Required equipment. All facilities must be equipped with the following, unless it can be demonstrated to the department that none of the hazards posed by waste handled at the facility could require a particular kind of equipment specified below: (a) An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel; (b) A device, such as a telephone or a hand-held, two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams; (c) Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment; and (d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems. All facility communications or alarm systems, fire protection equipment, spill control equipment, and decontamination equipment, where required, must be tested and maintained as necessary to assure its proper operation in time of emergency.	Required equipment is evaluated on a site-wide basis (Hanford Fire Department) and a location-specific basis for TSD units and 90-day accumulation areas. Each location does not necessarily require each type of equipment. Lists of appropriate equipment are documented in accordance with WAC 173-303-350(3)(e).	See line item for WAC 173-303-350(3)(e).
WAC 173-303-340(2)	Access to communications or alarms. Personnel must have immediate access to the signaling devices described in the situations below: (a) Whenever dangerous waste is being poured, mixed, spread, or otherwise handled, all personnel involved must have immediate access to an internal alarm or emergency communication device, either directly or through visual or voice contact with another employee, unless such a device is not required in subsection (1) of this section; (b) If there is ever just one employee on the premises while the facility is operating, he must have immediate access to a device, such as a telephone or a hand-held, two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subsection (1) of this section.	Site personnel are provided access to signaling devices.	None required to document compliance.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	HOW DOES REQUIREMENT APPLY TO HANFORD?	WHERE IS REQUIREMENT MET IN DOCUMENTATION?
WAC 173-303-340(3)	Aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.	This requirement is met at TSD units and 90-day accumulation area, where appropriate.	N/A
WAC 173-303-340(4)	Arrangements with local authorities. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations, unless the hazards posed by wastes handled at the facility would not require these arrangements: (a) Arrangements to familiarize police, fire departments, and emergency response teams with the layout of the facility, properties of dangerous waste handled at the facility and associated hazards, places where facility personnel would normally be working, entrances to roads inside the facility, and possible evacuation routes; (b) Arrangements to familiarize local hospitals with the properties of dangerous waste handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility; (c) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and (d) Where more than one party might respond to an emergency, agreements designating primary emergency authority and agreements with any others to provide support to the primary emergency authority.	Arrangements are addressed on a site-wide basis. Memoranda of Understanding which RL enters into are described in DOE/RL-94-02, Table 3-1. Hanford Site emergency responders (Hanford Fire Department and Hanford Patrol) must be familiar with items -340(4)(a). The City of Richland, Benton County Sheriff and Washington State Patrol will be familiar as necessary.	See line item for WAC 173-303-350(3)(c).
WAC 173-303-340(5)	Where state or local authorities decline to enter into such agreements, the owner or operator must document the refusal in the operating record.	The operating record is the set of documents maintained to demonstrate compliance with WAC 173-303 and the Hanford Site RCRA Permit.	None. If authorities decline, the documentation will be maintained in accordance with DOE/RL-91-28.
WAC 173-303-350(1)	Purpose. The purpose of this section and WAC 173-303-360 is to lessen the potential impact on the public health and the environment in the event of an emergency circumstance, including a fire, explosion, or unplanned sudden or nonsudden release of dangerous waste or dangerous waste constituents to air, soil, surface water, or ground water by a facility. A contingency plan must be developed to lessen the potential impacts of such emergency circumstances, and the plan must be implemented immediately in such emergency circumstances.	DOE/RL-94-02 is the site-wide plan meeting site-wide contingency planning requirements. Location-specific elements is contained in a location-specific document at the TSD units and 90-day accumulation areas.	The contingency plan is considered as portions of DOE/RL-94-02 and location-specific documentation.
WAC 173-303-350(2)	Each owner or operator must have a contingency plan at his facility. A contingency plan must be developed to lessen the potential impacts of such emergency circumstances, and the plan must be implemented immediately in such emergency circumstances.	Facility = Hanford Site according to the regulations. (See section 1.4.1 of this plan for definition.)	The contingency plan is considered as portions of DOE/RL-94-02 and location-specific documentation.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	HOW DOES REQUIREMENT APPLY TO HANFORD?	WHERE IS REQUIREMENT MET IN DOCUMENTATION?
WAC 173-303-350(3)(a)	The contingency plan must contain the following: (a) A description of the actions which facility personnel must take to comply with this section and WAC 173-303-360;	Generic response procedures or emergency response guides have been developed and are contained in DOE 0223, RLEP 1.1. Location-specific documentation utilize the generic response procedures or create more detailed procedures appropriate for the location.	Site-level: DOE/RL-94-02, section 1.3.2. Unit-level: location-specific documentation.
WAC 173-303-350(3)(b)	The contingency plan must contain the following: (b) A description of the actions which will be taken in the event that a dangerous waste shipment, which is damaged or otherwise presents a hazard to the public health and the environment, arrives at the facility, and is not acceptable to the owner or operator, but cannot be transported, pursuant to the requirements of WAC 173-303-370(5), Manifest system, reasons for not accepting dangerous waste shipments;	Generic response procedures or emergency response guides have been developed and are contained in DOE 0223, Appendix 1-10.A for offsite shipments received at Hanford. For TSD units that receive offsite waste shipments, location-specific documentation address these circumstances.	Site-level: DOE/RL-94-02, section 1.3.2. Unit-level: location-specific documentation.
WAC 173-303-350(3)(c)	The contingency plan must contain the following: (c) A description of the arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services as required in WAC 173-303-340(4);	DOE/RL-94-02, section 3.7 and Table 3-1 contains this information. This requirements is met at the site level. No location-specific information is needed to meet this requirement.	Site-level: DOE/RL-94-02, sections 3.2.3, 3.3.1, 3.3.2, 3.4, 3.4.1.1, 3.4.1.2, 3.4.1.3, 3.7, and Table 3-1.
WAC 173-303-350(3)(d)	The contingency plan must contain the following: (d) A current list of names, addresses, and phone numbers (office and home) of all persons qualified to act as the emergency coordinator required under WAC 173-303-360(1). Where more than one person is listed, one must be named as primary emergency coordinator, and others must be listed in the order in which they will assume responsibility as alternates. For new facilities only, this list may be provided to the department at the time of facility certification (as required by WAC 173-303-810(14)(a)(i)), rather than as part of the permit application;	DOE/RL-94-02, section 2.2, discusses personnel job titles which will fill duties and responsibilities of the Emergency Coordinator described in WAC 173-303-360. Location-specific documentation at TSD units and 90-day accumulation areas include information on job title, work location, and work phone number for Emergency Coordinator. Emergency Coordinator names and home phone numbers are maintained separate from the contingency plan document, on file in accordance with Hanford Facility RCRA Permit, DW Portion, General Condition II.A.4. and is updated, at a minimum on a monthly basis.	Site-level: None. Unit-level: location-specific documentation.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	HOW DOES REQUIREMENT APPLY TO HANFORD?	WHERE IS REQUIREMENT MET IN DOCUMENTATION?
WAC 173-303-350(3)(e)	The contingency plan must contain the following: (e) A list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems, and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities; and	DOE/RL-94-02, Appendix C contains the list of Hanford Fire Department equipment. Location-specific documentation at TSD and 90-day accumulation areas contain equipment lists for their respective locations.	Site-level: DOE/RL-94-02, Appendix C. Unit-level: Appropriate equipment identified in location-specific documentation.
WAC 173-303-350(3)(f)	The contingency plan must contain the following: (f) An evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe the signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes.	The site-wide signals are delineated in DOE/RL-94-02, Table 6-1. No location signal information is required unless unique devices are used at the location. Site-wide evacuation routes are contained in DOE/RL-94-02, Figure 5-2. Location-specific evacuation routes will be provided in TSD and 90-day accumulation area documentation. Evacuation routes for occupied buildings are provided through postings.	Site-level: DOE/RL-94-02, Figure 5-2 and Table 6-1. Unit-level: location-specific documentation.
WAC 173-303-350(4)	Copies of contingency plan. A copy of the contingency plan and all revisions to the plan shall be: (a) Maintained at the facility; and (b) Submitted to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.	Copies of DOE/RL-94-02 are maintained throughout the Hanford Site and with offsite agencies. Copies of location-specific documentation are not being provided to offsite agencies because no agency requested them when asked in 1994.	Site-level: DOE/RL-94-02, section 13.3.7.
WAC 173-303-350(5)	Amendments. The owner or operator shall review and immediately amend the contingency plan, if necessary, whenever: (a) Applicable regulations or the facility permit are revised; (b) The plan fails in an emergency; (c) The facility changes (in its design, construction, operation, maintenance, or other circumstances) in a way that materially increases the potential for fires, explosions, or releases of dangerous waste or dangerous waste constituents, or in a way that changes the response necessary in an emergency; (d) The list of emergency coordinators changes; or (e) The list of emergency equipment changes.	DOE/RL-94-02 and location-specific documentation is revised according to these criteria. Making changes to these documents must also be accomplished in accordance with WAC 173-303-830, when applicable.	Site-level: DOE/RL-94-02, section 13.3.1.
WAC 173-303-355(1)	Owners or operators must coordinate preparedness and prevention planning and contingency planning efforts, conducted under WAC 173-3-3-340 and 350 with local emergency planning committees established pursuant to Title III of the 1986 Superfund Amendments and Reauthorization Act.	RL coordinates planning actions with three LEPCs: Benton County, Franklin County, and Grant County.	Site-level: DOE/RL-94-02, sections 3.1, 3.1.1, and 3.4.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	HOW DOES REQUIREMENT APPLY TO HANFORD?	WHERE IS REQUIREMENT MET IN DOCUMENTATION?
WAC 173-303-355(2)	Appropriate and generally accepted computer models should be utilized to determine the impacts of a potential catastrophic air release due to fire, explosion, or other accidental releases of hazardous constituents. Evacuation plans prepared pursuant to WAC 173-303-350(3)(d) must include those effected persons and areas identified through these modelling efforts.	The RL-EOC contains modeling equipment to predict impacts of air releases.	Site-level: DOE/RL-94-02, sections 2.2.3.3.3 and 4.1.
WAC 173-303-360(1)	Emergency coordinator. At all times, there must be at least one employee either on the facility premises or on call with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, required by WAC 173-303-350(2), all operations and activities at the facility, the location and properties of all wastes handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.	Duty met by Incident Command Structure and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, section 1.3.2 and 2.2.
WAC 173-303-360(2)(a)	Emergency procedures. The following procedures must be implemented in the event of an emergency. (a) Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately: (i) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and (ii) Notify appropriate state or local agencies with designated response roles if their help is needed.	Alarm activation can be accomplished by the discoverer of the event (fire/911), or Incident Command System and staff with supporting on-call personnel for additional location-specific site-wide alarms. Notification made to designated response role agencies is accomplished via 911 telephones to request assistance (fire, ambulance, law enforcement).	Site-level: DOE/RL-94-02, sections 1.3.2 and 6.2.1.
WAC 173-303-360(2)(b)	Emergency procedures. (b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials.	Incident Command System and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, sections 2.2.1.2(j) and 2.2.1.3(i).
WAC 173-303-360(2)(c)	Emergency procedures. (c) Concurrently, the emergency coordinator shall assess possible hazards to human health and the environment (considering direct, indirect, immediate, and long-term effects) that may result from the release, fire, or explosion.	Incident Command System and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, section 4.2.1.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	HOW DOES REQUIREMENT APPLY TO HANFORD?	WHERE IS REQUIREMENT MET IN DOCUMENTATION?
WAC 173-303-360(2)(d)	Emergency procedures. (d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment, he must report his findings as follows: (i) If his assessment indicates that evacuation of local areas may be advisable, he must immediately notify appropriate local authorities. He must be available to help appropriate officials decide whether local areas should be evacuated; and (ii) He must immediately notify the department and either the government official designated as the on-scene coordinator, or the National Response Center (using their 24-hour toll free number (800) 424-8802).	Incident Command System and staff with supporting on-call personnel. ONC personnel notify local authorities if evacuation is advisable on behalf of the Incident Command Structure. Site contractor environmental single point-of-contact personnel perform the assessment report notification to Ecology (Kennewick) and RL (the on-scene coordinator on behalf of the Incident Command Structure. NRC is not called.	Site-level: DOE/RL-94-02, sections 2.2.1.2(f)&(i), 2.2.1.3(e)&(h), 6.1.1, 6.1.2, and 6.1.2.1.
WAC 173-303-360(2)(e)	Emergency procedures. (e) His assessment report must include: (i) Name and telephone number of reporter; (ii) Name and address of facility; (iii) Time and type of incident (e.g., release, fire); (iv) Name and quantity of material(s) involved, to the extent known; (v) The extent of injuries, if any; and (vi) The possible hazards to human health or the environment outside the facility.	Site contractor environmental single point-of-contact personnel perform the assessment report notification to Ecology (Kennewick) and RL after obtaining it from location-specific personnel.	Site-level: DOE/RL-94-02, sections 2.2.1.2(i), 2.2.1.3(h), 6.1.1, and 6.1.2.1.
WAC 173-303-360(2)(f)	Emergency procedures. (f) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other dangerous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released waste, and removing or isolating containers.	Incident Command System and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, sections 2.2.1.2(j) and 2.2.1.3(i).
WAC 173-303-360(2)(g)	Emergency procedures. (g) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.	Incident Command System and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, sections 2.2.1.2(j) and 2.2.1.3(i).
WAC 173-303-360(2)(h)	Emergency procedures. (h) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.	Onsite Recovery Manager with supporting on-call personnel.	Site-level: DOE/RL-94-02, section 6.3.3.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	HOW DOES REQUIREMENT APPLY TO HANFORD?	WHERE IS REQUIREMENT MET IN DOCUMENTATION?
WAC 173-303-360(2)(i)	Emergency procedures. (i) The emergency coordinator must ensure that, in the affected area(s) of the facility: (i) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and (ii) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.	Onsite Recovery Manager with supporting on-call personnel.	Site-level: (i) DOE/RL-94-02, section 8.3.3. Site-level: (ii) DOE/RL-94-02, section 10.2.
WAC 173-303-360(2)(j)	Emergency procedures. (j) The owner or operator must notify the department, and appropriate local authorities, that the facility is in compliance with (i) of this subsection before operations are resumed in the affected area(s) of the facility.	Site contractor environmental single point-of-contact personnel perform this notification, when applicable, on behalf of the Onsite Recovery Manager.	Site-level: DOE/RL-94-02, section 6.1.2.3.
WAC 173-303-360(2)(k)	Emergency procedures. (k) The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen days after the incident, he must submit a written report on the incident to the department. The report must include: (i) Name, address, and telephone number of the owner or operator; (ii) Name, address, and telephone number of the facility; (iii) Date, time, and type of incident (e.g., fire, explosion); (iv) Name and quantity of material(s) involved; (v) The extent of injuries, if any; (vi) An assessment of actual or potential hazards to human health or the environment, where this is applicable; (vii) Estimated quantity and disposition of recovered material that resulted from the incident; (viii) Cause of incident; and (ix) Description of corrective action taken to prevent reoccurrence of the incident.	Site contractor management through RL ensures the note in the operating record is performed and prepares the 15-day report to Ecology.	Site-level: DOE/RL-94-02, section 6.1.2.2.
40 CFR 761.65(c)(1)(iv) and (c)(7)(ii) SPCC Plans for PCBs	Temporary Storage Areas (less than 30-days). (c)(1)(iv): PCB containers containing liquid PCBs at a concentration between 50 and 500 ppm may be stored temporarily for up to 30-days provided a Spill Prevention Control and Countermeasures (SPCC) plan has been prepared in accordance with 40 CFR Part 112. (c)(7)(ii): Liquid PCBs in containers larger than those specified in (c)(6). The owner or operator of any facility using containers described in (c)(7)(i) of this section, shall prepare and implement a Spill Prevention Control and Countermeasures (SPCC) plan as described in Part 112 of this Title. The word "oils" is read as PCBs.	When SPCC plans apply to Hanford Site activities, the information not covered in site-wide documentation must be addressed in location-specific documentation.	Site-level: DOE/RL-94-02, sections 1.1 (fourth paragraph), 1.2 (first bullet, sixth dash and second bullet, fourth dash), and 2.2.1.2 (first paragraph). Unit-level: appropriate location-specific documentation.

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APPENDIX B

MEMORANDUM OF UNDERSTANDING

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APPENDIX B

AGREEMENTS

This appendix contains memoranda of understanding (MOU) between the U.S. Department of Energy (DOE), Richland Operations Office (RL), and the following agencies:

Agency/Title	Page
State of Washington	B-5
Benton and Franklin Counties	B-10
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Washington Public Power Supply System	B-19
Washington Public Power Supply System and Hanford Environmental Health Foundation	B-23
Hanford Environmental Health Foundation and Siemens Power Corporation (formerly Advanced Nuclear Fuels)	B-26
National Weather Service	B-28
Our Lady of Lourdes Hospital	B-30
Kadlec Hospital	B-32
Kennewick General Hospital	B-34
(This space intentionally left blank. MOU canceled.)	B-36
State of Oregon	B-43
Tri-Cities Mutual Aid Agreement	B-50
Mutual Law Enforcement Assistance (Example of agreements established with Richland, West Richland and Kennewick Police, Benton and Franklin County Sheriffs, and Washington State Patrol)	B-54
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MEMORANDUM OF UNDERSTANDING BETWEEN U.S. DEPARTMENT OF ENERGY, RICHLAND OPERATIONS OFFICE AND STATE OF WASHINGTON FOR EMERGENCY PREPAREDNESS

I. PURPOSE

The purpose of this Memorandum of Understanding (MOU) is to describe the areas of cooperation for the State of Washington (State) and the U.S. Department of Energy, Richland Operations Office (RL) in their planning for and response to emergencies at the RL Hanford Site (Hanford). It also describes assistance RL will provide to the State, for other radiological emergencies that originate on, or may affect, the Hanford Site. Additional federal radiological assistance that may be available to the State is described in the Federal Radiological Emergency Response Plan.

The concept of operations, specific responsibilities and requirements that apply to the parties to this MOU are related in detail in their respective emergency response plans and procedures.

II. GEOGRAPHIC AREAS OF RESPONSIBILITY

For the purpose of emergency preparedness planning ONLY, the following definitions of geographic areas of responsibility shall generally apply:

A. State of Washington

Those areas outside Hanford, up to approximately a fifty (50) mile radius around Hanford, except that portion within the State of Oregon.

B. RL

Those areas within Hanford Site boundaries, excluding the facilities not owned and/or operated by RL and the portion of the Site north and east of the Columbia River.

III. RESPONSE

A. Protective Action Guides

The protective action guides (PAGs) utilized by RL will be consistent with those contained in the State plan and procedures.

B. Protective Action Recommendations

In the early phase of an emergency RL has the responsibility for dose assessment and developing associated PARs. Dose assessment and PAR development takes place in the Unified Dose Assessment Center located in the RL Emergency Operations Center (EOC). In the intermediate phase the State has responsibility for dose assessment and developing associated PARs. RL will make the resources of the UDAC available to the State in the intermediate phase for purposes of dose assessment and PAR development.

C. Radiological Support

As available, RL will provide radiological monitoring field teams to assist in the identification of the plume footprint and relocation and food control boundaries. RL will also provide radiological monitoring resources to conduct monitoring and decontamination of the public at designated boat launches on the Columbia River. If requested, RL will provide the State assistance in radiation exposure evaluation. These resources will be provided until other resources are available.

D. Medical Treatment Support

As available, RL will provide the State assistance in health hazards assessment and medical treatment advice until such time as other resources are available to assist the State.

E. Exchange of Emergency Information

1. Notifications

RL will maintain a CRASH telephone system which enables RL to provide prompt emergency notifications and protective action recommendations to Washington Emergency Management and the Hanford plume emergency planning zone (EPZ) counties simultaneously. Washington Emergency Management, as the single point of contact for the State, will provide notifications to ingestion EPZ counties and any other state agencies that are procedurally required.

RL and the State will provide liaisons to each other's EOCs to assist in information exchange.

2. Technical Data

As participants in the UDAC, State staff will have access to all technical data. Prior to the arrival of State staff, RL will transmit technical data directly to the State EOC and counties, as appropriate.

3. Emergency Public Information

During an emergency, media releases from RL and the State will be coordinated to the maximum extent practical. RL will activate a Joint Information Center (JIC), which is the primary location from which information will be released by RL and the offsite agencies represented there. Each agency will focus its statements on issues within its responsibility. RL agrees to provide accommodations and timely information within the JIC for the State to fulfill its public information responsibilities.

IV. PREPAREDNESS

A. Coordination

RL and the State will provide copies of applicable emergency plans and procedures to each other to ensure consistency. RL and the State shall meet periodically to review the status of plans, procedures, agreements, and capabilities that may require revision and/or further development.

B. Exercises

RL shall provide an opportunity for State participation in two annual exercises, to the extent negotiated between the State and RL.

C. Public Education

Upon request, RL will assist the State in the development of educational materials concerning radiation and information regarding appropriate actions to be taken by the general public in the event of an accident at the Hanford Site.

V. OTHER EMERGENCIES

In the event of a radiological emergency not occurring at a DOE facility but originating on, or potentially affecting the Hanford Site, RL will provide radiological monitoring assistance to the State as available. These resources will be provided until other resources are available.

In the event a Washington Nuclear Project Number 2 (WNP-2) emergency requires evacuation of the Columbia River, RL will provide radiological field teams to conduct monitoring and decontamination of the public at designated boat launches, in accordance with county and State procedures.

VI. TERMS OF AGREEMENT

This agreement will become effective upon signature and will continue until it is canceled by either party in writing with at least thirty (30) days advance notice to the other party. This agreement may be amended or modified only upon written agreement signed by all parties to the agreement.

APPROVED FOR THE STATE OF WASHINGTON

Mike Lowry 8-23-96

Governor Mike Lowry Date

Kevin O'Neal 8-30-96

Assistant Attorney General Date

APPROVED FOR THE
U.S. DEPARTMENT OF ENERGY, RICHLAND OPERATIONS OFFICE

John D. Wagoner 9/10/96

John D. Wagoner, Manager Date

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MEMORANDUM OF UNDERSTANDING
BETWEEN
BENTON COUNTY, WASHINGTON
AND
FRANKLIN COUNTY, WASHINGTON
AND
DEPARTMENT OF ENERGY
RICHLAND FIELD OFFICE
EMERGENCY PREPAREDNESS AND RESPONSE

I. BACKGROUND AND PURPOSE

This memorandum of understanding reaffirms the established framework of cooperation among Benton County and Franklin County located in the State of Washington and the Department of Energy (DOE) Richland Field Office in the planning for, and response to, emergencies at the Hanford Site which might have offsite consequences.

II. RESPONSIBILITIES

The DOE Richland Field Office (RL), is responsible for responding to all emergencies contained within the federally operated facilities located within the Hanford Site boundaries. In the event that a Hanford emergency has offsite public health implications, RL and the Counties will coordinate implementation of their emergency plans. RL will provide support and assistance to the Counties in the preparation and implementation of emergency responses affecting the offsite environment by:

- Coordinating the activities of Federal agencies which are parties to the Federal Radiological Monitoring and Assessment Plan (FRMAP).
- Assisting in radiological monitoring and decontamination, radiation exposure evaluation, and radiation health hazards assessment.
- Providing medical advice on emergency treatment of persons exposed to radiation and technical advice on radioactive contamination.
- Coordinating with appropriate officials in the development of the Counties' plan for coping with radiological incidents occurring on the Hanford Site.

III. OPERATIONAL EMERGENCIES AND RESPONSE ACTIONS

Operational emergencies may involve such things as reactor or non-reactor facilities, and safeguards and security matters.

Three classes of operational emergencies will be utilized. These are: (1) Alert, (2) Site Area Emergency, and (3) General Emergency. The description of these classifications and RL's interpretation as

applicable to the Hanford Site, along with the expected response actions of RL, and the Counties relative to each classification, are as follows:

1. Alert - An Alert represents events in progress or having occurred which involve an actual or potential substantial reduction for the level of facility safety and protection. Any environmental releases of hazardous materials are expected to be limited to small fractions of the appropriate Protective Action Guideline (PAG) or Emergency Response Planning Guideline (ERPG) onsite.

   The purpose of the notification of the Alert by RL to the Counties is to assure that emergency personnel are readily available to respond if the situation becomes more serious or to perform confirmatory monitoring, if required, and provide current status information.

   RL will activate its Emergency Plan, to include provisions to:

   - Promptly notify the Benton County Emergency Dispatch Center of the Alert status and reason for the Alert.
   - Activate its Emergency Control Center and Joint Information Center.
   - Dispatch onsite monitoring teams and associated communications.
   - Provide status updates to the Benton and Franklin Counties Emergency Operations Center (EOC), at periodic intervals.
   - Provide periodic meteorological assessments to the Benton and Franklin Counties EOC, and, if any releases are occurring, dose estimates for actual releases.
   - Activate the Unified Dose Assessment Center, perform offsite monitoring and evaluation, and provide information to the Benton and Franklin Counties EOC until the State of Washington monitoring team is activated, operating, and assumes responsibility.
   - Close out by verbal summary within eight hours after conclusion of event or, if appropriate, escalate to a more severe classification.

   When notified by RL, Benton County will activate its applicable emergency plan, to include provisions to:

   - Notify the Franklin County Emergency Dispatch Center.
   - Activate its Emergency Operations Center.
   - Provide liaison between RL, and Franklin County in coordinating the required actions by Franklin County.

- Alert to standby status key emergency personnel.
- Maintain Alert status until verbal closeout or the event is escalated to a more severe classification.

When notified by the Benton County Emergency Dispatch Center, Franklin County will:

- Coordinate necessary actions with Benton County.
- Alert to standby status key emergency personnel.
- Maintain Alert status until verbal closeout or the event is escalated to a more severe classification.

2. Site Area Emergency

A Site Area Emergency represents events which are in progress or have occurred involving actual or likely major failure(s) of facility safety or safeguards systems needed for the protection of onsite personnel the public health and safety, the environment, or national security. Any environmental releases of hazardous materials are not expected to exceed the appropriate PAGs or ERPGs offsite.

3. General Emergency

A General Emergency represents events which are in progress or have occurred that involve actual or imminent catastrophic failure of facility safety systems with potential for loss of confinement integrity, catastrophic degradation of facility protection systems, or catastrophic failure in safety or protection systems threatening the integrity of a weapon or test device which could lead to substantial offsite impacts. Any environmental release of hazardous materials can reasonably be expected to exceed the appropriate PAGs or ERPGs offsite.

The purpose of the Site Area and General Emergency notification by RL to the Counties is to (1) initiate predetermined protective actions for the public, (2) provide continuous assessment of information from RL and offsite measurements, (3) initiate additional measures as indicated by event release or potential release, and (4) provide current information for consultation with the Counties and the public.

For both a Site Area and General Emergency, RL will implement its Emergency Plan, to include provisions to:

- Promptly notify the Benton County Emergency Dispatch Center of the emergency status and the reason for the emergency.
- Activate its Emergency Control Center and Joint Information Center.
- Dispatch onsite and offsite monitoring teams and their associated communications.

- Provide status updates to the Benton and Franklin Counties EOC at periodic intervals.
- Provide periodic press briefings.
- Provide technical and management consultation to the Benton and Franklin Counties EOC as required.
- Provide meteorological and dose estimates to the Benton and Franklin Counties EOC.
- Close out by verbal summary within eight hours after conclusion of event, or, if the Site Area Emergency needs to be escalated to General Emergency, so advise.

When notified by RL, Benton County will implement its applicable emergency plan, to include provisions to:

- Notify the Franklin County Emergency Dispatch Center.
- Provide liaison between RL and Franklin County for Franklin County's required actions.
- Provide immediate public notification about the emergency status and provide public updates.
- Activate its Emergency Operations Center.
- Dispatch key emergency personnel.
- Continuously assess information obtained from RL, with regard to changes to the protective actions already initiated for public evacuation and/or sheltering.
- Provide a Public Information Officer at the Joint Information Center.
- Maintain emergency status until closeout or reduction of emergency classification.

When notified by the Benton County Emergency Dispatch Center, Franklin County will:

- Provide immediate public notification of the emergency status and provide public updates.
- Establish a joint Emergency Operations Center with Benton County.
- Dispatch key personnel.
- Maintain emergency status until closeout or reduction of emergency classification.

IV. AREAS OF COOPERATION

- Notification

  The Benton County Emergency Dispatch Center will be the single point of contact for notification to Benton and Franklin Counties. Notification will be based upon the emergency classification levels described above. Authentication of the notification call to the Counties may be effected by a return call to RL.

- Radiation Control and Meteorology Data

  Communications and liaison of dose assessments and current status about meteorological and radiological conditions will be accomplished through the RL Emergency Control Center. This information will be provided to the Benton and Franklin Counties EOC via the Unified Dose Assessment Center.

- Recovery Period

  RL will provide assistance during post-accident periods to minimize radiation health hazards and decontamination problems to the State's Washington Fixed Nuclear Facility Reentry and Recovery Task Force, of which the counties are a member.

- Training and Exercises

  RL and the Counties should conduct an annual emergency response exercise designed to assess emergency response capabilities and provide needed training. Cooperative arrangements for such exercises and training will be agreed to in advance.

- Public Affairs

  At the request of the Counties, RL will assist the Counties in the development of educational materials concerning radiation and its hazards and information regarding appropriate actions to be taken by the general public in the event of an accident involving radioactive materials.

- Warning to the Public

  The Counties, with support from RL, will implement protective measures for the plume pathway zone(s) around the Hanford Site.

- Emergency Public Information

  During an emergency, preliminary media releases from RL, and from the Counties will be coordinated. For a Site Area or General Emergency, RL and Counties spokespersons will jointly prepare and release information statements from the Joint Information Center.

V. TERMS OF AGREEMENT

This agreement will become effective upon signature and continue until canceled by either party by written notice to the other. Amendments or modification to this Agreement may be made upon written agreement by both parties to the Agreement.

APPROVED FOR BENTON COUNTY, STATE OF WASHINGTON:

Sandi Strawn — Date 2/26/92
Chairman,
Benton County Emergency Management Council

APPROVED AS TO FORM:

Deputy Prosecuting Attorney — Date 2/5/92

Deputy Prosecuting Attorney — Date 2/18/92

APPROVED FOR FRANKLIN COUNTY, STATE OF WASHINGTON

Gary Crutchfield — Date 2/18/92
Chairman,
Franklin County Emergency Management Board

APPROVED FOR DOE RICHLAND FIELD OFFICE

Richard A. Holten — Date 3/11/92
Director,
Technical Support Division

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

SEP 30 1994

RECEIVED
OCT 4 1994
BOARD OF COMMISSIONERS
GRANT COUNTY, WASHINGTON

Ms. Helen Fancher, Chairperson
Board of County Commissioners
Grant County Courthouse
Ephrata, Washington 98823

Dear Ms. Fancher:

RADIOLOGICAL EMERGENCY PLANNING AND RESPONSE

The purpose of this letter is to update the areas of cooperation between the U. S. Department of Energy, Richland Operations Office (RL), and Grant County, in the planning for and response to operational emergencies at the Hanford Site which might have consequences in Grant County.

RL is responsible for responding to all emergencies involving the federally operated facilities located within the Hanford Site boundary. In the event that a Hanford emergency has offsite public health implications, RL and Grant County will coordinate implementation of their emergency plans.

RL will provide support and assistance to Grant County in the preparation and implementation of emergency response affecting Grant County by:

- Coordinating with your Department of Emergency Services in the development of plans for coping with emergencies occurring on the Hanford Site.
- Assisting in radiological monitoring, radiation exposure evaluation, and radiation health hazards assessment.
- Providing medical advice on emergency treatment of persons exposed to or contaminated by radiation.
- Providing recommendations, as necessary, on actions that may be taken to protect the public.

Operational emergencies may involve such things as reactors and other facilities involved with hazardous materials, security events, and transportation accidents involving hazardous materials.

Three classes of operational emergencies will be utilized; Alert, Site Area Emergency, and General Emergency. The descriptions of these classifications, along with the expected response actions of RL relative to each classification are as follows:

Ms. Helen Fancher -2-

1. Alert: An Alert represents events in progress or having occurred which involve an actual or potential substantial reduction of the level of facility safety and protection. Any environmental release of hazardous materials is expected to be limited to small fractions of the appropriate Protective Action Guideline (PAG) or Emergency Response Planning Guideline (ERPG) onsite.

2. Site Area Emergency: A Site Area Emergency represents events which are in progress or have occurred involving actual or likely major failure(s) of facility safety or safeguards systems needed for the protection of onsite personnel, the public health and safety, the environment, or national security. Any environmental release of hazardous materials is not expected to exceed the appropriate PAGs or ERPGs offsite.

3. General Emergency: A General Emergency represents events which are in progress or have occurred that involve actual or imminent catastrophic failure of facility safety systems with potential for loss of confinement integrity, catastrophic degradation of facility protection systems, or catastrophic failure in safety or protection systems threatening the integrity of a weapon or test device which could lead to substantial offsite impacts. Any environmental release of hazardous materials can reasonably be expected to exceed the appropriate PAGs or ERPGs offsite.

For an Alert, Site Area or General Emergency, RL will:

- Promptly notify Grant County of the emergency classification and rationale for classification.
- Activate the Emergency Control Center and provide periodic status updates and protective action recommendations, as necessary.
- Activate the Unified Dose Assessment Center and, in coordination with the State of Washington, perform offsite monitoring and evaluation, meteorological assessments and dose estimates for actual releases.
- Send a representative to the Grant County emergency operations center.
- Activate the Joint Information Center and provide periodic media briefings.

We look forward to our continued good working relationship with your Department of Emergency Services.

Ms. Helen Fancher -3- SEP 30 1994

If these arrangements meet with your approval, please sign and return one copy of this letter. If you have any questions regarding this agreement, please contact Ms. J. L. Tokarz-Hames of my staff on (509) 376-4766.

Sincerely,

John B. Hall, Acting Director
Quality, Safety, and Health
Programs Division

QSH:JLH

APPROVED: Helen Fancher
Helen Fancher, Chairperson
Board of County Commissioners
Grant County

DATE: 10-4-94

Memorandum of Understanding

between

Washington Public Power Supply System

and

U.S. Department of Energy, Richland Operations Office

for

Emergency Preparedness and Response

PURPOSE

This memorandum of understanding (MOU) reaffirms the established framework of cooperation between the Washington Public Power Supply System (Supply System) and the Department of Energy, Richland Operations Office (RL), in the planning for and response to emergencies at the Hanford Site. Fire and ambulance response is covered under a separate agreement.

BACKGROUND

Emergencies occurring at either Hanford facilities or WNP-2 site may impact other facilities on the Hanford Site. In addition, both parties actively coordinate emergency preparedness activities and provide support to some of the same local and state agencies, which present further opportunities for coordination and resource sharing.

The WNP-2 site is defined as the 1.2 mile Exclusion Area for WNP-2 plus the pipeline corridor leading to the Columbia River pumphouse.

The Hanford Site is defined as those areas within Hanford boundaries, excluding the facilities not owned and/or operated by RL.

OBJECTIVE

The objective of this MOU is to identify responsibilities and areas of cooperation and assistance that may be provided for emergency preparedness and response.

RESPONSIBILITIES

RL is responsible for direction and overview for all emergency response actions required within the Hanford Site, excluding the non-federally operated facilities.

Memorandum of Understanding

Supply System is responsible for direction and overview of all emergency response actions required on the WNP-2 site.

Both parties are responsible to provide prompt notification to designated points of contact, and as necessary, protective action recommendations to the other in the event of an emergency at their facilities.

AREAS OF COOPERATION AND ASSISTANCE

Communications - The Supply System will use existing RL communications systems through the Patrol Operations Center (POC) and Occurrence Notification Center (ONC) contacts for emergency communication between the Supply System and RL. The Supply System will provide emergency communications capabilities in the form of a shortwave radio link to the POC and a special telephone circuit between the ONC, RL Emergency Operations Center, the Benton-Franklin Emergency Operations Center, the State of Washington and the Supply System facilities. RL will provide emergency communication capabilities in the form of a special telephone circuit between the Supply System Emergency Operations Facility, the Benton-Franklin Emergency Operations Center, State of Washington, the ONC, POC and RL Emergency Operations Center. RL and the Supply System will participate in periodic testing, as necessary, to assure operation of the communications capabilities and to meet any regulatory requirements for this function.

The Supply System will provide RL with radio control access to the Supply System 46 megahertz radiological field team base station located on Rattlesnake Mountain. RL will provide the leased circuits, interface equipment and radio control unit necessary to implement this function. RL will participate in periodic testing of this system to assure operational readiness and compliance with regulatory requirements.

The Supply System will provide access to radio frequencies for the activation of RL river alerting sirens. The Supply System warrants that it is the holder of FCC license authorizations for the frequencies in question and that it approves co-use of these frequencies by RL. It is understood that RL will obtain and maintain proper license authority to operate it's own equipment on these frequencies. The Supply System makes no warranties, either express or implied, with respect to the suitability of these frequencies for RL purposes or the condition or availability of any required Supply System equipment. Further, the Supply System makes no warranty that Supply System usage of these frequencies will not interfere with RL use of the frequencies. RL further understands and agrees that congestion of the existing frequencies may cause the Supply System to migrate to other frequencies in the near future, and that any and all costs/or expenses associated with this migration will be at each parties own expense.

RL agrees to provide and maintain the necessary radio repeater equipment to be used, when installed, as a co-primary activation system for the Supply System and RL river sirens. This necessary equipment shall include but not be

limited to repeater station, antennas, feedline, and associated materials normally required to implement this type of equipment. This equipment shall be installed by Supply System and RL personnel, in the Supply System radio facility on Rattlesnake mountain. Coordination of installation activities and routine maintenance shall coincide with normal Supply System maintenance activities whenever possible.

The Supply System agrees that they will continue to own and maintain the existing river alerting siren control system as a co-primary system for activation of either parties' siren system.

Emergency Facilities and Equipment - Mutual assistance, as needed and available, will be provided in the areas of facilities and equipment for personnel decontamination, first aid, evacuation reassembly areas, respiratory protective equipment, radiological protective clothing, vehicles, including buses and ambulances, radiological survey instruments and resources for river alerting.

Emergency Decontamination Facility - The Supply System will continue to include the Emergency Decontamination Facility (EDF) as a resource for its emergency planning effort. The use of the EDF by the Supply System will be outlined in a separate memorandum of understanding.

Radiation Control and Meteorology Data - Environmental and meteorology data, and radiological release evaluation data will be exchanged. If the emergency is at an RL facility or outside the WNP-2 site, RL will have responsibility for primary dose assessment, development of protective action recommendations and field team control. If the emergency originates at the WNP-2 site, the Supply System will have responsibility for the dose assessment, and development of protective action recommendations. RL will retain field team control responsibilities on the Hanford Site. Due to RL's unique ownership of Hanford facilities and properties, RL shall participate along with the Supply System and the State of Washington in the development of joint dose assessment and protective action recommendations, and coordination of field teams in the Supply System's Meteorology and Unified Dose Assessment Center.

Training and Exercises - Coordination of training and exercise opportunities are encouraged. The Supply System and RL shall coordinate exercises and training opportunities as appropriate.

Public Information - In cooperation with Benton and Franklin Counties, RL and the Supply System will jointly assist the Counties in the development of educational materials concerning the emergency preparedness program for the Hanford Site and WNP-2, including information regarding appropriate actions to be taken by the general public in the event of an emergency.

Emergency Public Information - If the emergency originates on the Hanford Site, outside the WNP-2 site, RL will have primary emergency public information responsibility. If the emergency originates at the WNP-2 site,

the Supply System will have the primary emergency public information responsibility. RL and the Supply System shall participate as partners in the Supply System or RL Joint Information Center.

LIMITATIONS

The specific areas of assistance, as defined above, will be provided based upon availability, and are limited to those actions necessary to protect onsite personnel, the public health and safety and the environment in the event of an emergency at the Hanford Site and/or the WNP-2 site.

COST RECOVERY

When the parties to this MOU agree to provide equipment, services, etc., this implies each party will pay the attendant costs and expenses associated with that equipment, service, etc., unless otherwise specified. If either party is responding to the other due to an actual (i.e., declared) emergency event, then the party requesting the other's assistance agrees to undertake all costs and expenses incurred that directly result from this agreement. The requesting party agrees to reimburse the responding party on a full cost recovery basis, based on their then-current cost accounting system.

INDEMNIFICATION

1) Supply System agrees to indemnify and save harmless DOE-RL, the contractors and the officers, employees, authorized representatives and sub-contractors of DOE-RL from any and all claims, costs (including but not limited to attorney fees, consultant fees and/or expert witness fees), or liabilities (including but not limited to sums paid in settlement of claims), arising during the term of this MOU or thereafter from the injury or death of any person or persons, or from the injury to any property, real or personal, resulting from the release of hazardous materials from WNP-2, and/or arising out of or related to the support and assistance to be provided by DOE-RL to Supply System under this MOU.

2) RL agrees to indemnify and hold harmless the Supply System, its directors, officers, employees and agents from any and all claims, costs (including but not limited to attorney fees, consultant fees, and/or expert witness fees), or liabilities (including but not limited to sums paid in settlement of claims), arising during the term of this MOU or thereafter from the injury or death of any person or persons, or from the injury to any property, real or personal, resulting from the release of hazardous materials from areas controlled by DOE-RL and/or arising out of or related to the support and assistance to be provided by the Supply System to RL under this MOU.

Memorandum of Understanding

TERM OF AGREEMENT

This memorandum of understanding will become effective upon the latter date of signature by the parties. It shall continue until canceled by either of the parties upon thirty (30) days written notice to the other party. Amendments or modifications shall be in writing and signed by both parties to the agreement.

APPROVED FOR THE DEPARTMENT OF ENERGY,
RICHLAND OPERATIONS OFFICE:

John D. Wagoner, Manager — 10/25/95 Date

APPROVED FOR THE WASHINGTON PUBLIC POWER SUPPLY SYSTEM:

J. V. Parrish, Vice-President, Nuclear Operations — 10/30/95 Date

Memorandum of Understanding
between

U.S. Department of Energy, Richland Operations Office

Hanford Environmental Health Foundation

and

Washington Public Power Supply System

for

Treatment of Radiologically Contaminated Persons

PURPOSE

The Washington Public Power Supply System (Supply System), the U.S. Department of Energy, Richland Operations Office (RL) and the Hanford Environmental Health Foundation (HEHF) agree to the following procedures and responsibilities when assistance in the treatment of a significantly radiologically contaminated injured person has been requested by the Supply System.

BACKGROUND

Under contract with RL, the HEHF provides assistance in the care of radiologically contaminated injured workers on the Hanford Site.

HEHF maintains and operates the RL Emergency Decontamination Facility (EDF). The EDF is designed to provide for decontamination, treatment of internal contamination and minor medical treatment for non-serious or non-life threatening significantly, radiologically contaminated injuries.

OBJECTIVE

The objective of this MOU is to:

1) Identify assistance that may be provided to the Supply System in the treatment of radiologically contaminated person;

2) Delineate the procedure to be followed for requesting such assistance;

3) Clearly identify the limitations on assistance and the responsibilities of the Supply System when using the EDF.

Memorandum of Understanding

IMPLEMENTATION

If the Supply System requests assistance from HEHF for treatment of a significantly contaminated and injured person, Supply System will:

- notify the HEHF physician on-call to request assistance in assessing the injury and coordinating care at the EDF and/or Kadlec Medical Center
- notify the RL Patrol Operations Center that assistance has been requested from the HEHF physician on-call due to a contaminated injury
- provide qualified health physics personnel and appropriate radiation protection instrumentation to respond to the EDF or Kadlec Medical Center
- be responsible for dose assessment of Supply System personnel and its contractors and may provide a representative in the EDF for close evaluation
- be responsible for all decontamination

HEHF will:

- respond, to the site if necessary, to assess the injury and will coordinate care at the EDF and/or Kadlec Medical Center
- activate the EDF, as indicated
- utilize either Supply System or other selected personnel for contamination and dose assessment
- direct any media requests for information to the Supply System

Supply System will make available basic radiological safety training to HEHF and Kadlec Medical Center personnel on, at least, an annual basis. Supply System will maintain agreements with Kadlec Medical Center and other hospitals to provide medical care of contaminated injured personnel. HEHF will coordinate with Supply System for participation of personnel in an annual drill involving a simulated contaminated patient. HEHF will coordinate the provisions of this agreement with the Kadlec Medical Center including receiving critical patients and overflow of patients from the EDF.

COST RECOVERY

Supply System agrees to reimburse RL, on a full cost recovery basis, for the use of the EDF and HEHF personnel for treatment of a radiologically contaminated injured patient.

-3-

Memorandum of Understanding

INDEMNIFICATION

1) Supply System agrees to indemnify and save harmless RL, the contractors and the officers, employees, authorized representatives and sub-contractors of RL from any and all claims, costs (including but not limited to attorney fees, consultant fees and/or expert witness fees), or liabilities (including but not limited to sums paid in settlement of claims), arising during the term of this MOU or thereafter from the injury or death of any person or persons, or from the injury to any property, real or personal, resulting from the release of hazardous materials from WNP-2, and/or arising out of or related to the support and assistance to be provided by RL to Supply System under this MOU.

2) RL agrees to indemnify and hold harmless the Supply System, its directors, officers, employees and agents from any and all claims, costs (including but not limited to attorney fees, consultant fees, and/or expert witness fees), or liabilities (including but not limited to sums paid in settlement of claims), arising during the term of this MOU or thereafter from the injury or death of any person or persons, or from the injury to any property, real or personal, resulting from the release of hazardous materials from areas controlled by DOE-RL and/or arising out of or related to the support and assistance to be provided by the Supply System to RL under this MOU.

DISCLOSURE

Subject to the Freedom of Information Act (5 U.S.C. 552), press releases, media announcements, and advertising by the Parties, pertaining to this MOU, or the joint activities performed hereunder, shall be approved by the Parties prior to release.

TERM OF AGREEMENT

This memorandum of understanding will become effective upon the latter date of signature by the parties. It shall continue until canceled by either of the parties upon thirty (30) days written notice to the other party. Amendments or modifications shall be in writing and signed by both parties to the agreement.

APPROVED FOR THE DEPARTMENT OF ENERGY -
RICHLAND OPERATIONS OFFICE:

John D. Wagoner 10/27/95

John D. Wagoner, Manager Date

-4-

Memorandum of Understanding

APPROVED FOR THE HANFORD ENVIRONMENTAL HEALTH FOUNDATION:

Sandra J. Matheson 10-28-95
Sandra J. Matheson, President Date

APPROVED FOR THE WASHINGTON PUBLIC POWER SUPPLY SYSTEM:

for J. V. Parrish, Vice President, Nuclear Operations 11/2/95
Date

Memorandum of Understanding

between

U. S. Department of Energy, Richland Operations Office

and

Hanford Environmental Health Foundation

and

Siemens Power Corporation, Nuclear Division

For the Use of the Emergency Decontamination Facility

December 1995

Siemens Power Corporation (SPC), the Department of Energy, Richland Operations Office (RL) and the Hanford Environmental Health Foundation (HEHF) agree to the following procedures and responsibilities in connection with the Emergency Decontamination Facility (EDF) at Richland, Washington when that facility is used in response to emergencies at the SPC Plant Site.

If SPC requests assistance from RL for treatment of a significantly contaminated and injured person:

- SPC will notify the HEHF physician on call about the person who requires medical care. SPC will also notify the RL Patrol Operations Center (373-3800) who in turn will notify RL Quality, Safety, & Health Facility Representative and Hanford Exposure Evaluator. The HEHF physician on call will respond to assess the injury, and will coordinate care at the Emergency Decontamination Facility (EDF) and/or Kadlec Medical Center.

- The HEHF physician will direct activation of the EDF, when indicated, and will utilize personnel from HEHF, Kadlec Medical Center or other organizations as deemed appropriate.

- SPC will provide radiation monitoring personnel and appropriate radiation protection instrumentation with the ambulance or have personnel meet the ambulance at the receiving area. Once the patient is delivered, the HEHF physician may elect to utilize other selected personnel for contamination and dose assessment, and can release the SPC radiation monitoring personnel to return to the plant. However, SPC remains responsible for dose assessment of SPC personnel and may provide a representative in the EDF for dose evaluation.

- SPC agrees to undertake all costs and expenses incurred that directly result from this agreement. DOE-RL will be reimbursed on a full cost recovery basis for use of the EDF.

- Any requests for press releases will be directed to SPC.

As preparation for an emergency covered under this agreement, SPC will:

- Make available, when requested, basic radiological safety training to HEHF and Kadlec Medical Center personnel on, at least, an annual basis.

In return, HEHF will:

- Be available to participate in periodic drills involving simulated contaminated patients.

- Coordinate activities relating to this agreement with Kadlec Medical Center including provisions for receiving critical patients or overflow of patients into the Kadlec Medical Center.

Indemnification

SPC agrees to indemnify and save harmless RL, the contractors of RL and the officers, employees, authorized representatives and sub-contractors of RL from any and all claims, costs (including but not limited to attorney fees, consultant fees and/or expert witness fees), or liabilities (including but not limited to sums paid in settlement of claims), arising during the term of this MOU or thereafter from the injury or death of any person or persons, or from the injury to any property, real or personal, resulting from the release of hazardous materials from the SPC-ND Plant Site, and arising out of or any way related to the support to be provided by RL to SPC under this MOU.

This agreement will be come effective upon signature and will continue until canceled by one or more of the parties by written notice to the other(s).

Approved

B F Bentley for — 1/17/96
B. N. Fernreite, Vice President — Date
Engineering and Manufacturing
Siemens Power Corporation - Nuclear Division

J D Wagoner — 2/20/96
J. D. Wagoner, Manager — Date
Richland Operations Office
United States Department of Energy

Sandra L Matheson — 2/27/96
S.J. Matheson, President — Date
Hanford Environmental Health Foundation

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

SEP 30 1994

Mr. Robert Richey, Chief
Meteorological Services Division
National Weather Service
Western Regional Headquarters
P.O. Box 11188, Federal Building
Salt Lake City, Utah 84147

Dear Mr. Richey:

LETTER OF AGREEMENT

This is an update to our letter of October 23, 1991, on the same topic. The U.S. Department of Energy, Richland Operations Office (RL), would like to renew the agreement with the National Weather Service (NWS), Washington area, for possible response to an emergency at the Hanford Site.

The following conditions would continue to be applicable to this agreement. RL will provide to the NWS:

1. Notification of emergencies occurring on the Hanford Site.

2. Meteorological information including routine hourly surface observations and special observations via Automated Field Operation Services (AFOS). This information will be provided by the Hanford Meteorology Station operated by the Pacific Northwest Laboratory. In the event of emergencies on the Hanford Site, hourly observations will be supplemented with observations from the telemetry station on Rattlesnake Mountain (Station #20) and from other reporting stations as necessary. These supplemental observations will consist of station number, wind speed, and wind direction. Wind speed and direction will be reported in accordance with Federal Meteorological Handbook No. 1 (Surface Observations). (Special observations may be omitted when the forecaster's workload is such that other duties take precedence.)

The NWS will provide to RL:

1. Organizational structure, personnel lists, 24-hour telephone numbers, locations, and areas of responsibility of NWS offices that may be involved with incidents or emergencies on the Hanford Site.

2. Synoptic scale weather information and forecasts in support of activities to mitigate unusual events, incidents, or emergencies on the Hanford Site.

SEP 30 1994

Mr. Robert Richey -2-

This agreement may be terminated by either party upon 30 days written notice to the other party. If these arrangements meet with your approval, please sign below and return one copy of this letter. If you have any questions, please contact Ms. J. L. Tokarz-Hames of my staff at (509) 376-4766.

Sincerely,

John B. Hall

John B. Hall, Acting Director
Quality, Safety, and Health
Programs Division

QSH:JLH

APPROVED: ✓

SIGNATURE: Richard H. Douglas

NAME: RICHARD DOUGLAS

TITLE: Deputy Chief MSD, WRIT

DATE: OCT 5, 94

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

SEP 1 6 1994

RECEIVED
SEP 1 9 1994

Mr. T. F. Corley, Administrator
Our Lady of Lourdes Hospital
520 North 4th Street
Pasco, Washington 99301

Dear Mr. Corley:

LETTER OF AGREEMENT

This is an update to our letter of October 23, 1991, same subject. The U.S. Department of Energy, Richland Operations Office (RL), would like to renew the agreement with Our Lady of Lourdes Hospital. This agreement provides assurance that in the event of a major radiation accident involving personnel of RL, or its contractors or subcontractors, affected persons will be admitted to your facility for appropriate medical care.

The following conditions will continue to be applicable to this agreement:

1. RL will provide health physics services and available supporting assistance as requested by Our Lady of Lourdes. These services will be limited to activities performed at the hospital.

2. The responsibilities of Our Lady of Lourdes will be limited to activities performed at the hospital.

3. Our Lady Lourdes has the right to limit admission of such patients to those numbers as can be properly handled.

4. Our Lady of Lourdes would serve as one of the backup facilities to the RL Emergency Decontamination Facility (EDF) in Richland.

5. These arrangements may be terminated by Our Lady of Lourdes or by RL upon written notice to the other, which notice shall not become effective for at least 30 days after the date thereof.

SEP 16 1994

T. F. Corley -2-

If these arrangements meet with your approval, please sign below and return one copy of this letter. If you have any questions regarding this agreement, please contact Ms. J. L. Tokarz-Hames of my staff on 376-4766.

Sincerely,

John B. Hall

John B. Hall, Acting Director
Quality, Safety, and Health
Programs Division

QSH:JLH

APPROVED: Thomas Corley

SIGNATURE: _____

NAME: Thomas Corley

TITLE: Administrator

DATE: September 27, 1994

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

SEP 16 1994

Mr. Walter Behn, Administrator
Kadlec Medical Center
888 Swift Boulevard
Richland, Washington 99352

Dear Mr. Behn:

LETTER OF AGREEMENT

This is an update to our letter of October 23, 1991, on the same topic. The U.S. Department of Energy, Richland Operations Office (RL), would like to renew the agreement with Kadlec Medical Center. This agreement provides assurance that in the event of a major radiation accident involving personnel of RL, or its contractors or subcontractors, affected persons will be admitted to your facility for appropriate medical care.

The following conditions will continue to be applicable to this agreement:

1. Patients will be admitted by a physician who has staff privileges at Kadlec Medical Center.

2. RL will provide health physics services and available supporting assistance as requested by Kadlec Medical Center. These services and support will be limited to activities performed at the hospital.

3. The responsibilities of Kadlec Medical Center will be limited to activities performed at the hospital and at the RL Emergency Decontamination Facility (EDF).

4. Kadlec Medical Center has the right to limit admission of such patients to those numbers as can be properly handled.

5. These arrangements may be terminated by Kadlec Medical Center or by RL upon written notice to the other, which notice shall not become effective for at least 30 days after the date thereof.

SEP 16 1994

Walter Behn -2-

If these arrangements meet your approval, please sign below and return one copy of this letter. If you have any questions regarding this agreement, please contact Ms. J. L. Tokarz-Hames of my staff on 376-4766.

Sincerely,

John B. Hall

John B. Hall, Acting Director
Quality, Safety, and Health
Programs Division

QSH:JLH

APPROVED: _____

SIGNATURE: _____

NAME: WALTER L. BEHN

TITLE: Interim Adm

DATE: 9-30-94

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

SEP 16 1994

Mr. Michael Tuohy, Administrator
Kennewick General Hospital
900 South Auburn
Kennewick, Washington 99336

Dear Mr. Tuohy:

LETTER OF AGREEMENT

This is an update to our letter of October 23, 1991, on the same topic. The U.S. Department of Energy, Richland Operations Office (RL), would like to renew the agreement with Kennewick General Hospital. This agreement provides assurance that in the event of a major radiation accident involving personnel of RL, or its contractors or subcontractors, affected persons will be admitted to your facility for appropriate medical care.

The following conditions will continue to be applicable to this agreement:

1. RL will provide health physics services and available supporting assistance as requested by Kennewick General Hospital. These services and support will be limited to activities performed at the hospital.

2. The responsibilities of Kennewick General Hospital will be limited to activities performed at the hospital.

3. Kennewick General Hospital has the right to limit admission of such patients to those numbers as can be properly handled.

4. Kennewick General Hospital would serve as one of the backup facilities to the RL Emergency Decontamination Facility (EDF) in Richland.

5. These arrangements may be terminated by Kennewick General Hospital or by RL upon written notice to the other, which notice shall not become effective for at least 30 days after the date thereof.

SEP 16 1994

Mr. Michael Tuohy -2-

If these arrangements meet with your approval, please sign below and return one copy of this letter. If you have any questions regarding this agreement, please contact Ms. J. L. Tokarz-Hames of my staff on 376-4766.

Sincerely,

John B. Hall, Acting Director
Quality, Safety, and Health
Programs Division

QSH:JLH

APPROVED: _____

SIGNATURE: _____

NAME: Michael J. Tuohy

TITLE: Administrator

DATE: 9/29/94

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The MOU with the U.S. Coast Guard, Washington Public Supply System, and Benton and Franklin Counties was determined to be unnecessary as agreements and responsibilities have been documented in respective plans and procedures. As such, this MOU has been canceled.

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MEMORANDUM OF UNDERSTANDING

Between the

DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE

and the

STATE OF OREGON

This Memorandum of Understanding between the State of Oregon (hereafter "State") and the U.S. Department of Energy, Richland Operations Office (hereafter DOE-RL) expresses the desire of the parties to cooperate in matters of mutual interest; it sets forth mutually agreeable principles of cooperation between the State and DOE-RL in areas subject to the jurisdiction of the State or DOE-RL or both. This agreement is intended to provide the basis for exploration of subsequent detailed sub-agreements between the parties.

Close cooperation between the signatories will help assure that the goals and policies of State and Federal law will be carried out efficiently and expeditiously without diminishing the responsibilities or authorities of either party.

With the execution of this Memorandum, the State and DOE-RL agree to consult and cooperate in exploring and devising appropriate procedures to minimize duplication of effort to the extent permitted by State and Federal law, to avoid delays in decision-making and to ensure the exchange of information that is needed to make the most effective use of the resources of the State and DOE/RL in order to accomplish the purpose of both parties.

PRINCIPLES OF COOPERATION

1. The State and DOE-RL agree to explore together the development of detailed sub-agreements in areas of mutual concern.

2. Sub-agreements under this Memorandum may provide for activities to be performed by either party under mutually acceptable guidelines and criteria which assure that the needs of both are met. For activities performed by one party at the request of the other party under specific sub-agreements to this Memorandum, either party may explore means by which compensation can be made available to the other party or by which the costs may be shared by the parties.

3. Nothing in this Memorandum is intended to restrict or extend the constitutional or statutory authority of either DOE-RL or the State.

-2-

4. The principal DOE-RL contact under this Memorandum shall be the Assistant Manager for Safety, Environment and Safeguards (AMS) or his or her designee. The principal State contact shall be the Director of the Oregon Department of Energy or his or her designee. Sub-agreements will name appropriate individuals, agencies or offices as contacts.

5. This Memorandum shall take effect immediately upon signing by the Governor of the State of Oregon and the Manager, DOE-RL and may be terminated upon 30 days written notice by either party.

APPROVED FOR STATE OF OREGON:

Governor Victor Atiyeh
State of Oregon

11-10-86
Date

APPROVED FOR THE DEPARTMENT OF ENERGY
RICHLANDS OPERATIONS OFFICE:

Michael J. Lawrence
Manager

12-12-86
Date

SUB-AGREEMENT I
BETWEEN
STATE OF OREGON
AND
DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE
EMERGENCY PREPAREDNESS AND RESPONSE

I. BACKGROUND AND PURPOSE

This Memorandum of Understanding establishes a framework of cooperation between the State of Oregon (the State) and the Department of Energy, Richland Operations Office (DOE-RL), in the planning for and providing notification and interface in the event of an incident on the Hanford Site which might have offsite consequences, and coordinating Federal emergency radiological assistance, if required, in the event of an incident in the State of Oregon.

II. RESPONSIBILITIES

The Department of Energy's Richland Operations Office is responsible for responding to all emergencies contained within the federally operated facilities located within the Hanford Site boundaries. In the event that a Hanford emergency which might have offsite public health implications, DOE-RL and the State will coordinate implementation of their emergency plans.

The State of Oregon is responsible for responding to all emergencies within the State of Oregon with the exception of radioactive materials which pertain to the national security and are under the jurisdiction of the U.S. Department of Defense or the U.S. Department of Energy. In the event that resources are required beyond those available within the State, DOE-RL will provide radiological support and assistance to the extent available and at the extent requested by the State as outlined in the Federal Radiological Monitoring and Assessment Response Plan (FRMAP).

DOE-RL will provide support and assistance to the State in preparation and implementation of emergency responses affecting the State of Oregon by:

A. Coordinating the activities of Federal agencies which are parties to the FRMAP.

B. Assisting in radiological monitoring and decontamination; radiation exposure evaluation and radiation health hazards assessment.

C. Providing medical advice on emergency treatment of persons exposed to radiation and technical advice on radioactive contamination.

D. Cooperating in implementing and improving as necessary the State plan for emergencies occurring in the State of Oregon or on the Hanford Site.

E. Cooperating in the generation and release of public information.

The State of Oregon will provide support and assistance to DOE-RL in preparation and implementation of emergency responses affecting the State of Oregon by:

A. Coordinating radiological monitoring activities with DOE-RL, as appropriate.

B. Cooperating with appropriate DOE-RL officials in implementing and improving as necessary the FRMAP and the State plan for emergencies in the State of Oregon or on the Hanford site. This cooperation will be limited to those areas which are pertinent to the joint emergency response effort.

III. EMERGENCY ACTION LEVELS AND RESPONSE ACTIONS

Five classes of emergency action levels will be utilized. These classes are: (1) off normal event, (2) unusual event, (3) alert, (4) site area emergency, and (5) general emergency. The description of these classes and the response actions are as follows:

A. Off Normal Event

This class is described as a nonemergency event (at Hanford only) of general public interest.

DOE-RL will inform the Oregon Department of Energy (ODOE) of such events before the close of the next working day of the event or prior to its issuance of a news release, whichever comes first.

B. Unusual Event

This class is described as an event in progress or having occurred which normally would not constitute an emergency but which indicates little or no potential for offsite release of radioactive material.

DOE-RL will inform the ODOE, or vice versa, of the nature of the unusual event, escalate to a more severe class, if appropriate, or close out with verbal summary within 24 hours. Notification of ODOE will be included in the initial notification of State, County and Federal agencies. ODOE will coordinate with DOE-RL in release of public information as necessary.

C. Alert

This class is described as an event in progress or having occurred which involves an actual or potential substantial reduction of the level of safety of the facility. Limited offsite releases of radioactive materials may occur.

DOE-RL will inform the ODOE, or vice versa, of the nature of the alert, escalate to a more severe class, close out or recommend reduction in emergency class as appropriate. Notification of ODOE will be included in the initial notification of State, County and Federal agencies. The State will begin a limited activation of the Emergency Operations Center to facilitate communications on technical information and to coordinate public information.

D. Site Area Emergency

This class is described as an event in progress or having occurred which involves actual or likely major failures of facility functions which are needed for the protection of onsite personnel, the public health and safety, and the environment. Offsite releases of radioactive materials are not occurring or likely to occur which would exceed levels requiring protective action recommendations or guidelines.

DOE-RL will inform the ODOE, or vice versa, of the nature of the Site area emergency, escalate to general emergency class, or close out or recommend reduction in emergency class as appropriate. Notification of ODOE will be included in the initial notification of State, County and Federal agencies. The State will activate the Emergency Operations Center and dispatch field teams to the vicinity of the Hanford area. Oregon's field teams will be prepared to assist DOE-RL upon request through ODOE.

E. General Emergency

This class is described as an event in progress or having occurred which involves actual or imminent substantial reduction of facility safety systems. Releases offsite of radioactive materials are occurring or expected to occur and exceed levels requiring protective action recommendations or guidelines.

DOE-RL will inform the ODOE or vice versa, of the nature of the general emergency, recommend reduction of emergency class, or close out as appropriate. Notification of ODOE will be included in the initial notification of State, County and Federal agencies. The State will activate the Emergency Operations Center, dispatch field teams to the vicinity of the Hanford area, and may recommend public protective actions in the State of Oregon. Oregon's field teams will be prepared to assist DOE-RL upon request through ODOE.

IV. AREAS OF COOPERATION

A. Notification

The ODOE will be the single point of contact for notification to the State regarding emergencies. Authentication of the notification call to the State will be effected by a return call to DOE-RL, if necessary.

The Oregon State Health Division or ODOE will notify DOE-RL if a Radiological Assistance Program (RAP) or Federal Radiological Monitoring and Assistance Plan (FRMAP) response is requested. DOE-RL will only respond to an emergency in the State of Oregon at the request of the State.

B. Radiological Assessment and Evaluation

During a RAP or FRMAP response, DOE-RL will provide quality assured radiological technical data to the State. DOE-RL will provide protective action recommendations to the State if appropriate.

C. Intermediate and Recovery Period

DOE-RL will provide assistance to the State to minimize radiation health hazards and decontamination problems, until

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the Environmental Protection Agency assumes the lead agency in support of the State, as outlined in FRMAP. Any Federal agency or contractor assisting the State of Oregon in behalf of DOE-RL will do so in compliance with the agreements established in this Memorandum of Understanding.

D. Training and Exercises

DOE-RL and the State will participate in training and exercises at their own expense. Cooperative arrangements for emergency response exercises will be agreed to in advance and will be designed to assess emergency response capabilities and provide needed training.

V. AVAILABILITY OF FUNDING

Performance of US DOE's activities under this agreement is subject to the availability of appropriated funds for such purpose.

VI. TERM OF AGREEMENT

This agreement will become effective upon signature and continue until cancelled by either party by written notice to the other. Amendments or modifications to this Agreement may be made upon written agreement by both parties to the Amendment.

APPROVED FOR STATE OF OREGON:

David O. Kish — 12-2-86

David O. Kish, Acting Director
Oregon Department of Energy

Date

APPROVED FOR THE DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE:

Michael J. Lawrence — 12-12-86

Michael J. Lawrence
Manager

Date

MWA:jf
1179L(dl,fl)
10/20/86

TRI-CITIES MUTUAL AID AGREEMENT

THIS AGREEMENT, made and entered into on this 26th day of April, 1985 by and between the Cities of Richland, Kennewick and Pasco and the Fire Protection Districts Benton County #1, Benton County #2, Benton County #3, Benton County #4, Benton County #5, Benton County #6, Franklin County #3, Walla Walla County #5 and the Hanford Fire Department.

WITNESSETH:

WHEREAS, each of the parties hereto maintains equipment and personnel for the suppression of fires within its own jurisdiction and areas, and

WHEREAS, the parties hereto desire to augment the fire and emergency medical protection available in their various establishments, districts, agencies and municipalities in the event of large fires or conflagrations or other disaster, and

WHEREAS, the lands or districts of the parties hereto are adjacent or contiguous so that mutual assistance in a fire or medical emergency is deemed feasible, and

WHEREAS, it is the policy of the above municipalities or other districts and of their governing bodies to conclude such agreements wherever practicable, and

Tri-Cities Mutual Aid Agreement,
Page 2

WHEREAS, it is mutually deemed sound, desirable, practicable, and beneficial for the parties to this agreement to render assistance to one another in accordance with these terms:

THEREFORE BE IT AGREED THAT:

1. Whenever it is deemed advisable by the commanding officer of a fire department belonging to a party to this agreement, or by the commanding officer of any such fire department actually present at any fire or other emergency including any medical emergency, to request assistance under the terms of this agreement, he is authorized to do so, and the commanding officer of the department receiving the request, or his authorized subordinates, shall forthwith take the following actions:

   A. Immediately determine if apparatus and personnel can be spared in response to the call.

   B. What apparatus and personnel might be most effectively dispatched.

   C. The exact mission to be assigned in accordance with the detailed plans and procedures of operation drawn in accordance with this agreement by the technical heads of the fire departments concerned.

   D. Forthwith dispatch such apparatus and personnel as, in the judgment of the responsible officer receiving the call, should be sent, with complete instructions as to the mission, in accordance with the terms of this agreement.

2. The rendering of assistance under the terms of this agreement shall not be mandatory, but the party receiving the request for assistance should immediately inform the requesting agency if, for any reason assistance cannot be rendered.

Tri-Cities Mutual Aid Agreement,
Page 3

3. A. Each party to this agreement waives all claims against the other party or parties for compensation for any loss, damage, personal injury or death occurring in consequence of the performance of this agreement.

   B. All service performed under this agreement shall be rendered without reimbursement of either party or parties.

4. The commanding officer of the fire department requesting assistance shall assume full charge of the operations, but if he specifically requests a senior officer of a fire department furnishing assistance to command, he shall not, by relinquishing command, be relieved of his responsibility for the operation; provided, that the apparatus, personnel and equipment of the agency rendering assistance shall be under the immediate supervision of and shall be the immediate responsibility of the senior responding fire officer or the commanding officer of the department rendering assistance.

5. The chief fire officer and personnel of the fire departments of all parties to this agreement are invited and encouraged on a reciprocal basis, to frequently visit each other's activities for guided familiarization tours consistent with local security requirements and as feasible, to jointly conduct pre-fire planning inspections and drills.

6. The commanding officer of the fire departments of the parties to this agreement are authorized to meet and draft any detailed plans and procedures of operation necessary to effectively implement this agreement. Such plans and procedures of operation shall become effective upon ratification by the signatory parties.

Tri-Cities Mutual Aid Agreement,
Page 4

7. This agreement shall become effective upon the date hereof and shall remain in full force and effect until cancelled by mutual agreement of the parties hereto or by written notice by one party to the other party giving ten (10) days' notice of said cancellation.

IN WITNESS WHEREOF, the parties hereto have executed this agreement at Richland, Washington on the day and year first above written.

City of Richland

City of Kennewick

City of Pasco

Benton County Fire District #1

Benton County Fire District #2

Benton County Fire District #3

Benton County Fire District #4

Benton County Fire District #5

Benton County Fire District #6

Franklin County Fire District #3

Walla Walla County Fire District #5

Hanford Fire Department

MEMORANDUM OF AGREEMENT

For Mutual Law Enforcement Assistance

This Memorandum of Agreement (the "Agreement") is entered into between the United States Department of Energy (the "DOE") represented by the Richland Operations Office (DOE-RL) and the Benton County Sheriff (the "BCS").

Recitals

1. The BCS is the chief executive officer and conservator of the peace of Benton County, State of Washington. The DOE-RL Hanford Site is located in Benton County, Washington.
2. The DOE-RL security forces exercise law enforcement authority and maintain security on the DOE's Hanford Site as special deputies of the BCS and as federal officers authorized to carry firearms and make arrests pursuant to Section 161K of the Atomic Energy Act of 1954, as amended.
3. This Agreement is entered into by the DOE pursuant to the authority of the Atomic Energy Act of 1954, as amended, and by the BCS pursuant to RCW 10.98.130, which provides that any law enforcement agency may contract with any other such agency to provide mutual law enforcement assistance in order that the parties may perform their responsibilities described above.
4. This agreement shall be jointly administered by the Benton County Sheriff, James H. Kennedy, and the Director of Safeguards and Security Division, DOE-RL, Kenneth H. Jackson or their successors.

5. There shall be no funds or property held under this Agreement.

ARTICLE I - SCOPE

The general scope of this Agreement includes mutual law enforcement assistance, loan of special equipment, specialized training, and other assistance which may be identified by the parties from time to time. Specifically, the parties agree as follows:

A. The BCS, at his discretion and to the extent he is legally authorized to do so, agrees to commit available manpower and other resources to assist DOE-RL in dealing with security or law enforcement emergencies on the Hanford Site. Specific response plans may be developed by DOE-RL and submitted to the BCS for concurrence. DOE will provide any necessary training and special equipment and materials to facilitate the response by the BCS.

B. The DOE-RL will favorably consider providing assistance to the BCS in the execution of their law enforcement responsibilities, which assistance may include permitting the BCS temporarily to use certain property and equipment, including where appropriate and necessary, operators for such equipment; the utilization of training facilities; specialized forensic science assistance, and other forms of assistance which the DOE-RL may be authorized and equipped to provide.

C. Each party to this Agreement may provide the other party the opportunity to allow personnel available to participate in unique training opportunities which may arise as the result of incidents or occurrences encountered in the course of law enforcement activities. Participation will be subject to availability of manpower and accommodations.

ARTICLE II - REQUESTS FOR ASSISTANCE

A. Requests for assistance from the DOE-RL shall be made by the BCS or his official designee and shall be addressed to the Director, Safeguards and Security Division, DOE-RL. Each request shall be subject to approval on an individual case basis. Upon approval, the requested assistance will be provided, subject to the provisions of this Agreement and whatever additional conditions to which the parties may agree.

B. Requests for assistance from the BCS shall be made by the Director, Safeguards and Security Division, DOE-RL, and shall be addressed to the BCS. Each request shall be subject to approval of the BCS, or his official designee, on an individual case basis. Assistance provided by the BCS shall be subject to the provisions of this Agreement and to any other conditions as the parties may agree.

C. If the assistance provided by either party includes providing personnel, such personnel may operate under the general direction of, but shall not be deemed to be employees of the receiving party.

D. The DOE-RL may at its option provide any assistance requested hereunder through one or more of its Hanford onsite operating contractors.

ARTICLE III-TERMINATION

The term of this Agreement shall commence on July 10, 1987 and is intended to be of indefinite duration. This Agreement or any activity thereunder may be terminated at any time upon written notice by either party to the other party. Notwithstanding the above, the parties agree to exercise their best efforts to avoid terminating any individual activity if to do so would substantially hinder the other party in the fulfillment of its mission. This Agreement may be amended in writing at any time by agreement between the undersigned parties.

ARTICLE IV - WAIVER OF CLAIMS

A. Except as otherwise provided in Article VII, the United States of America, by and through the DOE, for the sole consideration of any benefits derived from this Agreement, hereby waives, relinquishes, remisses, releases, and forever discharges BCS from any and all claims, actions, causes of actions, demands, rights, damages, costs, loss of service, expenses, and compensation whatsoever, which the undersigned now has/have or which may hereafter accrue on account of or in any way growing out of any and all known and unknown, foreseen and unforeseen bodily and personal injuries and property damage and the consequences thereof, resulting or to result in consequence of assistance rendered or activity conducted by the BCS under this Agreement.

B. Except as otherwise provided in Article VII, the BCS, for the sole consideration of any benefits derived from this Agreement, hereby waives, relinquishes, remisses, releases, and forever discharges the United States of America and the DOE from any and all claims, actions, causes of actions, demands, rights, damages, costs, loss of service, expenses, and compensation whatsoever, which the undersigned now has/have or which may hereafter accrue on account of or in any way growing out of any and all known and unknown, foreseen and unforeseen bodily and personal injuries and property damage and the consequences thereof, resulting or to result in consequence of assistance rendered or activity conducted by the DOE or its contractors under this Agreement.

ARTICLE V - PAYMENT

Except as provided in Article VII or as otherwise agreed in individual cases, no compensation shall be paid by the DOE or by the BCS for any assistance rendered pursuant to this Agreement.

ARTICLE VI - DISCLAIMER OF WARRANTIES

Neither the DOE nor the BCS makes any representations or warranty as to the physical condition or usefulness of any equipment, information, training, or other assistance exchanged under this Agreement or the fitness for any particular purpose to which any such equipment, information, training, or other assistance may be put by the recipient.

ARTICLE VII - LOSS OR DAMAGE TO PROPERTY AND EQUIPMENT

Property and equipment which may be loaned by one party to the other under this Agreement shall be returned in as good condition as when it was received by the using party, reasonable wear and tear excepted. The using party agrees to reimburse the lending party for any loss or damage of any nature to the property or equipment which is caused by or arises from activities of the user.

ARTICLE VIII - ASSIGNMENT

The BCS shall not assign this Agreement or any interest therein or any claim thereunder, except as expressly authorized in writing by the DOE.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of July 10, 1987.

Benton County Sheriff

BY: James H. Kennedy, Sheriff

Dated this 11 day of JUNE. 1987

United States Department of Energy

BY: Michael J. Lawrence
Manager

Memorandum of Understanding
between

Siemens Power Corporation

and

U.S. Department of Energy/Richland Operations Office

PURPOSE

This Memorandum of Understanding (MOU) establishes a means by which the U.S. Department of Energy (DOE), Richland Operations Office (RL) can provide consequence assessment and meteorological information to Siemens Power Corporation (SPC-ND) during an emergency at the SPC-ND Plant Site in Richland, Washington.

BACKGROUND

SPC-ND has identified a potential need for back-up consequence assessment services and meteorological information during an emergency. Due to the close proximity of the SPC-ND Site to the Hanford Site, RL recognizes the potential impact on Hanford facilities and workers from an accidental release of hazardous materials at the SPC-ND Site. During an SPC-ND emergency, consequence assessment would be crucial in determining the RL emergency response.

STATEMENT OF OBJECTIVES

1) Develop an arrangement to provide support to SPC-ND that will also enhance RL's ability to generate protective action recommendations for Hanford workers.

2) Identify the scope and limitations of RL support to SPC-ND in the event of an SPC-ND emergency; and

3) Identify the activities and associated responsibilities necessary to ensure the preparedness of the Parties to provide and coordinate the requested support.

IMPLEMENTATION

If a hazardous material (toxic chemical or radiological) release occurs at SPC-ND, SPC-ND will notify the Hanford Occurrence Notification Center. This notification will include a brief description of the incident, the emergency classification level, the nature and quantity of hazardous materials released, and protective action recommendations, as available.

If SPC-ND is unable to assess consequences from an actual or potential airborne release of radiological or hazardous materials,

SPC-ND will:

- Request Unified Dose Assessment Center (UDAC) designated staff support through the Hanford Occurrence Notification Center.

- Provide UDAC staff with release data (source-term) as it becomes available.
- Consider sending a representative to UDAC for coordination, if the situation dictates.

RL will:

- Notify the designated staff to provide the requested UDAC support to SPC-ND.
- Establish contact with SPC-ND and provide consequence assessment and meteorological information until SPC-ND notifies UDAC that services are no longer needed.
- Direct any requests for support or information other than consequence assessment and meteorology to SPC-ND.

As preparation for the emergency support covered under this agreement,

SPC-ND will:

- Prepare procedures to implement this MOU, with the concurrence of DOE-RL;
- Provide RL with SPC-ND hazard data, facility descriptions and locations, and assessment tools;
- Inform RL when SPC-ND drills or exercises will occur so that the designated staff can participate using the UDAC facilities; and
- Provide annual training of designated UDAC staff on the consequence assessment and meteorological support activities to be carried out in support of an SPC-ND emergency.

RL will:

- Coordinate with SPC-ND to determine appropriate designated UDAC staffing levels;
- Develop and maintain internal procedures to activate the designated UDAC staff upon SPC-ND request;
- Ensure that designated UDAC staff be available to participate in the annual training provided by SPC-ND; and
- Provide designated UDAC staff and the use of UDAC facilities for those drills or exercises agreed to by RL.

LIMITATIONS

It is understood by the Parties that emergencies affecting the Hanford Site or Hanford facilities would take precedence over all other uses of the RL UDAC facilities and/or staff.

-3-

COST RECOVERY

SPC-ND agrees to reimburse RL for use of designated staff at their normal hourly rates during an emergency, training related to SPC-ND support, and drills/exercises involving SPC-ND emergencies. RL agrees to notify SPC-ND in writing of any pre-emergency costs associated with ensuring that UDAC can support SPC-ND during an emergency (e.g., installation of software). SPC-ND agrees to reimburse such pre-emergency costs upon approval.

INDEMNIFICATION

SPC-ND agrees to indemnify and save harmless RL, the contractors of RL and the officers, employees, authorized representatives and sub-contractors of RL from any and all claims, costs (including but not limited to attorney fees, consultant fees and/or expert witness fees), or liabilities (including but not limited to sums paid in settlement of claims), arising during the term of this MOU or thereafter from the injury or death of any person or persons, or from the injury to any property, real or personal, resulting from the release of hazardous materials from the SPC-ND Plant Site, and arising out of or any way related to the support to be provided by RL to SPC-ND under this MOU.

DISCLOSURE

Any press releases, media announcements, and advertising that pertain to this MOU, shall be approved by both Parties prior to release, except for those done under the Freedom of Information Act (5 U.S.C. 552).

EFFECTIVE DATE/TERMINATION

The parties agree to this MOU by signing below, subject to approval of their governing bodies as appropriate. This agreement shall become effective upon the date of the last signature. It shall remain in effect for five years from the effective date, at which time it shall be reviewed and renegotiated, reissued, or terminated. Either party may withdraw from this agreement upon thirty (30) days written notice.

U.S. Department of Energy
Richland Operations Office

By John D. Wagoner
(Signature)

John D. Wagoner
(Type or print name)

Title Manager

Date 1/19/95

Siemens Power Corporation
Nuclear Division

By B. N. Femreite
(Signature)

B. N. Femreite
(Type or print name)

Title Richland Plant Manager

Date November 29, 1994

APPENDIX C

HANFORD FIRE DEPARTMENT EQUIPMENT LIST

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APPENDIX C

HANFORD FIRE DEPARTMENT EQUIPMENT LIST

Equipment	Description	*Normally Located
Engines 4 Ladders 4 Pumpers	Examples of equipment contained on engines: • 1,500-2,000 gal/min (5,678.1-7,570.8 L/min) pump • 300-500 gal (1,135.6-1,892.7 L) portable tank • Telescoping nozzle • Jaws of Life.	1 at each station
Tankers 6 Each	Examples of equipment contained on tankers and pumpers: • 500 gal/min (1,892.7 L/min) pump • 1,500 gal (5,678.1 L) tank • 6x6 with 2,000 gal (7,570.8 L) porti-tank • Hose, nozzles, fittings, and tools.	1 at Station 1 2 at Station 2 1 at Station 4 2 at Station 3
Water Tenders 1 Each	Examples of equipment contained on water tenders: • 450 gal/min (1,703.4 L/min) pump • 4,500 gal (17,034.3 L) tank • Hose, nozzles, fittings, and tools.	Station 1
Grass Fire Units 4 Each	Examples of equipment contained on grass fire units: • 100 gal/min (378.5 L/min) pump • 250 gal (946.3 L) tank • 4-wheel drive • Hose, nozzles, fittings, and tools.	1 at each station
Ambulances 5 Each	Examples of equipment contained on ambulances: • Life support systems • Medical supplies and emergency response supplies.	1 at Station 1 2 at Station 2 1 at Station 3 1 at Station 4
Command Vehicles 3 Each	Contains communications equipment and protective equipment for commander.	Station 2

Equipment	Description	*Normally Located
Attack Vehicles 1 Each	Examples of equipment contained on attack vehicles: • 450 lb (204.1 kg) of purple-K • 300 gal (1,1335.6 L) aqueous film-forming foam concentrate • 300 gal (1,135.6 L) of aqueous film-forming foam pre-mix solution • Hose, nozzles, fittings, and tools.	Station 2
Hazardous Materials Vehicle 2 Each	Examples of equipment contained on hazardous materials vehicle: • Protective clothing for Hazardous Materials Response Team • Breathing apparatus for Hazardous Materials Response Team • Diking, plugging, and damming equipment • Detection instruments for Hazardous Materials Response Team • Tools for plugging and repairing leaking containers • Overpack containers for leaking containers • Command module with material safety data sheets, software, and portable meteorological station • Tools and communications devices necessary to provide communications during emergency response activities.	1 at Station 2 1 at Station 3
Metal Fire Response Vehicle 1 Each	Examples of equipment contained on metal fire response vehicle: • Equipment for response to special metals fire • 500 lb (226.8 kg) of extinguishing powder • 1,000 lb (453.6 kg) of carbon microspheroids.	Station 4
Mobile Air Vehicle 1 Each	Examples of equipment contained on mobile air vehicle: • Mobile air compressor, recharges self-contained breathing apparatus cylinders • Tools and fittings for operation of vehicle and spare cylinders.	Station 4

*The Hanford Fire Department Chief has the authority to direct the placement of Fire Department equipment as needed to control emergency events. The Hanford Fire Department Chief also has the authority to take pro-active action and assign different vehicle locations based on such conditions as fuel moisture content, area fire history, work in progress, or other conditions that could arise.