0051851

Department of Energy
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

9957629
CC RECD: 10/11/99

OCT 07 1999

00-EAP-002

Ms. L. E. Ruud
Permit Specialist
Nuclear Waste Program
State of Washington
Department of Ecology
1315 West Fourth Avenue
Kennewick, Washington 99336

Dear Ms. Ruud:

QUARTERLY NOTIFICATION OF CLASS 1 MODIFICATIONS TO THE HANFORD FACILITY RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) PERMIT, DANGEROUS WASTE PORTION (DW PORTION) (QUARTER ENDING SEPTEMBER 30, 1999 - CONDITION I.C.3.)

In accordance with Condition I.C.3. of the Hanford Facility RCRA Permit, enclosed for your notification are the Class 1 modifications to the Hanford Facility RCRA Permit, DW Portion. Modifications this quarter included updating information in the List of Attachments and in Part III (Enclosure). The List of Attachments modifications pertain to Attachment 4. The Part III modifications pertain to the 305-B Storage Facility and the 325 Hazardous Waste Treatment Units. The Class 1 modifications are being made to ensure that all activities conducted are in compliance with the RCRA Permit DW Portion.

OCT 07 1999

Should you have any questions regarding this information, please contact Ellen M. Mattlin, U.S. Department of Energy, Richland Operations Office, on (509) 376-2385; Susan M. Price, Fluor Daniel Hanford, Inc., on (509) 376-1653; or Alice K. Ikenberry, Pacific Northwest National Laboratory, on (509) 373-5638.

James E. Rasmussen, Director
Environmental Assurance, Permits,
and Policy Division
DOE Richland Operations Office

William D. Adair, Director
Environmental Protection
Responsible Party for
Fluor Daniel Hanford, Inc.

Roby D. Enge, Director
Environment, Safety, and Health
Pacific Northwest National Laboratory

Enclosure:
Quarterly Notification of Class 1
Modifications to the Hanford Facility
RCRA Permit, (DW Portion) Quarter
Ending September 30, 1999

cc w/encl:
Administrative Record, H6-08
Ecology NWP Kennewick Library
HF Operating Record, H6-08
Environmental Portal, LMSI
A. K. Ikenberry, PNNL
R. Jim, YN
R. J. Landon, BHI
S. Sobotta, NPT
S. A. Thompson, FDH
J. R. Wilkinson, CTUIR

cc w/o encl:
M. C. Hughes, BHI
L. J. Cusack, Ecology
S. V. Moore, Ecology
A. B. Stone, Ecology
D. R. Sherwood, EPA
W. D. Adair, FDH
R. D. Enge, PNNL

Hanford Facility RCRA Permit Modification Notification Forms
for
Attachment 4
Hanford Emergency Management Plan, DOE/RL-94-02

Index

Page 2 of 57:	RCRA Permit, Rev. 5
Page 3 of 57:	Section 1.3.4
Page 4 of 57:	Section 2.2
Page 5 of 57:	Section 2.2.1.1.2(a), (d), and (f)
Page 6 of 57:	Section 2.2.1.1.3(a), (e), and (g)
Page 7 of 57:	Section 2.2.2.3.3
Page 8 of 57:	Section 3.1
Page 9 of 57:	Section 3.1.1
Page 10 of 57:	Section 3.3.1
Page 11 of 57:	Section 3.3.2
Page 12 of 57:	Section 3.4
Page 13 of 57:	Section 3.4.1.1
Page 14 of 57:	Section 3.4.1.2
Page 15 of 57:	Section 3.4.1.3
Page 16 of 57:	Section 3.7
Page 17 of 57:	Section 3, Table 3-1
Page 18 of 57:	Section 3, Table 3-1
Page 19 of 57:	Section 3, Table 3-1
Page 20 of 57:	Section 4.2
Page 21 of 57:	Section 5.1.1
Page 22 of 57:	Section 5.1.1.2
Page 23 of 57:	Section 5.1.2
Page 24 of 57:	Section 5.1.2.1
Page 25 of 57:	Section 5.1.2.3
Page 26 of 57:	Section 5.2.1
Page 27 of 57:	Section 5, Table 5-1
Page 28 of 57:	Section 7, Figure 7-3
Page 29 of 57:	Section 9.2.3

Page 30 of 57:	Section 11.2
Page 31 of 57:	Section 14.3.1
Page 32 of 57:	Section 14.3.7
Page 33 of 57:	Appendix A, Table
Page 34 of 57:	Appendix A, Table
Page 35 of 57:	Appendix A, Table
Page 36 of 57:	Appendix A, Table
Page 37 of 57:	Appendix A, Table
Page 38 of 57:	Appendix A, Table
Page 39 of 57:	Appendix A, Table
Page 40 of 57:	Appendix A, Table
Page 41 of 57:	Appendix A, Table
Page 42 of 57:	Appendix A, Table
Page 43 of 57:	Appendix A, Table
Page 44 of 57:	Appendix A, Table
Page 45 of 57:	Appendix A, Table
Page 46 of 57:	Appendix A, Table
Page 47 of 57:	Appendix A, Table
Page 48 of 57:	Appendix A, Table
Page 49 of 57:	Appendix A, Table
Page 50 of 57:	Appendix A, Table
Page 51 of 57:	Appendix A, Table
Page 52 of 57:	Appendix A, Table
Page 53 of 57:	Appendix A, Table
Page 54 of 57:	Appendix A, Table
Page 55 of 57:	Appendix A, Table
Page 56 of 57:	Appendix A, Table
Page 57 of 57:	Appendix C, Footnote

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

The title of DOE/RL-94-02 changed: Hanford Emergency ~~Response~~ Management Plan

RCRA Permit, Page 5 of 84, lines 13-14:

Attachment 4 Hanford Emergency ~~Response~~ Management Plan, DOE/RL-94-02, release 13, July 1, 1998, as amended

RCRA Permit, Page 22 of 84, lines 3-15:

II.A.1. The Permittees shall immediately carry out applicable provisions of the Hanford Emergency ~~Response~~ Management Plan as provided in Attachment 4, pursuant to WAC 173-303-360(2), whenever there is a release of dangerous waste, or dangerous waste constituents, or other emergency circumstance, either of which threatens human health or the environment.

II.A. 2. The Permittees shall comply with the requirements of WAC 173-303-350(4), as provided in The Hanford Emergency ~~Response~~ Management Plan (Attachment 4). The Hanford Emergency Emergency ~~Response~~ Management Plan provides reference to the need for unit-specific contingency documentation included in Part III of this Permit.

II.A.3. The Permittees shall review and amend, if necessary, the applicable portions of the Hanford Emergency ~~Response~~ Management Plan, as provided in Attachment 4, pursuant to WAC 173-303-350(5), and in accordance with the provisions of WAC 173-303-830(4). The Permittees shall be able to demonstrate how Amendments to the applicable portions are controlled. The plan shall be amended within a period of time agreed upon by Ecology.

II.A.4. The Permittees shall comply with the requirements of WAC 173-303-350(3) and -360(1) concerning the emergency coordinator, except the names and home telephone numbers will be on file with the single point-of-contact, phone number (509) 373-3800 or 375-2400 (for PNNL units) as described in the Hanford Emergency ~~Response~~ Management Plan.

II.B. PREPAREDNESS AND PREVENTION

II.B.1 The Permittees shall equip the Facility with the equipment specified in WAC 173-303-340(1) as specified in the Hanford Emergency ~~Response~~ Management Plan (Attachment 4). Unit-specific preparedness and prevention provisions are included in Parts III, V, and/or VI of this Permit.

II.B.2. The Permittees shall test and maintain the equipment specified in the previous Condition as necessary to assure proper operation in the event of emergency.

II.B.3. The Permittees shall maintain access to communications or alarms pursuant to WAC 173-303-340(2), as provided in the Hanford Emergency ~~Response~~ Management (Attachment 4) and unit-specific contingency plans.

RCRA Permit, Page 30 of 84, lines 37-39:

II.I.1.e. The Hanford Emergency ~~Response~~ Management Plan, as well as summary reports, and details of all incidents that require implementing the contingency plan, as specified in WAC 173-303-360(2)(k);

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/29/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Section 1.3.4:

1.3.3 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.

Since 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~~ incident, 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 ~~may~~ include shutting down systems, isolating materials, or ~~performing~~ other facility specific response actions when appropriate. ~~In addition, the~~ Facility procedures may ~~also~~ direct protective actions for personnel.

In other ~~cases events~~ resources outside the facility may be required. In these cases, the general response approach is outlined in Figure 1-2 and requires the discoverer to ~~notify~~ call the 911 ~~emergency number~~. Upon being contacted, the 911 ~~emergency center assesses the situation and~~ notifies the primary response agency – the Hanford Fire Department ~~or Hanford Patrol for security events~~ – ~~who~~ that responds and ~~establishes an Incident Command Post (ICP)~~ ~~initiates~~ implementation of the Hanford Incident Command System. ~~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 Hanford Incident Command System provides for coordination of all responders including the facility emergency response organization (i.e., Building Emergency Director, Building Warden, etc.). 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~~ Hanford Incident Command System 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 if determined necessary.

Whenever there is an event at Hanford, ~~depending upon the type and severity of the event~~, certain notifications are required ~~depending upon the type and severity of the event~~. 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, 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 an ~~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~~ the agencies to implement protective actions for their populations if necessary[1] and to begin mobilization of resources. In addition, preplanned protective actions are implemented for site personnel and the ~~RL~~ DOE Hanford EOC is activated to support the Incident Command Organization and 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~~ Actions could include activities such as equipment repair, decontamination, proper storage of waste generated, and providing any follow-up reporting to appropriate regulatory agencies.

Modification Class: [1,2,3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99	J. E. Rasmussen 10/6/99	S. Moore	L.E. Ruud
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Section 2.2:

2.2 EMERGENCY ~~DIRECTION AND CONTROL~~ RESPONSE ORGANIZATION STRUCTURE

Emergency response on the Hanford Site is ~~in accordance with the~~ modeled after the NFPA Incident Command System. ~~, which~~ As such, the Hanford Incident Command System 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.~~

The Hanford Site ERO has two distinct components – the Incident Command Organization and the DOE Hanford EOC – each with emergency direction and control responsibilities.

The Incident Command Organization consists of the Facility/Building Emergency Response Organization with responsibility for implementing emergency response activities at the event facility, and site contractor emergency response personnel (i.e., Hanford Fire Department, Hanford Patrol) with the responsibility for on-scene mitigation. 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) until arrival of the Hanford Fire Department IC or the Hanford Patrol IC for security events. Upon arrival of the Hanford Fire Department or Hanford Patrol IC, the Facility/Building Emergency Response Organization becomes part of a consolidated Incident Command Organization. The BED/BW shall retain responsibility for direct 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. If the BED/BW is not present 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 BED/BW ~~of BED/BW~~ listing 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.

The DOE Hanford EOC has the responsibility to monitor and provide support for the onsite response, assist with issue resolution, assess the offsite impacts, and interface with offsite agencies and the public.

Both components of the Hanford ERO are depicted on Figure 2-1 and further delineated in the respective subsections below.

~~In the event of a transportation incident occurring on the Hanford Site~~ For non-facility events (e.g., onsite transportation incidents, wildland fires), the IC shall be responsible for coordinating and performing the response activities. The EDO shall have the responsibility for further classifying the event (i.e., as an Alert, Site Area Emergency, or General Emergency) or determining if implementation of the contingency plan has occurred, if warranted. 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 Organization~~ 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.

Modification Class: [1,2,3]	Class 1	Class[1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1], 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1], if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Section 2.2.1.1.2(a), (d), and (f): Sections reformatted, text remained unchanged.

2.2.1.1.2 Nonhazardous Facilities. Nonhazardous facilities are defined as onsite facilities that can not generate 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 management for nonhazardous facilities shall assign BWs or BEDs (primary and alternates) who shall manage and control all aspects of the initial facility response and direct a Facility/Building Emergency Response Organization made up of individuals within the facility who will assist in the protection of personnel, the environment, and property. The BW/BED is responsible for emergency response at the event scene until arrival of the IC.

In addition, the building management, or designee, shall be responsible for:

- assigning and ensuring the training of the Facility/Building Emergency Response Organization as necessary to support the Hanford Fire Department as the RL/ORP-designated hazardous materials emergency response agency;
- maintaining the facility emergency response information boards and/or building emergency plans/procedures;
- maintaining applicable facility-specific emergency response procedures in accordance with subsection 14.3.1;
- ensuring that facility personnel are aware of hazards; and
- ensuring that facility personnel are trained to respond to emergencies.

Specific responsibilities of the BW/BED shall include, as applicable:

(a) determining when an event has occurred or a condition exists that requires response in accordance with applicable state and Federal regulations;
(b) activating internal facility alarms or communications systems, where applicable, to notify building occupants of protective actions to be taken;
(c) ensuring that a 911 telephone call is made when emergency assistance is required;
(d) reporting events or conditions in accordance with applicable state and Federal regulations;
(e) establishing an initial ICP and assigning other Incident Command Organization functions in accordance with established procedures to provide effective control at the event scene;
(f) 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 material;
- 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;
- monitoring for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, as appropriate; and

Modification Class: [1 2 3]	Class 1	Class[1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:		Reviewed by Ecology:	
W. D. Adair 9/23/99	Date	J. E. Rasmussen 10/6/99	Date	S. Moore	Date	L.E. Ruud	Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:

Section 2.2.1.1.3(a), (e), and (g): Sections reformatted, text remained unchanged.

Specific responsibilities of the BED shall include:

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

(b) 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;

(c) assessing the potential or actual onsite and offsite consequences of the emergency;

(d) contacting the POC, via the 911 emergency number, to implement predetermined onsite protective actions and provide initial emergency and classification information in accordance with established procedures;

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

(f) establishing an initial ICP and assigning other Incident Command Organization functions in accordance with established procedures to provide effective control at the event scene;

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

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:
Section 2.2.2.3.3:

2.2.2.3.3 Unified Dose Assessment Center. As part of the SMT, the primary Unified Dose Assessment Center [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~~ Consequence Assessment Director is responsible for all UDAC activities~~. In this role, the UDAC manager~~ and reports directly to the Site Emergency Director.

Modification Class: [1,2,3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:
A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: **List of Attachments**	Permit Part & Chapter: **Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:

Section 3.1:

3.1 OVERVIEW

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

- ~~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); and
- ~~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.

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:
Section 3.1.1:

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; and
- Development of public information programs.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:
A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:		Reviewed by Ecology:	
W. D. Adair	Date 9/23/99	J. E. Rasmussen	Date 10/6/99	S. Moore	Date	L.E. Ruud	Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Section 3.3.1:

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; and
- Department of Transportation.

~~The Washington State Hanford Emergency Response Plan~~ An emergency response plan is maintained by the Emergency Management Division ~~and~~ that describes the concept of operations, and roles and responsibilities of the 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, ORP;
- 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; and requesting Federal assistance, as required.

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:		Reviewed by Ecology:	
W. D. Adair	Date 9/23/99	J. E. Rasmussen	Date 10/6/99	S. Moore	Date	L.E. Ruud	Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Section 3.3.2:

3.3.2 The State of Oregon

The Governor of Oregon is responsible for directing and controlling state activities to protect the lives and property of Oregon citizens. The lead agency for Hanford Site emergency planning is the Oregon ~~Department~~ Office 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; and
- State Highway Division.

~~The Oregon State-Hanford Emergency Response Program for DOE facilities~~ An emergency response plan is maintained by the Oregon ~~DOE~~ Office of Energy ~~and~~ that 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/ORP;
- 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; and
- requesting Federal assistance, as required.

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:
Section 3.4:

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.

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:
A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:
Section 3.4.1.1:

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.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:
A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:
Section 3.4.1.2:

3.4.1.2 Fire and Emergency Medical. The Hanford Fire Department is signatory to the ~~Tri-Cities~~ Tri-County 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 service agencies to coordinate and share information.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:
A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:

Section 3.4.1.3:

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~~:~~. These hospitals include:

- Our Lady of Lourdes Health Care Center;
- Kennewick General Hospital; and
- 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.

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:		Reviewed by Ecology:	
William D. Adair	9/23/99	J E Rasmussen	10/6/99				
W. D. Adair	Date	J. E. Rasmussen	Date	S. Moore	Date	L.E. Ruud	Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:
Section 3.7:

3.7 MEMORANDA OF UNDERSTANDING

~~The~~ RL shall ~~enter into~~ develop and implement mutual assistance agreements with offsite ~~organizations~~ agencies 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 MOUs 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~~ CSO through their inclusion in ~~the *Hanford Emergency Response Plan* (see Appendix B)~~ Appendix B of this plan.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:
A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:

Section 3, Table 3-1:

Energy Northwest (formerly Washington Public Power Supply System)	Document areas of cooperation between the parties in the planning for and response to emergencies at the Hanford Site.	Energy Northwest (formerly Washington Public Power 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

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	***Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02***

Description of Modification:

Section 3, Table 3-1:

Energy Northwest (formerly Washington Public Power Supply System] and HEHF	Treatment of a significantly contaminated and injured person.	Energy Northwest (formerly Washington Public Power 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

Modification Class: [1 2 3]	Class 1	Class [1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1] 1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1] 1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	***Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02***

Description of Modification:

Section 3, Table 3-1:

~~Tri-Cities~~ Tri-County 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~~ Hanford Fire Department	Assistance under the agreement is not mandatory.	02/05/98	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~~ Hanford Fire Department

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:		Reviewed by Ecology:	
William D. Adair 9/23/99		J E Rasmussen 10/6/99					
W. D. Adair	Date	J. E. Rasmussen	Date	S. Moore	Date	L.E. Ruud	Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] *If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I,* then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Section 4.2:

~~4.2.1~~ 4.2 RESOURCE CONSERVATION AND RECOVERY ACT EMERGENCY ~~CLASSIFICATION~~

A RCRA emergency is defined as a release, fire, or explosion that could 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~~ make this determination 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~~ subsection 5.1.2.1 shall be performed. Notifications described in ~~section 6.1.1 of this plan~~ subsection 5.1.1 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 that 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.

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Section 5.1.1:

~~6.1.1~~ 5.1.1 Operational 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~~ For Operational Emergencies procedures shall be ~~developed~~ established and maintained to provide ~~timely notice~~ prompt initial notification to workers and ~~the~~ emergency response personnel and organizations, ~~site and facility workers, and~~ including appropriate 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.~~

For Operational Emergencies that also meet RCRA emergency criteria, personnel shall categorize the event in accordance with subsection 4.2 and perform notifications in accordance with subsection 5.1.2.

~~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.~~

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:
Section 5.1.1.2:

5.1.1.2 Hazardous Material Operational Emergency Notifications. ~~The following notifications~~ Hazardous Material Operational Emergency 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~~ Hazardous Material Operational Emergency notification process is outlined in ~~Figure 6-1~~ Figure 5-1.

Modification Class: [1 2 3]	Class 1	Class[1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:
A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:
Section 5.1.2:

5.1.2 Environmental Notifications

There are numerous environmental notifications that must be made~~,~~ including those required under the RCRA emergency category. These notifications are 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~~ classifiable emergency (i.e., Alert, Site Area Emergency, or General Emergency), contractors must ensure that environmental notification procedures are consistent with the environmental notification process depicted in ~~Figure 6.3~~ Figure 5-3.

Modification Class: [1 2 3]	Class 1	Class [1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:
A. General Permit Provisions
1. *Administrative* and Informational *changes.*

Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:		Reviewed by Ecology:	
W. D. Adair 9/23/09	Date	J. E. Rasmussen 10/6/09	Date	S. Moore	Date	L.E. Ruud	Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:
Section 5.1.2.1:

5.1.2.1 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~~ an Abnormal Event notifications ~~are~~ is also required as delineated in ~~section 6.1.3.1 of this plan~~ subsection 6.1.3.

Modification Class: [1 2 3]	Class 1	Class [1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:
A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
William D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1] 1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1] 1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:
Section 5.1.2.3:

5.1.2.3 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~~ subsection 9.2.2 before operations are resumed.

Modification Class: [1 2 3]	Class 1	Class [1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:
A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/09 Date	J. E. Rasmussen 10/6/09 Date	S. Moore Date	L.E. Ruud Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1] 1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1] 1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:
Section 5.2.1:

5.2.1 Telephone Number 911

The Hanford Site emergency 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.~~ The 911 emergency number shall be called when emergency conditions exist that requires responses from the Hanford Patrol or Hanford Fire (including ambulance or the Hazardous Materials Response Team), or whenever there is any doubt as to the conditions present.

Where cellular telephone is the only method of communication, onsite emergency response may be requested by calling the POC at 373-3800.

Modification Class:[1 2 3]	Class 1	Class[1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:
A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair Date 9/23/99	J. E. Rasmussen Date 10/6/99	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:
Section 5, Table 5-1:

Table 5-1. 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)~~ Take cover (shelter)	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.

Modification Class: [1 2 3]	Class 1	Class [1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:
A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1] 1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1] 1, if appropriate.

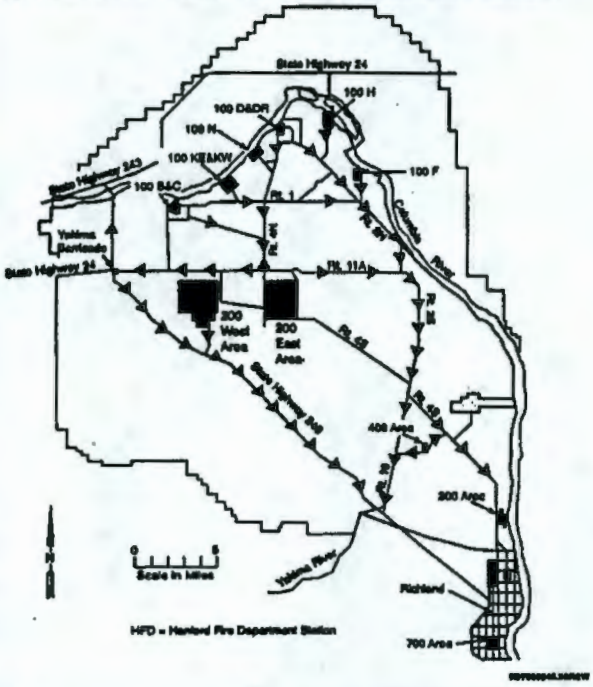
Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Section 7, Figure 7-3:

Figure ~~5-2~~ 7-3. Hanford Site Evacuation Routes.



Modification Class: [1 2 3]	Class 1	Class[1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:		Reviewed by Ecology:	
W. D. Adair	Date 9/29/99	J. E. Rasmussen	Date 10/6/99	S. Moore	Date	L.E. Ruud	Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Section 9.2.3:

~~8.2.3~~ 9.2.3 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~~ activities ~~are taken~~ shall be performed by trained site personnel. In order to meet 29 CFR 1910.120(q)(11) criteria, such personnel shall have completed the training requirements of 29 CFR 1910.38(a), 29 CFR 1910.134, 29 CFR 1910.1200, and other appropriate safety and health training made necessary by the tasks that they are expected to perform (e.g., personnel protective equipment, decontamination procedures). In addition, all equipment to be used in the performance of the clean-up work shall be in serviceable condition and shall have been inspected prior to use.

~~Actions that may be taken~~ Activities may 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.

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
William D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Section 11.2:

~~10.3~~ 11.2 EMERGENCY EQUIPMENT

Adequate personal protective equipment and other equipment and supplies ~~must~~ shall be available and operable to meet the needs determined by the results of the hazards assessment and 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;
- radiation control monitoring instrumentation;
- 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. RL/ORP 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 database, 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.

Modification Class: [1,2,3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
William D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Section 14.3.1:

~~13.3.1~~ 14.3.1 Review and Update of the Hanford Emergency ~~Response~~ Management Plan and U.S. Department of Energy Richland Operations Office/ Office of River Protection and Site Contractor Implementing Procedures

~~The *Hanford Emergency Response Plan*~~ This plan and ~~RL implementing procedures~~ the *Emergency Plan Implementing Procedures* (DOE-0223) will be reviewed annually by the RL/ORP and the appropriate response organizations and agencies. The RL QSH Division is responsible for the coordination of this review and any resulting actions. The RL QSH Division will identify specific changes deemed necessary and will ensure implementation of the revisions.

Revising and updating of ~~the *Hanford Emergency Response Plan*~~ this plan and/or ~~RL procedures~~ the *Emergency Plan Implementing Procedures* (DOE-0223) may be initiated at any time deemed necessary by the RL QSH Division. Changes and/or amendments shall be concurred upon by ORP and site contractors, approved by the RL/ORP Manager or his designee, and incorporated by the RL QSH Division.

~~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.~~ A controlled copy of the approved plan and the *Emergency Plan Implementing Procedures* (DOE-0223) shall be submitted to the DOE-HQ Director of Emergency Management, the CSO, and to the DOE-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.~~

Modification Class: [1 2 3]	Class 1	Class[1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:		Reviewed by Ecology:	
William D. Adair	9/23/99	J. E. Rasmussen	10/6/99				
W. D. Adair	Date	J. E. Rasmussen	Date	S. Moore	Date	L.E. Ruud	Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1] 1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1] 1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Section 14.3.7:

14.3.7 Plan Locations

Copies of this plan are maintained at:

- RL and ORP Emergency Preparedness program offices;
- each ~~occupied hazardous and occupied nonhazardous facility~~ contractor Emergency Preparedness office and other locations as specified by the respective contractor;
- Hanford Fire Department (area fire stations);
- Occurrence Notification Center;
- ~~RL~~ DOE Hanford Emergency Operations Center (primary and alternate); and
- the Patrol Operations Center.

Copies of the plan are also maintained at the following offsite agencies (per their request) to meet the WAC 173-303-350(4) requirement:

- 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.

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:		Reviewed by Ecology:	
W. D. Adair 9/23/99	Date	J. E. Rasmussen 10/6/99	Date	S. Moore	Date	L.E. Ruud	Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	***Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02***

Description of Modification:

Appendix A, Table:

WAC 173-303-340(1) (Permit requirement)	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).

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:

Appendix A, Table:

WAC 173-303-340(2) (Permit requirement)	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.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/29/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-340(4) (Permit requirement)	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).

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-350(3)(a) (Permit requirement)	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.~~ The site-level description of actions is addressed in this plan. Location-specific/activity-specific documentation utilizes ~~the~~ generic response ~~procedures~~ descriptions or creates more detailed ~~procedures~~ descriptions appropriate for the location.	Site-level: DOE/RL-94-02, section ~~1.2.3~~ 1.3.4. Unit-level: location-specific documentation.

Modification Class: [1 2 3]	Class 1	Class[1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] *This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.*

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-350(3)(b) (Permit requirement)	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 1-10A for offsite shipments received at Hanford.~~ The site-level description of actions is addressed in this plan. For TSD units that receive offsite waste shipments, location-specific documentation address these circumstances.	Site-level: DOE/RL-94-02, section ~~1.3.3~~ 1.3.4. Unit-level: location-specific documentation.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:		Reviewed by Ecology:	
W. D. Adair	Date 9/23/99	J. E. Rasmussen	Date 10/6/99	S. Moore	Date	L.E. Ruud	Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-350(3)(c) (Permit requirement)	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 contain this information. This requirement 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.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:

Appendix A, Table:

WAC 173-303-350(3)(d) (Permit requirement)	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/activity-specific documentation for 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.

Modification Class: [1 2 3]	Class 1	Class [1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:		Reviewed by RL Program Office:		Reviewed by Ecology:		Reviewed by Ecology:	
W. D. Adair	9/23/99 Date	J. E. Rasmussen	10/6/99 Date	S. Moore	Date	L.E. Ruud	Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1] 1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1] 1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:

Appendix A, Table:

WAC 173-303-350(3)(e) (Permit requirement)	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 for TSD units 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.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:

Appendix A, Table:

WAC 173-303-350(3)(f) (Permit requirement)	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~~ Table 5-1. 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 5-3~~ Figure 7-3. Location-specific evacuation routes will be provided in TSD units and 90-day accumulation area documentation. Evacuation routes for occupied buildings are provided through postings.	Site-level: DOE/RL-94-02, Figure ~~5-3~~ 7-3 and Table ~~6-1~~ 5-1. Unit-level: location-specific documentation.

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:

Appendix A, Table:

WAC 173-303-350(4) (Permit requirement)	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~~ 14.3.7.

Modification Class: [1 2 3]	Class 1	Class[1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/09 Date	J. E. Rasmussen 10/6/09 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-350(5) (Permit requirement)	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 ~~13.2.1~~ 13.3.1.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-355(1) (Permit requirement)	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.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:

Appendix A, Table:

WAC 173-303-360(1) (Permit requirement)	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 the Hanford Incident Command Structure and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, section ~~1.2.1~~ 1.3.1 and 2.2.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
William D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-360(2)(a) (Permit requirement)	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 the Hanford Incident Command System and staff with supporting on-call personnel ~~for additional location specific site wide alarms~~. Notification made to non-Hanford agencies with designated response roles agencies are accomplished via 911 telephones to request assistance (fire, ambulance, law enforcement).	Site-level: DOE/RL-94-02, sections ~~1.3.2~~ 13.3 and ~~6.2.1~~ 12.1.

Modification Class: [1 2 3]	Class 1	Class[1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
William D Adair 9/23/99	J E Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1] 1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1] 1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:

Appendix A, Table:

WAC 173-303-360(2)(b) (Permit requirement)	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.	Hanford Incident Command System and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, sections ~~2.2.1.2(j)~~ 2.2.1.2(f) and ~~2.2.1.3(f)~~ 2.2.1.3(g).

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
William D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:

Appendix A, Table:

WAC 173-303-360(2)(c) (Permit requirement)	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.	Hanford Incident Command System and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, section ~~4.2.1~~ 1.2.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-360(2)(d) (Permit requirement)	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).	Hanford Incident Command System and staff with supporting on-call personnel. ONC personnel notify local authorities if evacuation is advisable on behalf of the Hanford 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 Hanford Incident Command Structure. NRC is not called.	Site-level: DOE/RL-94-02, sections ~~2.2.1.2(f)&(i), 2.2.1.2(e)&(h), 6.1.1, 6.1.2, and 6.1.2.1~~ 2.2.1.2(a) & (d), 2.2.1.3(a) & (e), 5.1.1 & 5.1.2, 5.1.2, and 5.1.2.1.

Modification Class: [1 2 3] Please check one of the Classes:	Class 1	Class [1] 1	Class 2	Class 3
	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1] 1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1] 1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-360(2)(c) (Permit requirement)	Emergency procedures. (c) 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~~ 2.2.1.2(d), 2.2.1.3(c), 5.1.1, 5.1.1.2, and 5.1.2.1

Modification Class: [1,2,3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-360(2)(f) (Permit requirement)	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.	Hanford Incident Command System and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, sections ~~2.2.1.2(f) and 2.2.1.3(f)~~ 2.2.1.12(f) and 2.2.1.13(f).

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
William D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-360(2)(g) (Permit requirement)	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.	Hanford Incident Command System and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, sections ~~2.2.1.3(f) and 2.2.1.3(i)~~ 2.2.1.12(f) and 2.2.1.13(g).

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair Date 9/23/99	J. E. Rasmussen Date 10/6/99	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-360(2)(h) (Permit requirement)	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 ~~8.3.3~~ 9.2.3.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-360(2)(i) (Permit requirement)	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~~ 9.23. Site-level: (ii) DOE/RL-94-02, section ~~10.2~~ 112.

Modification Class: [1 2 3]	Class 1	Class [1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 4/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-360(2)(j) (Permit requirement)	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 ~~6.1.2.2~~ 5.1.2.3.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit: List of Attachments	Permit Part & Chapter: Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02

Description of Modification:

Appendix A, Table:

WAC 173-303-360(2)(k) (Permit requirement)	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~~ 3.1.2.2.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:

A. General Permit Provisions

1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99 Date	J. E. Rasmussen 10/6/99 Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
List of Attachments	**Attachment 4, Hanford Emergency Management Plan, DOE/RL-94-02**

Description of Modification:
Appendix C, Footnote:

*The Hanford Fire Department Chief has the authority to: 1) direct the placement of ~~Fire Department~~ equipment as needed to control emergency events~~,~~ and 2) ~~The Hanford Fire Department Chief also has the authority to~~ take proactive action and assign different vehicle locations based on conditions such as fuel moisture content, area fire history, work in progress, or other conditions that could arise.

Modification Class: [1 2 3]	Class 1	Class[1]1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation:
A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
W. D. Adair 9/23/99	J. E. Rasmussen 10/6/99		
W. D. Adair Date	J. E. Rasmussen Date	S. Moore Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit

Attachment 4
Hanford Emergency Management Plan, DOE/RL-94-02, Revision 2

Replacement

Index

DOE/RL-94-02, Revision 2

DOE/RL-94-02
Revision 2

Hanford Emergency Management Plan

Date Published
October 1999

Approved for Use and Application by:

Keith A. Klein
Manager, DOE
Richland Operations Office

Richard T. French
Manager, DOE
Office of River Protection

Prepared for the U.S. Department of Energy

United States
Department of Energy
P.O. Box 550
Richland, Washington 99352

Approved for Public Release

LEGAL DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, nor any of their contractors, subcontractors or their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or any third party's use or the results of such use of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof or its contractors or subcontractors. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

This report has been reproduced from the best available copy.
Available in paper copy and microfiche.

Available to the U.S. Department of Energy
and its contractors from
U.S. Department of Energy
Office of Scientific and Technical Information (OSTI)
P.O. Box 62
Oak Ridge, TN 37831
(615) 576-8401

Available to the public from the U.S. Department of Commerce
National Technical Information Service (NTIS)
5285 Port Royal Road
Springfield, VA 22161
(703) 487-4650

Printed in the United States of America

DISCLM-1.CHP (8-95)

CONTENTS

1.0 INTRODUCTION 1
1.1 PURPOSE 1
1.2 SCOPE 2
1.3 CONCEPT OF OPERATION 5
1.3.1 Hanford Site Emergency Management Program Elements 5
1.3.2 Hanford Site Emergency Management Program Basis 5
1.3.3 Hazards Survey and Hazards Assessment 7
1.3.4 Hanford Site Emergency Response 9
1.4 SITE DESCRIPTION 13
1.4.1 Overview Site Description 13
1.4.2 Physical Attributes of the Hanford Site 15

2.0 EMERGENCY RESPONSE ORGANIZATION (INTERNAL) 1
2.1 U.S. DEPARTMENT OF ENERGY, RICHLAND OPERATIONS OFFICE/ OFFICE OF RIVER PROTECTION AND HANFORD SITE CONTRACTOR ROLES AND RESPONSIBILITIES 1
2.1.1 Hanford Site Contractors 1
2.1.2 U.S. Department of Energy, Richland Operations Office/ Office of River Protection 4
2.2 EMERGENCY RESPONSE ORGANIZATION STRUCTURE 6
2.2.1 Incident Command Organization 7
2.2.2 U.S. Department of Energy, Hanford Emergency Operations Center 17

3.0 OFFSITE RESPONSE INTERFACES 1
3.1 OVERVIEW 1
3.1.1 Planning and Preparedness 1
3.1.2 Response and Recovery 1
3.2 FEDERAL AGENCIES 2
3.2.1 U.S. Department of Energy-Headquarters 2
3.2.2 Federal Bureau of Investigation 4
3.2.3 U.S. Coast Guard 4
3.2.4 U.S. Environmental Protection Agency 4
3.2.5 Federal Aviation Administration 4
3.2.6 Federal Emergency Management Agency 5
3.3 STATE GOVERNMENT 5
3.3.1 The State of Washington 5
3.3.2 The State of Oregon 6
3.4 LOCAL ORGANIZATIONS 7
3.4.1 Plume Emergency Planning Zone Counties 7
3.4.2 Ingestion Emergency Planning Zone Counties 9

CONTENTS (cont)

3.5 TRIBAL ORGANIZATIONS 9
3.6 PRIVATE ORGANIZATIONS 9
3.7 MEMORANDA OF UNDERSTANDING 10

4.0 EVENT CATEGORIZATION AND CLASSIFICATION 1
4.1 OPERATIONAL EMERGENCY 1
4.1.1 Base Program Operational Emergency 2
4.1.2 Hazardous Material Operational Emergency 2
4.2 RESOURCE CONSERVATION AND RECOVERY ACT EMERGENCY 4
4.3 ABNORMAL EVENT 5
4.4 EMERGENCY ACTION LEVELS 5
4.4.1 Symptom-Based Emergency Action Levels 6
4.4.2 Event-Based Emergency Action Levels 6
4.4.3 Emergency Action Level Development 7
4.4.4 Use of Emergency Action Levels 7

5.0 NOTIFICATIONS AND COMMUNICATIONS 1
5.1 NOTIFICATIONS 1
5.1.1 Operational Emergency Notifications 1
5.1.2 Environmental Notifications 4
5.1.3 Abnormal Event Notifications 7
5.2 COMMUNICATIONS 7
5.2.1 Telephone Number 911 9
5.2.2 Telephone Number 373-3800 9
5.2.3 Telephone Number 376-2900 9
5.2.4 Site Contractor Environmental Single Point-Of-Contact 9
5.2.5 Onsite Crash Alarm Telephone System 9
5.2.6 Emergency Notification System 10
5.2.7 Priority Message System 10
5.2.8 Radios 10
5.2.9 Incident Command Post Communications 10
5.2.10 U.S. Department of Energy, Hanford Emergency Operations Center Communications 11
5.2.11 Secure Communications 11
5.2.12 Emergency Signals 12

6.0 CONSEQUENCE ASSESSMENT 1
6.1 CONSEQUENCE DETERMINATION 1
6.1.1 Meteorological Monitoring 1
6.1.2 Water/Groundwater Monitoring 1
6.1.3 Event Scene Consequence Assessments 2
6.1.4 Area Consequence Assessments 2
6.2 COORDINATION OF CONSEQUENCE ASSESSMENT RESULTS 2

CONTENTS (cont)

7.0 PROTECTIVE ACTIONS AND REENTRY 1
7.1 EMERGENCY PLANNING ZONES 1
7.1.1 Plume Exposure Pathway Emergency Planning Zones 1
7.1.2 Ingestion Exposure Pathway Emergency Planning Zone 2
7.2 PROTECTIVE ACTIONS 5
7.2.1 Protective Action Guides 5
7.2.2 Emergency Response Planning Guidelines for Non-radiological Releases 6
7.2.3 Onsite Protective Actions 7
7.2.4 Offsite Protective Actions 10
7.2.5 Protective Equipment and Supplies 10
7.3 REENTRY 11
7.3.1 Reentry Exposure Considerations 11
7.3.2 Termination of Protective Actions 12

8.0 EMERGENCY MEDICAL SUPPORT 1
8.1 EMERGENCY MEDICAL RESPONSIBILITIES 1
8.1.1 Hanford Fire Department 1
8.1.2 Hanford Environmental Health Foundation 2
8.1.3 Hanford Patrol 3
8.1.4 Hanford Internal and External Dosimetry and Whole Body Counting Programs 3
8.1.5 Other Hanford Site Contractors 3
8.1.6 Local Hospitals 3
8.2 MEDICAL EMERGENCY FACILITIES AND EQUIPMENT 4
8.2.1 Health Care Centers 4
8.2.2 Emergency Decontamination Facility 4
8.2.3 Site Decontamination Equipment 4
8.2.4 Medical Emergency Equipment 4
8.2.5 Medical Emergency Transportation 5
8.2.6 Offsite Medical Facilities 5
8.3 MEDICAL EMERGENCY COMMUNICATIONS 5

9.0 EMERGENCY TERMINATION AND RECOVERY 1
9.1 TERMINATION OF THE EMERGENCY 1
9.2 RECOVERY PLANNING 1
9.2.1 Planning and Operations for Onsite Recovery 2
9.2.2 Planning and Operations for Offsite Recovery 4
9.2.3 Incompatible Waste 5

10.0 PUBLIC INFORMATION 1
10.1 EMERGENCY PUBLIC INFORMATION PROGRAM 1
10.2 EMERGENCY PUBLIC INFORMATION ORGANIZATION 2
10.2.1 Policy Team 2
10.2.2 Joint Information Center 3

CONTENTS (cont)

10.3 PUBLIC EDUCATION 6
10.3.1 Plume Emergency Planning Zone Public Education 6
10.3.2 Ingestion Emergency Planning Zone Public Education 7

11.0 EMERGENCY FACILITIES AND EQUIPMENT 1
11.1 EMERGENCY FACILITIES 1
11.1.1 U.S. Department of Energy, Hanford Emergency Operations Center 1
11.1.2 Hanford Patrol Operations Center 3
11.1.3 Occurrence Notification Center 3
11.1.4 Medical Emergency Facilities 4
11.1.5 Protective Clothing Cleaning 4
11.1.6 State and County Emergency Operations Centers 4
11.2 EMERGENCY EQUIPMENT 5
11.2.1 Assessment Equipment 6
11.2.2 Fire Control Equipment 7
11.2.3 Personal Protective Equipment 7
11.2.4 Spill Control and Contamination Supplies 7
11.2.5 Decontamination Operation Equipment 7
11.2.6 Evacuation Vehicles 8
11.2.7 Hanford Patrol 8
11.2.8 Hanford Fire Department 8
11.3 MAINTENANCE AND TESTING OF ALARM AND COMMUNICATION SYSTEMS 8
11.4 INVENTORY OF EMERGENCY EQUIPMENT 9

12.0 TRAINING AND DRILLS 1
12.1 GENERAL TRAINING REQUIREMENTS 1
12.1.1 General Employee Training 1
12.2 HANFORD EMERGENCY RESPONSE ORGANIZATION TRAINING REQUIREMENTS 1
12.2.1 U.S. Department of Energy, Hanford Emergency Operations Center Staff Training 2
12.2.2 Incident Command Organization Training 2
12.3 TRAINING PROGRAM EVALUATION 4
12.4 EMERGENCY PREPAREDNESS COURSES 4
12.5 RECORD KEEPING 4
12.6 VISITORS/VENDORS/SUBCONTRACTORS/CONSULTANTS/ REGULATORY AGENCY PERSONNEL 5
12.7 OFFSITE TRAINING SUPPORT 6
12.8 OFFSITE PERSONNEL TRAINING 6
12.9 INSTRUCTOR TRAINING AND QUALIFICATION 6

CONTENTS (cont)

12.10 DRILLS 6
12.10.1 Drill Definitions 7
12.10.2 Drill Development and Conduct 8
12.10.3 Emergency Preparedness and Functional Drill Evaluation 9

13.0 EXERCISES 1
13.1 EXERCISE PROGRAM 1
13.2 EXERCISE DEFINITIONS 2
13.2.1 Limited Exercise 2
13.2.2 Tabletop Exercise 2
13.2.3 Field Exercise 2
13.3 EXERCISE DEVELOPMENT AND CONDUCT 3
13.4 EXERCISE EVALUATION AND CORRECTIVE ACTION 3
13.5 OFFSITE COORDINATION 4

14.0 PROGRAM ADMINISTRATION 1
14.1 EMERGENCY MANAGEMENT PROGRAM ADMINISTRATOR 1
14.1.1 Emergency Management Functions at the U.S. Department of Energy, Richland Operations Office 1
14.2 EMERGENCY READINESS ASSURANCE PROGRAM 3
14.2.1 Hanford Emergency Readiness Assurance Plan 3
14.2.2 Emergency Readiness Assurance Assessments/Appraisals 3
14.2.3 Lessons Learned 4
14.3 DOCUMENT CONTROL 4
14.3.1 Review and Update of the Hanford Emergency Management Plan and U.S. Department of Energy, Richland Operations Office/Office of River Protection and Site Contractor Implementing Procedures 4
14.3.2 Review of Agreements 5
14.3.3 Classified Information 5
14.3.4 Supporting Documents 5
14.3.5 Vital Records 6
14.3.6 Emergency Records 6
14.3.7 Plan Locations 7

15.0 REFERENCES 1

APPENDICES

A DOCUMENTATION CROSSWALK MATRIX 1
B MEMORANDA OF UNDERSTANDING 1
C HANFORD FIRE DEPARTMENT EQUIPMENT LIST 1

LIST OF FIGURES

1-1 Emergency Preparedness Documentation Hierarchy 3
1-2 Emergency Response 11
1-3 Transportation Emergency Response 12
1-4 Hanford Site Map 18
1-5 Ingestion Exposure Emergency Planning Zone 19
2-1 Hanford Site Emergency Response Organization 9
3-1 Lines of Communication Between Emergency Centers 3
5-1 Hazardous Material Operational Emergency Notifications 5
5-2 RL Emergency Notification Form 6
5-3 Environmental Notifications 8
7-1 Plume Exposure Emergency Planning Zones 3
7-2 Ingestion Exposure Emergency Planning Zone 4
7-3 Hanford Site Evacuation Routes 13
8-1 Medical Emergency Response Communications 6
11-1 Hanford Site Emergency Centers and Fire Stations 2

LIST OF TABLES

2-1 Incident Command Organization Functions 10
3-1 Memorandums of Understanding 11
4-1 Summary of Hazardous Material Operational Emergency Classifications 8
4-2 Hanford Site Hazardous Material Operational Emergency Classification Criteria 8
5-1 Standard Emergency Signals 12
7-1 Hanford Site Area Plume Emergency Planning Zones 2
12-1 Emergency Preparedness Training Courses 5
13-1 Exercise Frequency 4

ACRONYMS/ABBREVIATIONS

AIHA	American Industrial Hygienists Association
BED	Building Emergency Director
BHI	Bechtel Hanford, Inc.
BW	Building Warden
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CPR	cardiopulmonary resuscitation
CSO	Cognizant Secretarial Officer
DOE	U.S. Department of Energy
DOE-HQ	U.S. Department of Energy, Headquarters
DOT	U.S. Department of Transportation
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
ERC	Environmental Restoration Contract
ERDF	Environmental Restoration Disposal Facility
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
MOU	memoranda of understanding
NFPA	National Fire Protection Association
ONC	Occurrence Notification Center
ORP	U.S. Department of Energy, Office of River Protection
OSHA	Occupational Safety and Health Administration

ACRONYMS/ABBREVIATIONS (cont)

PAG	Protective Action Guideline
PAR	protective action recommendation
PCB	Polychlorinated biphenyl
PHMC	Project Hanford Management Contract
PNNL	Pacific Northwest National Laboratory
POC	Patrol Operations Center
QSH	Quality, Safety, and Health Program Division
RAP	Radiological Assistance Program
RCRA	Resource Conservation and Recovery Act
RL	U.S. Department of Energy, Richland Operations Office
SARA	Superfund Amendment and Reauthorization Act of 1986
SAS	Safeguards and Security
SCAPA	Subcommittee on Consequence Assessment and Protective Actions
SCBA	self-contained breathing apparatus
SMT	Site Management Team
SRG	Scenario Review Group
TEDE	total effective dose equivalent
TEEL	Temporary Emergency Exposure Limit
TEP	Transportation Emergency Preparedness
TSD	treatment, storage, and disposal
UDAC	Unified Dose Assessment Center
USCG	U.S. Coast Guard
WAC	Washington Administrative Code
WNP-2	Washington Nuclear Project 2

1.0 INTRODUCTION

1.1 PURPOSE

The *Hanford Emergency Management Plan* for the U.S. Department of Energy (DOE), Richland Operations Office (RL) and Office of River Protection (ORP), 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 as well as Federal and state 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 revision of the plan recognizes the establishment of the ORP responsible for managing the River Protection Project (formerly called Tank Waste Remediation System), including those portions under privatization contracts, of the DOE at Hanford. The plan further assumes that ORP will retain the emergency management program requirements within the framework of the existing Hanford Emergency Response Organization (ERO). As more details of the interface between RL and ORP are defined and documented, this plan will be modified accordingly.

This plan provides a description of how the Hanford Site will implement the provisions of DOE O 151.1 and other applicable Orders in terms of overall policies and concept of operations. The plan should be used as the basis, along with DOE Orders, for the development of specific RL/ORP and site contractor implementing procedures.

Additionally, portions of this plan, together with Hanford Site location/activity-specific documentation established to meet contingency plan requirements, meet the Washington Administrative Code (WAC) 173-303 requirements for the Hanford Site contingency plan. Many documents comprise the Hanford Site 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 treatment, storage, and disposal (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. Contingency plan requirements from WAC 173-303-350 met in this plan are identified in the crosswalk matrix in Appendix A.

This plan, together with each Polychlorinated biphenyl (PCB) temporary accumulation area location/activity-specific documentation, also meets the requirements for a Spill Prevention Countermeasures and Control (SPCC) Plan and the notifications required by 40 CFR 761.

1.2 SCOPE

Event response is governed by an emergency preparedness documentation hierarchy that is 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). The crosswalk contained in Appendix A illustrates which portions of this plan address the specified requirements.

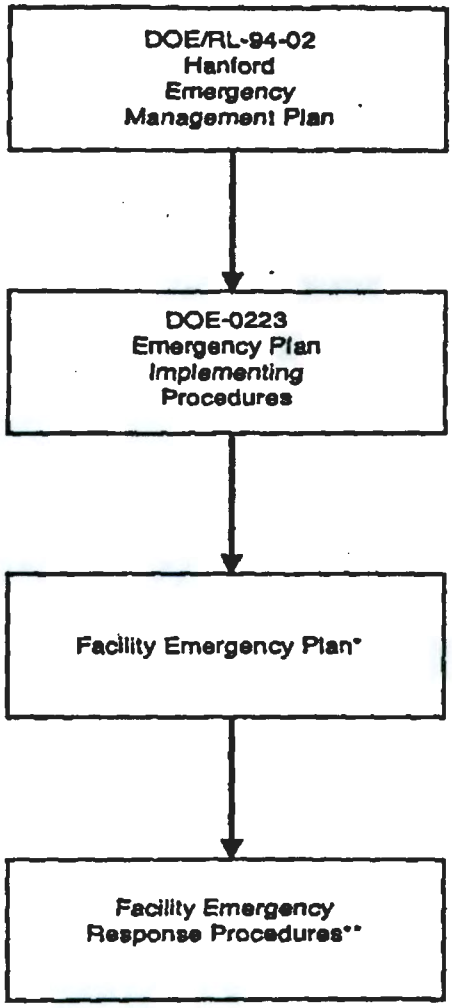
This plan describes the overall emergency organization, authorities, and responsibilities for response to and mitigation of emergency events involving facilities and activities on the Hanford Site. These events include the full spectrum of operational emergencies, natural phenomena, transportation events, and safeguard and security emergencies. This 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.

RL/ORP and each site contractor shall develop and maintain procedures or other documents necessary to implement the emergency management program described in this plan. Procedures 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 appropriate action during a drill, exercise, or actual emergency.

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

- RL/ORP site-wide emergency procedures used by RL/ORP and site contractors that delineate:
  - the operation of the Hanford Incident Command System and responsibilities of the Incident Command Organization;
  - the responsibilities for the DOE Hanford Emergency Operations Center (EOC), which includes the Policy Team, Site Management Team (SMT), and the Joint Information Center (JIC);
  - recognition, categorization/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 site not covered by TSD unit-specific contingency plans or building emergency plans;

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, the plan and procedures are integrated.

H98040022.3R2

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/ORP-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/ORP 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 buildings, facilities, and structures defined as a nuclear or reactor facility, regulated by the Washington State Department of Ecology (Ecology) Dangerous Waste Regulations, or 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, this 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 DOE/RL-92-49, *U.S. Department of Energy Radiological Assistance Program Plan and Procedure Region 8* (DOE/RL 1992).

1.3 CONCEPT OF OPERATION

An integrated and comprehensive Hanford Site emergency management program has been developed to ensure that:

- the site can respond effectively and efficiently to emergencies so that appropriate response measures are taken to protect workers, the public, the environment, and the national security;
- emergencies are promptly recognized and classified, and parameters associated with the emergency are monitored to detect changed or degraded conditions;
- emergencies are reported and notifications are made; and
- reentry activities are properly and safely accomplished, and recovery and post-emergency activities commence properly.

1.3.1 Hanford Site Emergency Management Program Elements

There are five elements of the Hanford Site emergency management program. These elements are:

- emergency **planning** which includes identification of hazards and threats, hazard mitigation, development and preparation of emergency plans and procedures, and identification of personnel and resources needed for an effective response;
- emergency **preparedness** which includes acquisition and maintenance of resources, training, drills, and exercises;
- emergency **response** which includes the application of resources to mitigate consequences to workers, the public, the environment, and the national security, and the initiation of recovery from an emergency;
- **recovery** which includes planning for and taking actions following termination of the emergency to return the facility/operations to normal; and
- **readiness assurance** which includes assessments and documentation to ensure that stated emergency capabilities are sufficient to implement emergency plans.

1.3.2 Hanford Site Emergency Management Program Basis

The comprehensive Hanford Site emergency management program is based on and commensurate with the hazards and consequences associated with facilities and activities on the site (i.e., developed consistent with a graded approach), offsite facilities that may impact the site,

and onsite and offsite RL/ORP transportation emergency preparedness (TEP) activities involving radiological and nonradiological hazardous materials.

1.3.2.1 Operational Emergency Base Program. Each site facility shall have an Operational Emergency Base Program that provides the framework for response to serious events involving health and safety, the environment, safeguards, and security. These events are not unique to DOE operations.

The Operational Emergency Base Program shall provide for compliance with applicable regulations and plans developed by other Federal agencies and DOE offices, and with those state and local planning and preparedness requirements that apply.

Additionally, the Operational Emergency Base Program shall provide for integrated planning to meet the response requirements identified in the hazards survey. Hazards surveys are discussed further in subsection 1.3.3.1.

1.3.2.2 Operational Emergency Hazardous Material Program. The Operational Emergency Hazardous Material Program adds to the Operational Emergency Base Program. Depending on the findings of the hazards survey, site facilities may be required to establish and maintain a quantitative hazards assessment. The hazards assessment will be used to define the provisions of the Operational Emergency Hazardous Material Program to ensure the program is commensurate with the hazards identified. Such hazard assessments are required if the hazard survey identifies hazardous materials in quantities exceeding the lower of the Threshold Quantities listed in 29 CFR 1910.119 or 40 CFR 68.130; Threshold Planning Quantities, listed in 40 CFR 355; or quantities listed in 10 CFR 30.72 for radionuclides. The results of this assessment provide the technical basis for establishing a graded approach that will meet the program requirements.

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. Hazards assessments are discussed further in subsection 1.3.3.2.

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 further in the respective subsections of section 4.0. For each emergency class there shall be predetermined protective actions necessary to protect onsite personnel as well as recommended actions for the protection of offsite populations.

The Hanford Site ERO shall be formed, trained, and tested to ensure the recognition and classification of emergencies, and the implementation of protective actions. Recognition and classification of emergencies and protective action implementation is described further in subsequent sections of this plan.

1.3.2.3 Hanford Transportation Emergency Preparedness Program. The Hanford Transportation Emergency Preparedness Program provides the framework for response to onsite and offsite transportation incidents involving radiological and nonradiological hazardous material.

For transportation planning purposes, shipments transported on roadways north of the site's Wye Barricade are exempt from the U.S. Department of Transportation (DOT) regulations found in 49 CFR. Shipments transported south of the Wye Barricade are considered "in commerce" and shall be regulated under the DOT regulation in 49 CFR, unless public access control is extended south of the Wye Barricade (but not beyond the site boundary) for special case shipments.

For transportation incidents that occur on the site, the Incident Command System is used to mitigate the situation. Upon notification of the event by the Patrol Operations Center (POC), the Hanford Fire Department shall assume incident command responsibilities. The Emergency Duty Officer (EDO) shall have the responsibility for event classification and activation of the Hanford ERO as appropriate.

For transportation incidents involving DOE-owned hazardous materials that occur off the site, the POC shall initially provide information to first responders on a 24-hour basis in accordance with DOT 49 CFR requirements. In addition, the POC will then connect the caller directly with the Transportation On-Call Representative and the EDO who will provide more detailed information regarding the shipment and follow on response assistance as appropriate.

Figure 1-3 outlines the response approach to a transportation emergency.

1.3.3 Hazards Survey and Hazards Assessment

Hazards surveys and hazards assessments are used for emergency planning purposes. DOE O 151.1 requires that emergency management efforts begin with the identification of hazards and that the scope and extent of emergency planning and preparedness be commensurate with the hazards. The hazards survey briefly describes the potential impacts of emergency events or conditions and summarizes the planning and preparedness requirements that apply. The hazards assessment includes the identification and characterization of hazardous materials (radiological and nonradiological) specific to a facility or activity, analyses of potential accidents or events, and evaluation of potential consequences.

1.3.3.1 Hazards Survey Process. A hazards survey (i.e., qualitative examination) shall be prepared to identify the conditions to be addressed by the comprehensive emergency management program. Much of the facility hazards survey should already have been done in the course of meeting other DOE, Federal, and state agency requirements.

The hazards survey shall:

- identify and describe each facility or activity;

- identify (e.g., in matrix or tabular form) the emergency conditions (e.g., fires, work place accidents, natural phenomena, etc.);
- describe the potential health, safety, or environmental impacts related to specific and surrounding facilities; and
- summarize the planning and preparedness requirements that apply.

Each hazards survey shall combine as many facilities as possible that are subject to the same types of hazards and shall be updated whenever operations warrant a change, but no less than every three years.

Additional information/guidance to assist in the preparation of hazards surveys is delineated in the applicable section of the DOE *Emergency Management Guide* (DOE 1997).

1.3.3.2 Hazards Assessment Process. The release or loss of control of hazardous materials (radiological and nonradiological) shall be quantitatively analyzed. If the results of the analysis indicate the potential for an Alert, Site Area Emergency, or General Emergency, the results of the analysis shall be used to determine the necessary personnel, resources, and equipment for the Hazardous Materials Operational Emergency Program. If the hazards assessment indicates that all events would be classified as less than an Alert, the minimum program requirements shall encompass the requirements for Hazardous Waste Operations and Emergency Response found in 29 CFR 1910.120 and the Base Program Operational Emergency requirements specified in this plan.

Each facility with significant quantities of hazardous materials (radiological and nonradiological) shall develop and maintain a quantitative hazards assessment and meet more detailed emergency planning requirements. Hazardous materials are any solid, liquid, or gaseous material that is toxic, flammable, radioactive, corrosive, chemically reactive or unstable upon prolonged storage in quantities that could pose a threat to life, property, or the environment.

While not every conceivable situation will be analyzed, the hazards assessments will provide the framework for response planning to virtually any declared emergency. Assumptions, methodology, models, and evaluation techniques used in the hazards assessment shall be documented.

The hazards assessment shall be reviewed at least annually and updated to delineate significant changes to the facility or hazardous material inventories, and be maintained in accordance with site contractor document control requirements.

In addition, the hazards assessment shall include a determination of the size of the emergency planning zone (EPZ). The EPZ is the geographic area surrounding the site/facility for which special planning and preparedness actions are taken or need to be taken to reduce or minimize the impact to onsite personnel and public health and safety in the event of a Hazardous Material Operational Emergency.

1.3.3.2.1 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 safety analysis reports 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 safety analysis reports, 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.

Additional information/guidance to assist in the development of hazards assessments is delineated in the applicable section of the DOE *Emergency Management Guide* (DOE 1997).

1.3.4 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.

Since 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 incident, 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 may include shutting down systems, isolating materials, or performing other facility specific response actions when appropriate. Facility procedures may also direct protective actions for personnel.

In other events, resources outside the facility may be required. In these cases, the general response approach is outlined in Figure 1-2 and requires the discoverer to call the 911 emergency number. Upon being contacted, the 911 emergency center assesses the situation and notifies the primary response agency – the Hanford Fire Department or Hanford Patrol for security events – that responds and ensures implementation of the Hanford Incident Command System. The Hanford Incident Command System provides for coordination of all responders including the facility emergency response organization (i.e., Building Emergency Director, Building Warden, etc.). 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 Hanford Incident Command System is established, a coordinated effort to plan and implement additional mitigative activities commences. In addition, the consequences of the event are further analyzed and additional protective actions are implemented through the use of emergency signals, crash alarm telephone systems, and barricades if determined necessary.

Whenever there is an event at Hanford, certain notifications are required depending upon the type and severity of the event. 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, 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 an Alert, Site Area Emergency, or General Emergency, state and county agencies are notified within 15 minutes of declaration of the emergency. This notification allows the agencies 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 DOE Hanford EOC is activated to support the Incident Command Organization and coordinate interface with offsite agencies.

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. Actions could include activities such as equipment repair, decontamination, proper storage of waste generated, and providing any follow-up reporting to appropriate regulatory agencies.

Figure 1-2. Emergency Response.

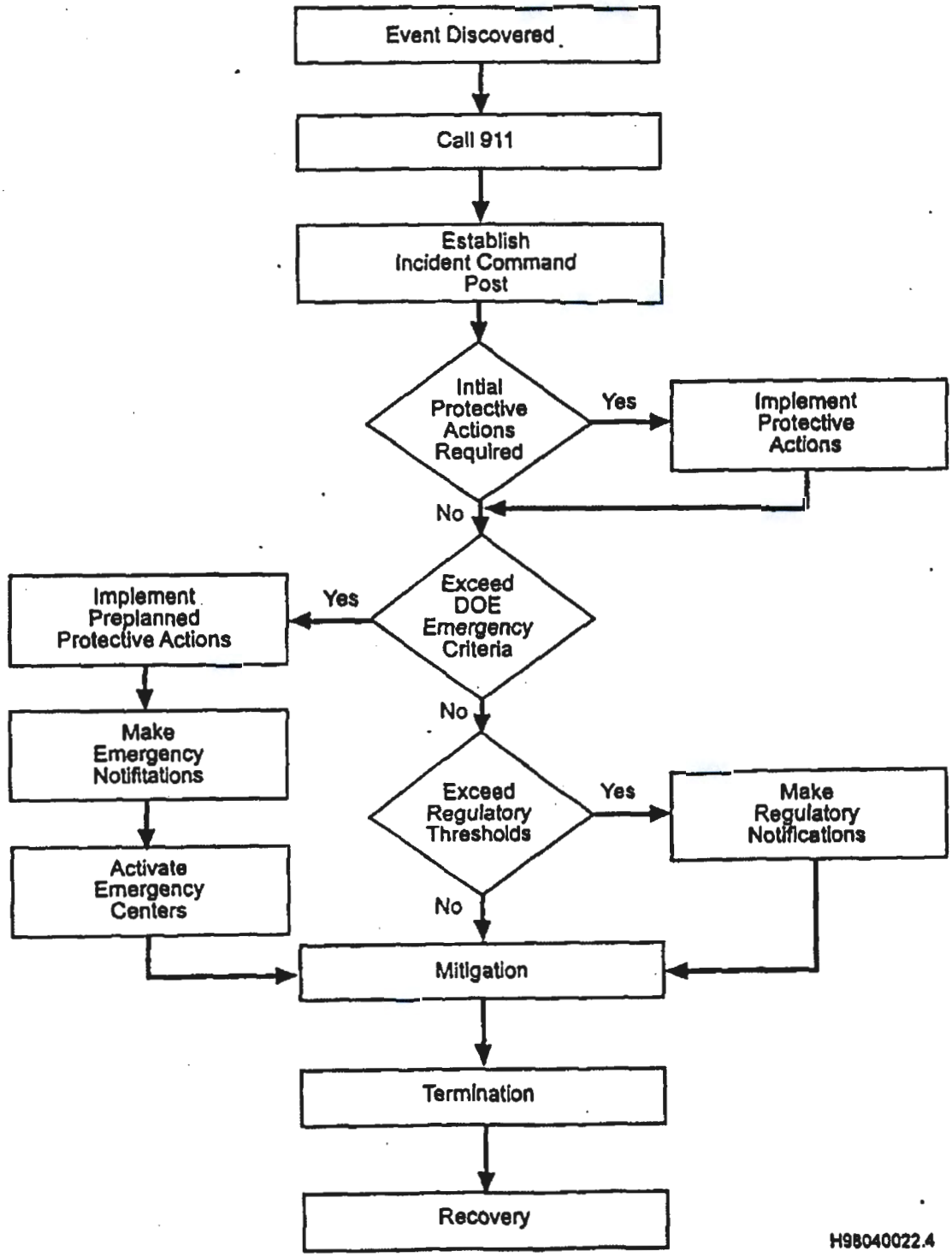
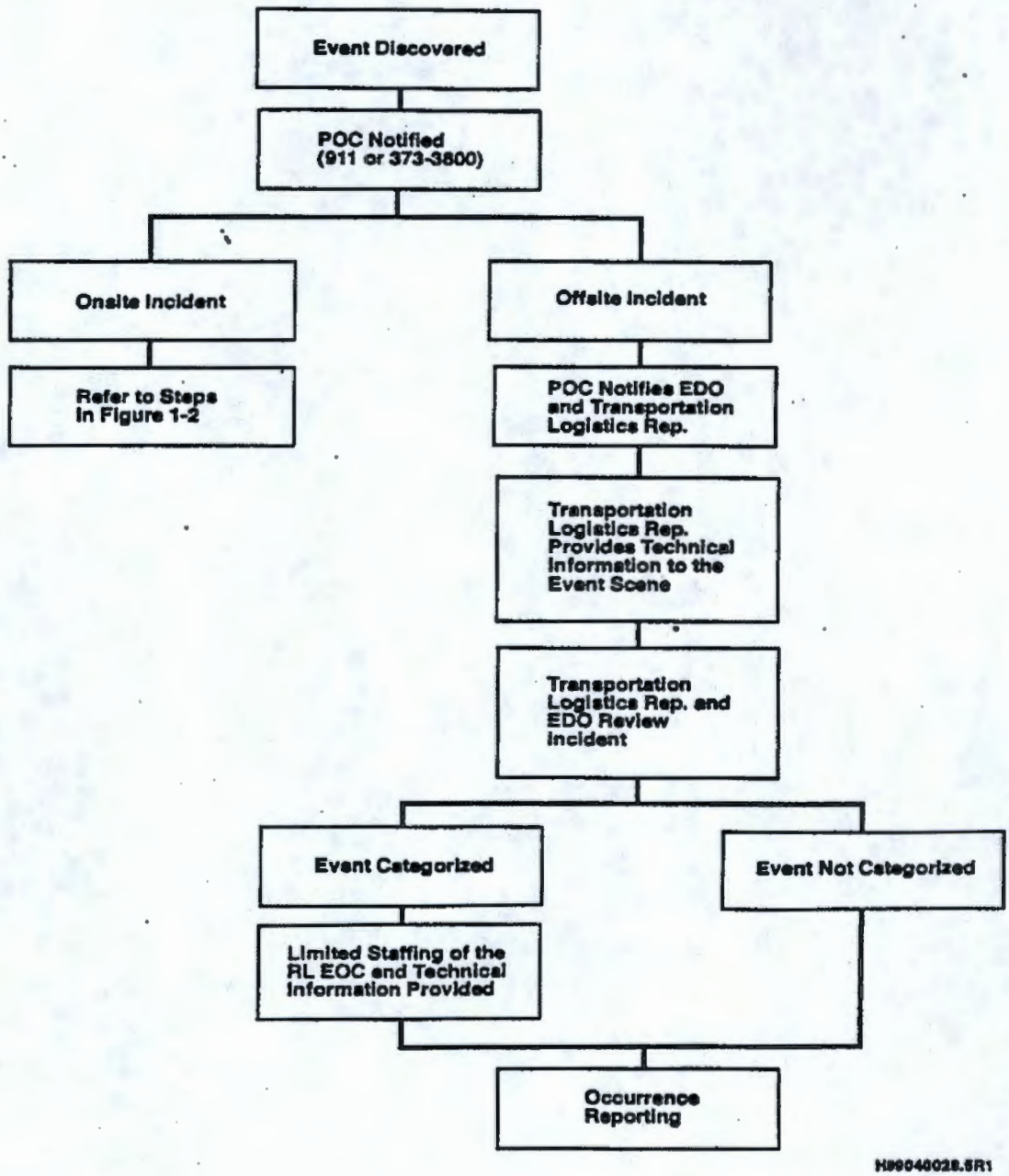


Figure 1-3. Transportation Emergency Response.



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.

Hanford Site contractors operate/manage facilities and provide site services for RL/ORP. 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 1,500 buildings (occupied and unoccupied) on the site with an infrastructure of utilities and transportation necessary to support an operation employing approximately 10,000 workers.

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 Energy Northwest, 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: These areas are located along the Columbia River in the northern portion of the Hanford Site and contain nine former plutonium production reactors. The facilities in the 100 Areas are currently being prepared for permanent disposal.

- 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, and are dedicated to waste management activities, laboratory support, waste characterization, and environmental restoration.

- 300 Area: This area is approximately 8 kilometers (5 miles) north of Richland, Washington. Major activities include nuclear research and development.

- 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.

- 600 Area: This 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, the Environmental Restoration Disposal Facility (ERDF), a U.S. Fish and Wildlife Refuge, and a recreational game site leased to the Washington State Department of Game.

The site also contains several major and minor operations that are not owned and/or operated by RL/ORP and its site contractors. The major operations include the following.

- A publicly owned commercial nuclear power plant, Washington Nuclear Power Plant No. 2 (WNP-2), operated by Energy Northwest on land 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), located in the northern part of the 600 Area.

RL/ORP and its site contractors also lease site-related office and warehouse facilities off the Hanford Site in the city of Richland. These facilities can not generate an Alert 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, sodium, fuming acids, and others.

For purposes of emergency planning, facilities on the Hanford Site are described as 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 are 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 emergency preparedness purposes, 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 1-4). 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 worst-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 ridges, Gable Butte and Gable Mountain, rise above the plateau on 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 wildland 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.

1.4.2.1 Population. The permanent population within the 50-mile (80-kilometer) site ingestion exposure EPZ, which is centered on WNP-2, is approximately 270,000 (Figure 1-5). 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: A small portion of the Columbia River at the near bank of the site boundary. 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.

Plume and ingestion EPZs are discussed further in subsection 7.1. Figure 7-1 depicts the EPZs for each site geographical areas with potential offsite consequences.

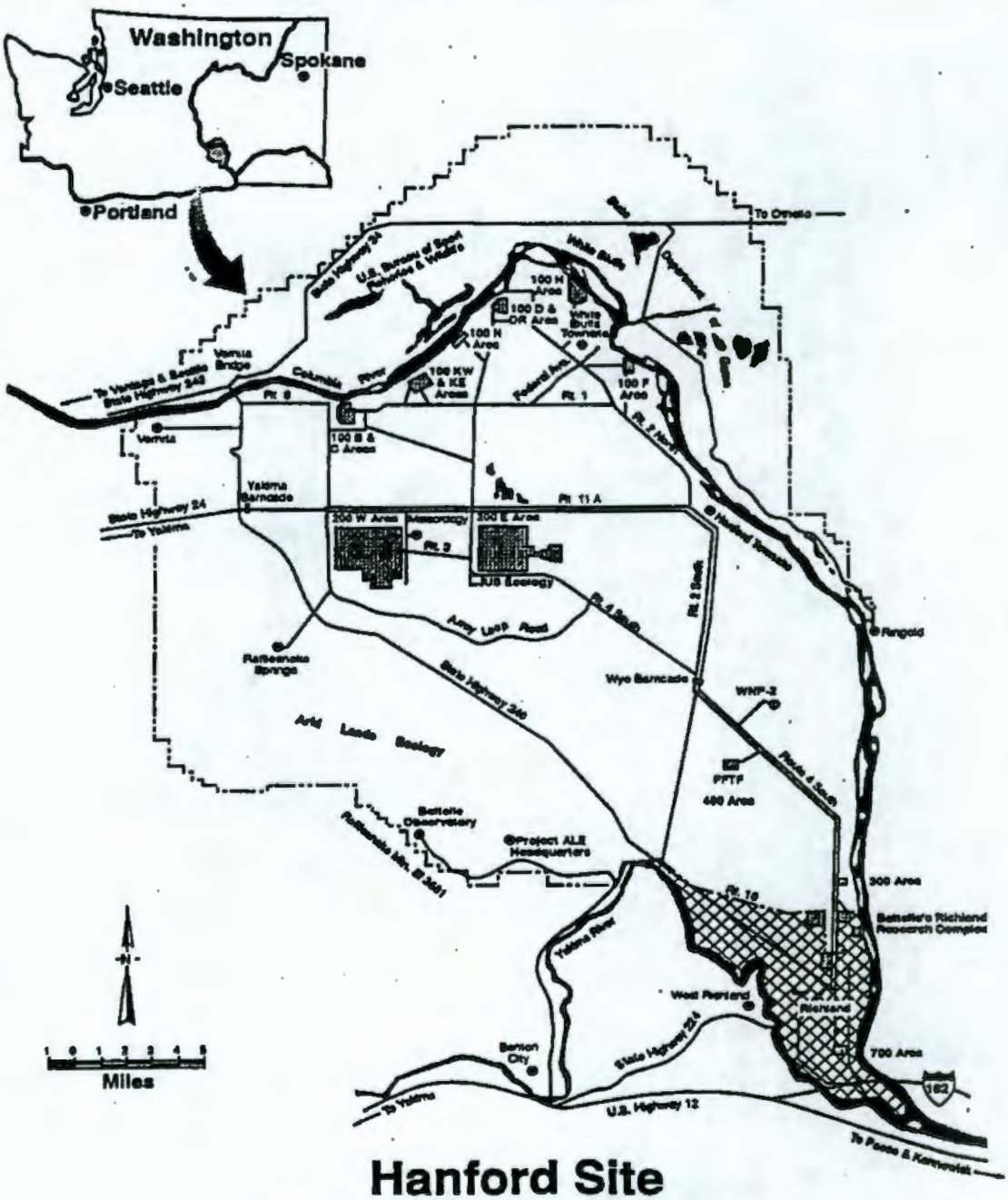
1.4.2.2 Transportation System. Hundreds of miles of roads are maintained on the Hanford Site. State Routes 240 and 24 and site roads are used by many types of vehicles including commercial trucks and private vehicles.

A 26-kilometer (16-mile) stretch of the southern portion of the site's 169-kilometer (105-mile) railroad system has been transferred to the Port of Benton. The remaining railroad lines are no longer in use.

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 1-4. Hanford Site Map.



Hanford Site
Department of Energy

H99030061.2

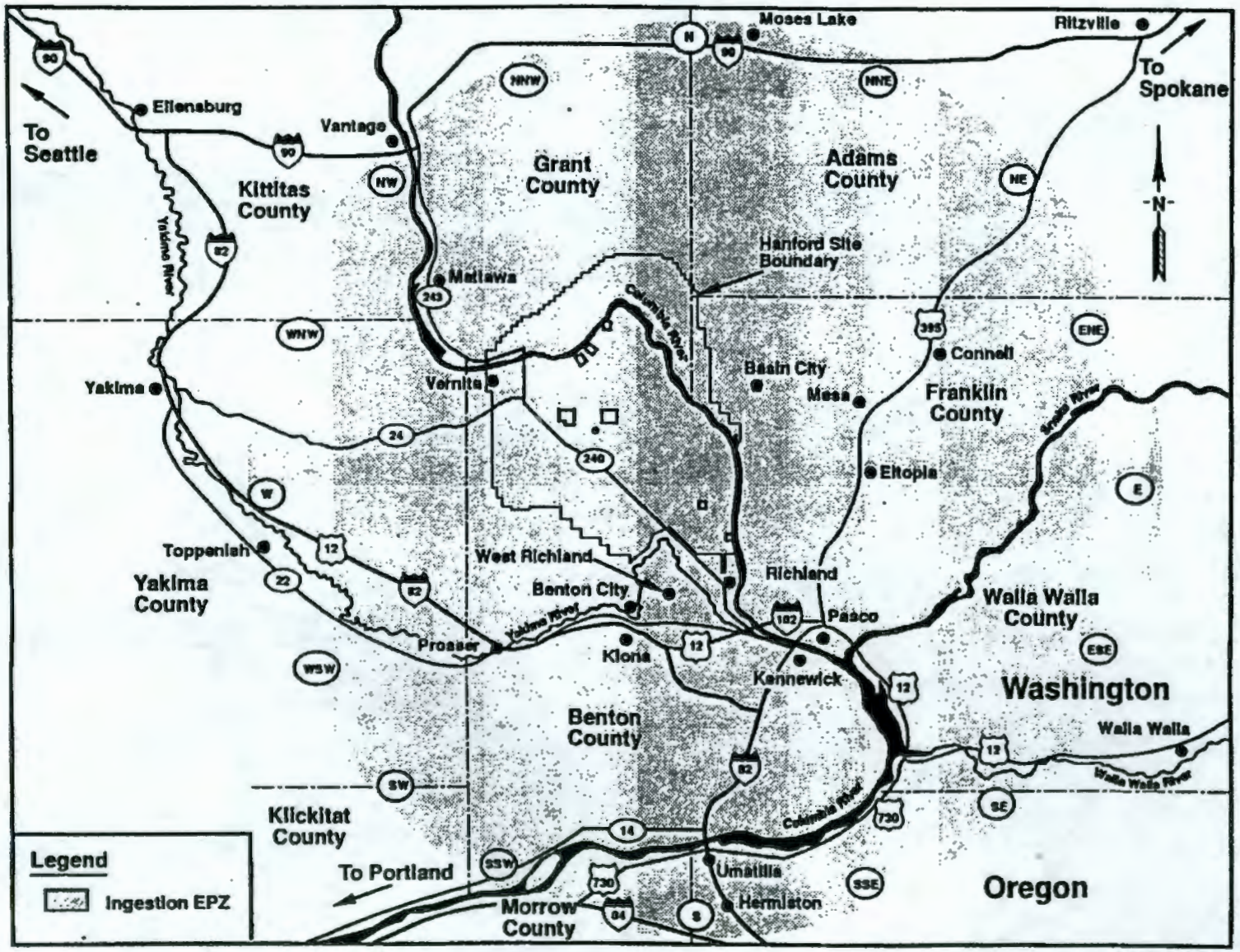


Figure 1-5. Ingestion Exposure Emergency Planning Zone.

This page intentionally left blank.

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 Hanford Site 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 DOE O 151.1 and other applicable Federal and state regulations. Hanford facilities and response organizations such as the Hanford Fire Department are governed by the standards and regulations of the National Fire Protection Association (NFPA) and Code of Federal Regulations, as well as the Washington Administrative Code and Revised Code of Washington for emergency response, training, and on-scene emergency management. Responsibilities and tasks shall be assigned to individuals identified by name, title, or position. In addition, each member of the Hanford Site ERO shall participate in a drill or exercise at least annually to demonstrate proficiency in response duties.

2.1 U.S. DEPARTMENT OF ENERGY, RICHLAND OPERATIONS OFFICE/ OFFICE OF RIVER PROTECTION AND HANFORD SITE CONTRACTOR ROLES AND RESPONSIBILITIES

Specific ORP responsibilities within the Hanford Site ERO are presently being defined as part of the ongoing RL/ORP interface clarification discussions. In the interim, the Hanford Site ERO has been developed to allow RL to maintain the option to assume overall management, direction, and control of site emergencies while the site contractors continue their management and operational roles. Contractor and RL/ORP roles and responsibilities are delineated below.

2.1.1 Hanford Site Contractors

Hanford Site contractors with responsibilities for facility operations/activities or for providing site services shall coordinate with one another and participate in the development and maintenance of a comprehensive Hanford Site emergency management program that meets the mission of the Hanford Site ERO. Such programs shall contribute to DOE's comprehensive Emergency Management System by promoting effective and efficient integration of applicable requirements, including those promulgated by other agencies.

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 occurrences in accordance with this plan and DOE Order 232.1A (DOE 1997);

- initially classifying the emergency, if warranted;
- assisting, as necessary, in mitigating the emergency situation;
- initiating actions to protect workers within their geographic area of responsibility;
- contacting the POC and providing initial emergency information;
- requesting support from nonevent site contractors as necessary;
- establishing an initial Incident Command Post (ICP) and, as applicable, assigning other Incident Command Organization functions as delineated in Table 2-1, and other supporting entities such as radiological control technicians as available;
- arranging for employer notification (if not an event contractor employee), decontamination, and transport of a contaminated corpse;
- providing personnel to staff the DOE Hanford EOC to include senior management staff and technical representatives;
- providing event status information to the DOE Hanford 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 suppression, emergency rescue, emergency medical, hazardous materials response, fire protection services, and incident response 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 DOE Hanford 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;
- 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 DOE Hanford 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 DOE Hanford EOC; and
- radiological control technician support.

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

- minor emergency medical care and consultation;
- medical support for chemical and radiologically contaminated patients;
- medical staffing and operation of the EDF;
- hostage negotiation and critical stress debriefing support;
- coordination with and support to community medical services; and
- senior management and technical staff support to the DOE Hanford EOC, and
- provide support to the Hanford Fire Department in the event of a large-scale mass casualty event on the Hanford Site as requested.

2.1.2 U.S. Department of Energy, Richland Operations Office/ Office of River Protection

RL/ORP shall have a trained emergency response staff and shall provide facilities/activities under their cognizance with:

- direction to implement emergency management policy and requirements;
- direction in emergency planning and preparedness activities;
- support and assistance during emergencies; and
- support and assistance in resolving issues in site/facility/activity emergency management programs, as well as assessments of site/facility/activity emergency management programs.

2.1.2.1 RL/ORP Manager. The RL/ORP Manager (or designee) is the senior official who serves as the RL/ORP Emergency Manager with decision-making responsibilities and has the ultimate responsibility and authority for Hanford Site emergency response activities to ensure that effective management is provided for response to emergencies. If the event involves an ORP facility, the ORP Manager (or designee) will assume the responsibility. The RL Manager (or designee) will assume the responsibility in all other events. The RL/ORP Manager is responsible for overseeing the performance of onsite activities necessary to place the site in a safe condition and to minimize or terminate uncontrolled releases of hazardous materials. The RL/ORP Manager is also responsible for interfaces with offsite agencies and the public.

The RL/ORP Manager shall be supported by personnel with communications, technical, and liaison and public affairs expertise and shall ensure fulfillment of his or her responsibilities through direction of the Policy Team and RL/ORP representatives assigned to offsite emergency centers. The responsibilities and staffing of the Policy Team are described in subsection 2.2.2.1.1.

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

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

2.1.2.3 DOE Facility Representative. The DOE Facility Representative serves in an oversight and liaison capacity at the ICP during declared emergencies. The primary function of the DOE Facility Representative is to observe ICP activities and, if required, report problems about facility conditions, event status, or mitigative actions to the Safety Oversight Director in the DOE Hanford EOC.

2.1.2.4 RL Chief Counsel. The Chief Counsel is responsible for advising the RL/ORP Emergency Manager regarding legal matters associated with the emergency, using 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 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/ORP in responding to emergency assistance.

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

2.1.2.7 Director, Site Services Division. The Site Services Division director is responsible for:

- reallocating office space, if required;

- coordinating 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 additional manpower required during the emergency.

2.1.2.9 Director, Site Engineering Division. The Site Engineering Division director is responsible for:

- coordinating power distribution in the event of a power failure;

- 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 RESPONSE ORGANIZATION STRUCTURE

Emergency response on the Hanford Site is modeled after the NFPA Incident Command System. As such, the Hanford Incident Command System 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.

The Hanford Site ERO has two distinct components – the Incident Command Organization and the DOE Hanford EOC – each with emergency direction and control responsibilities.

The Incident Command Organization consists of the Facility/Building Emergency Response Organization with responsibility for implementing emergency response activities at the event facility, and site contractor emergency response personnel (i.e., Hanford Fire Department, Hanford Patrol) with the responsibility for on-scene mitigation. 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) until arrival of the Hanford Fire Department IC or the Hanford Patrol IC for security events. Upon arrival of the Hanford Fire Department or Hanford Patrol IC, the Facility/Building

Emergency Response Organization becomes part of a consolidated Incident Command Organization. The BED/BW shall retain responsibility for direct 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. If the BED/BW is not present 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 BED/BW listing 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.

The DOE Hanford EOC has the responsibility to monitor and provide support for the onsite response, assist with issue resolution, assess the offsite impacts, and interface with offsite agencies and the public.

Both components of the Hanford ERO are depicted on Figure 2-1 and further delineated in the respective subsections below.

For nonfacility events (e.g., onsite transportation incidents, wildland fires), the IC shall be responsible for coordinating and performing the response activities. The EDO shall have the responsibility for further classifying the event (i.e., as an Alert, Site Area Emergency, or General Emergency) or determining if implementation of the contingency plan has occurred, if warranted. 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 Organization 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 Incident Command Organization

The Hanford Incident Command System provides a graduated response mechanism for unusual conditions and emergencies on the Hanford Site.

Depending on the severity of the event, the Incident Command Organization is comprised of two main groups — the Facility/Building Emergency Response Organization, and site contractor emergency response personnel (i.e., Hanford Fire Department, Hanford Patrol). Other emergency response support personnel may be called upon to assist in the mitigation of an event depending on the type of emergency, but are not considered part of the Hanford ERO. The appropriate personnel from each group may be located at either the event scene or ICP, or staging area. A description of each group, including roles and responsibilities, is provided in the following subsections.

In its most basic form, the Incident Command Organization 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, facility protective actions, and relevant notifications. Examples of such events that do not require assistance from outside the facility (termed incidental responses) include small releases of known substances when mitigation can be accomplished by trained on-scene personnel, minor first aid cases, noninjury contamination incidents, and nonemergency plant responses.

As incidents escalate, the Hanford Incident Command System enables the use of additional site contractor emergency response personnel to mitigate the event. Requests for additional site contractor emergency response personnel are made to the POC via the 911 emergency number (or 373-3800 for cellular telephones) and, where applicable, automated alarm systems. This level of response requires the designation of an IC. The responding Hanford Fire Department senior officer for events involving fire, medical, hazardous materials, or rescue shall be the IC and also fulfill the role of the senior emergency response official. The Hanford Patrol Shift Commander will act in the capacity of the IC during security incidents.

Additionally, an ICP shall be established as required to meet the needs of the event. The ICP shall be established in a safe location near the incident scene. Organizations supporting the ICP retain responsibility for their technical operations and provide facility expertise to the IC. The IC is responsible for the health and safety of 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 functional areas are appropriately staffed and working cohesively towards mitigation of the incident.

The Incident Command Organization is staffed by pre-appointed and trained individuals as delineated in Table 2-1. Personnel working in support of the Incident Command Organization delineated in Table 2-1 must complete initial, annual, and ongoing training on their respective roles, responsibilities, and authorities within the Incident Command Organization. Drills and exercises are used to provide a format for Incident Command Organization responders to demonstrate their proficiency.

Contractor personnel shall provide a BED or BW for the purpose of supporting the Incident Command Organization as soon as possible. In the event of full implementation of the Incident Command Organization, additional facility personnel shall be available to support required functions.

2.2.1.1 Facility/Building Emergency Response Organization. Hanford Site facilities are divided into one of three types – administrative, nonhazardous, and hazardous – depending on the hazards associated with the facility. Personnel and resources at the facility level comprise initial response capability for an emergency. Facilities shall direct appropriate emergency response actions, as delineated in the respective sections below, within the area under their control and at the scene of the emergency, including effective coordination with the IC and the DOE Hanford EOC. Initial direction and control of emergency response at the facility prior to establishment of an ICP is the responsibility of the Facility/Building Emergency Response Organization.

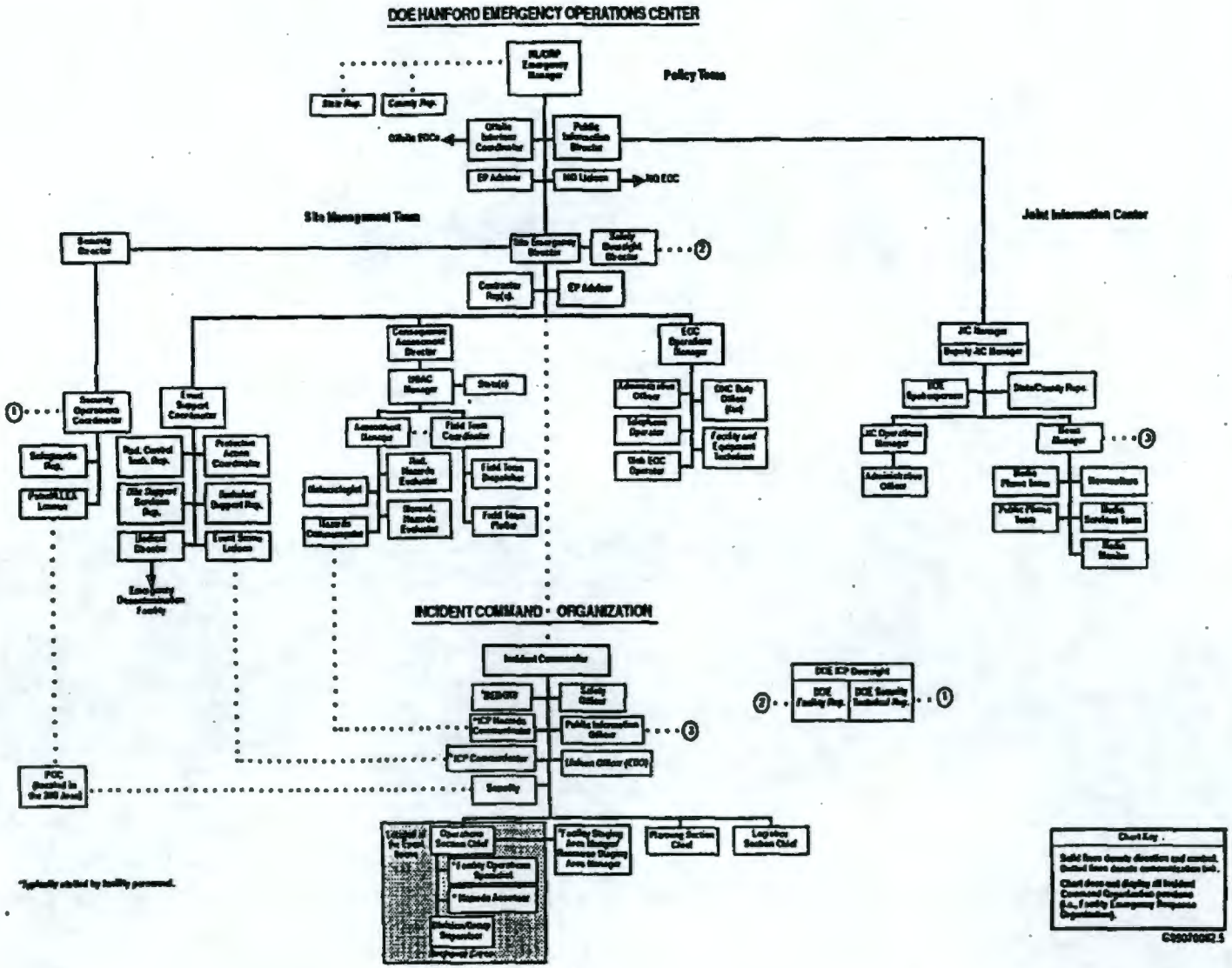


Figure 2-1. Hanford Site Emergency Response Organization.

Table 2-1. Incident Command Organization Functions.

FUNCTION	RESPONSIBLE STAFFING
Incident Commander	Hanford Fire Department/Hanford Patrol
Building Emergency Director/ Building Warden	Affected facility
Public Information Officer	FDH or appropriate contractor personnel
Liaison Officer	Emergency Duty Officer
Safety Officer	Hanford Fire Department
ICP Communicator	Affected hazardous facility
ICP Hazards Communicator	Affected hazardous facility
Facility Operations Specialists	Affected facility
Operations Section Chief	Hanford Fire Department/Hanford Patrol
Security	Hanford Patrol
Radiological Hazards Assessor	Affected facility radiological control manager (or equivalent)
Chemical Hazards Assessor	Hanford Fire Department, on-call Industrial Hygienist, or affected facility
Communications Specialist	FDH
Planning Section Chief	Hanford Fire Department
Logistics Section Chief	Hanford Fire Department
Resource Staging Area Manager	Hanford Fire Department
Facility Staging Area Manager	Affected facility

A list of all BEDs and BWs assigned to nonhazardous and hazardous facilities shall be maintained by the ONC in accordance with the Hanford Facility RCRA Permit (Dangerous Waste Portion) General Condition II.A.4. The list shall include telephone numbers (home and work) to ensure that these individuals can be reached 24 hours per day.

2.2.1.1.1 Administrative Facilities. Administrative facilities are defined as onsite office buildings or general-purpose facilities. The governing requirement for such facilities is 29 CFR 1910.38, which means that facilities where personnel are evacuated from the danger area when an emergency occurs, and are not permitted to assist in handling the emergency, are exempt from 29 CFR 1910.120(q) requirements.

The building management for administrative facilities shall assign BWs or BEDs (primary and alternates) who shall manage and control all aspects of the initial facility response and shall direct an emergency organization made up of individuals within the facility who will assist in the protection of personnel, the environment, and property. Personnel may take emergency actions to report an emergency, initiate protective actions including personnel accountability, and control of personnel while implementing protective actions. Typically, three emergency positions are identified for these response actions: the BW/BED, Staging Area Manager, and Personnel Accountability Aides (or other contractor-designated names). These positions may also be present in nonhazardous and hazardous facilities but only for emergency actions as required in 29 CFR 1910.38 and not for 29 CFR 1910.120. The BW/BED is responsible for emergency response at the event scene until arrival of the IC.

In addition, the building management, or designee, shall be responsible for:

- assigning and ensuring the training of the BW/BED, personnel accountability aides, and staging area managers (or other contractor-designated names); and
- maintaining the facility emergency response information boards/building emergency procedures.

Specific responsibilities of the BW/BED shall include, as applicable:

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

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

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

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

2.2.1.1.2 Nonhazardous Facilities. Nonhazardous facilities are defined as onsite facilities that can not generate 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 management for nonhazardous facilities shall assign BWs or BEDs (primary and alternates) who shall manage and control all aspects of the initial facility response and direct a Facility/Building Emergency Response Organization made up of individuals within the facility who will assist in the protection of personnel, the environment, and property. The BW/BED is responsible for emergency response at the event scene until arrival of the IC.

In addition, the building management, or designee, shall be responsible for:

- assigning and ensuring the training of the Facility/Building Emergency Response Organization as necessary to support the Hanford Fire Department as the RL/ORP-designated hazardous materials emergency response agency;
- maintaining the facility emergency response information boards and/or building emergency plans/procedures;
- maintaining applicable facility-specific emergency response procedures in accordance with subsection 14.3.1;
- ensuring that facility personnel are aware of hazards; and
- ensuring that facility personnel are trained to respond to emergencies.

Specific responsibilities of the BW/BED shall include, as applicable:

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

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

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

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

(e) establishing an initial ICP and assigning other Incident Command Organization functions in accordance with established procedures to provide effective control at the event scene;

(f) 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 material;

- 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;

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

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

The duties of the Facility/Building Emergency Response Organization may include, but will not be limited to:

- assisting in the alerting of employees of an emergency situation;

- assisting in building evacuations and building sweeps;

- providing assistance to the Hanford Fire Department and/or Hanford Patrol to include meeting and directing responders to the event scene, providing safe routes of travel, and providing immediate and constant interface, coordination, and information as the emergency situation requires.

Emergency training requirements for the Facility/Building Emergency Response Organization are delineated in subsection 12.2.2.1.2.

2.2.1.1.3 Hazardous Facilities. Hazardous facilities are defined as facilities capable of generating an Alert, Site Area, or General Emergency as defined by DOE O 151.1. Facilities in this group include reactor or nuclear facilities, or nonnuclear hazard facilities. TSD units containing quantities of wastes or materials capable of generating an Alert or higher emergency will also be categorized as a hazardous facility.

The building management for each hazardous facility shall establish and maintain a Facility/Building Emergency Response Organization with overall responsibility for the initial and ongoing response to and mitigation of an emergency. BEDs (primary and alternates) shall be assigned to manage and control all aspects of the facility response and to direct the

Facility/Building Emergency Response Organization at the event scene until arrival of the IC. Initiation of emergency lifesaving measures or support of protective actions for facilities which require self-contained breathing apparatus (SCBA) must not rely entirely on the Hanford Fire Department to provide such equipment on emergency response vehicles. The minimum assumption used for emergency planning for the Hanford Fire Department arrival shall be 10 minutes plus travel time to destination. A BED (primary or alternate) must be present onsite and within reasonable proximity to the facility (as defined by contractor policy) if work is being performed which could generate an Alert or higher emergency classification. On-call BEDs, where designated, may be used for facilities where hazardous materials is in storage and stable, and the work being performed is that of surveillance.

The organization, size, and emergency response duties assigned to the Facility/Building Emergency Response Organization shall be based on a graded approach and upon hazards at the facility and the level necessary to support the Hanford Fire Department as the RL/ORP-designated hazardous materials emergency response agency. In addition, the positions and responsibilities of the Facility/Building Emergency Response Organization shall be documented 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.

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

The building management, or designee, shall be responsible for:

- assigning and ensuring the training of the Facility/Building Emergency Response Organization as necessary to support the Hanford Fire Department as the RL/ORP-designated hazardous materials emergency response agency;
- maintaining, reviewing, and revising the building emergency plan and applicable facility-specific emergency response procedures in accordance with subsection 14.3.1;
- ensuring that facility personnel are aware of hazards; and
- ensuring that facility personnel are trained to respond to emergencies.

Specific responsibilities of the BED shall include:

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

(b) 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;

(c) assessing the potential or actual onsite and offsite consequences of the emergency;

(d) contacting the POC, via the 911 emergency number, to implement predetermined onsite protective actions and provide initial emergency and classification information in accordance with established procedures;

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

(f) establishing an initial ICP and assigning other Incident Command Organization functions in accordance with established procedures to provide effective control at the event scene;

(g) 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;

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

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

The duties of the Facility/Building Emergency Response Organization may include, but will not be limited to:

- assisting in the alerting of employees of an emergency situation;

- assisting in the safe evacuation of the incident scene hazard area;

- providing immediate first-aid if required;

- placing operating systems or controls in a safe configuration;

Permit requirement: Subsection 2.2.1.1.3(e), Class 1 Modification 9/30/99
Subsection 2.2.1.1.3(f), Class 1 Modification 9/30/99
Subsection 2.2.1.1.3(g), Class 1 Modification 9/30/99

- implementing or supporting the implementation of protective actions for the general population to include roadblocks and building sweeps;

- assisting in emergency classification and emergency notification of such classification within established regulatory time limits;

- providing assistance to the Hanford Fire Department and/or Hanford Patrol to include meeting and directing responders to the event scene, providing safe routes of travel, and providing immediate and constant interface, coordination, and information as the emergency situation requires;

- serving as emergency response team members in support of the Hanford Fire Department for entry into the incident scene hazard area for mitigation where personnel protective equipment requirements do not specify Level A or Level B dermal protection (refer to Appendix B of CFR 1910.120);

- providing chemical monitoring and assessment, in conjunction with the Hanford Fire Department Industrial Hygienist, for emergency response;

- providing radiological monitoring and assessment for emergency response; and

- providing support for chemical and/or radiological decontamination.

Emergency training requirements for the Facility/Building Emergency Response Organization are delineated in subsection 12.2.2.1.3.

2.2.1.2 Site Contractor Emergency Response Personnel

2.2.1.2.1 Hanford Fire Department. The Hanford Fire Department is the RL/ORP-designated incident command agency for control of all hazardous materials (radiological and nonradiological) and chemical/biological incidents on the site and, as such, controls the fire, hazardous materials, and/or personnel rescue response activities associated with an emergency. In this capacity, the Hanford Fire Department shall provide a hazardous materials response team, as defined in 29 CFR 1910.120(q)(6)(i)-(v) and NFPA 472, as well as a qualified Safety Officer for all emergency response activities.

As a 24-hour operational facility/dispatch center, the Hanford Fire Department also monitors facility fire alarm systems, and coordinates and provides emergency medical services on the Hanford Site. Emergency medical support responsibilities are further delineated in subsection 8.1.1.

2.2.1.2.2 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/dispatch center, is responsible for emergency functions that include, but are not limited to:

- operating the site's enhanced 911 system;

- 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 bridge 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/ORP-owned hazardous materials.

Emergency medical support responsibilities of the Hanford Patrol are further delineated in subsection 8.1.3.

2.2.1.3 Other Emergency Response Support Personnel. Some emergency situations may require facility or site support personnel to be used for emergency response at the event scene that are not assigned positions within the Hanford ERO. These emergency response support personnel – termed either as Skilled Support Personnel or Specialist Employees – are not trained to operate within the Hanford Incident Command System and must only be used for specific tasks defined in the following subsections.

2.2.1.3.1 Skilled Support Personnel. Personnel needed to operate specific support equipment, including those within the incident scene hazard area, but are not addressed in specific emergency response procedures, may be designated as Skilled Support Personnel. Such personnel shall receive a briefing prior to commencing any work. Training requirements in accordance with 29 CFR 1910.120(q)(4) are delineated in subsection 12.2.2.3.1.

2.2.1.3.2 Specialist Employees. Safety professionals and environmental specialists who provide technical advice within their field of expertise, but are not addressed in specific emergency response procedures, may be designated as Specialist Employees. Such personnel will only provide expertise and advise to the IC when requested and may not enter the incident scene hazard area. Training requirements in accordance with 29 CFR 1910.120(q)(5) are delineated in subsection 12.2.2.3.2.

2.2.2 U.S. Department of Energy
Hanford Emergency Operations Center

The DOE Hanford 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 DOE Hanford EOC shall be activated and operational within one hour upon declaration of an Alert or higher emergency.

The DOE Hanford EOC may also be fully or partially activated in the following situations.

- As directed by the RL/ORP Manager, or designees, when events occur that are not classified as an Alert 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;
  - security events;
  - 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; or
  - 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/ORP-owned hazardous materials.

The DOE Hanford EOC is made up of several organizations that 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 DOE Hanford EOC are contained in DOE-0223, *Emergency Plan Implementing Procedures*.

2.2.2.1 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, oversight of public information activities, and coordination with offsite agencies.

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

During security incidents, RL is responsible for 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.

2.2.2.1.1 Policy Team Staffing and Responsibilities. The RL/ORP Manager (or designee) shall be the RL/ORP Emergency Manager. If the event involves an ORP facility, the ORP Manager (or designee) will assume the responsibility. The RL Manager (or designee) will assume the responsibility in all other events. The RL/ORP Emergency Manager is responsible for oversight operations of the DOE Hanford EOC and for ensuring implementation of the responsibilities of RL as the lead Federal agency. In consultation with the DOE Hanford EOC staff, the RL/ORP Emergency Manager approves emergency reclassification and termination, offsite PARs, and notifications.

Once operational, general functions of the Policy Team include:

- overview of 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 DOE-HQ Cognizant Secretarial Officer (CSO) 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, during a security incident;
- 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 RL/ORP news releases;
- forwarding requests for additional DOE emergency response assets to the Regional Response Coordinator as needed;

- providing liaisons to offsite emergency centers and responding DOE emergency response assets;
- providing a representative to DOE-HQ as requested; and
- designating a recovery organization.

2.2.2.2 Joint Information Center. The primary function of the JIC is the dissemination of accurate and timely information to the public and employees about RL/ORP activities during declared emergencies. The JIC is staffed by RL/ORP, 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/ORP 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/ORP 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 that 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.

2.2.2.3 Site Management Team. The primary functions of the SMT are to provide support to the Incident Command Organization 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, tracking personnel medical issues, 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.

2.2.2.3.1 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 Consequence Assessment Director.

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/ORP Emergency Manager and the Policy Team. The Contractor Representative and SMT Emergency Preparedness Advisor provide support to the Site Emergency Director.

2.2.2.3.2 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 Federal Bureau of Investigation (FBI), and oversight of onsite patrol activities. 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 and other medical assessment activities. The Event Support Coordinator reports directly to the Site Emergency Director.

2.2.2.3.3 Unified Dose Assessment Center. As part of the SMT, the primary Unified Dose Assessment Center (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 Consequence Assessment Director is responsible for all UDAC activities and 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.

2.2.2.3.4 DOE Hanford EOC Operations. As part of the SMT, the primary functions of the DOE Hanford 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.

3.0 OFFSITE RESPONSE INTERFACES

3.1 OVERVIEW

Interfaces and coordination with offsite agencies are important in the planning, preparedness, response, and recovery elements of the Hanford emergency management program. As such, RL shall interface with Federal, tribal, state, local, and private organizations and/or agencies:

- that have a responsibility to protect the public and environment within the EPZs of the Hanford Site;
- with which RL supports as the Regional Coordinating Office for Region 8 (Oregon, Washington, and Alaska); and
- 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; and
- 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 respective subsections in section 5.0);

- communication and coordination with DOE-HQ;
- RL representation in appropriate offsite emergency centers;
- offsite representation in the DOE Hanford EOC;
- PARs to offsite agencies; and
- 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 U.S. Department of Energy-Headquarters

The DOE-HQ Cognizant Secretarial Officers are responsible for ensuring implementation of policy and requirements for activities conducted under their respective areas of cognizance.

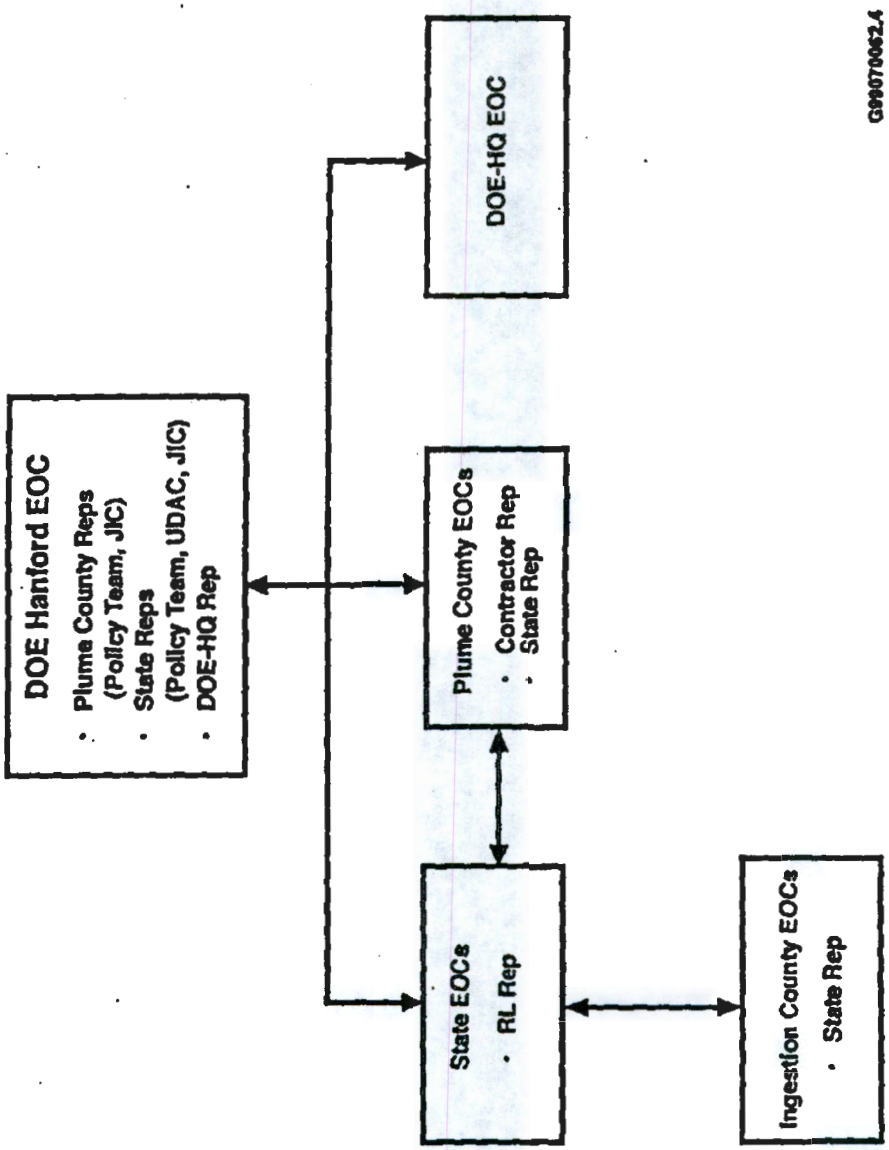
The DOE-HQ EOC serves as the point-of-contact for receipt of all emergency notifications and reports. Accordingly, the DOE-HQ EOC receives, coordinates, and disseminates emergency information to DOE-HQ elements and Program Office emergency points-of-contact, the White House Situation Room, and other Federal agencies. As such, emergency status reports shall be forwarded to the DOE-HQ EOC on a continuing basis until the emergency is terminated.

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

- receive information on the facility, site, or area response;
- monitor the Operations/Field Office;
- provide appropriate support and assistance;
- assist with issue resolution; and
- coordinate interagency Congressional, and public information activities at the national level.

RL/ORP 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 DOE Hanford EOC to provide liaison with the DOE-HQ EOC. Upon request from DOE-HQ, RL/ORP shall dispatch a liaison to support activation of the DOE-HQ EOC.

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



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. 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.

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. RL will retain command and control of a 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 EPA shall assume the lead Federal agency responsibility for coordinating the intermediate and long-term offsite radiation monitoring activities.

In the event of an emergency, the DOE Hanford 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 DOE Hanford 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.

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 as well as areas of cooperation and understanding between RL and the states are delineated in memoranda of understanding (MOU). Copies of the MOUs are provided in 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:

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

An emergency response plan is maintained by the Emergency Management Division that describes the concept of operations and roles and responsibilities of the state agencies. Emergency procedures are maintained by each state agency.

Responsibilities of the state of Washington include:

- providing a 24-hour single point of contact for the receipt of emergency notifications from RL/ORP;
- 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; and
- requesting Federal assistance as required.

3.3.2 The State of Oregon

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

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

An emergency response plan is maintained by the Oregon Office of Energy that 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:

- providing a 24-hour single point of contact for the receipt of emergency notifications from RL/ORP;
- 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; and
- 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.

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:

- law enforcement;
- fire and emergency medical;
- public works/road departments;
- hospitals; and
- American Red Cross.

The emergency responsibilities of the plume EPZ counties include:

- 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; and
- coordinating response actions and public information with neighboring counties, the state of Washington, and RL.

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. 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.

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-County Mutual Aid Agreement for fire agencies. The agreement, signed by 11 local fire agencies, provides mutual aid for fire or medical emergencies.

Permit requirement: Subsection 3.4.1.1, Class 1 Modification 9/30/99
Subsection 3.4.1.2, Class 1 Modification 9/30/99

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

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

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

RL shall provide for training and exercise support, as needed, related to the services provided to the Hanford Site. 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.

RL shall coordinate emergency planning and preparedness for ingestion counties through the Washington State Emergency Management Division and the Oregon Office of Energy. Ingestion county responsibilities include:

- coordinating with the state and implementing decisions regarding protective measures for its residents within the ingestion EPZ; and

- 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.

RL shall coordinate emergency planning and preparedness activities with onsite private facilities (namely WNP-2, US 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

RL shall develop and implement mutual assistance agreements with offsite agencies 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 MOUs 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 CSO through their inclusion in Appendix B of this plan.

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
Energy Northwest (formerly Washington Public Power Supply System)	Document areas of cooperation between the parties in the planning for and response to emergencies at the Hanford Site.	Energy Northwest (formerly Washington Public Power 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 in Richland, Washington	Siemens Power Corporation	Emergencies affecting 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
Energy Northwest (formerly Washington Public Power Supply System) and HEHF	Treatment of a significantly contaminated and injured person.	Energy Northwest (formerly Washington Public Power 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

Table 3-1. Memorandums of Understanding

PARTIES	SERVICES/AREAS OF COOPERATION	POINTS OF CONTACT	CONSTRAINTS	DATE	EXPIRATION DATE	WHERE ON FILE
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
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.	08/17/98	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.	08/17/98	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.	08/17/98	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-County 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.	Hanford Fire Department	Assistance under the agreement is not mandatory.	02/05/98	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.	Hanford Fire Department

Table 3-1. Memorandums of Understanding

PARTIES	SERVICES/AREAS OF COOPERATION	POINTS OF CONTACT	CONSTRAINTS	DATE	EXPIRATION DATE	WHERE ON FILE
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
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

Permit requirement: Table 3-1

This page intentionally left blank.

4.0 EVENT CATEGORIZATION AND CLASSIFICATION

Categorization and classification of events is key to ensuring that appropriate notifications and response actions are promptly initiated. Event categorization and classification criteria are developed and maintained to include events that require similar actions. The spectrum of actions triggered by categorization range from management activities that are not required to be initialized until after an event is closed out (i.e., occurrence reporting), to full activation of onsite and offsite emergency response organizations.

At the Hanford Site, five event categories are used to meet the requirements of DOE Orders, state and Federal regulations, and mutual agreements between RL and state and county agencies. Events may meet the criteria of one or more category; therefore, a sequential event evaluation process prioritized according to the time urgency of the required actions is employed. The five event categories used at Hanford are: Operational Emergencies, RCRA Emergencies, Abnormal Events, Unusual Occurrences, and Off-Normal Occurrences.

This section describes the provisions that shall be established and maintained as methods to be used to recognize, categorize, and classify events in order to protect workers, the public, and the environment. The Unusual and Off-normal Occurrence categories are used solely for occurrence reporting purposes, which is delineated in the Hanford implementing directive HFID 232.1B, *Notification, Reporting, and Processing of Operations Information*, and, therefore, will not be addressed further in this plan.

4.1 OPERATIONAL EMERGENCY

Operational Emergencies are unplanned, significant events or conditions that require time-urgent response from outside the immediate/affected facility or area of the incident. Operational Emergencies are divided into Base Program Operational Emergencies or Hazardous Material Operational Emergencies. Such emergencies are caused by, involve, or affect DOE facilities or activities and represent, cause, or have the potential to cause the events or conditions described in the respective subsections below. Incidents that can be controlled by employees or maintenance personnel in the immediate/affected facility or area are not Operational Emergencies. Incidents that do not pose a significant hazard to safety, health, and/or the environment and that do not require a time-urgent response are not Operational Emergencies. Initiating events that warrant categorization as Operational Emergencies shall be included in site- and facility-specific procedures.

Emergencies, once categorized, shall not be downgraded. An event determined to be an emergency will remain so until the emergency response is terminated.

RL/ORP shall determine the criteria to be used to categorize and classify Operational Emergencies based on site-specific criteria. Additional criteria may be based on the DOE *Emergency Management Guide* (DOE 1997). Site contractors shall maintain procedures to ensure recognition and appropriate categorization and classification of emergencies.

4.1.1 Base Program Operational Emergency

A Base Program Operational Emergency shall be declared when events occur that represent a significant degradation in the level of safety at a facility and that require time-urgent response efforts from outside the facility but do not involve the release or potential release of significant quantities of radiological or nonradiological materials. Since Base Program Operational Emergencies do not involve the release of significant quantities of hazardous materials, they do not require further classification (i.e., as Alert, Site Area Emergency, or General Emergency).

The designated point-of contact (e.g., BED/BW, contractor single point-of-contact), with assistance from ONC personnel will assess event information to determine if the event should be categorized as a Base Program Operational Emergency. The criteria for categorization of a Base Program Operational Emergency is part of the Abnormal Event criteria which is contained as a single criteria list within Hanford implementing directive HFID 232.1B, *Notification, Reporting, and Processing of Operations Information.*

Additionally, offsite transportation events involving RL/ORP-owned hazardous materials are categorized as Base Program Operational Emergencies and, as such, do not require classification.

4.1.2 Hazardous Material Operational Emergency

If an Operational Emergency represents a specific threat to workers and the public due to the release or potential release of significant quantities of radiological and nonradiological hazardous materials, it shall be classified as either an Alert, Site Area Emergency, or General Emergency, in order of increasing severity.

For facility events, the initial event classification shall be made by the BED or IC in accordance with established procedures.

For nonfacility events (e.g., transportation events, wildland fires), the initial event classification shall be made by the on-call Emergency Duty Officer.

The emergency classification shall be reviewed periodically to ensure the classification is commensurate with response activities; however, the classification shall not be downgraded until termination of the event. The criteria used to recognize and classify emergencies, called emergency action levels (EALs), are delineated in subsection 4.4. Hazardous Material Operational Emergency notification requirements are delineated in subsection 5.1.1.2.

4.1.2.1 Alert. An Alert shall be declared when events are predicted, are in progress, or have occurred that result in either of the following.

(1) An actual or potential substantial degradation in the level of control over hazardous materials (radiological and nonradiological). The radiation dose from any release to the environment of radioactive material or a concentration in air of other hazardous material is expected to be limited to a fraction of the applicable Protective Action Guide (PAG) or Emergency Response Planning Guideline (ERPG) at the facility boundary; but it is not expected that the applicable PAG or ERPG will be exceeded at or beyond the facility boundary. (See Table 4-2 for specific PAG and ERPG exposure levels.)

(2) An actual or potential substantial degradation in the level of safety or security of a facility or activity that could, with further degradation, produce a Site Area Emergency or General Emergency.

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

At an Alert, the Hanford Site ERO shall:

- activate the DOE Hanford EOC and establish communications, consultation, and liaison with offsite agencies;
- continuously assess pertinent information for DOE decision makers, offsite agencies, the public, and other appropriate entities;
- conduct appropriate assessments, investigations, or preliminary sampling and monitoring;
- mitigate the severity of the occurrence or its consequences; and
- prepare for other response actions should the situation become more serious, requiring emergency response organizations to mobilize or activate resources.

4.1.2.2 Site Area Emergency. A Site Area Emergency shall be declared when events are predicted, in progress, or have occurred that result in either of the following situations.

(1) An actual or potential major failure of functions necessary for the protection of workers or the public. The radiation dose from any release of radioactive material or concentration in air from any release of other hazardous material is expected to be equal to or exceed the applicable PAG or ERPG exposure levels at the facility boundary but is not expected to be exceeded at or beyond the Hanford Site boundary. (See Table 4-2 for specific PAG and ERPG exposure levels. Refer to site boundary definition in subsection 1.4.2.)

(2) Actual or potential major degradation in the level of safety or security of a facility or process that could, with further degradation, produce a General Emergency.

At a Site Area Emergency, the Hanford Site ERO shall perform the same response actions as for an Alert plus the:

- initiation of predetermined protective actions for onsite personnel;
- provision of information to the public and the media;
- implementation of or assistance in any evacuations and sheltering; and
- mobilization of appropriate emergency response groups or protective/security forces for immediate dispatch should the situation become more serious.

4.1.2.3 General Emergency. A General Emergency shall be declared when events are predicted, in progress, or have occurred that result in the actual or imminent catastrophic reduction of facility safety or security systems with potential for the release of large quantities of hazardous materials (radiological or nonradiological) to the environment. The radiation dose from any release of radioactive material or a concentration in air from any release of other hazardous material is expected to be equal to or exceed the applicable PAG or ERPG exposure levels at or beyond the Hanford Site boundary. (See Table 4-2 for specific PAG and ERPG exposure levels. Refer to site boundary definition in subsection 1.4.2.)

At a General Emergency, the Hanford Site ERO shall perform the same response actions as for a Site Area Emergency plus the notification, mobilization, and dispatch of appropriate emergency response personnel and equipment, including appropriate DOE emergency response assets, and liaison with offsite agencies for the recommendation of predetermined public protective actions.

Operational Emergency notification requirements are delineated in respective subsections of section 5.0.

4.2 RESOURCE CONSERVATION AND RECOVERY ACT EMERGENCY

A RCRA emergency is defined as a release, fire, or explosion that could threaten 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 a RCRA emergency. It is the responsibility of the BED/BW/IC to make this determination even though they consult with the site contractor environmental single point-of-contact. When this occurs, notifications delineated in subsection 5.1.2.1 shall be performed. Notifications described in subsection 5.1.1 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 that 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.

4.3 ABNORMAL EVENT

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 agencies need timely information regarding these events in order to reassure the public that these situations do not threaten their health or safety.

RL will work with offsite agencies to maintain criteria that will be used to identify these situations, termed Abnormal Event. The criteria will include those events as mutually agreed to by RL/ORP and the offsite agencies. Additionally, any incident categorized as an Operational Emergency, but not further classified as an Alert, Site Area Emergency, or General Emergency, will automatically trigger notifications to offsite agencies as an Abnormal Event. RL/ORP will further communicate criteria changes to the site contractors upon acceptance by RL/ORP and the offsite agencies.

4.4 EMERGENCY ACTION LEVELS

The EALs are specific, predetermined, observable criteria used to detect, recognize, and determine the classification of Hazardous Material Operational Emergencies identified by the hazards assessment. The EALs are typically 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 will usually be some initiating conditions that require an event-based

approach. Initiating conditions must be identified specifically in EAL procedures and must be observable and recognizable in a timely manner by responsible personnel.

Facility-specific EALs shall be developed for the spectrum of potential Hazardous Material Operational Emergencies identified by the hazards assessment. Additional guidance for developing EALs can be found in the DOE *Emergency Management Guide* (DOE 1997) regarding hazards assessment and event classification.

The definitions delineated in Table 4-1, used in conjunction with Table 4-2, depict the criteria used at the Hanford Site to classify Hazardous Material Operational Emergency events. Site contractor facility managers or BEDs are responsible for making initial classification of emergency events in accordance with RL/ORP 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.

4.4.1 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 Hazardous Material Operational Emergency class can be readily determined.

4.4.2 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.

4.4.3 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.

4.4.4 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 Hazardous Material Operational Emergency classification. Then, immediate protective and mitigative actions, activation of the emergency response organization, and appropriate notifications are carried out.

The DOE Hanford 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.

Table 4-1. Summary of Hazardous Material Operational Emergency Classifications.

OPERATIONAL EMERGENCY CLASSIFICATION	FACILITY OR PROCESS EVENT	ONSITE TRANSPORTATION EVENT
Alert	Actual or potential substantial degradation of level of control over radiological or nonradiological hazardous material. Releases are not expected to exceed applicable PAG or ERPG levels at or beyond the facility boundary. OR Actual or potential substantial degradation in the level of safety or security that could, with further degradation, produce a Site Area Emergency or General Emergency.	Actual or potential substantial degradation of the safety of the shipment. Exposures in excess of PAG or ERPG levels only expected for personnel engaged in cleanup, recovery and investigation.
Site Area Emergency	Actual or potential major failures of functions necessary for the protection of workers or the public. Releases could exceed applicable PAG or ERPG levels onsite but not offsite. OR Actual or potential major degradation in the level of safety or security that could, with further degradation, produce a General Emergency.	Actual or potential major reduction in safety of a shipment. Release may exceed PAG or ERPG levels beyond the exclusion zone[1] onsite but not at nearest site boundary.
General Emergency	Actual or imminent catastrophic reduction of facility safety or security systems with potential for the release of large quantities of radiological or nonradiological materials to the environment. Releases reasonably expected to exceed applicable PAG or ERPG levels offsite.	Actual or imminent catastrophic reduction in safety of a shipment. Release expected to exceed PAG or ERPG levels offsite.

[1] The exclusion zone is defined as the immediate vicinity of the accident.

Table 4-2. Hanford Site Hazardous Material Operational Emergency 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 DOE *Emergency Management Guide*. *Solubility class "D" uranium compounds are limited by chemical toxicity.*

[2]The facility boundary is defined as the property protection area perimeter fence when present or a distance of 100 meters from the release location unless otherwise specified in the hazards assessment documentation.

[3]The total effective dose equivalent (TEDE) includes the summation of the doses delivered from plume submersion, ground shine, and inhalation from accidental releases.

5.0 NOTIFICATIONS AND COMMUNICATIONS

5.1 NOTIFICATIONS

Notifications are made for events on the Hanford Site according to the event category – Operational Emergency, RCRA (Environmental), Abnormal Event, Unusual Occurrences, and Off-normal Occurrences. Notifications shall be made in order of urgency with Operational Emergency (Hazardous Material Operational Emergency only) notifications performed first; Environmental notifications performed second; and Abnormal Event (including Base Program Operational Emergency), Unusual Occurrence, and Off-Normal Occurrence notifications performed last.

Contractors shall maintain procedures to ensure that notification and reporting requirements are made in accordance with DOE O 151.1 and DOE O 232.1A; applicable Federal, state, or local requirements; and special agreements with offsite agencies or tribal governments.

The Unusual and Off-normal Occurrence categories are used solely for reporting versus immediate action purposes. 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 that are to receive the occurrence reports. Additional information regarding Unusual and Off-normal Occurrences is delineated in the Hanford implementing directive HFID 232.1B, *Notification, Reporting, and Processing of Operations Information*, and, therefore, will not be addressed further in this plan. Offsite transportation events involving RL/ORP-owned hazardous materials shall be reported in accordance with DOE O 151.1 and 49 CFR 171.15.

RL/ORP shall monitor the notification process to ensure notifications of applicable emergency events as necessary or appropriate.

5.1.1 Operational Emergency Notifications

Prompt and accurate emergency notifications are essential to mitigating consequences and for protecting the health and safety of workers and the public. For Operational Emergencies, procedures shall be established and maintained to provide prompt initial notification to workers and emergency response personnel and organizations, including appropriate offsite agencies, under the most limiting set of conditions.

For Operational Emergencies that also meet RCRA emergency criteria, personnel shall categorize the event in accordance with subsection 4.2 and perform notifications in accordance with subsection 5.1.2.

5.1.1.1 Base Program Operational Emergency Notifications. Site contractors shall ensure that their designated points-of-contact (e.g., BED/BW, contractor single point-of-contact) report events that meet notification criteria delineated in Appendix A of HFID 232.1B, *Notification, Reporting, and Processing of Operations Information*, to the ONC. These notifications shall be made as soon as possible (within 30 minutes). The designated point-of-contact, with assistance from ONC personnel, will assess the event information to determine if the event should be categorized as a Base Program Operational Emergency. If the event meets the Base Program Operational Emergency criteria, the ONC shall notify the DOE-HQ EOC within 30 minutes following categorization and the offsite agencies immediately following as part of the Abnormal Event notification delineated in subsection 5.1.3.

The same notification requirements apply to offsite transportation events involving RL/ORP-owned hazardous materials. The EDO shall provide categorization information to the ONC so that the notifications can be initiated.

5.1.1.2 Hazardous Material Operational Emergency Notifications. Hazardous Material Operational Emergency 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 Hazardous Material Operational Emergency notification process is outlined in Figure 5-1.

5.1.1.2.1 Initial Onsite and Offsite Notifications. The initial event classification (Alert, Site Area Emergency, or General Emergency per criteria delineated in subsections 4.1.2.1, 4.1.2.2, and 4.1.2.3 respectively) shall be made by the BED or IC in accordance with established procedures.

The BED/IC shall initiate immediate notifications via the 911 emergency number 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.

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.

Additionally, the BED/IC is responsible for ensuring that a completed copy of the RL Notification Form (Figure 5-2) is transmitted to the ONC in accordance with established procedures. If a facsimile machine is not available, the BED/IC is responsible for ensuring that pertinent information from the RL Notification Form is provided to the ONC.

For nonfacility events (e.g., onsite transportation incidents, wildland fires, etc.), the EDO is responsible for making the initial event classification and providing notification, including information to complete the RL Notification Form, to the ONC.

Upon notification from the BED/IC or EDO regarding the declaration of a emergency event classified as Alert, Site Area Emergency, or General Emergency, the ONC shall make offsite notifications within 15 minutes to:

- DOE-HQ EOC;
- Benton County, Franklin County, Grant County, Washington State, and Energy Northwest (WNP-2) via the DOE Crash Alarm Telephone System (hot line); and
- Oregon State.

The ONC shall also initiate the automated Emergency Notification System (ENS) and pager system to activate the DOE Hanford EOC and make onsite notifications, as appropriate, to the:

- DOE Hanford senior management on-call;
- Emergency Duty Officer (FDH);
- PNNL single point-of-contact;
- BHI single point-of-contact; and
- HEHF single point-of-contact.

Within 30 minutes of the event declaration, the ONC Duty Officer shall notify, as applicable to the event, other offsite agencies that may have personnel working in remote locations of the Hanford Site (e.g., personnel at locations without alarm or siren capabilities). All other notifications shall be made as soon as practical. The ONC shall maintain a list of agencies to be notified.

5.1.1.2.2 Reclassification Notifications. Reclassification of rapidly escalating emergencies shall be made by the BED/IC until the DOE Hanford 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 number regarding the reclassification. The ONC then shall notify the offsite emergency response organizations of the event reclassification.

Upon declaration of their operability, the DOE Hanford EOC shall have the responsibility for reclassifying or terminating emergencies, disseminating additional protective action decisions to onsite personnel, and performing offsite notifications that include protective action recommendations.

The same offsite notification requirements listed above apply anytime an event is reclassified.

5.1.1.2.3 U.S. Department of Energy Emergency Response Assets. It is the responsibility of the DOE Hanford EOC to forward any requests for national DOE emergency response assets to the Regional Response Coordinator. Response to events requiring DOE emergency assistance shall be directed to appropriate DOE-HQ elements. DOE responsibilities for emergency assistance are delineated within interagency Federal response and recovery plans, Executive Orders, and/or international agreements. Specific notifications for response to a request for radiological assistance are described in DOE/RL-92-49, *U.S. Department of Energy Radiological Assistance Program Plan and Procedure Region 8.*

5.1.1.2.4 Reports. Following termination of emergency response, and in conjunction with the Final Occurrence Report per DOE O 232.1A, the facility shall submit a final report on the emergency to the Occurrence Reporting and Processing System. The RL/ORP Manager shall designate a lead evaluator to conduct an evaluation and submit a final report on the emergency response. Upon approval by the RL/ORP Manager, the final report shall be submitted to the Associate Deputy Secretary for Field Management and the Director of Emergency Management.

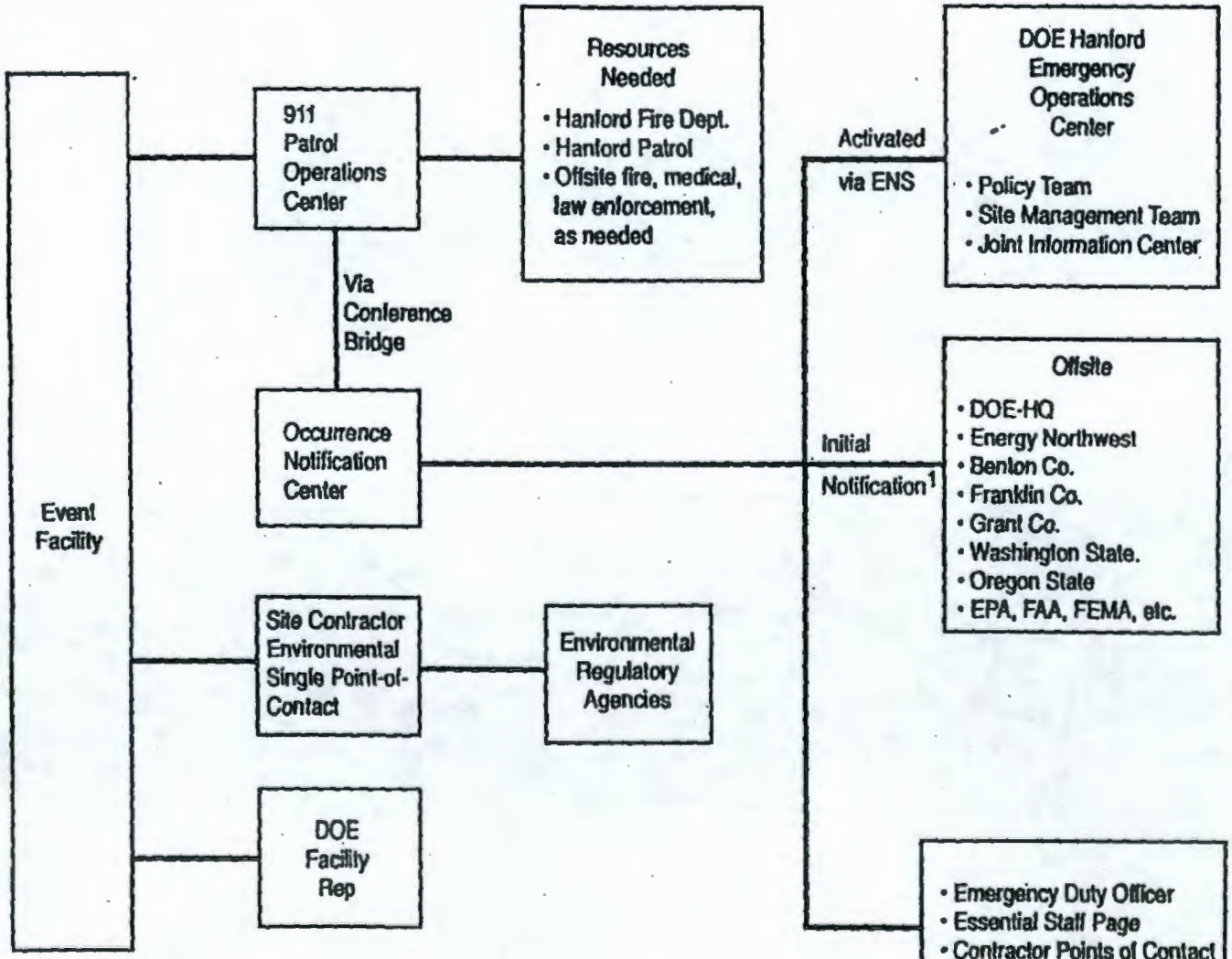
All reports and releases shall be reviewed for classified or Unclassified Controlled Nuclear Information prior to being provided to noncleared personnel, entered into unclassified data bases, or transmitted using nonsecure communications equipment.

5.1.2 Environmental Notifications

There are numerous environmental notifications that must be made including those required under the RCRA emergency category. These notifications are 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 classifiable emergency (i.e., Alert, Site Area Emergency, or General Emergency), contractors must ensure that environmental notification procedures are consistent with the environmental notification process depicted in Figure 5-3.

Figure 5-1. Hazardous Material Operational Emergency Notifications.



[1] Subsequent notifications made by the DOE Hanford EOC once operational.

Figure 5-2. RL Notification Form.

RL-F-5540.1
(02/99)

U.S. DEPARTMENT OF ENERGY
RICHLAND OPERATIONS OFFICE

NOTIFICATION FORM | Notification No.

1 NOTIFICATION PROVIDED BY: Name: _____ Phone: (509) _____

2 AREA AND FACILITY: _____ 3 TYPE EVENT: a. ☐ Emergency b. ☐ Exercise/Drill

4 CLASSIFICATION/STATUS:
a. ☐ Initial Classification b. ☐ Reclassification c. ☐ Termination d. ☐ PAR Change/Addition e. ☐ Information

5 EMERGENCY CLASSIFICATION LEVEL AND PROTECTIVE ACTION RECOMMENDATIONS:

AREA	a. ☐ ALERT EMERGENCY	b. ☐ SITE AREA EMERGENCY	c. ☐ GENERAL EMERGENCY
☐ 100K	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.
☐ 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	None	Evacuate Columbia River from White Bluffs to Howard Amon Park.	• Evacuate Columbia River from White Bluffs to Howard Amon Park. • Evacuate 3 mile radius.
☐ 400	None	Evacuate Columbia River from White Bluffs to Leslie Groves Park.	Evacuate Columbia River from White Bluffs to Leslie Groves Park.
☐ Others	None	None	None

6 TYPE OF INCIDENT: *check all that apply*
a. ☐ Fire b. ☐ Explosion c. ☐ Radiological d. ☐ Security e. ☐ Hazardous Materials f. ☐ Electrical
g. ☐ Other EAL Used for Classification: DOE-0223, RLEP 1.0, Appendix 1-
Description of Incident: _____

7 RELEASE INFORMATION:
a. ☐ No Release
b. ☐ Airborne Release
c. ☐ Spill
d. ☐ Release to Columbia River
e. ☐ Unknown
f. ☐ Release Terminated
Estimated Start Time of Release _____
Assumed Duration of Release _____

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

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

FOR EOC USE ONLY

10 ADDITIONAL OFFSITE PROTECTIVE ACTION RECOMMENDATIONS:
_____

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

APPROVED: _____ DATE: _____ TIME: _____

5.1.2.1 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 an Abnormal Event notification is also required as delineated in subsection 5.1.3.

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

5.1.2.3 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 subsection 9.2.3 before operations are resumed.

5.1.3 Abnormal Event 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 Abnormal Event - which may generate public concern or media interest. RL will work with appropriate offsite entities to maintain the criteria to be used to initiate the Abnormal Event notifications, the notification procedure, and a list of entities to be notified. Additionally, RL shall notify the site contractors when criteria change. The Abnormal Event notification process is further delineated in the Hanford implementing directive HFID 232.1B, *Notification, Reporting, and Processing of Operations Information*.

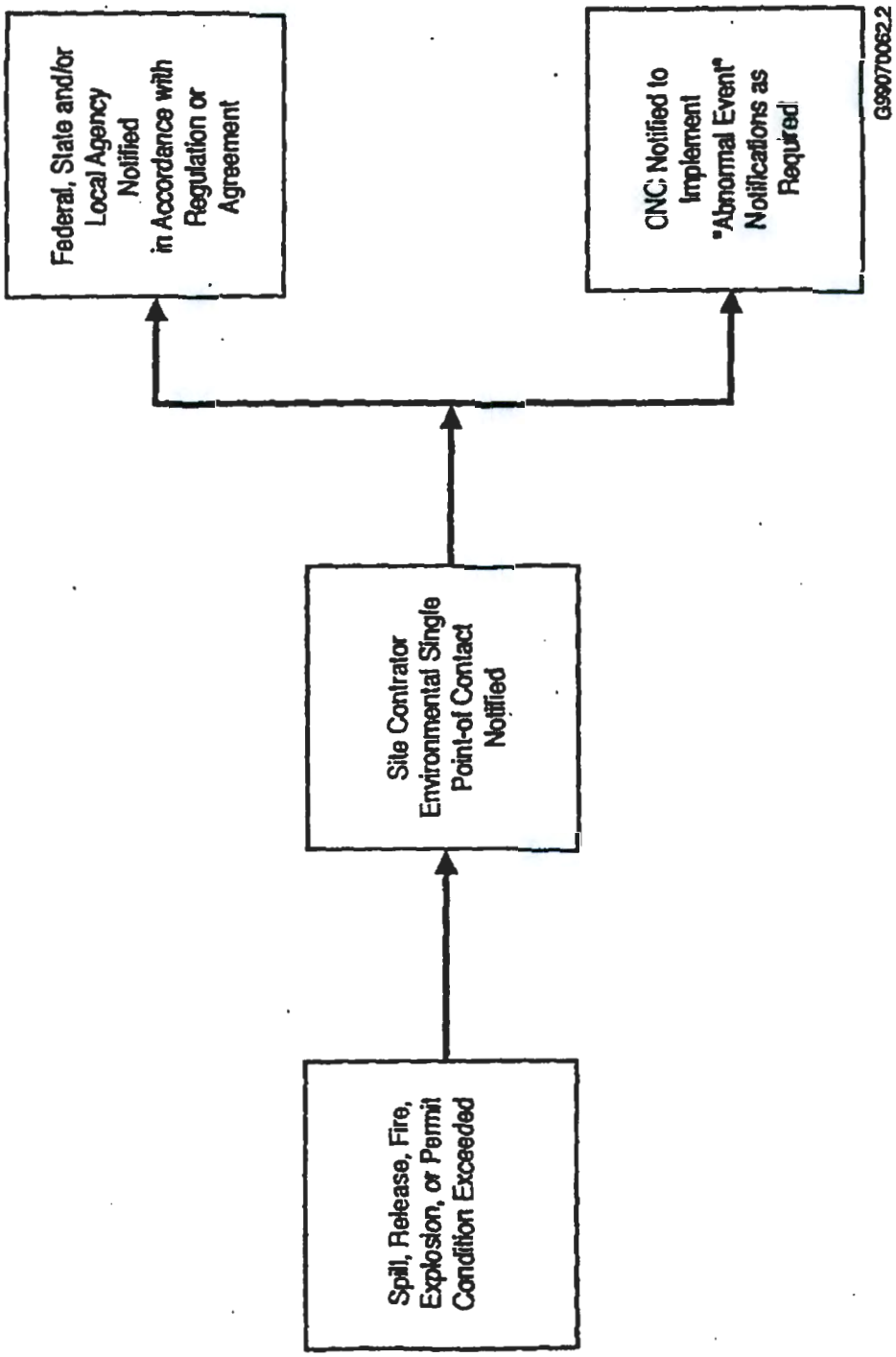
Site contractors are responsible to ensure that events meeting the HFID 232.1B Abnormal Event notification criteria at their respective facilities are promptly reported to the ONC. The ONC will initiate Abnormal Event notifications when notified of a situation which meets the agreed upon criteria. Additionally, offsite agencies will notify the ONC if public or media inquiries indicate the need to initiate notifications.

5.2 COMMUNICATIONS

Effective communications methods shall be established between event scene responders, emergency managers, and response facilities. Provisions shall also be established for continuing effective communication (i.e., back up means of communication) among the response organizations throughout an emergency. To minimize the potential for confusion in disseminating information, the simplest, most direct system for communications should be established.

Permit requirement: Subsection 5.1.2.1, Class 1 Modification 9/30/99
Subsection 5.1.2.2, Class 1 Modification 9/30/99
Subsection 5.1.2.3, Class 1 Modification 9/30/99

Figure 5-3. Environmental Notifications.



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.

5.2.1 Telephone Number 911

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

Where cellular telephone is the only method of communication, onsite emergency response may be requested by calling the POC at 373-3800.

5.2.2 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/ORP-owned hazardous materials shipments.

5.2.3 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.

5.2.4 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 subsection 5.1.2.1.

5.2.5 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, 100H, 100K, 100N, 200, 300, and 400 Areas.

5.2.6 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.

5.2.7 Priority Message System

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

5.2.8 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).

5.2.9 *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.

5.2.10 U.S. Department of Energy Hanford Emergency Operations Center Communications

The DOE Hanford 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:
  - Energy Northwest (WNP-2);
  - Benton County;
  - Franklin County;
  - Grant County;
  - Washington State;
  - Oregon State;
  - Hanford POC;
  - ONC; and
  - DOE Hanford EOC.

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

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

5.2.11 Secure Communications

Secure communications in the DOE Hanford 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.

5.2.12 Emergency Signals

Table 5-1 lists the standard Hanford Site emergency signals, their meanings, and normal response actions.

Table 5-1. 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	Take cover (shelter)	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.

6.0 CONSEQUENCE ASSESSMENT

Initial and continuous consequence assessments are necessary to protect workers, the public, and the environment during a declared emergency. Consequence assessments evaluate and interpret radiological or other hazardous materials measurements or other information 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.

6.1 CONSEQUENCE DETERMINATION

Provisions shall be established to adequately assess the potential or actual onsite and offsite consequences of an emergency. Hanford Site consequence assessment activities shall:

- be timely throughout the emergency;
- be integrated with the event classification and protective action process;
- incorporate monitoring of specific indicators and field measurements; and
- be coordinated with offsite agencies.

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.

6.1.1 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.

6.1.2 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.

6.1.3 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.

6.1.4 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 (e.g., 100K, 200E, 200W, 300, 400 Area) 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.

6.2 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 that 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.

7.0 PROTECTIVE ACTIONS AND REENTRY

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.

7.1 EMERGENCY PLANNING ZONES

Emergencies at 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.

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, approved EPZs shall be submitted to the Assistant Secretary for Environment, Safety, and Health; the Director of Emergency Management; and the CSO.

7.1.1 Plume Exposure Pathway Emergency Planning Zones

The extent of the plume exposure EPZ for radiological hazards is based upon 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 upon 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. Plume exposure EPZs have been determined for each facility based on the radiological, nonradiological, or mixed (radiological and nonradiological) hazards. Area plume exposure EPZs (i.e., 100, 200, 300, and 400 Areas) are determined by the largest facility EPZ in that area. The plume exposure EPZs are described in Table 7-1.

Figure 7-1 shows the plume exposure EPZs for geographical areas on the Hanford Site with potential offsite consequences.

Table 7-1. Hanford Site Area Plume Emergency Planning Zones.

LOCATION	TYPE OF HAZARD DETERMINING EPZ SIZE	RADIUS OF ZONE[1]
100K Area	Radiological	8.0 kilometers/5.0 miles
100N Area	Radiological	5.0 kilometers/3.0 miles
200E/W Area	Radiological	16 kilometers/10.0 miles
300 Area	Radiological	5.0 kilometers/3.0 miles
400 Area	Radiological	7.2 kilometers/4.5 miles

[1]For the purposes of EPZ definition, the receptor location is defined as the south and/or west shore of the Columbia River.

7.1.2 Ingestion Exposure Pathway Emergency Planning Zone

The ingestion exposure pathway EPZ for radiological and nonradiological incidents involving Hanford Site facilities corresponds to the 50-mile (80-kilometer) EPZ for Energy Northwest (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 exposure EPZ is shown on Figure 7-2.

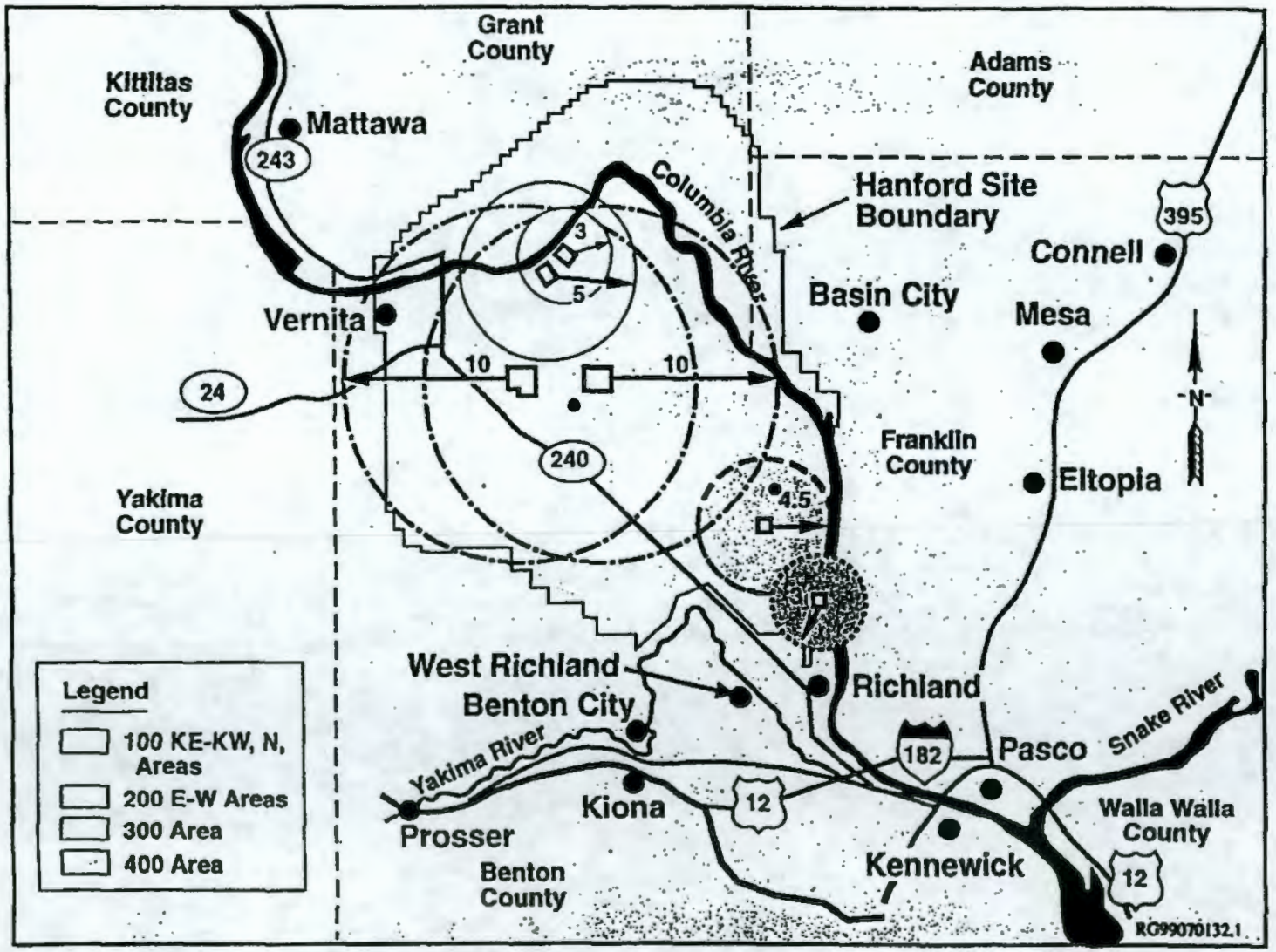


Figure 7-1. Plume Exposure Emergency Planning Zones.

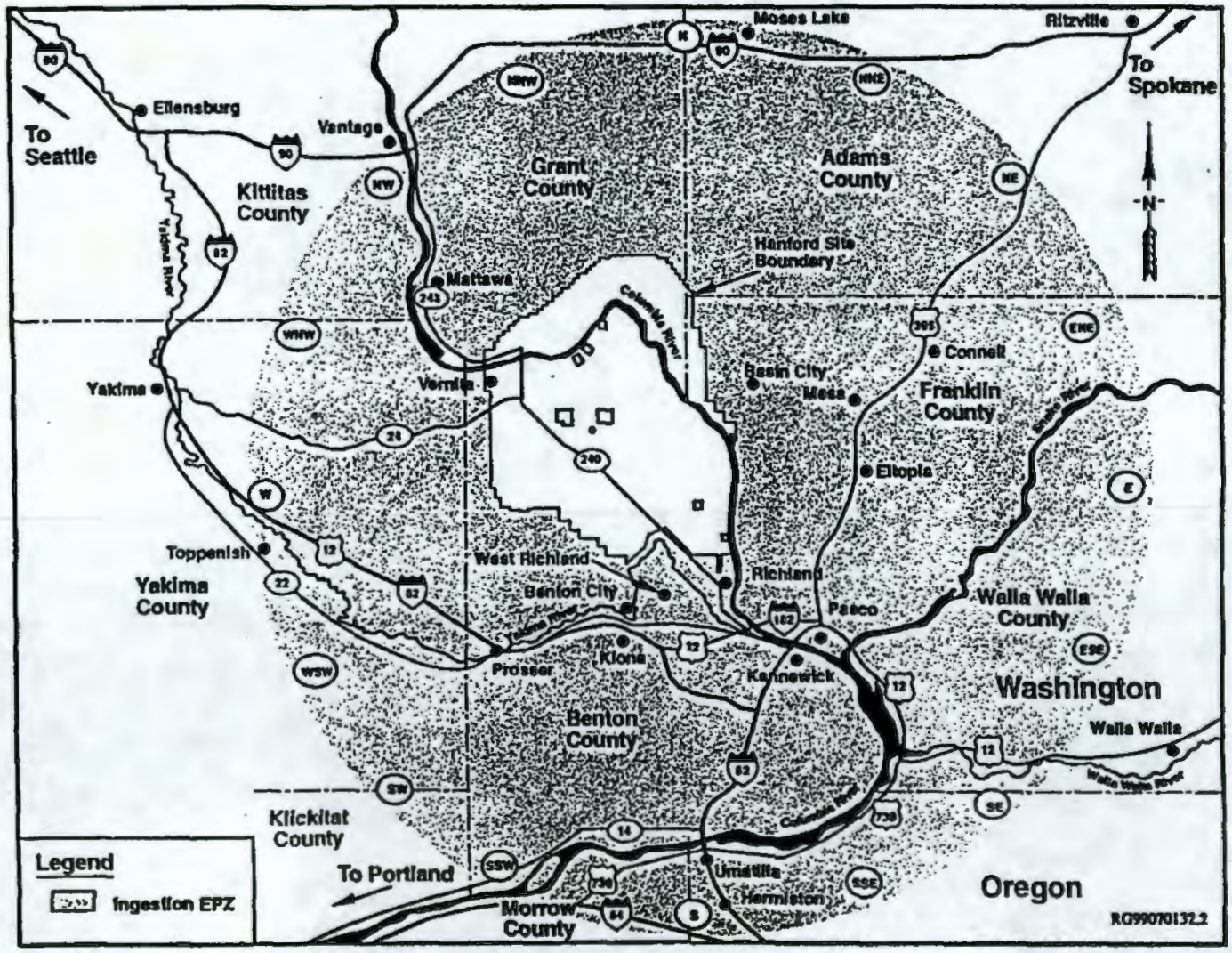


Figure 7-2. Ingestion Exposure Emergency Planning Zone.

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.

These intervention levels are based on Food and Drug Administration (FDA) guidelines and are described in respective state 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.

7.2 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 shall be predetermined for onsite personnel and the public and shall include:

- methods for controlling, monitoring, and maintaining records of personnel exposures to hazardous materials (radiological and nonradiological);
- plans for timely sheltering and/or evacuation of workers;
- methods for controlling access to contaminated areas and for decontaminating personnel or equipment exiting the area;
- actions to be taken to increase the effectiveness of protective actions (i.e., heating, ventilation, and air conditioning shutdown during sheltering;
- methods for providing timely protective action recommendations, such as sheltering, evacuation, relocation, and food control, to appropriate offsite agencies;
- PAGs and ERPGs, prepared in conformance with DOE-approved guidance applicable to the actual or potential release of hazardous materials to the environment, for use in protective action decision making; and
- the administration of medications.

7.2.1 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 PAG; 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 total effective dose equivalent, 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 PAG acronym used in this plan shall be interpreted to 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.

7.2.2 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. The Temporary Emergency Exposure Limit (TEEL) values developed by the Chemical Exposures Working Group of the DOE Subcommittee on Consequence Assessment and Protective Actions (SCAPA) are used for chemicals that do not have ERPG values. Within the ERPG system, the three values are defined below for each material.

7.2.2.1 Emergency Response Planning Guidelines 1 (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.

7.2.2.2 Emergency Response Planning Guidelines 2 (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.

7.2.2.3 Emergency Response Planning Guidelines 3 (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 O 151.1 Operational Emergency classification definitions, the terms ERPG and appropriate ERPG exposure levels shall be interpreted to mean a 15-minute time weighted average concentration of the substance in air that equals or exceeds the published ERPG-2 values, or its alternative value, for that substance.

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.

7.2.3 Onsite Protective Actions

7.2.3.1 DOE Hanford Emergency Operations Center. The DOE Hanford 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.

7.2.3.2 Facilities.

7.2.3.2.1 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, when appropriate, 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 subsection 7.2.3.4.

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

7.2.3.2.2 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, when appropriate, of heating, ventilation, and air-conditioning systems;
- facility evacuation including persons with permanent or temporary disabilities;
- ensuring that facility emergency response 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 subsection 7.2.3.4.

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

7.2.3.2.3 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.

7.2.3.3 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).

7.2.3.4 Personnel Accountability. Each facility on the Hanford Site shall provide for an evacuation accountability system commensurate with the hazards associated with the facility.

The accountability shall be conducted immediately after emergency evacuation has been completed to ensure that all employees are properly accounted for.

7.2.3.5 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 or event scene 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.

7.2.3.6 Area or Site Take Cover. Emergency procedures/checklists shall be maintained by Hanford Patrol and RL/ORP to provide instructions for implementing an area or site take cover. These procedures/checklists shall include, as a minimum, criteria for the implementation, notification, and termination of an area or site take cover. Hanford Patrol shall be responsible for implementing initial take cover protective actions until the DOE Hanford EOC is operational.

7.2.3.7 Area or Site Evacuation. Emergency procedures/checklists shall be maintained by Hanford Patrol and RL/ORP to provide instructions for implementing an area or site emergency evacuation. These procedures/checklists 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. Hanford Patrol shall be responsible for implementing initial evacuation protective actions until the DOE Hanford EOC is operational. Evacuation routes for the Hanford Site are shown in Figure 7-3. Specific routes will be

determined at the time of the event based on event magnitude, location, and meteorology. Private and government vehicles are available to provide transportation in the event of an emergency evacuation. Periodic drills and exercises are performed to ensure that an adequate employee-to-vehicle ratio is maintained to provide a timely and safe evacuation of personnel.

7.2.4 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. RL/ORP notifications to the state and the counties adjacent to the site are delineated in subsection 5.1.1.2.1. 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.

Protective action decision 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 DOE Hanford EOC 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.

7.2.5 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.

7.3 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 event termination, the BED and IC shall be responsible for determining appropriate protective measures for personnel reentering the event facility or area and for authorizing reentry. Reentry planning shall include contingency planning to ensure the safety of reentry personnel, such as planning for the rescue of reentry teams. All individuals involved in reentry shall receive a hazards/safety briefing prior to emergency response activities consistent with Federal, state, and local laws or regulations.

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.

7.3.1 Reentry Exposure Considerations

The means shall exist for estimating exposure to hazardous materials (radiological and nonradiological) and for protecting workers and the general public from exposure during reentry and recovery 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.

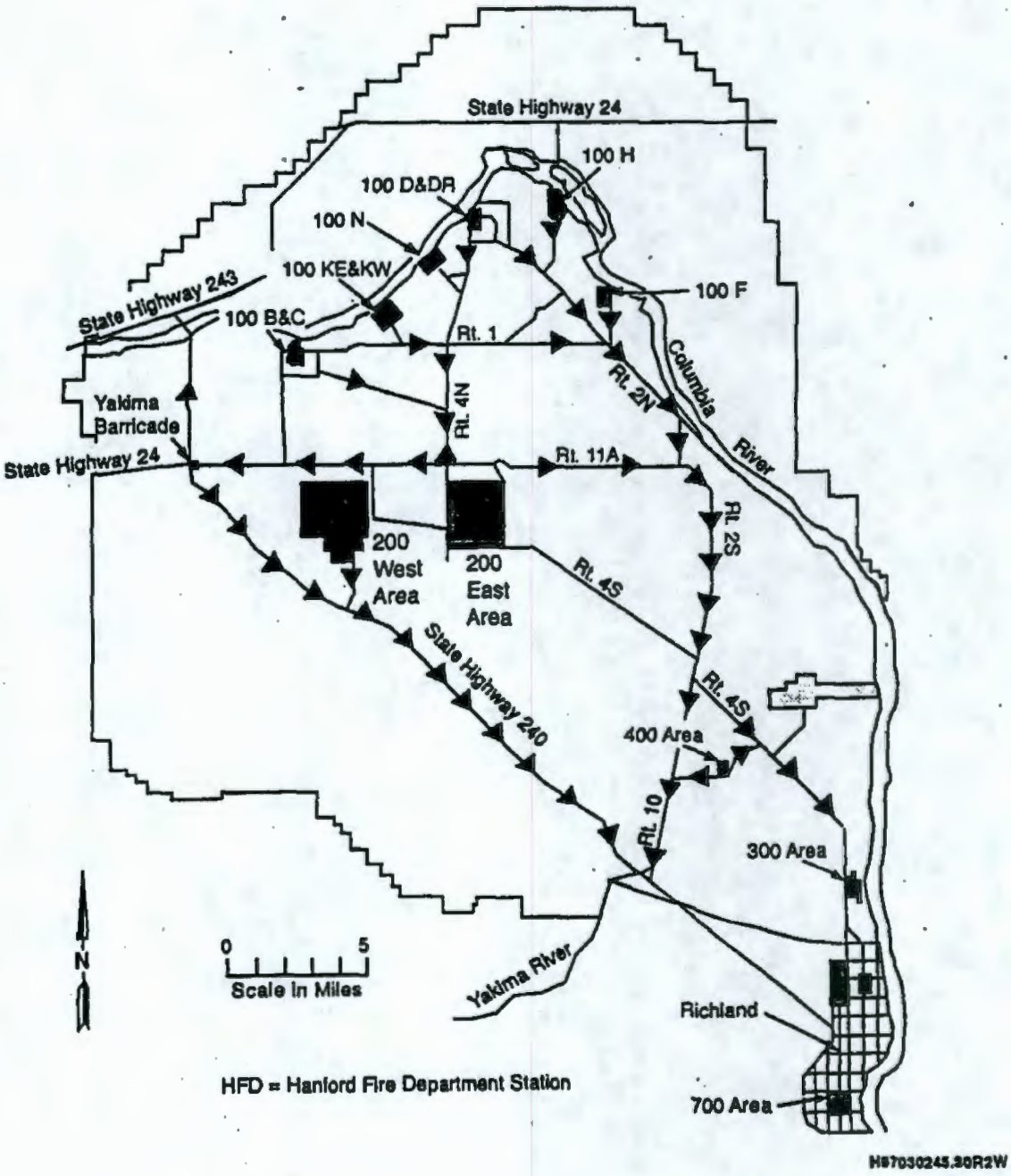
Emergency situations involving the saving of lives require separate criteria than those actions required to retrieve deceased victims or to save property. The limits for radiation exposure for reentry activities shall be in accordance with DOE/RL-96-109, *Hanford Site Radiological Control Manual* (DOE 1994). 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/ORP (e.g., asbestos).

7.3.2 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 7-3. Hanford Site Evacuation Routes.



This page intentionally left blank.

8.0 EMERGENCY MEDICAL SUPPORT

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.

RL/ORP shall ensure that provisions exist on the Hanford Site for emergency medical aid, triage, and decontamination; and the planning for mass casualty situations. Because of the potential for injuries to be accompanied by radiological contamination, medical support shall include documented arrangements with offsite medical facilities to accept and treat contaminated, injured personnel for emergency medical services not provided on the site. A synopsis of the MOUs with offsite medical facilities can be found in Table 3-1.

8.1 EMERGENCY MEDICAL RESPONSIBILITIES

Medical support shall be planned in advance in accordance with DOE O 440.1A (or replacement directive) for workers contaminated by hazardous material. Hanford Site organizations are authorized by RL/ORP 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 of 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.

8.1.1 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 Hanford 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.

8.1.2 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;
- 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.

8.1.3 Hanford Patrol

The Patrol Operations Center 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.

8.1.4 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.

8.1.5 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 respective subsections of section 2.0.

8.1.6 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.

A copy of each MOU is provided in Appendix B.

8.2 MEDICAL EMERGENCY FACILITIES AND EQUIPMENT

8.2.1 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.

8.2.2 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.

8.2.3 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.

8.2.4 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.

8.2.5 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.

8.2.6 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.

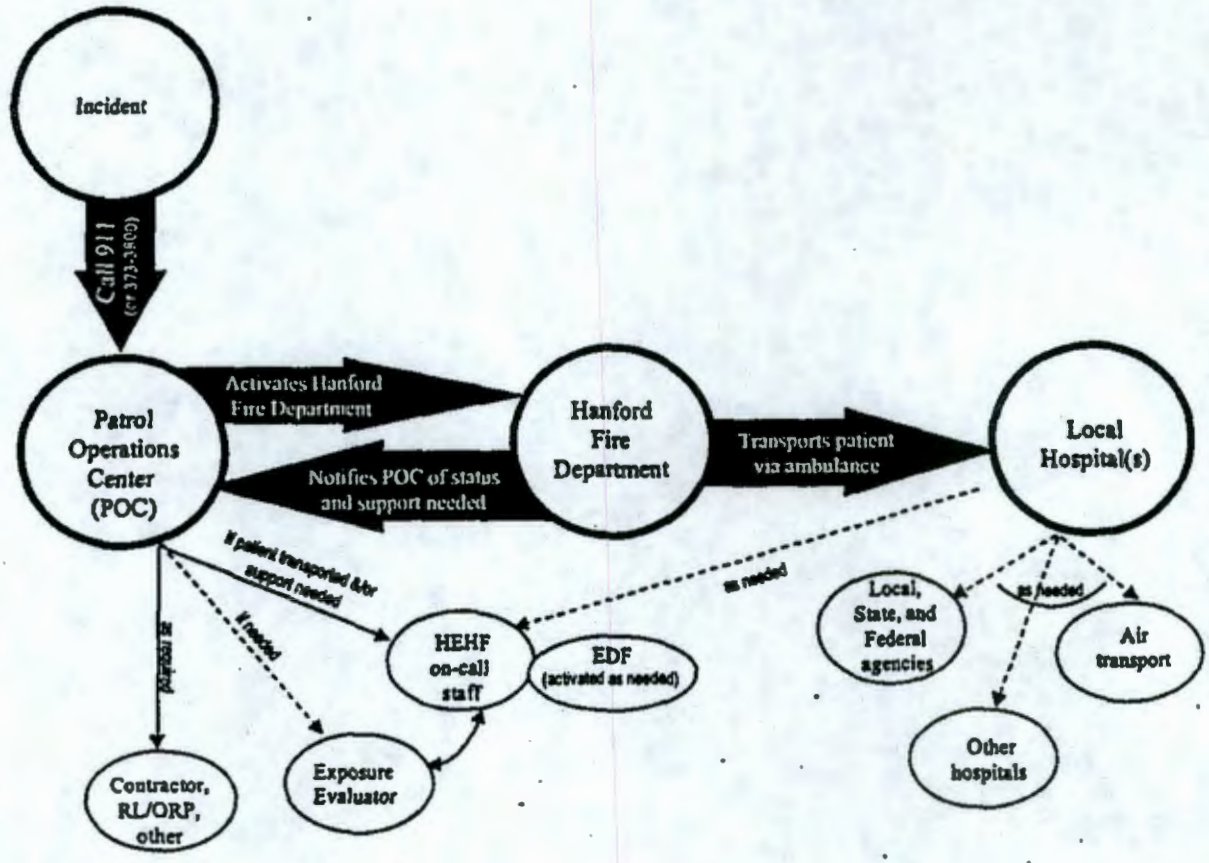
Memorandums of understanding with each hospital are maintained by RL. A copy of each MOU is contained in Appendix B. Other offsite medical facilities may be involved in Hanford medical emergencies through agreements with the local hospitals.

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.

8.3 MEDICAL EMERGENCY COMMUNICATIONS

The communications process during a Hanford medical emergency is illustrated in Figure 8-1.

Figure 8-1. Medical Emergency Response Communications.



9.0 EMERGENCY TERMINATION AND RECOVERY

This section describes the responsibilities for termination and recovery planning and operations. Predetermined criteria for termination of emergencies shall be developed and maintained in DOE-0223, *Emergency Plan Implementing Procedures*. Recovery shall include notifications associated with termination of an emergency and establishment of criteria for resumption of normal operations.

9.1 TERMINATION OF THE EMERGENCY

In general, response activities are terminated when the situation has been stabilized. At this point, potential threats to workers, the public, and the environment have been characterized, conditions no longer meet established emergency categorization criteria, and it appears unlikely that conditions will deteriorate. Once the emergency has been declared terminated, activities may then focus on recovery.

It is the function of the BED/BW/IC to declare the termination of an event after applicable criterion has been met where the DOE Hanford EOC has not been activated.

In an event where the DOE Hanford EOC has been activated, termination occurs after applicable criteria have been met and concurrence between the event contractor and RL/ORP has been obtained. The BED, IC, and Site Emergency Director must confer and agree that termination can be declared. The Site Emergency Director shall then communicate the information to the RL/ORP Emergency Manager.

The RL/ORP 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 offsite emergency agencies that the emergency is terminated and the recovery phase has been initiated. Notification will be done through the DOE Hanford EOC emergency communications network. The criteria for the termination decision and the basis for relaxing applicable offsite PARs will be included in the notification as appropriate. Press releases will be prepared and disseminated through the JIC.

9.2 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. RL/ORP shall direct recovery planning for Hanford Site facilities and support the offsite recovery efforts of Federal, state, and local agencies.

Recovery planning shall include dissemination of information to offsite agencies regarding the emergency and possible relaxation of public protective actions; planning for decontamination actions; establishment of a recovery organization; development of reporting requirements; and establishment of criteria for resumption of normal operations.

The RL Manager shall determine the type of accident investigation necessary and ensure that actions are performed in accordance with DOE O 225.1A, *Accident Investigations* (DOE 1997). In addition, the RL/ORP Emergency Manager, with assistance from the event contractor, shall provide for investigation of emergency root cause(s) and corrective action(s) to prevent recurrence in accordance with DOE requirements (e.g., see DOE O 225.1A and DOE 5480. 19) and RLIP 5484.1A, *Environmental Protection, Safety, and Health Protection Information Reporting Requirements* (DOE/RLIP 1981).

9.2.1 Planning and Operations for Onsite Recovery

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

9.2.1.1 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 DOE Hanford 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:

- coordinating personnel safety and health recovery actions such as stress debrief and case management activities;
- 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.

9.2.1.2 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.
- 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.

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

- 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 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.

9.2.2 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 offsite reentry and recovery decisions. The states shall coordinate recovery activities with the affected counties, who will coordinate local public health actions and disaster assistance. Recovery actions also will be coordinated with RL/ORP.

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.

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

A major event at the Hanford Site affecting offsite populations could involve the implementation of the Federal Radiological Emergency Response Plan (FRERP) and the Federal Response Plan. 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 lead Federal agency. The FRERP details the responsibilities of the lead federal agency 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.

9.2.3 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 activities shall be performed by trained site personnel. In order to meet 29 CFR 1910.120(q)(11) criteria, such personnel shall have completed the training requirements of 29 CFR 1910.38(a), 29 CFR 1910.134, 29 CFR 1910.1200, and other appropriate safety and health training made necessary by the tasks that they are expected to perform (e.g., personnel protective equipment, decontamination procedures). In addition, all equipment to be used in the performance of the clean-up work shall be in serviceable condition and shall have been inspected prior to use.

Activities may 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.

10.0 PUBLIC INFORMATION

Public information is an integral part of the emergency management program at the Hanford Site. Accurate, candid, and timely information consistent with requirements of the Freedom of Information Act and the Privacy Act shall be provided to site workers and the public before, during, and after emergencies so as to establish facts and avoid speculation. RL/ORP shall coordinate interagency and public information activities at the regional level and coordinate directly with DOE-HQ.

RL/ORP and state and local governments share the responsibility to provide this information. RL/ORP 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; and
- 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/ORP public information program with offsite agencies. Interfaces and assistance provided to offsite agencies related to public information shall be documented in MOUs. Applicable MOUs are contained in Appendix B.

10.1 EMERGENCY PUBLIC INFORMATION PROGRAM

RL/ORP and site contractor personnel shall cooperatively ensure that an adequate emergency public information program is established and maintained, commensurate with site hazards, to ensure that information can be provided to the public and media during an emergency.

The emergency public information program shall be adequately staffed with personnel trained to serve as spokespersons and newswriters, and to provide support in media services, public inquiry, Joint Information Center management and administrative activities, and media monitoring. Persons with technical expertise about the emergency and with spokesperson training shall also be assigned to the emergency public information staff.

Adherence to emergency public information policies and requirements shall be demonstrated during exercise evaluations, appraisals/evaluations, and approved training programs.

10.2 EMERGENCY PUBLIC INFORMATION ORGANIZATION

The Emergency Public Information organization shall be activated upon declaration of an emergency, activation of the DOE Hanford 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 backup. Emergency public information support to offsite responses under the RAP is addressed in DOE/RL-92-49, *U.S. Department of Energy Radiological Assistance Program Plan and Procedure Region 8*.

The Emergency Public Information organization shall be made up of site contractor and RL/ORP 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 DOE Hanford EOC have responsibilities for emergency public information: the Policy Team and the JIC.

10.2.1 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/ORP Emergency Manager.

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

10.2.1.1 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/ORP 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; and
- protecting the organization's image/credibility as they relate to emergency responses, control, and recovery.

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

10.2.2 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.

10.2.2.1 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/ORP, 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.

RL shall encourage the participation of impacted offsite agencies in the JIC. In addition to RL/ORP 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/ORP, site contractors, and offsite agencies;
- rumor control;
- response to telephone inquiries from the public and media; and
- information to employees.

In situations involving classified information, the JIC will provide sufficient unclassified information to explain the emergency response and protective actions required for the health and safety of workers and the public. Public announcements that contain information that may present a security risk shall be reviewed by an Authorized Derivative Classifier or reviewing official before release and released as appropriate.

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

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

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

10.2.2.1.3 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.

10.2.2.1.4 Telephone Teams. Telephone teams, staffed by RL/ORP 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.

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

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

10.2.2.2 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.

10.2.2.3 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 DOE Hanford 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.

10.2.2.4 Staffing and Responsibilities. The JIC staff shall receive initial training on the JIC concept of operations 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 functions to include:

- 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/ORP, 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, information released to the media or the public for classified information; and
- transmitting emergency releases, bulletins, and updates to 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 news conferences.

10.3 PUBLIC EDUCATION

RL shall assist the jurisdictions within Hanford Site EPZs in 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/ORP 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/ORP shall coordinate the provision of information on the emergency management program to the media with offsite agencies.

RL/ORP 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.

10.3.1 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 respective emergency plans. These plans, developed cooperatively with RL and Energy Northwest, include:

- 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;
- periodic public meetings; and
- annual surveys to determine the effectiveness of these programs.

Information provided to residents includes:

- a 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; and
- how those with special needs can get help.

10.3.2 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:

- a 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; and
- 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.

This page intentionally left blank.

11.0 EMERGENCY FACILITIES AND EQUIPMENT

This section identifies and describes the emergency facilities and equipment used or maintained by RL/ORP and the Hanford Site contractors. The provision of facilities and equipment adequate to support emergency response, including the capability to notify employees of an emergency to facilitate the safe evacuation of employees from the work place, immediate work area, or both shall be addressed. Facility-specific equipment may be listed in respective building emergency plans and/or procedures.

11.1 EMERGENCY FACILITIES

This section contains a description of the RL/ORP and site contractor facilities that have been equipped for emergency control, operations, and coordination. Figure 11-1 depicts the geographical location of the primary and alternate DOE Hanford EOC, the POC, and the Hanford fire stations. The functions, staffing, and activation criteria of the DOE Hanford EOC are described in the various subsections of section 2.0.

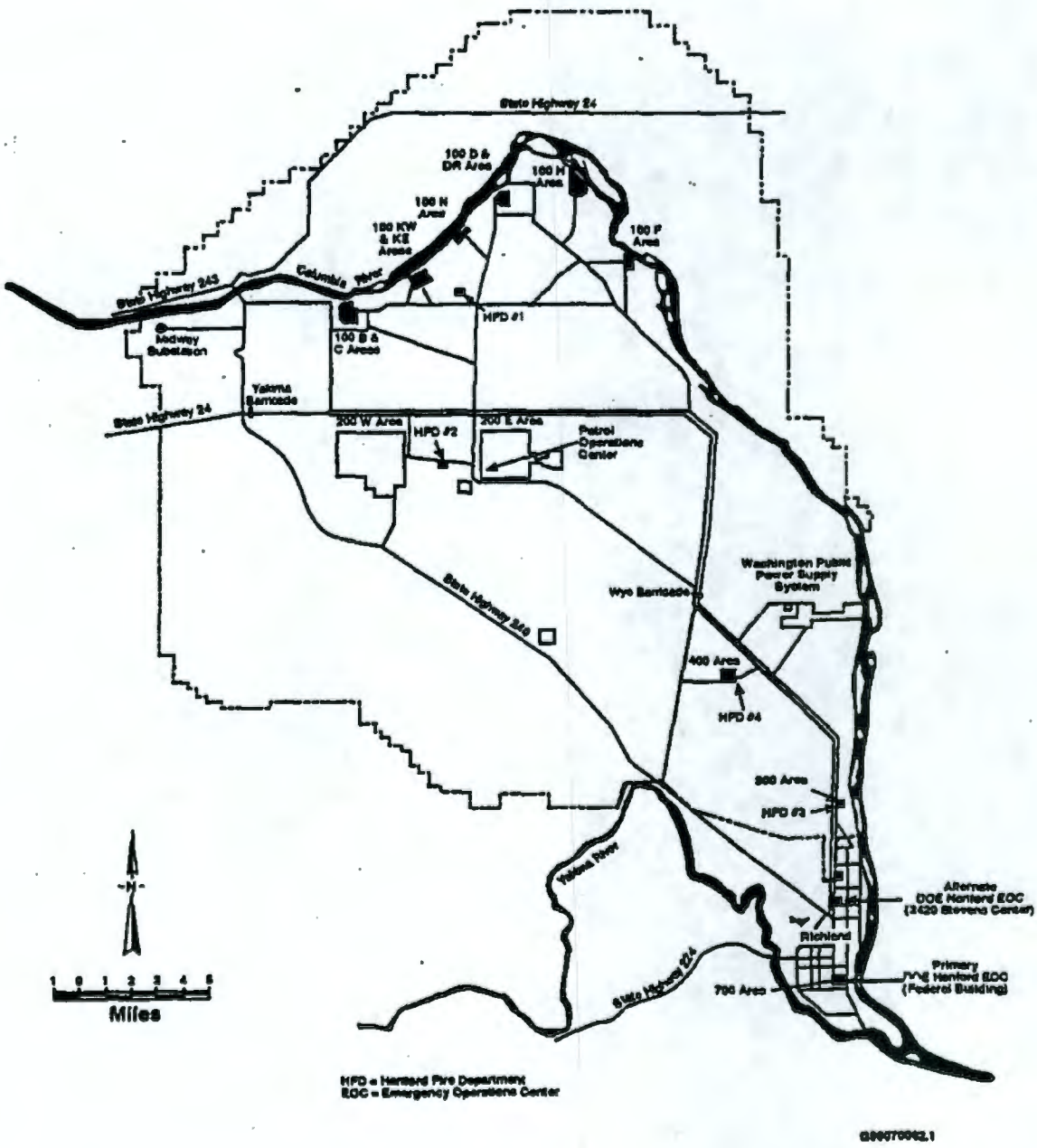
11.1.1 U.S. Department of Energy, Hanford Emergency Operations Center

The DOE Hanford 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. Telecommunication, 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 DOE Hanford EOC location provides favorable proximity to the emergency management and response staff, the RL Communications Center, and to additional office space.

Additionally, the DOE Hanford EOC is outside of Hanford Site facility plume EPZs thus ensuring a high probability of the DOE Hanford 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 DOE Hanford EOC shall be equipped with compatible communication, photo/video, and automatic data processing support specified by the DOE-HQ Director of Emergency Management. 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.

Figure 11-1. Hanford Site Emergency Centers and Fire Stations.



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

The primary DOE Hanford 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/ORP Emergency Manager, it is safe to reoccupy the primary DOE Hanford EOC.

Procedures for the operation of the alternate DOE Hanford EOC are found in the *Emergency Plan Implementing Procedures* (DOE-0223).

11.1.2 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), business number (373-3800), and acts as the single point-of-contact for RL/ORP.

The POC notifies and/or dispatches the:

- Hanford Fire Department, including ambulance and the Hazardous Material Response Team;
- Hanford Patrol;
- HEHF on-call provider;
- 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.

11.1.3 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/ORP and site contractor personnel and to state and local emergency management organizations.

Specific responsibilities of the ONC includes:

- activating the Hanford Site ERO 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 applicable subsections of section 5.0. Specific operational desk instructions shall be maintained by the ONC.

11.1.4 Medical Emergency Facilities

Capabilities for medical aid, triage, and personnel decontamination shall be available onsite. Emergency Medical Support is described further in section 8.0.

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 (Richland, Washington). The EDF is a dedicated, hardened facility designed to accommodate nonserious or nonlife-threatening radiologically contaminated injuries.

Agreements shall be in place between RL and local hospitals for backup medical treatment. A copy of each MOU is contained in Appendix B.

11.1.5 Protective Clothing Cleaning

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

11.1.6 State and County Emergency Operations Centers

The Benton County EOC is located at 651 Truman Avenue, Richland, Washington.

The Franklin County EOC is located at 502 Boeing Street, Pasco, Washington.

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

The Washington State EOC is located in the office of the Washington State Emergency Management Division (Building 20) at Camp Murray in Tacoma, Washington.

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

11.2 EMERGENCY EQUIPMENT

Adequate personal protective equipment and other equipment and supplies shall be available and operable to meet the needs determined by the results of the hazards assessment and 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;
- radiation control monitoring instrumentation;
- 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. RL/ORP 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 database, 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.

11.2.1 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.

11.2.1.1 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.

11.2.1.2 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.

11.2.2 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.

11.2.3 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.

11.2.4 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.

11.2.5 Decontamination Operation Equipment

The T Plant Complex in the 200 West Area provides equipment decontamination services for the Hanford Site.

11.2.6 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 DOE Hanford EOC.

11.2.7 Hanford Patrol

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

11.2.8 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 11-1.

11.3 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.

The FDH Emergency Preparedness organization 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 e-mail. Sitewide information sources, such as the POC and Hanford telephone operator, should also be notified of any audible facility or area siren/alarm testing.

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 DOE Hanford EOC radios by the FDH Emergency Preparedness organization; and
- quarterly testing of the ENS by the ONC.

As applicable, the organization(s) responsible for communications with DOE-HQ and offsite agencies shall test communications systems at least annually or as often as needed to ensure that communications systems are operational.

11.4 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.

This page intentionally left blank.

12.0 TRAINING AND DRILLS

In addition to training that site personnel receive on their day-to-day functions, a coordinated program of training and drills for developing and/or maintaining specific emergency response capabilities shall be an integral part of the Hanford Site emergency management program.

12.1 GENERAL TRAINING REQUIREMENTS

12.1.1 General Employee Training

Initial training and periodic drills shall be provided to all workers who may be required to take protective actions (e.g., assembly, evacuation) when they are employed, when their expected actions change, or when the facility-specific emergency plan/procedure changes. This may be provided through general employee training and participation in drills or exercises.

Refresher training shall be provided annually to Hanford Site employees who are likely to witness a hazardous material release and who are required to notify proper authorities of the release.

In addition, site personnel are provided information on the specific emergency response documentation of their facility. Information is also 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.

12.2 HANFORD EMERGENCY RESPONSE ORGANIZATION TRAINING REQUIREMENTS

A formal training program shall be provided for the instruction and qualification of all personnel (i.e., primary and alternate) comprising the Hanford Site ERO to include both initial training and annual refresher training.

Training programs should include a mix of classroom instruction, tabletop exercises or walk-throughs, and drills. In addition, training programs should be systematic and performance based (i.e., based on the 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 refresher training should include lessons learned from past drills and exercises, changes to plans and procedures, and lessons learned from emergencies at DOE and other industrial facilities.

12.2.1 U.S. Department of Energy, Hanford Emergency Operations Center Staff Training

Site personnel assigned to the DOE Hanford EOC shall receive training prior to assignment to an activation list and at least annually thereafter. Offsite personnel with designated positions in the DOE Hanford EOC receive initial orientation training as requested.

12.2.2 Incident Command Organization Training

Personnel working in assigned roles of the Incident Command Organization, as delineated in Table 2-1, shall attend incident command and task-specific training prior to assignment and at least annually thereafter. Training shall include roles, responsibilities, and authorities for the respective position within the Incident Command Organization.

Personnel directing or supervising response actions must be trained for all tasks they assign to be performed and have the same level of qualification for emergency response as the personnel being directed.

Additional training requirements, as applicable, are delineated in the following subsections.

12.2.2.1 Facility/Building Emergency Response Organization Training.

12.2.2.1.1 Administrative Facilities. All designated BWs/BEDs (primary and alternates) shall attend BW/BED training prior to assignment and at least annually thereafter. The training shall include an overview of the Hanford Incident Command System including roles and responsibilities.

Personnel accountability aides and staging area managers (or other contractor-designated names) shall be trained on their respective roles and responsibilities prior to assignment and at least annually thereafter. The annual retraining requirement may be met by participation in a drill or exercise or by classroom training.

12.2.2.1.2 Nonhazardous Facilities. All designated BWs/BEDs (primary and alternates) shall attend BW/BED training prior to assignment and at least annually thereafter. The training shall include an overview of the Hanford Incident Command System including roles and responsibilities.

Additionally, the building management, or designee, shall ensure that documented training is provided to the Facility/Building Emergency Response Organization on their respective roles and responsibilities prior to assignment and at least annually thereafter.

12.2.2.1.3 Hazardous Facilities. All designated BEDs (primary and alternates) shall attend BED training prior to assignment and at least annually thereafter.

Additionally, the building management, or designee, shall ensure that documented training is provided to the Facility/Building Emergency Response Organization (including the BED) prior to assignment and at least annually thereafter. The training shall include:

- duties delineated within DOE-0223, *Hanford Emergency Plan Implementing Procedures* and supporting facility-specific emergency response procedures (see Note below);
- an overview of the Hanford Incident Command System including roles and responsibilities; and
- an overview of the facility hazards and hazard control measures specified in accident scenarios such as those contained in authorization basis documentation (e.g., safety analysis report, facility hazards analysis) and supporting emergency response procedures.

NOTE: Some site contractors may interpret DOE-0223 actions through contractor-specific emergency management documentation.

Facility/Building Emergency Response Organization personnel who have been designated to support emergency response at the event scene must have first aid training (to include cardiopulmonary resuscitation (CPR) and blood borne pathogen training) and SCBA training. Contractors may grant exceptions from this training where it can be demonstrated that these services are not required. Contractors shall provide documentation of such exemptions to the RL Emergency Preparedness Program Manager.

12.2.2.2 Site Contractor Emergency Response Personnel Training. Site Contractor Emergency Response Personnel requiring certification/qualification are identified as 911 dispatchers, ICs, firefighters performing defensive or offensive operations in the incident scene hazard area, and/or emergency medical personnel. These staff shall obtain and maintain such certification/qualification.

12.2.2.3 Other Emergency Response Support Personnel Training. Skilled Support Personnel and Specialist Employees are not designated members of the Hanford ERO and, as such, are not required to meet specific Hanford ERO training requirements. However, other safety measures or training are required, as delineated in the following subsections, to ensure that such personnel are protected against hazards that may be present at the event scene.

12.2.2.3.1 Skilled Support Personnel. Site support personnel who are skilled in the operation of certain equipment, such as mechanized earth moving or digging equipment or crane and hoisting equipment, and who are needed temporarily to perform immediate emergency support work that will or may expose them to hazards at the event scene shall be given an initial briefing prior to their participation in any emergency response. The initial briefing shall include

instruction in the wearing of appropriate personal protective equipment, what hazards are involved, and what duties are to be performed. All other appropriate safety and health precautions shall be used to assure the safety and health of these personnel. This training meets the requirements of 29 CFR 1910.120(q)(4).

12.2.2.3.2 Specialist Personnel. Personnel who, in the course of their regular job duties, work with and are trained in the hazards of specific hazardous (radiological and nonradiological) substances and who will be called upon to provide technical advise or assistance to the IC shall receive training or demonstrate competency in the area of their specialization annually. This training meets the requirements of 29 CFR 1910.120(q)(5).

12.3 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.

12.4 EMERGENCY PREPAREDNESS COURSES

Emergency preparedness training courses conducted at the Hanford Site are identified in Table 12-1.

12.5 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 for reminding employees when refresher training is needed.

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

Table 12-1. Emergency Preparedness Training Courses.

TRAINING COURSE	FREQUENCY	COURSE SUMMARY
General Employee Training	Annually	Training provides basic emergency preparedness response procedures to DOE and site contractor employees.
DOE Hanford Emergency Operations Center Training	Before assignment; annually thereafter[1]	Training provides an overview of the Hanford Emergency Response Organization as well as specific roles and responsibilities for the various positions which make up the DOE Hanford EOC teams.
Facility/Building Emergency Response Organization Training	Before assignment; annually thereafter	Training addresses emergency procedures, responsibilities, and command and control for members of the Facility/Building Emergency Response Organization (i.e., BED/BW and support staff).
Incident Command Organization Training	Before assignment; annually thereafter	Training addresses the roles, responsibilities, and authorities for the respective position within the Incident Command Organization.
Visitor, Vendor, Subcontractor, Consultant, and Regulatory Agency Personnel Training	Before badge issuance	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 DOE Hanford EOC. Offsite personnel with designated positions in the DOE Hanford EOC receive initial orientation Training as requested.

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

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.

12.7 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.

12.8 OFFSITE PERSONNEL TRAINING

Emergency-related information, transportation information, and training on site-specific conditions and hazards shall be made available to offsite personnel who may be required to participate in response to an emergency at the Hanford Site. 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.

Offsite agencies that participate in the DOE Hanford EOC are given the opportunity to participate in training and drills related to their respective functions.

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

12.9 INSTRUCTOR TRAINING AND QUALIFICATION

The emergency preparedness training programs shall identify and document course instructor qualifications. Instructor qualification criteria shall be in accordance with contractor procedures where applicable. 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.

12.10 DRILLS

Drills shall provide supervised, "hands-on" training and application sessions for members of the Hanford Site ERO. 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.

12.10.1 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 subsections.

12.10.1.1 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 nonemergency notifications. An operational drill may also include the use of the appropriate *Emergency Plan Implementing Procedures* (DOE-0223) and be performed using a tabletop format. The 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, contamination spread, and other applicable operating functions. Operational drills may be evaluated during operational readiness reviews, readiness assessments, conduct of operation assessments, and assessments performed for compliance with DOE 5480.20A, *Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities*.

12.10.1.2 Emergency Preparedness Drill. An emergency preparedness drill at hazardous facilities involves designated facility emergency response personnel and the Hanford Incident Command System. Such 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 appropriate *Emergency Plan Implementing Procedures* (DOE-0223) and, at a minimum, should demonstrate:

- implementation and coordination of facility and/or area (i.e., 100 Area, 200 Area, 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 other Incident Command Organization functions 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 (evacuation to a staging area or take cover) annually to ensure that personnel are knowledgeable of response to alarms, can take immediate shelter, and are able to safely evacuate their work area.

12.10.1.3 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, DOE Hanford EOC, area take cover and evacuation drills, ONC staff, POC staff, Emergency Duty Officers, and Hanford Fire Department responders.

12.10.2 Drill Development and Conduct

Drills should be of sufficient scope and frequency to ensure an adequate and trained emergency response organization.

In addition, 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 and 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 initial ICP (hazardous and nonhazardous facilities); and
- personnel decontamination (hazardous and nonhazardous facilities).

Contractors with facilities that can generate 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. Site contractors, however, 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;
- technical 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.

12.10.3 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. The definition of each grade is delineated in this section. Site contractors may, however, substitute an equivalent evaluation process.

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.

GRADE	DEFINITION
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.

13.0 EXERCISES

Exercises provide the opportunity for participants to demonstrate their proficiency in assigned emergency response duties and are used to validate the adequacy of emergency procedures, facilities, equipment, training and personnel response.

13.1 EXERCISE PROGRAM

The Hanford Site Emergency Exercise Program organization shall establish and maintain a formal exercise program to validate all elements of the Hanford Site emergency management program over a multi-year period. Each exercise shall have specific objectives and shall be fully documented (e.g., by scenario packages that include objectives, scope, timelines, injects, controller instructions, and evaluation criteria).

Exercises shall be evaluated. A critique process, which includes gathering and documenting observations of the participants, shall be established. Corrective action items that are identified as a result of the critique process shall be incorporated into the Hanford Site emergency management program.

The Hanford Site Emergency Exercise Program organization shall exercise the emergency preparedness response capability of selected hazardous facilities annually as designated in the exercise schedule. The exercises shall include at least facility-level evaluation and critique. Evaluations of annual facility exercises by DOE entities (e.g., RL/ORP or the DOE-HQ Office of Emergency Management) shall be performed periodically so that each facility has external DOE evaluation at least every 3 years.

Site contractors with facilities that can generate an Alert or higher emergency, create a 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 the scenario development process 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.

The DOE Hanford EOC shall participate in selected exercises annually as designated in the exercise schedule. The exercises shall be designed to test and demonstrate the site's integrated emergency response capability. The basis for the exercises shall be rotated among facilities.

Adherence to Operational Emergency notification and reporting requirements shall be demonstrated in all emergency management exercises.

13.2 EXERCISE DEFINITIONS

There are three types of exercises conducted at the Hanford Site – limited, tabletop, and field. Each exercise is defined in the following subsections.

13.2.1 Limited Exercise

A limited exercise tests and validates the responsibilities of the Incident Command Organization, POC, ONC, and DOE Hanford EOC staff. There is no offsite involvement.

Communication links, at a minimum, will include the:

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

13.2.2 Tabletop Exercise

A tabletop exercise allows the Hanford Site ERO 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. A tabletop exercise is conducted annually as a precursor to the field exercise.

13.2.3 Field Exercise

A field exercise tests and validates the responsibilities of all aspects of the Hanford Site ERO, which includes the Incident Command Organization, POC, ONC, and the DOE Hanford EOC. Offsite involvement may include DOE-HQ, state and county EOCs, and supporting staff such as radiological field teams.

A dress rehearsal exercise is conducted prior to the field exercise to provide an opportunity for the Hanford Site ERO to work together as a team.

13.3 EXERCISE DEVELOPMENT AND CONDUCT

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 each 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 13-1.

13.4 EXERCISE EVALUATION AND CORRECTIVE ACTION

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

The exercise evaluation criteria will be based on this plan, *Emergency Plan Implementing Procedures* (DOE-0223), 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.

13.5 OFFSITE COORDINATION

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

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.

Table 13-1. Exercise Frequency.

EXERCISE TYPE	FREQUENCY	INITIATED BY/ EVALUATED BY	ORGANIZATIONAL PARTICIPANTS
Tabletop and Field	The Hanford Site shall conduct one tabletop and one field exercise per year unless otherwise directed by RL.	Hanford Site Emergency Preparedness	Facility ERO, Incident Command Organization, POC, ONC, DOE Hanford EOC, Hanford Patrol, Hanford Fire Department, radiation control, industrial hygiene, UDAC field teams, first response organizations, affected offsite agencies, etc.
Limited	The Hanford Site shall conduct three limited exercises per year unless otherwise directed by RL.	Hanford Site Emergency Preparedness	As noted above in tabletop/field exercise except for offsite agencies.

14.0 PROGRAM ADMINISTRATION

The basic purpose of program administration is to establish and maintain effective organizational management and control of the emergency management program. Even though the program is now available to ORP and its contractors, RL retains the primary responsibility to oversee, coordinate, and assess the emergency management programs of the Hanford Site contractors. RL will ensure the preparation and maintenance of plans and procedures necessary for RL/ORP to carry out its responsibilities during an emergency and will schedule through ORP any activities (i.e., drills, exercises, assessments) of ORP contractors.

14.1 EMERGENCY MANAGEMENT PROGRAM ADMINISTRATOR

The RL/ORP Managers have the responsibility for administering the overall emergency management program for the Hanford Site. The RL/ORP Managers have delegated the authority to develop, implement, and maintain the emergency management program to the RL Office of Environment, Safety, and Health director; however, key program decisions and/or policy changes will be coordinated with ORP prior to implementation. The RL Emergency Preparedness staff of the QSH Division carries out these responsibilities.

Each site contractor shall designate an individual to administer the site-level emergency management program and/or to administer/assess the facility-level emergency management program. This individual shall also assist, as necessary, in the development and maintenance of this plan and applicable implementing procedures; development of the Hanford Emergency Readiness Assurance Plan (ERAP) and annual updates; development and conduct of training and exercise programs; coordination of assessment activities; development of related documentation; and coordination of emergency resources.

Each building organization shall designate an individual (e.g., BED, BW, emergency preparedness coordinator) responsible to administer the emergency management program at the facility level.

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

The RL/ORP Emergency Preparedness staff functions, as appropriate to the responsibilities described above, related to overseeing site contractor emergency preparedness programs include:

- ensuring that hazards assessments and hazards surveys for emergency planning are adequately performed and documented;

- reviewing and recommending approval of the annual Hanford ERAP developed by site contractors and RL/ORP, and submitting it to the CSO and the DOE-HQ Director of Emergency Management for inclusion in the annual report;

- 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;

- submitting DOE Order requirement exemption requests, as necessary, for approval by the Under Secretary, which document the basis for each exemption, and 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.

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

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

- assigning senior emergency preparedness representatives to the Emergency Management Advisory Committee;

- revising and updating this plan and the *Emergency Plan Implementing Procedures* (DOE-0223) in accordance with DOE O 151.1 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 DOE Hanford EOC;

- maintaining the DOE Hanford EOC facility and equipment; and

- maintaining the DOE Region 8 RAP.

Additional organizational responsibility, authority, and functions within RL for implementing requirements from DOE O 151.1 and other DOE Directives and Federal and state laws are delineated in the *Richland Operations Office Functions, Responsibilities and Authorities Manual.*

14.2 EMERGENCY READINESS ASSURANCE PROGRAM

14.2.1 Hanford Emergency Readiness Assurance Plan

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

The Hanford ERAP shall be a planning tool to identify and develop needed resources and improvements. The Hanford ERAP shall highlight any significant changes in emergency management programs (i.e., planning bases, organizations, exemptions) from previous ERAPs, as well as comparing actual achievements to goals, milestones, and objectives. If applicable, the Hanford ERAP shall be reviewed for classified or controlled information prior to submittal.

Site contractor Emergency Preparedness personnel shall submit initial or updated emergency planning and preparedness activities information, as indicated above, to the RL QSH Division by September 30 each year for review and inclusion in the Hanford ERAP. The information shall cover a planning cycle of five years beginning the next October 1.

The RL Emergency Preparedness staff shall review and finalize the Hanford ERAP for approval by the RL QSH Division director. The RL staff will obtain concurrence from ORP prior to ERAP approval by the RL QSH Division director. The consolidated Hanford ERAP shall be submitted to the CSO and DOE-HQ Director of Emergency Management by November 30 each year.

14.2.2 Emergency Readiness Assurance Assessments/Appraisals

RL/ORP shall periodically review the ability of contractor-operated facilities to meet requirements of the DOE Emergency Management System. Appraisals and assessments shall be based on specific standards and criteria published by the DOE-HQ Director of Emergency Management. Appraisal findings shall be acknowledged by the appraised activity within 90 days of receipt of findings with a corresponding plan for correction. The RL/ORP appraising organization shall determine closure of open or unresolved appraisal findings.

Additionally, RL/ORP shall assess the emergency management program of each site contractor under its supervision. Each site contractor shall be assessed at least once every 3 years. RL/ORP shall notify the CSO of its assessment schedule.

Contractor-operated facilities shall conduct an annual internal readiness assurance assessment of their emergency management programs with the documented results provided to RL/ORP. Corrective actions shall be tracked and status reports provided to RL/ORP. In addition, site contractors shall assist external organizations (i.e., RL/ORP, DOE-HQ) in scheduling and conducting evaluations, appraisals, and assessments of their respective facilities; respond to external evaluation, appraisal, and assessment findings within 90 days of receipt of findings; and resolve all evaluation, appraisal, and assessment findings with the responsible organization or request approval for an exemption to the requirements.

RL/ORP and contractor assessment results shall be provided to the CSO and DOE-HQ Director of Emergency Management through documentation in the Hanford ERAP.

14.2.3 Lessons Learned

RL/ORP and each site contractor emergency management program shall include a system to track and identify correction of findings or lessons learned from training, drills, exercises, and actual responses.

14.3 DOCUMENT CONTROL

This plan and RL/ORP and site contractor implementing procedures shall be controlled distribution documents. RL/ORP and site contractors shall use a document control system to ensure that controlled copies are up to date and available at locations where they may be needed in an emergency. RL/ORP and site contractors shall determine the internal and external controlled copy distribution of the emergency plan and respective implementing procedures.

14.3.1 Review and Update of the Hanford Emergency Management Plan and U.S. Department of Energy Richland Operations Office/ Office of River Protection and Site Contractor Implementing Procedures

This plan and the *Emergency Plan Implementing Procedures* (DOE-0223) will be reviewed annually by the RL/ORP and the appropriate response organizations and agencies. The RL QSH Division is responsible for the coordination of this review and any resulting actions. The RL QSH Division will identify specific changes deemed necessary and will ensure implementation of the revisions.

Revising and updating of this plan and/or the *Emergency Plan Implementing Procedures* (DOE-0223) may be initiated at any time deemed necessary by the RL QSH Division. Changes and/or amendments shall be concurred upon by ORP and site contractors, approved by the RL/ORP Manager or his designee, and incorporated by the RL QSH Division.

A controlled copy of the approved plan and the *Emergency Plan Implementing Procedures* (DOE-0223) shall be submitted to the DOE-HQ Director of Emergency Management, the CSO, and to the DOE-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.

14.3.2 Review of Agreements

Agreements with local, state, and Federal officials and agencies (as contained in Appendix B) are maintained by the RL QSH Division and are reviewed and/or updated at least annually. Updates may be initiated either by 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. Agreements shall be reviewed annually and revised as necessary. The RL QSH Division shall maintain documentation of the annual review.

14.3.3 Classified Information

RL/ORP and site contractors shall ensure that emergency preparedness documents, such as plans, procedures, scenarios, and assessments, are reviewed, as necessary, for classified and Unclassified Controlled Nuclear Information (UCNI) by an authorized derivative classifier or UCNI reviewing official.

14.3.4 Supporting Documents

The RL QSH Division 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.

14.3.5 Vital Records

A program shall be established to ensure that vital records, regardless of media, essential to continued functioning or reconstruction of an organization during and after an emergency, are maintained and available, per 36 CFR 1236.

The vital records program 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 Services 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. RL/ORP and site contractors shall annually review their respective records indicated on the vital records submittal listing and determine necessary additions to or deletions from the list. The RL QSH Division 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/ORP shall provide designated storage locations for vital records, as appropriate. RL/ORP and site contractor documents identified as vital records, such as this 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.

14.3.6 Emergency Records

RL/ORP 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 RL 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.

14.3.7 Plan Locations

Copies of this plan are maintained at:

- RL and ORP Emergency Preparedness program offices;
- each contractor Emergency Preparedness office and other locations as specified by the respective contractor;
- Hanford Fire Department (area fire stations);
- Occurrence Notification Center;
- DOE Hanford Emergency Operations Center (primary and alternate); and
- the Patrol Operations Center.

Copies of the plan are also maintained at the following offsite agencies (per their request) to meet the WAC 173-303-350(4) requirement:

- 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.

This page intentionally left blank.

15.0 REFERENCES

Atomic Energy Act of 1954, 42 USC 2011 et seq., Public Law 83-703, as amended.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 USC 9601 et seq.

DOE, 1995, *Comprehensive Emergency Management System*, DOE O 151.1, U.S. Department of Energy, Washington, D.C.

DOE, 1997, *Accident Investigations*, DOE O 225.1A, U.S. Department of Energy, Washington, D.C.

DOE, 1997, *Occurrence Reporting and Processing of Operations Information*, DOE O 232.1A, U.S. Department of Energy, Washington, D.C.

DOE, 1998, *Worker Protection Management for DOE Federal and Contractor Employees*, DOE O 440.1A, U.S. Department of Energy, Washington, D.C.

DOE, 1992a, *U.S. Department of Energy, Richland Operations Office, Emergency Plan Implementing Procedures*, DOE-0223, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE, 1994, *Hanford Site Radiological Control Manual*, DOE/RL-96-109, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE, 1997, *Emergency Management Guide*, U.S. Department of Energy, Washington, D.C.

DOE, 1990, *General Environmental Protection Program*, DOE Order 5400.1, U.S. Department of Energy, Washington, D.C.

DOE/RL, 1992, *U.S. Department of Energy Radiological Assistance Program Plan and Procedure Region 8*, DOE/RL-92-49, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/HFID, 1998, *Notification, Reporting, and Processing of Operations Information*, DOE/HFID 232.1B, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RLIP, 1993, *Environmental Protection, Safety, and Health Protection Information Reporting Requirements*, DOE/RLIP 5484.1A, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Emergency Planning and Community Right-to-Know Act of 1986, 42 USC 11001 et seq.

EPA, 1992, *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents*, U.S. Environmental Protection Agency, Washington, D.C.

FDH, 1997, *Hanford Fire Department Emergency Medical Services Program Plan*, HNF-EP-0575, Fluor Daniel Hanford Company, Richland, Washington.

FEMA, 1996, *Federal Radiological Emergency Response Plan*, Federal Emergency Management Agency, Washington, D.C.

FEMA, 1999, *Federal Response Plan*, (For Public Law 93-288, as amended), Federal Emergency Management Agency, Washington, D.C.

NFPA 471, *Recommended Practice for Responding to Hazardous Materials Incidents*, National Fire Protection Association, 1997 Edition.

NFPA 472, *Standard on Professional Competence of Responders to Hazardous Materials Incidents*, National Fire Protection Association, 1997 Edition.

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program*, National Fire Protection Association, 1997 Edition.

NFPA 1561, *Standard on Fire Department Incident Management System*, National Fire Protection Association, 1995 Edition.

NFPA 1620, *Recommended Practice for Pre-Incident Planning*, National Fire Protection Association, 1998 Edition.

Oregon State Hanford Emergency Response Program, 1993, Oregon Department of Energy, Salem, Oregon.

PNL, 1994, *Locations of Criticality Alarms and Nuclear Accident Dosimeters at Hanford*, PNL-MA-583, Pacific Northwest National Laboratories, Richland, Washington.

Resource Conservation and Recovery Act of 1976, 42 USC 6901 et seq.

Superfund Amendment and Reauthorization Act of 1976, 42 USC 11001 et seq.

Washington State Hanford Emergency Response Plan, Washington State Department of Community, Trade, and Economic Development, Olympia, Washington.

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 locations where generator activities take place. For the purposes of these regulations: Facility = Hanford Site	N/A
WAC 173-303-340(1) (Permit requirement)	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) (Permit requirement)	Access to communications or alarms. Personnel must have immediate access to the signalling 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 signalling devices.	None required to document compliance.
WAC 173-303-340(3) (Permit requirement)	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

Permit requirement: Class 1 Modification 9/30/99

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	HOW DOES REQUIREMENT APPLY TO HANFORD?	WHERE IS REQUIREMENT MET IN DOCUMENTATION?
WAC 173-303-340(4) (Permit requirement)	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/activity-specific elements are contained in documentation for operating TSD units and 90-day accumulation areas.	The contingency plan consists of portions of DOE/RL-94-02 and location-specific/activity-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 consists of portions of DOE/RL-94-02 and location-specific/activity-specific documentation.
WAC 173-303-350(3)(a) (Permit requirement)	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;	The site-level description of actions is addressed in this plan. Location-specific/activity-specific documentation utilizes generic response descriptions or creates more detailed descriptions appropriate for the location.	Site-level: DOE/RL-94-02, section 1.3.4. 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)(b) (Permit requirement)	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;	The site-level description of actions is addressed in this plan. For TSD units that receive offsite waste shipments, location-specific documentation addresses these circumstances.	Site-level: DOE/RL-94-02, section 1.3.4. Unit-level: location-specific documentation.
WAC 173-303-350(3)(c) (Permit requirement)	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 contain this information. This requirement 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) (Permit requirement)	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/activity-specific documentation for 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.
WAC 173-303-350(3)(e) (Permit requirement)	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 for TSD units 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.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	HOW DOES REQUIREMENT APPLY TO HANFORD?	WHERE IS REQUIREMENT MET IN DOCUMENTATION?
WAC 173-303-350(3)(f) (Permit requirement)	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 5-1. 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 7-3. Location-specific evacuation routes will be provided in TSD units and 90-day accumulation area documentation. Evacuation routes for occupied buildings are provided through postings.	Site-level: DOE/RL-94-02, Figure 7-3 and Table 5-1. Unit-level: location-specific documentation.
WAC 173-303-350(4) (Permit requirement)	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 14.3.7.
WAC 173-303-350(5) (Permit requirement)	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 14.3.1.
WAC 173-303-355(1) (Permit requirement)	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.
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 DOE Hanford EOC contains modeling equipment to predict impacts of air releases.	Site-level: DOE/RL-94-02, sections 2.2.2.3.3 and 1.3.3.2.
WAC 173-303-360(1) (Permit requirement)	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 the Hanford Incident Command Structure and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, section 1.3.4 and 2.2.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	HOW DOES REQUIREMENT APPLY TO HANFORD?	WHERE IS REQUIREMENT MET IN DOCUMENTATION?
WAC 173-303-360(2)(a) (Permit requirement)	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 the Hanford Incident Command System and staff with supporting on-call personnel. Notification made to non-Hanford agencies with designated response roles agencies are accomplished via 911 telephones to request assistance (fire, ambulance, law enforcement).	Site-level: DOE/RL-94-02, sections 1.3.4 and 5.2.1.
WAC 173-303-360(2)(b) (Permit requirement)	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.	Hanford Incident Command System and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, sections 2.2.1.1.2(f) and 2.2.1.1.3(g).
WAC 173-303-360(2)(c) (Permit requirement)	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.	Hanford Incident Command System and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, section 4.2.
WAC 173-303-360(2)(d) (Permit requirement)	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).	Hanford Incident Command System and staff with supporting on-call personnel. ONC personnel notify local authorities if evacuation is advisable on behalf of the Hanford 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 Hanford Incident Command Structure. NRC is not called.	Site-level: DOE/RL-94-02, sections 2.2.1.1.2(a) &(d), 2.2.1.1.3(a)&(e), 5.1.1, 5.1.1.2, 5.1.2, and 5.1.2.1.
WAC 173-303-360(2)(e) (Permit requirement)	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 2.2.1.1.2(d), 2.2.1.1.3(e), 5.1.1, 5.1.1.2, and 5.1.2.1.
WAC 173-303-360(2)(f) (Permit requirement)	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.	Hanford Incident Command System and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, sections 2.2.1.1.2(f) and 2.2.1.1.3(g).

Permit requirement: Class 1 Modification 9/30/99

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	HOW DOES REQUIREMENT APPLY TO HANFORD?	WHERE IS REQUIREMENT MET IN DOCUMENTATION?
WAC 173-303-360(2)(g) (Permit requirement)	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.	Hanford Incident Command System and staff with supporting on-call personnel.	Site-level: DOE/RL-94-02, sections 2.2.1.1.2(f) and 2.2.1.1.3(g).
WAC 173-303-360(2)(h) (Permit requirement)	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 9.2.3.
WAC 173-303-360(2)(i) (Permit requirement)	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 9.2.3. Site-level: (ii) DOE/RL-94-02, section 11.2.
WAC 173-303-360(2)(j) (Permit requirement)	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 5.1.2.3.
WAC 173-303-360(2)(k) (Permit requirement)	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 5.1.2.2.
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 2.2.1.1.2 (first paragraph). Unit-level: appropriate location-specific documentation.

APPENDIX B

MEMORANDA OF UNDERSTANDING

This appendix contains copies of memoranda of understanding between the U.S. Department of Energy Richland Operations Office and the agencies listed in the table below.

Agency/Title	Page
State of Washington	3
Benton and Franklin Counties	7
Grant County	13
Energy Northwest (formerly Washington Public Power Supply System)	17
Energy Northwest (formerly Washington Public Power Supply System) and Hanford Environmental Health Foundation	23
Hanford Environmental Health Foundation and Siemens Power Corporation (formerly Advanced Nuclear Fuels)	27
National Weather Service	29
Our Lady of Lourdes Hospital	31
Kadlec Hospital	35
Kennewick General Hospital	39
State of Oregon	43
Tri-County Mutual Aid Agreement	51
Mutual Law Enforcement Assistance (Example of agreements established with Richland, West Richland and Kennewick Police, Benton and Franklin County Sheriffs, and Washington State Patrol)	55
Siemens Power Corporation	61

This page intentionally left blank.

NOTE:

Hard copies of Memoranda of Understanding are not included in this uncontrolled copy.

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; and • 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; and • 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; and • 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; and • hose, nozzles, fittings, and tools.	1 at each station
Ambulances 5 each	Examples of equipment contained on ambulances: • life support systems; and • medical 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

Hanford Fire Department Equipment List

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; and • 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; and • 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; and • 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; and • tools and fittings for operation of vehicle and spare cylinders.	Station 4

*The Hanford Fire Department Chief has the authority to: 1) direct the placement of equipment as needed to control emergency events; and 2) take proactive action and assign different vehicle locations based on conditions such as fuel moisture content, area fire history, work in progress, or other conditions that could arise.

Index

Page 2 of 2: Appendix 8A, Page 8A-2

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
305-B Storage Facility	**Part III, Chapter 2 and Attachment 18**

Description of Modification:
Appendix 8A:

APPENDIX 8A

305-B PERSONNEL LISTING

This appendix contains a listing of PNNL personnel fulfilling the various job duties shown in Section 8.0 of this permit application. The listing is provided as an appendix ~~in order to~~ for simplifying modifications ~~making changes~~ to this list as staff changes occur.

305-B UNIT OPERATIONS PERSONNEL

TITLE	NAME	WORK PHONE
Unit Operating Supervisor	~~CJ Simiele~~GT Thornton	~~373-9349~~376-7688
Waste Management Engineer	GM Bartel-Bailey	376-4189
Waste Management Engineer	TW Moon	376-1271
Waste Management Engineer	MR Gunter	373-2135
Scientist/Engineering Associate	KA Poeppel	376-2090
~~Scientist/Engineering Associate~~	~~MR Gunter~~	~~373-2135~~
Scientist/Engineering Associate	MW Vermillion	373-5646
Scientist/Engineering Associate	LS Upton	376-9726
Scientist/Engineering Associate	BG Anderson	376-3599
Scientist/Engineering Associate	TW Buckendorf	373-7758
Scientist/Engineering Associate	JM Johannesen	376-8777
Scientist/Engineering Associate	DL McMullin	373-5575
Scientist/Engineering Associate	TF Gilmore	373-2905

Modification Class: [1 2 3]	Class 1	Class [1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation
A. General Permit Provisions
1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
Mike K. Ikenberry 9/28/99	R F Christensen 10/5/99		
A. K. Ikenberry Date	R.F. Christensen Date	A. B. Stone Date	L.E. Ruud Date

[1] Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1] 1, 2, or 3 modification. this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1] 1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Forms

Part III, Chapter 2 and Attachment 18

305-B Storage Facility

Replacement Section

Index

Appendix 8A

APPENDIX 8A

305-B PERSONNEL LISTING

APPENDIX 8A

305-B PERSONNEL LISTING

This appendix contains a listing of PNNL personnel fulfilling the various job duties shown in Section 8.0 of this permit application. The listing is provided as an appendix for simplifying modifications to this list as staff changes occur.

305-B UNIT OPERATIONS PERSONNEL

TITLE	NAME	WORK PHONE
Unit Operating Supervisor	GT Thornton	376-7688
Waste Management Engineer	GM Bartel-Bailey	376-4189
Waste Management Engineer	TW Moon	376-1271
Waste Management Engineer	MR Gunter	373-2135
Scientist/Engineering Associate	KA Poeppel	376-2090
Scientist/Engineering Associate	MW Vermillion	373-5646
Scientist/Engineering Associate	LS Upton	376-9726
Scientist/Engineering Associate	BG Anderson	376-3599
Scientist/Engineering Associate	TW Buckendorf	373-7758
Scientist/Engineering Associate	JM Johannesen	376-8777
Scientist/Engineering Associate	DL McMullin	373-5575
Scientist/Engineering Associate	TF Gilmore	373-2905

Index

Page 2 of 3: Chapter 4, Section 4.2.1.2.2, page 4-13
Page 3 of 3: Appendix 8A, Section 8.1.1, page 8A-2

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
325 Hazardous Waste Treatment Units	**Part III, Chapter 6 and Attachment 36, Chapter 4**

Description of Modification:

Chapter 4, Section 4.2.1.2.2, page 4-13:

4.2.1.2.2 Requirements for Secondary Containment and Leak Detection

The secondary containment has been designed to prevent any migration of waste or accumulated liquid from the tank system to the soil, groundwater, or surface water. The secondary containment system also can detect and collect releases of accumulated liquids. A zoom color television camera surveillance system allows for tank, ancillary equipment, and general Room 32 viewing. The camera, located in Room 32, is equipped with auxiliary lighting and mounted on a remote controlled pan and tilt head. The color monitor and camera controls are housed in a dedicated cabinet in Room 527 or 527A~~and can also be moved to and operated in Room 201.~~ The HWTU will have the option of either keeping the camera/monitor controls in Room 527, 527A, or moving it to another location for operational flexibility. By maintaining operational flexibility of where the camera controls are located, the HWTU can meet ALARA (As Low As Reasonably Achievable) requirements and minimize the expense of added HWTU training requirements.

Please check one of the Classes:	Class 1	Class[1] 1	Class 2	Class 3
	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation

A. General Permit Provisions
   1. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
Alik Ikenberry 10-4-96	RF Christensen 10/5/96		
A. K. Ikenberry Date	R.F. Christensen Date	A. B. Stone Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1]1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1]1, if appropriate.

Hanford Facility RCRA Permit Modification Notification Form

Unit:	Permit Part & Chapter:
325 Hazardous Waste Treatment Units	**Part III, Chapter 6 and Attachment 36, Appendix 8A**

Description of Modification:

Appendix 8A, Section 8.1.1, page 8A-2:

8.1.1 Job Titles and Job Descriptions

The HWTU Technical Specialist(s) is responsible for the proper acceptance, treatment, storage, and transport of dangerous waste at the HWTU. In addition, the HWTU Technical Specialist oversees dangerous waste pickup and transportation to the HWTU storage areas. When adequate volumes of waste have accumulated, the HWTU Technical Specialist is responsible for readying the waste for transfer. These duties could include packaging, labeling, manifesting, and recordkeeping to ensure compliance with applicable regulations. The Activity Manager will post and maintain a current list of the individuals working in the 325 HWTUs. This list will be updated as necessary and will contain the job title, name of person filling the position and their respective phone numbers. The list will be posted at the entrance to the HWTUs/SAL and a copy maintained as part of the Operating Record.

	Class 1	Class[1] 1	Class 2	Class 3
Please check one of the Classes:	X			

Relevant WAC 173-303-830, Appendix I Modification: A.1.

Enter wording of the modification from WAC 173-303-830, Appendix I citation
B. General Permit Provisions
2. Administrative and Informational changes.

Submitted by Co-Operator:	Reviewed by RL Program Office:	Reviewed by Ecology:	Reviewed by Ecology:
A. K. Ikenberry 10-4-99	R.F. Christensen 10/5/99		
A. K. Ikenberry Date	R.F. Christensen Date	A. B. Stone Date	L.E. Ruud Date

[1]Class 1 modifications requiring prior Agency approval.

[2] This is only an advanced notification of an intended Class [1] 1, 2, or 3 modification, this should be followed with a formal modification request, and consequently implement the required Public Involvement processes when required.

[3] If the proposed modification does not match any modification listed in WAC 173-303-830 Appendix I, then the proposed modification should automatically be given a Class 3 status. This status may be maintained by the Department of Ecology, or down graded to [1] 1, if appropriate.

4.0 CONTENTS

4.0 CONTENTS 4-I

4.0 PROCESS INFORMATION [D] 4-1

4.1 CONTAINERS [D-1] 4-1
4.1.1 Description of Containers [D-1a] *4-1*
4.1.1.1 Containers Located in the Hazardous Waste Treatment Unit 4-1
4.1.1.2 Shielded Analytical Laboratory Containers. 4-1
4.1.2 Container Management Practices [D-1b] *4-2*
4.1.2.1 Hazardous Waste Treatment Unit Container Management Practices. 4-2
4.1.2.2 Shielded Analytical Laboratory Container Management Practices. 4-3
4.1.3 Container Labeling [D-1c].1.3 ..... *4-4*
4.1.4 Containment Requirements for Storing Containers [D-1d and D-1d(1)(a)] *4-4*
4.1.4.1 Secondary Containment System Design and Operation for the Hazardous Waste Treatment Unit 4-4
4.1.4.2 Secondary Containment System Design and Operation for the Shielded Analytical Laboratory 4-5
4.1.5 Structural Integrity of Base [D-1d(1)(b)] *4-6*
4.1.5.1 Requirements for Base or Liner to Contain Liquids in the Hazardous Waste Treatment Unit 4-6
4.1.5.2 Requirements for Base or Liner to Contain Liquids in the Shielded Analytical Laboratory 4-6
4.1.6 Containment System Drainage *4-7*
4.1.6.1 Containment System Drainage for the Hazardous Waste Treatment Unit 4-7
4.1.6.2 Containment System Drainage for the Shielded Analytical Laboratory 4-7
4.1.7 Containment System Capacity [D-1d(1)(c)] *4-7*
4.1.7.1 Containment System Capacity for the Hazardous Waste Treatment Unit 4-7
4.1.7.2 Containment System Capacity for the Shielded Analytical Laboratory 4-7
4.1.8 Control of Run-On [D-1d(1)(d)] *4-8*
4.1.8.1 Control of Run-On for the Hazardous Waste Treatment Unit 4-8
4.1.8.2 Control of Run-On for the Shielded Analytical Lab 4-8
4.1.9 Removal of Liquids from Containment System [D-1d(2)] *4-8*
4.1.9.1 Removal of Liquids from the Hazardous Waste Treatment Unit Containment System 4-8
4.1.9.2 Removal of Liquids from the Shielded Analytical Laboratory Containment System 4-9
4.1.10 Management of Ignitable and Reactive Waste in Containers [D-1f(1) and D-1f(2)] *4-9*
4.1.10.1 Management of Ignitable and Reactive Waste in Containers in the Hazardous Waste Treatment Units 4-9
4.1.10.2 Management of Ignitable and Reactive Waste in Containers in the Shielded Analytical Laboratory 4-10
4.1.11 Management of Incompatible Waste in Containers [D-1f(3)] *4-10*
4.1.11.1 Management of Incompatible Waste in Containers at the Hazardous Waste Treatment Unit 4-10
4.1.11.2 Management of Incompatible Waste in Containers at the Shielded Analytical Laboratory 4-10
4.2 TANK SYSTEMS 4-11
4.2.1 Shielded Analytical Laboratory Tank System *4-11*
4.2.1.1 Design, Installation, and Assessment of Tank Systems [D-2a] 4-11
4.2.1.2 Secondary Containment and Release Detection for Tank Systems 4-13
4.2.1.3 Tank Management Practices [D-2d] 4-15
4.2.1.4 Marking or Labeling [D-2e] 4-16
4.2.1.5 Ignitable, Reactive, and Incompatible Waste [D-2h] 4-16
4.2.2 Radioactive Liquid Waste System Load Out Tank System *4-17*
4.2.2.1 Design, Installation, and Assessment of Tank Systems [D-2a] 4-17
4.2.2.2 Secondary Containment and Release Detection for Tank System [D-2b] 4-18
4.2.2.3 Tank Management Practices [D-2d] 4-20
4.2.2.4 Marking or Labeling [D-2e] 4-21
4.2.2.5 Ignitable, Reactive, and Incompatible Waste [D-2h] 4-21
4.3 AIR EMISSIONS CONTROL [D-8] 4-21

FIGURES

FIGURE 4-1. HAZARDOUS WASTE TREATMENT UNIT SECONDARY CONTAINMENT SYSTEM..... 4-22
FIGURE 4-2. HOT CELL SECONDARY CONTAINMENT SYSTEM. 4-23

TABLE

TABLE 4-1. TYPICAL STORAGE CONTAINERS USED AT THE 325 HAZARDOUS WASTE TREATMENT UNITS. 4-24

APPENDIX

4A ENGINEERING DRAWINGS..... APP 4A-i

4.0 PROCESS INFORMATION [D]

This chapter provides a description of waste management, equipment, treatment processes, and storage operations.

4.1 CONTAINERS [D-1]

The following sections describe the management of dangerous waste in containers at the 325 HWTUs. Container management occurs at both the HWTU and the SAL. Both portions of the 325 HWTUs are used to store and treat dangerous waste generated from onsite programs, primarily as a result of laboratory analytical activities in the 325 Building and other PNNL facilities. Descriptions of the containers used are provided in the sections that follow for the HWTU and SAL.

4.1.1 Description of Containers [D-1a]

The following sections describe the types of containers used for dangerous waste storage and treatment in the 325 HWTUs.

4.1.1.1 *Containers Located in the Hazardous Waste Treatment Unit*

Rooms 520 and 528 of the HWTU are used to store and treat dangerous waste generated primarily from laboratory operations 0throughout the 325 Building and the Hanford Facility. The containers used to store and treat dangerous waste vary widely from original manufacturer containers to laboratory glassware for sample analysis or to 322-liter containers used to overpack smaller containers. Containers used for storage or treatment of dangerous waste are compatible with the waste stored in them. Acceptable containers for acidic waste include plastic, steel lined with plastic, glass, and fiberglass containers. Acceptable containers for other waste include steel, glass, fiberglass, plastic, and steel lined with plastic. Table 4.1 provides an example of the types of containers that could be used in the HWTU rooms, including the material of construction and the capacity of the container.

All containers of dangerous waste are labeled to describe the contents of the container and the major hazards of the waste as required under WAC 173-303-395. Each container is assigned a unique identifying number. All containers used for onsite transfer are selected and labeled according to any applicable regulations, including 49 CFR as required by WAC 173-303-190.

All flammable liquid waste is stored in compatible containers and in Underwriter's Laboratory (UL)-listed and Factory Mutual (FM)-approved flammable storage. Solid chemicals are stored on shelving in specifically designated areas based on the hazard classification.

4.1.1.2 Shielded Analytical Laboratory Containers.

The primary function of the SAL is to conduct analysis of samples of waste streams collected at various locations on the Hanford Facility. The types of containers used to store dangerous waste in the SAL can vary widely from the original containers to laboratory glassware for sample analysis to 322-liter containers used to overpack smaller containers.

The containers used for storage or treatment of dangerous waste are compatible with the waste stored in the containers. Acceptable containers for acidic waste include plastic, steel lined with plastic, glass, and fiberglass containers. Acceptable containers for other waste include steel, glass, fiberglass, plastic, and

steel lined with plastic. Table 4.1 provides an example of the types of container that could be used in the SAL, including the material of construction and the capacity of the container.

Rooms 32, 200, 202, and 203 are used to store dangerous waste in containers. The back face of the SAL is typically used to store waste in the larger containers. These containers include various types of 208-liter steel containers (lined and unlined). Because of the nature of some dangerous waste being stored at the SAL, it is often necessary that these standard 208-liter containers be modified. This modification ensures that the containers are specially shielded to reduce the hazard of the radioactive component of the dangerous waste stored in the container and are compliant with the ALARA criteria. These specially designed shielded containers are packaged to contain anywhere from 3.79 liters to 53 liters of waste depending on the amount of shielding required. The solid waste typically is packed in individual 3.79-liter to 4.73-liter containers before placement in the 208-liter shielded container. The shielding is accomplished by surrounding the small containers with concrete, lead, or other materials to reduce the dose rate produced by the radiological component of the dangerous waste.

All containers of dangerous waste are labeled to describe the contents of the container and the major hazards of the waste as required under WAC 173-303-395. Each container is assigned a unique identifying number. All containers used for onsite transfer are selected and labeled according to any applicable regulations, including 49 CFR are required by WAC 173-303-190.

All flammable liquid waste is segregated from any incompatible waste types and packaged in approved containers.

4.1.2 Container Management Practices [D-1b]

Management practices and procedures for containers of dangerous waste ensure the safe receipt, handling, preparation for transfer, and transportation of the waste. The following sections describe the container management practices used for the HWTU and the SAL. Table 4.1 lists the typical containers used in the 325 HWTUs.

4.1.2.1 Hazardous Waste Treatment Unit Container Management Practices.

Dangerous waste containers are inspected for integrity and adequate seals before being accepted at the HWTU. Waste received for storage and treatment from outside Rooms 520 and 528 is either picked up by HWTU personnel or moved to Rooms 520 and 528 in containers suitable for the waste. Depending on the container weight, size or number of containers to be moved, container(s) of dangerous waste are hand carried or moved on a platform or handcart, as appropriate, to Rooms 520 or 528. 325 HWTUs staff moves the dangerous containers in accordance with 325 HWTUs collection procedures that address safety and hazard consideration. These procedures cover various waste types (transuranic (TRU) and low-level) and transportation modes. 325 HWTUs staff does not perform the operations, covered by a procedure, until they are formally trained on the procedure.

Containers in poor condition or inadequate for storage (e.g., damaged, not intact, or not securely sealed to prevent leakage) are not accepted at Rooms 520 and 528. Examples of acceptable packaging include laboratory reagent bottles, U.S. Department of Transportation-approved containers, spray cans, sealed ampules, paint cans, leaking containers that have been overpacked, etc. Unit operations personnel have the authority to determine whether a container is in poor condition or inadequate for storage using the criteria of WAC 173-303-190 and to use professional judgment to determine whether the packaging could leak during handling, storage, and/or treatment. Container stacking is not performed.

Inspection of Containers. A system of daily, weekly, monthly, and yearly inspections is in place to ensure container integrity, and to check for proper storage location, prevent capacity overrun, etc. Inspections are detailed in Chapter 6.0, Section 6.2. Containers are inspected for integrity before acceptance at or transport to the HWTU. Containers found to be in poor condition or inadequate for storage are not accepted.

Container Handling. All HWTU staff is instructed in proper container handling and spill prevention safeguards as part of their training (Chapter 8.0). Containers are kept closed except when adding or removing waste in accordance with WAC 173-303-630(5)a). All personnel are trained and all operations are conducted to ensure that containers are not opened, handled, or stored in a manner that would cause the container to leak or rupture. All flammable cabinets containing dangerous waste are maintained with a minimum of 76 centimeters of aisle space in front of the doors. The walk-in fume hood containing the 208-liter containers is designed to hold four 208-liter containers and has over 76 centimeters of aisle space; the containers are not stacked in the hood. Waste-handling operations can be conducted only when two or more persons are present in the unit or when the personnel present have immediate access to a communication device such as a telephone or hand-held radio.

4.1.2.2 Shielded Analytical Laboratory Container Management Practices.

Containers are not opened, handled, or stored in a manner that would cause the containers to leak or rupture. Containers will remain closed except when sampling, adding, or removing waste; or when analysis or treatment of the waste is ongoing. Containers of incompatible waste are segregated in the storage areas. In-cell containers will be stacked no more than four high and labels will not be obscured.

Inspection of Containers. A system of daily, weekly, monthly, and yearly inspections is in place to ensure container integrity, and to check for proper storage location, prevent capacity overrun, etc. Inspections are detailed in Chapter 6.0, Section 6.2. Containers are inspected for integrity before acceptance at or transport to the SAL. Containers found to be in poor condition or inadequate for storage are not accepted.

Container Handling. All personnel are instructed in proper container-handling safeguards as part of their training (Chapter 8.0). Containers are kept closed except when adding or removing waste in accordance with WAC 173-303-630(5)(a).

All container handling in the hot cells must be performed remotely with manipulators. Waste samples managed in the SAL enter the cells through rotating transfer wheels located in the back walls of cells 1, 2, and 6 and through a 17.8-centimeter borehole in the back wall of cell 1. Waste samples are moved into and out of the cells at these locations according to approved procedures that vary with the radioactivity level of the sample. After analysis of the sample and necessary confirmation of results, compatible solid waste samples are consolidated into appropriate size containers often referred to as 'paint cans' and usually stored in cell 1. However, any of the cells can be used for storage of waste during operations.

After evaluation for treatment and the subsequent treatment, liquid waste is either transferred to the SAL tank (discussed in Section 4.2) or solidified and repackaged into shielded 208-liter containers and stored in the back face area of the SAL. Waste generated outside of the hot cells is placed into appropriately sized containers and stored until packaged for shipment or transfer. Waste-handling operations are conducted outside of the cells only when a minimum of two persons are present in the unit or when the personnel present has immediate access to a communication device such as a telephone or hand-held radio.

4.1.3 Container Labeling [D-1c].1.3

Once the material has been designated as a dangerous waste, all containers are marked and/or labeled to describe the content of the container as required by WAC 173-303-395. Containers also are marked with a unique identifying number assigned by the generating unit. All containers used for transfer of dangerous waste are prepared for transport in accordance with WAC 173-303-190.

4.1.4 Containment Requirements for Storing Containers [D-1d and D-1d(1)(a)]

A description of secondary containment system design and operation is provided for the HWTU and SAL in this section.

4.1.4.1 Secondary Containment System Design and Operation for the Hazardous Waste Treatment Unit

The secondary containment system for the HWTU has three primary components: uniform fire code-approved flammable liquid storage cabinets, the floor of the rooms, and the fire water containment system (Figure 4.1).

Mixed and/or dangerous waste, in containers of 65 liters or less, is stored in Room 520 in steel flammable storage cabinets located in a storage room that forms the northeast corner of the room. An additional flammable storage cabinet is located beneath a stainless steel ventilated hood located along the south wall of Room 520. Containers over 65 liters are stored in a hood located along the east wall of the room. The containers are made of stainless steel or other suitable material depending on the characteristics of the waste and are kept closed except when waste is being added or withdrawn.

Dangerous waste in containers of 65 liters or less is stored in Room 528 steel storage cabinets in accordance with WAC 173-303-395(1)(a) and the Uniform Building Code (ICBO 1991). There are five storage cabinets, three for flammable waste and two for corrosive waste. Two cabinets (one flammable storage cabinet and one corrosive storage cabinet) are located along the north wall of the room. A cabinet for corrosive waste is located along the east wall. A cabinet for flammable waste also is located along the south wall. Further storage is provided by a flammable cabinet located beneath a stainless steel ventilated hood on the east wall of the room. Each cabinet is clearly marked as containing either flammable or corrosive waste. Flammable waste cabinets are painted yellow, and corrosive cabinets are painted blue.

Rooms 520 and 528 are located on the main floor of the 325 Building and are constructed of concrete. The concrete floors of both rooms have been equipped with a heat-sealed seamless chemical-resistant polypropylene coating that covers the entire floor area of both rooms and laps approximately 10 centimeters up all of the outside walls of each room. The coated floor is capable of containing minor spills and leaks of liquid mixed waste. In addition, because the floors are not sloped, waste containers stored on the floors are elevated or otherwise protected to prevent the container from coming in contact with spilled waste.

Major spills or leaks of liquid mixed waste flow into the fire water containment system. The fire water containment system consists of floor trenches located at each entrance to the rooms and the fire water containment tank located in the basement of the building. The system is designed to collect the fire-suppression water in the event that the automatic sprinkler system was activated. The location of the trenches is shown in Figure 4.1.

The floor trenches located under the double doors on the west side of Rooms 520 and 528 are approximately 20 centimeters wide, 46 centimeters deep and 1.91 meters long. The floor trench located under the single south door of Room 520 is approximately 20 centimeters wide, 46 centimeters deep, and 1.5 meters long. The floor trench located under the single southwest door of Room 528 is 20 centimeters wide, 61 centimeters deep, and 1.5 meters long. The trenches extend completely across the entrance of each room so that liquids do not flow out through a doorway. The trenches are constructed of 14-gauge stainless steel and are equipped with a steel grate cover. All seams are welded to ensure integrity. Trenches under the double doors are equipped with two drains in the bottom, and trenches located under single doors are equipped with one drain to allow liquid to drain from the trench through 15-centimeter-diameter carbon steel piping to the fire water containment tank.

The fire water containment tank is located beneath Room 520 in the basement of the 325 Building. The rectangular tank has dimensions of 1.65 meters by 2.25 meters by 1.92 meters and a capacity of 22,710 liters. The sides and floor of the tank are constructed of epoxy-coated carbon steel plate. The steel sides and floor provide support for the chemical-resistant polypropylene liner. The tank is secured to the concrete floor of the 325 Building basement with 1.3-centimeter bolts at 1.82-meter intervals.

The possibility of mixing incompatible waste in the containment system is minimized, because the number of containers open at one time will be limited to those in process (waste not in process is stored in closed containers). In addition, the very large volume of any firewater flow would dilute waste and would minimize the possibility of adverse reactions.

4.1.4.2 Secondary Containment System Design and Operation for the Shielded Analytical Laboratory

The secondary containment in the SAL is divided into three systems: the six hot cells, the front face, and the back face. Figure 4.2 provides a first floor plan view depicting these three areas.

The secondary containment for the six hot cells consists of the stainless steel base of the cell and a continuous trough located on the east side of the cells. The hot cell secondary containment system is shown in Figure 4.2. The base and trough can collect leaks and spills generated during analytical chemistry operations. The stainless steel bases are approximately 0.55 square meter. The troughs are approximately 15.2 centimeters wide, 7.6 centimeters deep, and extend across the entire 1.82-meter width of each cell. The troughs are equipped with a stainless steel grate cover. The leaks and spills are drained by gravity through drains in the bottom of the trough and through stainless steel piping to the SAL tank located in the basement (Room 32). The SAL tank is constructed of stainless steel and has a capacity of 1,218 liters. Design and operating specifications are provided in Section 4.2.

The secondary containment system for the back face of the SAL consists of shielded 208-liter containers and plastic containers. Solid mixed waste is packaged in containers (e.g., paint cans, bottles, bags) before removal from the hot cells. Once removed from the hot cells, the containers are placed into specially designed, shielded 208-liter containers to provide secondary containment. Containers of liquid waste are placed into plastic containers that provide secondary containment and prevent spilled liquids from contacting other waste containers. Some containers are placed in shielded cubicles in Room 202 depending on container dose rates. The location of the cubicles is shown in Figure 4.2.

The secondary containment system for the front face of the SAL, which is minimally used to store mixed waste, is similar to the system for the back face. Containers holding liquid and solid mixed waste are placed into containers to provide secondary containment; the primary area for mixed waste storage is the fume hood.

4.1.5 Structural Integrity of Base [D-1d(1)(b)

A description of the requirements for base or liner to contain liquid is provided in the following sections for the HWTU and the SAL.

4.1.5.1 Requirements for Base or Liner to Contain Liquids in the Hazardous Waste Treatment Unit

The floors in Rooms 520 and 528 have been equipped with the chemical-resistant polypropylene coating. All seams in the coating were finished by heat welding to ensure the integrity of the coating. The coating currently is free of cracks and gaps and will be maintained that way throughout the life of the HWTU. The condition of the floor is inspected weekly as part of the inspection program (Chapter 6.0). Floor coating assessment is carried out whenever the floor coating is observed to have been chipped, bubbled up, scraped, or otherwise damaged in a manner that would impact the ability of the coating to contain spilled materials. Minor nicks and small chips resulting from normal operations are repaired periodically.

The floor coating holds any spilled liquid until the liquid is cleaned up or enters the drains in each room. Once the liquid has entered the drains, the liquid drains into the fire water containment tank in the basement, where the liquid is stored pending chemical analysis and treatment and/or disposal.

The base of the HWTU floors consists of 14.2 centimeter, reinforced, poured concrete slabs with no cracks or gaps. The concrete is mixed in accordance with ASTM 094, Section 5.3, Alternate 2, and is finished with a smooth troweled surface. The concrete base has a load capacity of 976 kilograms per square meter.

The floor trenches that prevent liquids from migrating from the HWTU rooms are constructed of 14-gauge stainless steel. All seams are welded and the connections with the drains are tight. The stainless steel is compatible with and resistant to the liquid mixed waste managed in the HWTU.

4.1.5.2 Requirements for Base or Liner to Contain Liquids in the Shielded Analytical Laboratory

The base currently is free of cracks and gaps and will be maintained that way throughout the life of the SAL. The base of the floor for the six hot cells consists of a 0.48-centimeter layer of stainless steel formed on top of poured concrete. The stainless steel base is compatible with most of the waste generated in the hot cells. The exceptions are waste containing hydrofluoric acid and high concentrations of hydrochloric acids. This waste is stored in individual secondary containment to prevent contact of the waste with the stainless steel in the event that a primary waste container was to fail. Because the volumes of waste generated and stored are small, and because the hot cell floors are not sloped, any waste spilled during waste handling activities probably would remain in a localized area and be cleaned up expeditiously to ensure that no damage occurs to the stainless steel. As was previously discussed, a stainless steel tank provides the secondary containment system for the six cells. Liner and base requirements for the SAL tank are discussed in Section 4.2.

The bases of the back face and front face of the SAL consist of a 15.2 centimeter, reinforced, poured concrete slabs with no cracks or gaps. The concrete base has a load capacity of 976 kilograms per square meter. The base in Room 201 is topped with a seamless chemical resistant polypropylene coating. Rooms 202 and 203 are topped with epoxy based paint. In Room 200, the concrete slab is painted, and there is a trap door in the painted floor of Room 200 that enables transfer of equipment between Rooms 200 and 32. The airflow between these rooms is from Room 200 to Room 32 due to positive air pressure in Room 200.

4.1.6 Containment System Drainage

A description of the containment system drainage for the HWTU and SAL is provided in this section.

4.1.6.1 Containment System Drainage for the Hazardous Waste Treatment Unit

The floors in Rooms 520 and 528 are not sloped. Small spills of liquid probably will remain in a localized area until the spills are cleaned up. All containers of dangerous waste are stored either in drums, on shelves within open-faced hoods, or within flammable or corrosives storage cabinets to prevent the containers from contacting spilled materials. Large spills of liquid material would spread laterally across the flat surface of the floor. The flow of the spilled liquid would be stopped by an outside wall(s) of the room or by one of the trenches protecting the entrances to the room. The lower 10 centimeters of the outside walls of the rooms are covered with the same chemical-resistant coating as that on the floor to prevent spills from migrating throughout the walls.

The floor drains across each exit drain spill to an emergency firewater containment tank (22,710-liter capacity) located in the basement of the 325 Building. The tank captures all drained liquid, where the liquid is stored until sampling and analysis indicates a proper treatment and/or disposal method.

4.1.6.2 Containment System Drainage for the Shielded Analytical Laboratory

The stainless steel base of the hot cell is not sloped. Because of the small volume of waste that is handled, small spills probably would remain in a localized area until the spills are cleaned up. As a result, all containers of liquid mixed waste are stored within secondary containment to prevent spilled liquids from contacting the containers. Large spills that occur within the SAL hot cells flow to the stainless steel trough at the front of each cell, which gravity drains into the SAL tank (TK-1, Room 32).

The bases of the front and back faces are not sloped. Containers in these areas are stored within secondary containment and off the base surface to prevent spilled liquids from contacting the containers.

4.1.7 Containment System Capacity [D-1d(1)(c)

A description of the containment system capacity for the HWTU and SAL is provided in the following sections.

4.1.7.1 Containment System Capacity for the Hazardous Waste Treatment Unit

The maximum combined total volume of all containers of dangerous waste stored in both HWTU rooms is 10,000 liters. The largest mixed waste storage container is a 322-liter container. The fire water containment tank provides secondary containment for both HWTU rooms. The capacity of the fire water containment tank is 22,710 liters; therefore, the containment system is more than adequate to contain either 10 percent of the total volume of waste (2,840 liters) or the entire volume of the largest container (322 liters).

4.1.7.2 Containment System Capacity for the Shielded Analytical Laboratory

The largest container of liquid waste to be stored in the hot cells is a 7.6-liter container.

The SAL tank is considered to be the secondary containment for the hot cells. The largest quantity of liquid that could be stored in the hot cells while maintaining adequate (10 percent of total volume)

secondary containment would be 12,491 liters. The total amount of liquid to be stored in the hot cells is governed by the area constraint of the cells. Typically, the largest amount of liquid waste to be stored in the hot cells at one time is 75.8 liters.

Liquid waste stored in Room 201 is stored in the fume hood. The waste is stored in glass or plastic bottles that are each placed in individual plastic containers of a size that is sufficient to hold all of the contents of the inner vessel. The quantity of liquid waste stored in the hood is governed by the area constraint in the hood. Similarly, liquid waste stored in Room 202 is stored in glass or plastic bottles that are each placed in individual secondary containment.

The floors of the front face and back face are constructed of concrete. The rear face floor in Rooms 202 and 203 is covered with epoxy paint. Floor drains flow to the retention process sewer (RPS) system, which has a diverter triggered by a radiation monitor that diverts radioactive liquids detected in the RPS line to the RLWS. Because of the small quantities of liquid stored in the front face and back face, any spill that is not contained by the plastic overpack probably would remain on the floor in a localized area until cleaned. Any liquid that managed to flow to the room drains would be conveyed by gravity to the RPS system or, depending on radionuclide content, to the RLWS.

4.1.8 Control of run-on [D-1d(1)(d)

Run-on control for the HWTU and SAL is described in the following sections.

4.1.8.1 Control of run-on for the Hazardous Waste Treatment Unit

The 325 Building mitigates the possibility of run-on for the HWTU. The level of the main floor is approximately 1.52 meters above the level of the ground surface around the building.

4.1.8.2 Control of run-on for the Shielded Analytical Lab

The 325 Building mitigates the possibility of run-on for the SAL. The level of the main floor is approximately 1.52 meters above the level of the ground surface around the building.

4.1.9 Removal of Liquids from Containment System [D-1d(2)]

The removal of liquids from the containment system for the HWTU and SAL is described in the following sections.

4.1.9.1 Removal of Liquids from the Hazardous Waste Treatment Unit Containment System

On discovery of liquid accumulation in the containment resulting from a spill or other release, the Building Emergency Director (BED) must be contacted in accordance with the contingency plan (Chapter 7.0). The BED may determine that the contingency plan should be implemented. If the incident is minor, and if the BED approves, removal of the liquid commences immediately following a safety evaluation. Appropriate protective clothing and respiratory protection will be worn during removal activities; an industrial hygienist could be contacted to determine appropriate personal protection requirements and any other safety requirements that might be required, such as chemical testing or air monitoring. In addition, ventilation of the spill area might be performed if it is determined to be safe and if appropriate monitoring of the air discharge(s) is performed.

Liquid spills are contained within the Room 520 or Room 528 floor or within the fire water containment tank. Localized spills of liquids to the floor of the HWTU rooms are absorbed with an appropriate absorbent (after the appropriate chemical reaction has occurred to neutralize reactivity in the case of reactive waste or after neutralization has occurred in the case of corrosive materials). The absorbent material is recovered and placed in an appropriate container. The floor, cabinets, and any other impacted containers can be cleaned by dry rags, soap and water, or a compatible solvent, if necessary, to remove external contamination. Contaminated rags and other cleanup material are disposed of in an appropriate manner. If spilled materials in the HWTU reach the firewater containment tank, the material will be held in place until chemical analysis indicates an appropriate treatment and/or disposal method. The waste analysis procedures and analytical methods used to designate the spilled materials are described in the waste analysis plan, Appendix 3A. The tank is designed to allow easy access for material sampling. Depending on the results of the analysis, the collected spill material is pumped to the RLWS or pumped to the RPS.

4.1.9.2 Removal of Liquids from the Shielded Analytical Laboratory Containment System

The removal of liquid from the SAL tank, which provides the secondary containment for the six hot cells, is discussed in Section 4.2. The tank will be emptied after the accumulated waste is designated.

On discovery of liquid accumulation in the back or front face containment resulting from a spill or other release, the BED must be contacted in accordance with the contingency plan (Chapter 7.0). The BED could determine that the contingency plan should be implemented. If the incident is minor, and if the BED approves, removal of the liquid commences immediately following a safety evaluation. Appropriate protective clothing and respiratory protection will be worn during removal activities; an industrial hygienist could be contacted to determine appropriate personal protection requirements and any other safety requirements that might be required, such as chemical testing or air monitoring. In addition, ventilation of the spill area could be performed if it is determined to be safe and if appropriate monitoring of the air discharge(s) is performed.

Localized spills of liquids to the floor of the SAL will be absorbed with an appropriate absorbent (after the appropriate chemical reaction to neutralize reactivity has occurred in the case of reactive waste or after neutralization has occurred in the case of corrosive materials). The absorbent material will be recovered and placed in an appropriate container. The floor, cabinets, and any other impacted containers can be cleaned by dry rags, soap and water, or a compatible solvent, if necessary, to remove external contamination. Contaminated rags and other cleanup material will be disposed of in accordance with applicable regulations and PNNL internal waste management procedures.

4.1.10 Management of Ignitable and Reactive Waste in Containers [D-1f(1) and D-1f(2)]

Management of ignitable and reactive-waste in containers within the HWTU and SAL is described in the following sections.

4.1.10.1 Management of Ignitable and Reactive Waste in Containers in the Hazardous Waste Treatment Units

Ignitable and reactive waste are stored in compliance with Article 79, Regulations for Flammable and Combustible Liquids (ICBO 1997). Containers of ignitable and reactive waste are stored in individual flammable storage cabinets within the HWTUs.

4.1.10.2 Management of Ignitable and Reactive Waste in Containers in the Shielded Analytical Laboratory

Ignitable and reactive waste are stored in compliance with Article 79, Regulations for Flammable and Combustible Liquids (ICBO 1997). Containers of ignitable and reactive waste are stored in individual flammable storage cabinets within the SAL.

4.1.11 Management of Incompatible Waste in Containers [D-1f(3)]

The prevention of reaction of ignitable, reactive, and incompatible waste in containers for the 325 HWTUs is discussed in the following sections.

4.1.11.1 Management of Incompatible Waste in Containers at the Hazardous Waste Treatment Unit

Containers of ignitable and reactive waste are stored in segregated flammable storage cabinets. Chapter 6.0, Section 6.5.2, describes the methods used to determine the compatibility of dangerous waste so that incompatible waste is not stored together. Incompatible waste is never placed in the same container or in unwashed containers that previously held incompatible waste. Operations are conducted such that extreme heat or pressure, fire or explosions, or violent reactions do not occur; uncontrolled toxic mists, fumes, dust, or gases in sufficient quantities to threaten human health or the environment are not produced; uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion are not produced; and damage to the container does not occur. Information on the hazard classification of waste accepted by the HWTU is documented by the generating unit, which is carefully reviewed by HWTU personnel before waste acceptance. Mixing of incompatible waste is prevented through waste segregation and storage. As the containers received in the HWTU usually are smaller than 19 liters, the most common segregation is performed by storage of incompatible hazard classes in separate chemical storage cabinets. Guidance for the segregation is provided in Chapter 6.0, Section 6.5.2.

Minimum aisle space is maintained according to the Uniform Fire Code to separate incompatible waste. The possibility of adverse reaction is minimized (Chapter 6.0, Sections 6.6 and 6.7 for methods used to prevent source of ignition).

4.1.11.2 Management of Incompatible Waste in Containers at the Shielded Analytical Laboratory

Incompatible waste in the SAL hot cells is managed by placing primary containers into a second container or tray capable of managing any leak or spilled material. Incompatible waste is never placed in the same container or in an unwashed container that previously held incompatible waste.

Treatment operations are conducted with minor amounts of waste to ensure that extreme heat or pressure, fire, or explosive or violent reactions do not occur. Potential releases would be controlled by the ventilation system that exhausts through two high-efficiency particulate air (HEPA) filters set in series, and due to the limited amount of waste in the SAL. These HEPA filters are part of the building exhaust system, which is maintained and inspected routinely in accordance with PNNL preventive maintenance standards. Radioactive and nonradioactive emissions from the 325 Building stack, and control devices for those emissions, are regulated by the Washington State Department of Health pursuant to Chapter 246-247 WAC, and the Washington State Department of Ecology (Ecology) pursuant to Chapters 173-400, 173-401, and 173-460 WAC, respectively. Air-pressure barriers for containment control are achieved by supplying air from areas of least contamination (i.e., offices) to areas of higher contamination (i.e., cells). These systems ensure proper emission flow through the HEPA filters.

Because waste normally is treated in the SAL hot cells, human exposure to the remote potential of mixing incompatible waste or reactive waste is minimal. Waste generated and treated within the SAL hot cells is stored within separate secondary containers, which eliminates the potential for combining incompatible waste. Waste stored in the front or back face of the SAL is packaged by hazard classes for transfer or is segregated in separate secondary containment.

4.2 TANK SYSTEMS

The following sections describe the management of dangerous waste in the 325 tank systems. Each tank system consists of the tank; associated piping, valves and pumps; and secondary containment. The first tank system is located in Room 32 of the SAL and is used to collect liquid waste generated from the analytical laboratory operations. This SAL tank system is described in Section 4.2.1. The second tank system is the RLWS load out tank system. This tank system will be used to collect liquid waste discharged to the RLWS prior to being transferred to the DST System. The RLWS load out tank system will be operated as described in Section 4.2.2.

4.2.1 Shielded Analytical Laboratory Tank System

The SAL is an analytical chemistry laboratory used primarily to prepare and analyze samples of dangerous waste streams for waste characterization. This work is conducted in six inter-connected hot cells that form the nucleus of the SAL. Liquid waste generated during these operations is collected, treated if necessary, and drained from the hot cells to the SAL tank located in Room 32 of the basement directly below the hot cells. A stainless steel trough, 15.2 centimeters wide by 7.62 centimeters deep, traverses the front of all six hot cells in which solution is poured. The trough is equipped with stainless steel grating to capture solids during solution pour. The trough collects any liquid waste poured from analytical chemistry operations, mixed waste treatment operations, other chemical and mixed waste stored in the hot cells, and spills or leaks. The liquid waste is transferred through a common stainless steel pipeline that drains into the SAL tank. The waste is batch transferred from the SAL tank to the radioactive liquid waste system. The SAL tank volume is 1,218 liters and has a throughput of 80,000 liters per year.

4.2.1.1 Design, Installation, and Assessment of Tank Systems [D-2a]

The following sections discuss the design and installation of the SAL tank and provide information on the integrity assessment.

4.2.1.1.1 Design Requirements [D-2a(1)]

Waste stored in the SAL tank has a pH between 7 and 12. The tank is constructed of 316L stainless steel. This material is compatible with any of the dangerous waste that is discharged to the tank. All waste is treated or reacted before introduction into the tank to meet RLWS waste acceptance criteria.

The tank system design has been reviewed by an independent, qualified, registered professional engineer to verify that the strength of the material is adequate and that it can withstand the stress of daily operation. The professional engineer evaluation is included in the tank integrity assessment.

The SAL tank is a vertical double-shell tank supported by 3 legs and stands approximately 1.7 meters above the ground. The top head is a 0.95-centimeter-thick flat stainless steel plate. Both bottom heads are flanged and dished heads (torispherical), and the bottom height is 10.2 centimeters above ground. The inner shell is 107 centimeters outside diameter, the outer shell is 114 centimeters outside diameter, and

each shell is 0.8-centimeter-thick stainless steel plate. The tank is located inside a containment pan that has a 203-centimeter diameter and is 51 centimeters high; the total volume of the pan is 1,648 liters. The pan provides for secondary containment of leaks from the tank, piping, and ancillary equipment and instruments located above the tank. Flanged and threaded connections are located within the containment boundary of the pan to capture any leaks that might occur from these connections. Outside the containment area, all connections are welded. There are no outlets, drainage or otherwise, on the bottom or sides of the tank. Appendix 4A contains engineering drawings.

Solution enters the tank through a gravity flow, welded drain line piped from the hot cells. The SAL sources that tie into this drainpipe include the hot cells, sink drain, hood drain via the sink drain, and floor drain. The cup sink drain and hood drain line is sealed off and is not in use. The drain line also functions as the tank vent that is exhausted by the hot cell exhaust system. Waste solution is pumped from the SAL tank to the RLWS by either a transfer gear pump or a water jet, both of which are located on top of the tank. Both the transfer pump and jet suction lines drop down vertically through the top head to the bottom head and are bent to the center of the tank to minimize the remaining liquid heel when transferring the liquid to the RLWS. The transfer pump is a gear pump with 30 liter per minute capacity at 9-meter water head with 1.5 meters suction head. A flow indicator/totalizer is located on the upstream process water line to be used to verify process water flow during water jet transfer operations. A second, smaller sample pump also is located above the tank. The sample pump provides for solution transfer to the sample station located just north of the tank system. The operators draw a sample at the ventilated sample hood by opening a small sample valve. The sample pump is a gear pump with 3.8 liter per minute capacity at 1.5-meter water head with 1.5 meters suction head. Both gear pumps have magnetic drives to avoid shaft leakage. The discharge piping from each pump has a pressure relief valve installed to protect the gear pumps. The discharge piping from the pressure relief valve is piped back into the tank to contain the solution. A mixer is located on top of the SAL tank to provide agitation of the contents for sampling and washout purposes. Process water also is provided to the tank system for cleanout of the tank and associated piping.

The SAL tank is located in a controlled access room and is monitored from two operating panels. The smaller sample panel is located next to the SAL tank, and the second main control panel is located in Room 201, the main operating gallery. The sample panel provides control for activities related to pulling a sample, such as activating the sample pump and controlling process water, and monitoring the liquid level of the tank. The main control panel provides the operators with the ability to monitor and control the entire SAL tank system. The main control panel provides level indication, high, and high-high level annunciation and contains switches for controlling pumps, agitators, valves, etc. The SAL tank is instrumented with three types of level-monitoring devices. Two devices are wired into the annunciator at the main control panel to provide high-level alarms, and one high-level alarm annunciates at the annunciator board in the control room on the third floor. This control room is staffed 24 hours a day, 7 days a week. If a high-alarm situation should occur after normal working hours, operations personnel would be notified immediately by the alarm and would take corrective action according to procedure. The SAL tank system normally is operated on the day shift. Personnel occupy the main operating gallery in Room 201, where the personnel would be alerted to off-normal conditions on the main control panel. A high-level alarm also would de-energize the process water solenoid valves to the closed position on three water lines into the hot cells and on the process water lines to the SAL tank. The containment pan contains a conductivity element that alarms at the main control panel should solution be detected in the pan. Operating procedures require that inspections of the entire system be made daily when in use (Chapter 6.0).

4.2.1.1.2 Integrity Assessments [D-2a(2) and D-2a(3)]

An independent, qualified, registered professional engineer's tank integrity certification has been completed and will be submitted as a separate document.

4.2.1.2 Secondary Containment and Release Detection for Tank Systems

This section describes the secondary containment systems and leak detection systems installed in the SAL.

4.2.1.2.1 Requirements for Tank Systems [D-2b(1), D-2b(2)(b), and D-2b(2)(c)]

The secondary containment system for the SAL Tank in Room 32 consists of two components: (1) the SAL tank is a double-walled vessel and the outer tank provides secondary containment for the inner tank; and (2) a pan has been installed under the tank to provide secondary containment for the pumps, valves, and flanges located on the top of the tank. The pan also provides tertiary containment for the tank.

The existing drainpipe from the hot cells to the SAL tank is a single-walled, 5.1-centimeter welded stainless steel pipe. This piping is visually inspected for leaks on a daily basis when the tank system is in use, by means of a remote video system. Flanges in this piping and ancillary equipment are located so that secondary containment is provided by the SAL tank secondary containment pan. For the existing RLWS, the transfer piping from the SAL tank to the 340 Building is single-walled, welded stainless steel pipe from the tank to the 325 Building boundary and double-walled stainless steel pipe from the RLWS tank to the cask loading station 325 Building boundary to the 340 Building. The modified RLWS system will utilize the single-walled, welded stainless steel pipe from the SAL tank to the RLWS load out tank, and a new double-walled stainless steel pipe will be used to transfer waste from the RLWS load out tank to the truck lock. New double-walled piping will also be installed to extend the drain line from Room 32 to the RLWS load out tank. Refer to Figure 2.3b for a schematic of the modified RLWS load out tank system. The welded single-walled transfer piping is visually inspected for leaks within 24 hours of a transfer. The 325 Building provides additional containment. The basement floors are concrete, and any liquid release remains in the immediate area until cleanup. The openings to the drains in the basement are elevated 10.2 centimeters above the floor; thus, any spill would remain in the basement until enough liquid collects to fill the entire basement to a 10.2-centimeter depth. The SAL tank can hold a maximum of 1,218 liters, and the entire contents of the SAL tank would fill an area of only 3.5 meters by 3.5 meters to a depth of 10.2 centimeters. Because the basement is larger than 3.5 meters square, the liquid from the SAL tank would not enter a drain opening. Details of the design, construction, and operation of the secondary containment system are described in the following sections.

4.2.1.2.2 Requirements for Secondary Containment and Leak Detection

The secondary containment has been designed to prevent any migration of waste or accumulated liquid from the tank system to the soil, groundwater, or surface water. The secondary containment system also can detect and collect releases of accumulated liquids. A zoom color television camera surveillance system allows for tank, ancillary equipment, and general Room 32 viewing. The camera, located in Room 32, is equipped with auxiliary lighting and mounted on a remote controlled pan and tilt head. The color monitor and camera controls are housed in a dedicated cabinet in Room 527 or 527A. The HWTU will have the option of either keeping the camera/monitor controls in Room 527, 527A, or moving it to another location for operational flexibility. By maintaining operational flexibility of where the camera controls are located, the HWTU can meet ALARA (As Low As Reasonably Achievable) requirements and minimize the expense of added HWTU training requirements.

The following is the system description.

Materials of construction. The tank and components are constructed of 316L stainless steel; this material is compatible with the aqueous waste being discharged to the tank. The waste has a pH between 7 and 12.

Strength of materials. The system design has been reviewed by an independent, qualified, registered professional engineer to verify that the strength of materials is adequate and that the tank can withstand the stress of daily operation (SAIC 1996). Also, pressure relief valves are installed in each line exiting the SAL tank. In the event that there is a blockage in the pipe or tubing, pressure will not build up in the lines. The pressure relief valves are set to 30 psi, which is well below the design strength of stainless steel pipe and tubing. Waste drains back into the SAL tank when a pressure relief valve opens.

Strength of foundation. The system design has been reviewed by an independent, qualified, registered professional engineer to verify that the strength of the tank mounting and foundation is adequate to withstand the design-basis earthquake (DBE). This ensures that the foundation is capable of providing support to the tank and will resist settlement, compression, or uplift.

Leak detection system description. The SAL tank is double walled, and a conductivity probe is installed in the annulus to detect any leak of liquid from the primary containment. If liquid is detected by the probe, alarms are sounded immediately in a local control panel located in Room 32 and in the main control room.

A pan installed beneath the SAL tank provides tertiary containment. The containment pan has a conductivity element that alarms at the main control panel if the presence of liquid in the pan is detected. The containment pan has an 203-centimeter diameter and a 51-centimeter height with a containment capacity of 1,648 liters. The containment pan will easily hold the total capacity of the 1,218-liter SAL tank plus any potential process water that might be released.

Removal of liquids from secondary containment. The tank secondary containment, the outer shell of the double-walled vessel, is designed to contain a liquid leak from the inner vessel until provisions can be made to remove the liquid. The liquid might not be removed within 24 hours because of the coordination that must take place in the 325 Building. A tube is installed in the annulus that extends to the bottom and is capped at the top of the tank. If liquid were detected in the annulus, the liquid could be removed by connecting a tube between the capped fitting and the transfer pump, which would pump the liquid into the RLWS transfer line.

A delay of greater than 24 hours in removing the liquid from the secondary containment poses no threat to human health or the environment, because the waste continues to be contained in a sealed vessel. In the event that the secondary containment should leak, the containment pan installed beneath the tank provides tertiary containment.

4.2.1.2.3 Secondary Containment and Leak Detection Requirements for Ancillary Equipment

Secondary containment for the SAL tank system ancillary equipment is provided by the containment pan below the SAL tank, by double-walled piping for the sample line between the tank and the sample station, and by daily visual inspection during use of the entire system including the existing single-walled piping. Flanged and threaded connections, joints, and other connections are located within the confines of the containment pan. Outside this pan, only double-walled piping and welded piping is allowed. The pumps are magnetic coupling pumps located above the pan. All material of construction is stainless steel; for welded parts the material is 316L stainless steel. Stainless steel material is compatible with the expected

corrosive, dangerous, and mixed waste stored in the SAL tank. The strength and thickness of the piping, equipment supports, and containment pan are designed to onsite standards that take into account seismic requirements for the region and corrosion protection. The entire system is located on an existing basement floor built in the 1960s. The 325 Building has proven over time to be of a sound structural integrity to withstand mild earthquake forces. The containment pan has a liquid element sensor that alarms immediately at the main control panel should any leakage be detected. The containment pan has a 203-centimeter diameter and a 51-centimeter height, or 1,648 liters of capacity. The containment pan will hold the total capacity of the 1,218-liter SAL tank plus any potential process water that also might be released. In the event of an alarm, the process water solenoid valves will become de-energized to the closed position to minimize the loss of additional water.

The 325 Building is staffed or monitored 24 hours a day, 7 days a week. The control system is designed to alarm on any leak/spill or high-level alarm encountered. The personnel responding to the alarm condition will stop or secure the action causing the leak/spill, warn others of the spill, isolate the spill area, and minimize individual contamination and exposure. The spilled or leaked waste will be removed in an expeditious manner according to procedures for cleaning up spills and leaks.

4.2.1.2.4 Controls and Practices to Prevent Spills and Overflows

The SAL tank system has been designed to account for safe and reliable operation to prevent the system from rupturing, leaking, corroding, or otherwise failing. The tank is provided with redundant-level instrumentation to monitor tank levels. Both capacitance- and conductance-level probes are used for level monitoring and alarming. The tank will alarm on high level and interlock the process water to fail close. The process water is supplied to both the hot cells and the tank system. The containment pan is equipped with a liquid-sensing element to detect the presence of liquid and alarms at the main control panel if liquid is detected. Normally, liquid is drained to the tank by operators pouring solution into the troughs in the hot cells. This operation is carried out in a "batch mode." If this operation sets off a high-level alarm, the operators stop pouring solution into the troughs. Even if this operation caused an alarm condition, no spill is expected, because the tank has sufficient freeboard to hold additional waste solution. The initial level alarm is set at 92 percent of full volume.

Trained personnel respond to spills by stopping or securing the action causing the spill, notifying others in the area of the spill, and following guidance provided in the 325 Building Emergency Plan and the 325 HWTUs Contingency Plan (Chapter 7.0). Measures are in place to inspect the system daily.

4.2.1.3 Tank Management Practices [D-2d]

According to operating procedures, liquid waste is poured into the troughs. The troughs tie into the 5.08-centimeter drain header located under the hot cells. This drain header is sloped down to the SAL tank located in Room 32 of the basement. The existing drain header is the only method of introducing mixed waste solutions into this tank. The drain line is fully welded and is constructed of 316L stainless steel material. Because this drain line also serves as the SAL tank vent line, the SAL tank operates at the same pressure as that of the hot cells. The heating, ventilation, and air conditioning operating pressure for the hot cells, and therefore the SAL tank, is -1.27 centimeters water (vacuum). The SAL tank operates at slightly subatmospheric pressure, and no pressure controls are necessary for this tank system.

The SAL tank is fully monitored with tank-level instruments. A main control panel provides level status and high-alarm annunciation. Two control panels are provided with the SAL tank monitoring system. One control panel is located adjacent to the sampling station in Room 32 to control the sampling pump when samples are pulled. A second control panel is located on the operating floor in Room 201, the SAL

main operating gallery. Tank status is monitored from the first floor control panel. Because waste solution is generated in a batch mode, waste solution drained to the tank is effectively controlled through operating and administrative procedures in order to prevent high-level-alarm conditions. A safety cutoff system for the tank will shut off all incoming water to the SAL in conjunction with a high-level-alarm condition. A backup tank system was determined to be unnecessary for the SAL operations because of the presence of tank monitoring devices and the use of administrative and operational (batch-processing) controls.

The tank transfer controls provide similar safety features. Once the SAL tank contains sufficient volume, the tank's solution is prepared for transfer to the RLWS. After waste characterization is completed, the transfer to the RLWS is initiated by following internal TSD procedures. Once started, the transfer continues until a low-level condition automatically stops the transfer pump or until it is stopped by operator action. The solution can be transferred to the RLWS by either the transfer gear pump or by the water jet. Currently, the RLWS piping is a 316L stainless steel single-walled pipeline inside the basement from the SAL tank to the boundary of the 325 Building; once outside the 325 Building, this piping becomes a double-contained pipeline. Once the RLWS modifications are complete, the piping from the SAL tank to the RLWS load out tank will be single-walled 316L stainless steel, while the piping from the RLWS load out tank to the truck lock will be double-walled 316L stainless steel.

4.2.1.4 Marking or Labeling [D-2e]

Due to the high radiation levels associated with the SAL tank, the tank itself is not labeled. The tank is located in a locked room to prevent unnecessary radiation exposure. Access points to the room are labeled to meet the requirements of WAC 173-303-395. The marking of the access points is legible from a distance of 15 meters and identifies the waste. The label adequately warns employees, emergency response personnel, and the public of the major risks associated with the waste being stored within the tank. The tank also has a written placard identifying important radioactivity, criticality, and hazard concerns.

4.2.1.5 Ignitable, Reactive, and Incompatible Waste [D-2h]

Many different types of samples and waste materials will be brought to the SAL hot cells for analytical or research activities. These samples are accompanied by an internal PNNL documentation form that provides waste characterization information from the sample-generating unit. Chemical characterization provided in these forms is based on previous chemical analysis or process knowledge. The hazard potential includes exposure to radiation, corrosive chemicals, and hazardous chemicals. All operations performed in the SAL hot cells are conducted by qualified operators following approved procedures. Typical hot cell analytic processes generate liquid waste that is highly acidic and/or that have a high chloride level. A small quantity of organic waste is generated and segregated prior to treatment or disposal. If heavy metals are present in the liquid waste before neutralization, the metals are precipitated as hydroxides incident to the neutralization and are filtered from the solution. If the chloride content of the liquid is above 0.01 Molar, the chlorides may be removed through silver nitrate precipitation. Therefore, waste solutions are not expected to be ignitable, reactive, or incompatible when transferred to the SAL tank.

The following factors will ensure a safe and reliable tank system with regard to ignitable, reactive, and incompatible waste: the tank system operates at ambient temperatures and pressures; all waste added to the tank meets the RLWS waste acceptance criteria; the tank construction material is stainless steel; and the operators are trained in the applicable procedures and have past operating experience.

4.2.2 Radioactive Liquid Waste System Load Out Tank System

The RLWS load out tank system modification is scheduled to be complete in FY 1998. This tank system will be placed in service prior to closing the 340 Building. Information provided in this permit application is based on information available in the conceptual design phase. Slight modifications to the design may be required as the final design is completed. All design changes will comply with the tank systems regulations in WAC 173-303-640.

The 340 Facility is scheduled for deactivation; therefore, the RLW will be collected and transported to the DSTs via an approved cask system when deactivation occurs. The RLWS load out tank system modifications include installing a tank system in the basement of the 325 Facility to collect radioactive liquid waste rather than directly piping the waste to the 340 Facility. The 325 Facility is expected to continue to generate approximately 5,678 to 7,570 liters of radioactive liquid waste each year. The tank will sit below the basement floor in a tank pit.

4.2.2.1 Design, Installation, and Assessment of Tank Systems [D-2a]

The following sections discuss the design of the RLWS load out tank system. Information on the integrity assessment will be provided when complete in accordance with WAC 173-303-640 and 810.

4.2.2.1.1 Design Requirements [D-2a(1)]

The RLWS tank will be constructed of 316L stainless steel. This material is compatible with any of the dangerous waste that is discharged to the tank. Waste in the RLWS tank will be treated or reacted, if needed, to protect the tank integrity.

The RLWS load out tank system design will be reviewed by an independent, qualified, registered professional engineer to verify that the strength of the material is adequate and that it can withstand the stress of daily operation before operations begin. The professional engineer evaluation will be included in the tank integrity assessment.

The RLWS tank will be a vertical single-shell tank supported by multiple legs and stand approximately 2.4 meters in height and 2.4 meters in diameter. The tank will have a welded construction of 316L stainless steel and sit approximately 15.2 centimeters above the floor in the tank pit with a formed bottom to minimized a heel in the tank. The tank will be located inside a concrete pit below the basement floor. The tank pit will be lined with a stainless steel liner on the floor and approximately 0.6 meters up the walls to allow for a secondary containment capacity of at least 100% of the tank. Sealant will be placed along the walls at the end of the liner, and the remaining portion of the concrete pit walls will be painted with a chemically resistant coating. A concrete shielding cover will be placed over the pit. A tank control room will be constructed of steel studs and gypsum and located on the west side of the tank pit.

The primary tank control panels will be located in the control room, and secondary control panels will be located in the truck lock, Room 601, Room 201, and in the operator's office. Conductivity probes will be installed in the tank at 305-mm intervals. Signals from the probes will indicate the liquid level in the tank by signal lights on all control panels. Other signals from the conductivity probes will alarm high liquid level by a signal light on each control panel plus sound on the panel in the operator's office.

Liquid waste will enter the RLWS tank through gravity flow piping. A mixing pump system will be installed to provide agitation of the tank contents. Mixing pump system controls will be installed on the control panel in the control room.

Samples will be collected prior to transferring the waste from the RLWS tank to the DST System. A sampling pump and recirculating loop will be installed on the tank. A small sample hood will be located in the control room. Controls for the sample hood will be located near the sample hood. This hood will be connected to the HEPA filtered exhaust system.

4.2.2.1.2 Integrity Assessments [D-2a(2) and D-2a(3)]

An independent, qualified, registered professional engineer's tank integrity certification will be completed and provided to Ecology before the tank system begins operation.

4.2.2.2 Secondary Containment and Release Detection for Tank System [D-2b]

This section describes the secondary containment systems and leak detection systems to be installed in the RLWS load out tank system.

4.2.2.2.1 Requirements for Tank Systems [D-2b(1), D-2b(2)(b), and D-2b(2)(c)]

The secondary containment system for the RLWS tank will consist of the stainless steel liner in the bottom of the concrete tank pit and 0.6 meters up the tank pit walls. The remaining portion of the concrete walls will be painted with a chemically resistant coating and the boundary between the steel liner and the coating will be sealed.

The welded single-walled transfer piping will be visually inspected for leaks within 24 hours of a transfer. The 325 Building provides additional containment. The basement floors are concrete, and any liquid release remains in the immediate area until cleanup.

The transfer piping from the SAL tank to the RLWS tank is single-walled, welded stainless steel pipe. Sections of the RLWS load out tank system piping will have secondary containment where feasible. Secondary containment for the piping system will consist of double-walled stainless steel pipe with sensors in the annulus. Secondary containment piping will be installed on the new line from Room 40A to the RLWS waste tank. Secondary containment piping will also be installed on the line between Room 528 and the RLWS tank and from the RLWS tank to the cask loading station.

4.2.2.2.2 Requirements for Secondary Containment and Leak Detection

The secondary containment has been designed to prevent any migration of waste or accumulated liquid from the tank system to the soil, groundwater, or surface water. The secondary containment system will be able to detect and collect releases of accumulated liquids. Remote television cameras will provide a surveillance system for the tank, ancillary equipment, and general viewing of the tank pit. Viewing screens and controls will be located in the control room. The following is the system description based on conceptual design.

Materials of construction. The tank and components will be constructed of 316L stainless steel; this material is compatible with the aqueous waste being discharged to the tank. The waste has a pH between 7 and 12, and the chloride ion concentration averages less than 0.01 Molar.

Strength of materials. The system design will be reviewed by an independent, qualified, registered professional engineer to verify that the strength of materials is adequate and that the tank can withstand the stress of daily operation before operations begin.

Strength of foundation. The system design will be reviewed by an independent, qualified, registered professional engineer to verify that the strength of the tank mounting and foundation is adequate to withstand the Design Basis Earthquake (DBE) before operations begin. This ensures that the foundation is capable of providing support to the tank and will resist settlement, compression, or uplift.

Leak detection system description. Conductivity probes will be installed inside the single-walled tank to detect the liquid level in the tank. Any leaks from the tank will be collected in the stainless steel lined tank pit. Liquid sensing tape will be installed in the bottom of the tank pit to detect any leak of liquid from the primary containment. If liquid is detected, alarms will sound immediately in a local control panel and in the operator's room.

Removal of liquids from secondary containment. The tank secondary containment, the lined tank pit, is designed to contain a liquid leak from the tank until provisions can be made to remove the liquid. The liquid might not be removed within 24 hours because of the coordination that must take place in the 325 Building and the DST personnel. A dip tube will be installed in the tank pit that extends from the bottom of the pit to the tank control room and is capped at the top. If liquid were detected in the tank pit, the liquid will be removed by connecting a transfer pump to the dip tube. Any liquid removed from the secondary containment would be transferred to the DSTs in a manner consistent with the transfer of waste from the RLWS tank to the DSTs.

A delay of greater than 24 hours in removing the liquid from the secondary containment poses no threat to human health or the environment, because the waste continues to be contained in the tank pit.

4.2.2.2.3 Secondary Containment and Leak Detection Requirements for Ancillary Equipment

Secondary containment for the RLWS load out tank system ancillary equipment will be provided by the lined tank pit, double-walled piping, and daily visual inspection during use of the entire system including the existing single-walled piping. All material of construction will be stainless steel; for welded parts the material is 316L stainless steel. Stainless steel material is compatible with the expected corrosive, dangerous, and mixed waste stored in the tank. The strength and thickness of the piping, equipment supports and secondary containment are designed to onsite standards that take into account seismic requirements for the region and corrosion protection. The entire system will be located on an existing basement floor built in the 1960s. The 325 Building has proven over time to be of a sound structural integrity to withstand mild earthquake forces. The tank pit has a liquid element sensor that alarms immediately at the main control panel should any leakage be detected. The tank pit will hold the total capacity of the 11,355-liter tank plus any potential process water that also might be released. In the event of an alarm, the process water solenoid valves will become de-energized to the closed position to minimize the loss of additional water.

The 325 Building is staffed or monitored 24 hours a day, 7 days a week. The control system is designed to alarm on any leak/spill or high-level alarm encountered. The personnel responding to the alarm condition will stop or secure the action causing the leak/spill, warn others of the spill, isolate the spill area, and minimize individual contamination and exposure. The spilled or leaked waste will be removed in an expeditious manner according to procedures for cleaning up spills and leaks.

4.2.2.2.4 Controls and Practices to Prevent Spills and Overflows

The RLWS load out tank system has been designed to account for safe and reliable operation to prevent the system from rupturing, leaking, corroding, or otherwise failing. The tank will be provided with redundant-level instrumentation to monitor tank levels. Conductance-level probes will be used for level

monitoring and alarming, and a secondary tank level monitoring system will be provided. The tank will alarm on high level and interlock the process water to fail close.

Trained personnel respond to spills by stopping or securing the action causing the spill, notifying others in the area of the spill, and following guidance provided in the 325 Building Emergency Plan and the 325 HWTUs Contingency Plan (Chapter 7.0). Measures are in place to inspect the system daily.

4.2.2.3 Tank Management Practices [D-2d]

The RLWS tank will be installed in an existing pit in the basement, entirely below grade. The top of the tank will be shielded by a concrete deck on top of the pit. The deck will be constructed of multiple stepped cover blocks to simplify installation/removal.

The single wall vertical tank is supported by multiple legs. Secondary containment is provided by lining the lower portion of the tank pit. The stainless steel liner will be sealed to the pit wall, and the wall above the liner will be coated with a chemical-resistant material. The tank will be operated near atmospheric pressure and vented through HEPA filters.

The primary panel in the control room is adjacent to the tank pit. Other Liquid level monitoring panels will be located in Room 601, 325A truck lock, Room 201, Room 527 and the power operator's office. The tank will be monitored with two liquid level instruments, and meters/indicating lights will be provided in all control panels. Several of the panels have high liquid level alarms. These alarms will be audible or visual, depending on location.

There will be a leak detection system for the double walled piping and the tank pit liner. Liquid sensing cable will be connected to alarms in the operator's office. There will be remotely operated TV cameras in the pit to inspect the tank and the liner. These cameras will be viewed by operators when performing the daily inspection of the tank for evidence of corrosion and releases of dangerous waste.

Because liquid waste is generated in a batch mode, waste drained to the RLWS tank will be effectively controlled through operating and administrative procedures in order to prevent high-level-alarm conditions. When there is an alarm, a safety cutoff system will shut off all incoming process water lines.

A backup tank system was determined to be unnecessary because of the presence of tank monitoring devices and the use of administrative and operational (batch-processing) controls.

Liquid waste will be transported from 325 Building to DSTs using the cask system. The 325A truck lock has been modified to handle the cask system. There will be a transfer line with secondary containment in 325 Building between the tank and the truck lock. A pump or other means will be used to transfer the waste from the RLWS tank to the truck lock.

Prior to transferring waste from the RLWS load out tank, responsible personnel will schedule the cask system for a waste transfer. A small quantity of waste will be obtained for characterization using a sample pump and small hood. The cask system will be positioned in the 325A truck lock. Transfer of the waste to the cask system will be performed in accordance with 325 Building and approved cask system procedures.

4.2.2.4 Marking or Labeling [D-2e]

Due to the high radiation levels associated with the RLWS tank, the tank itself will not be labeled. The tank will be located below grade in a sealed pit. Access points to the tank pit will be labeled to meet the requirements of WAC 173-303-395. The marking of the access points will be legible from a distance of 15 meters and identify the waste. The label will adequately warn employees, emergency response personnel, and the public of the major risks associated with the waste being stored within the tank. The tank will also have a written placard identifying important radioactivity, criticality, and hazard concerns.

4.2.2.5 Ignitable, Reactive, and Incompatible Waste [D-2h]

Many different types of samples and waste materials will be brought to the SAL hot cells, and the HWTU. These samples are accompanied by an internal PNNL documentation form that provides waste characterization information from the sample-generating unit. Chemical characterization provided in these forms is based on previous chemical analysis or process knowledge. The hazard potential includes exposure to radiation, corrosive/flammable chemicals, and hazardous chemicals.

Prior to transferring wastes to the RLWS system, the wastes are evaluated to ensure compatibility with the system and to preclude introduction of flammable or reactive waste in order to protect the integrity of the new RLWS tank. The RLWS load out tank system will be equipped with treatment capabilities including neutralization and chloride removal. These treatment systems will include chemical additive tanks and a tank agitator.

Based on analytical results and process knowledge of the 325 laboratories generating the waste, treatment of the SAL generated waste prior to discharge, and agitation and treatment capabilities in the RLWS tank, waste solutions are not expected to be ignitable, reactive, or incompatible.

The following factors will ensure a safe and reliable tank system with regard to ignitable, reactive, and incompatible waste: the tank system operates at ambient temperatures and pressures; all waste added to the tank meets the RLWS waste acceptance criteria; the tank construction material is stainless steel; and the operators are trained in the applicable procedures and have past operating experience. Closure of the RLWS tank is addressed in Section 11.4.

4.3 AIR EMISSIONS CONTROL [D-8]

The air emissions standards on 40 CFR 265, Subpart AA and BB do not apply to any part of the 325 HWTUs. Containers in the 325 HWTUs are primarily managed as mixed waste. Such containers are exempt from 40 CFR 264, Subpart CC by 40 CFR 264.1080(6).

Figure 4-1. Hazardous Waste Treatment Unit Secondary Containment System.

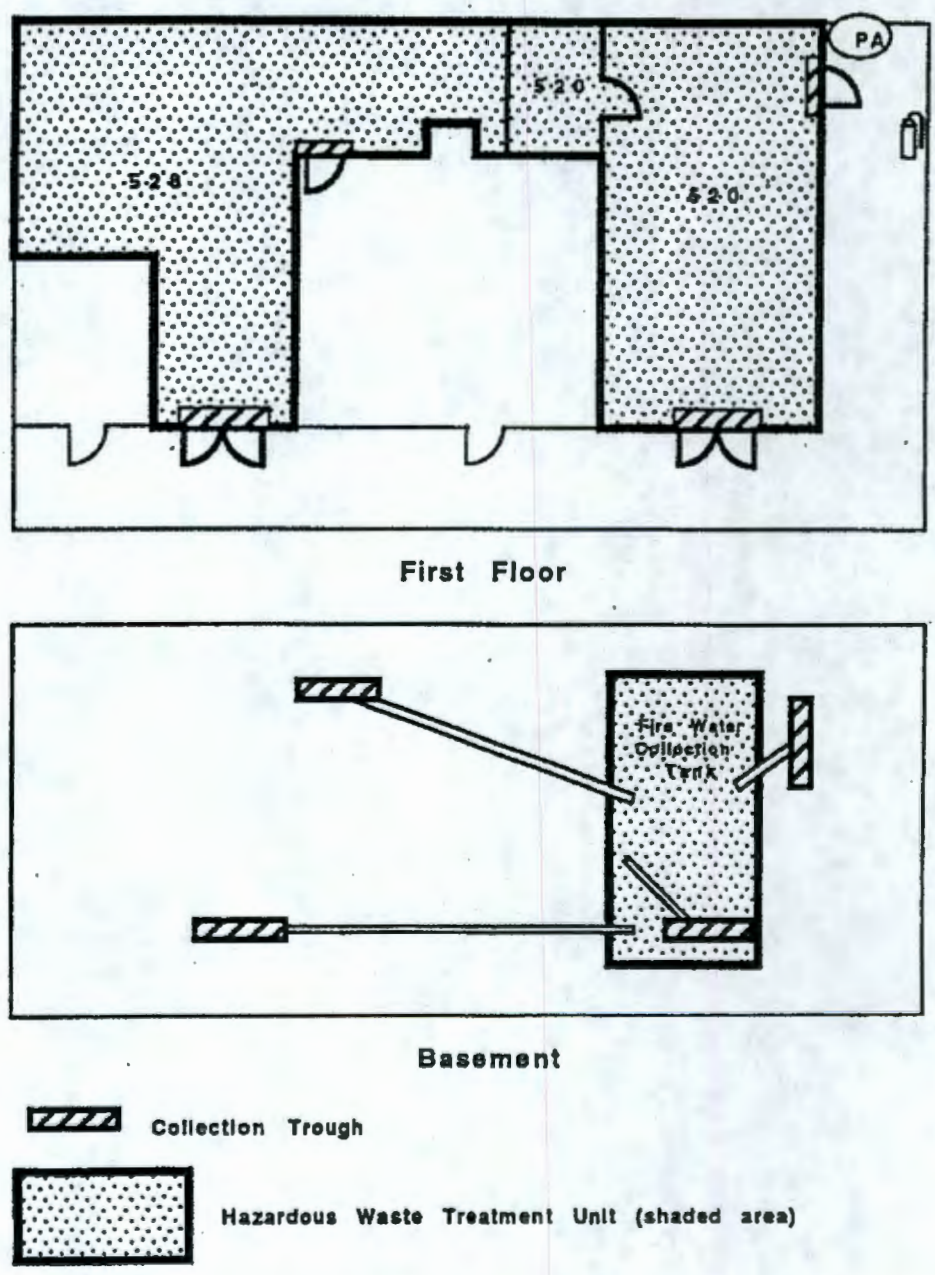


Figure 4-2. Hot Cell Secondary Containment System.

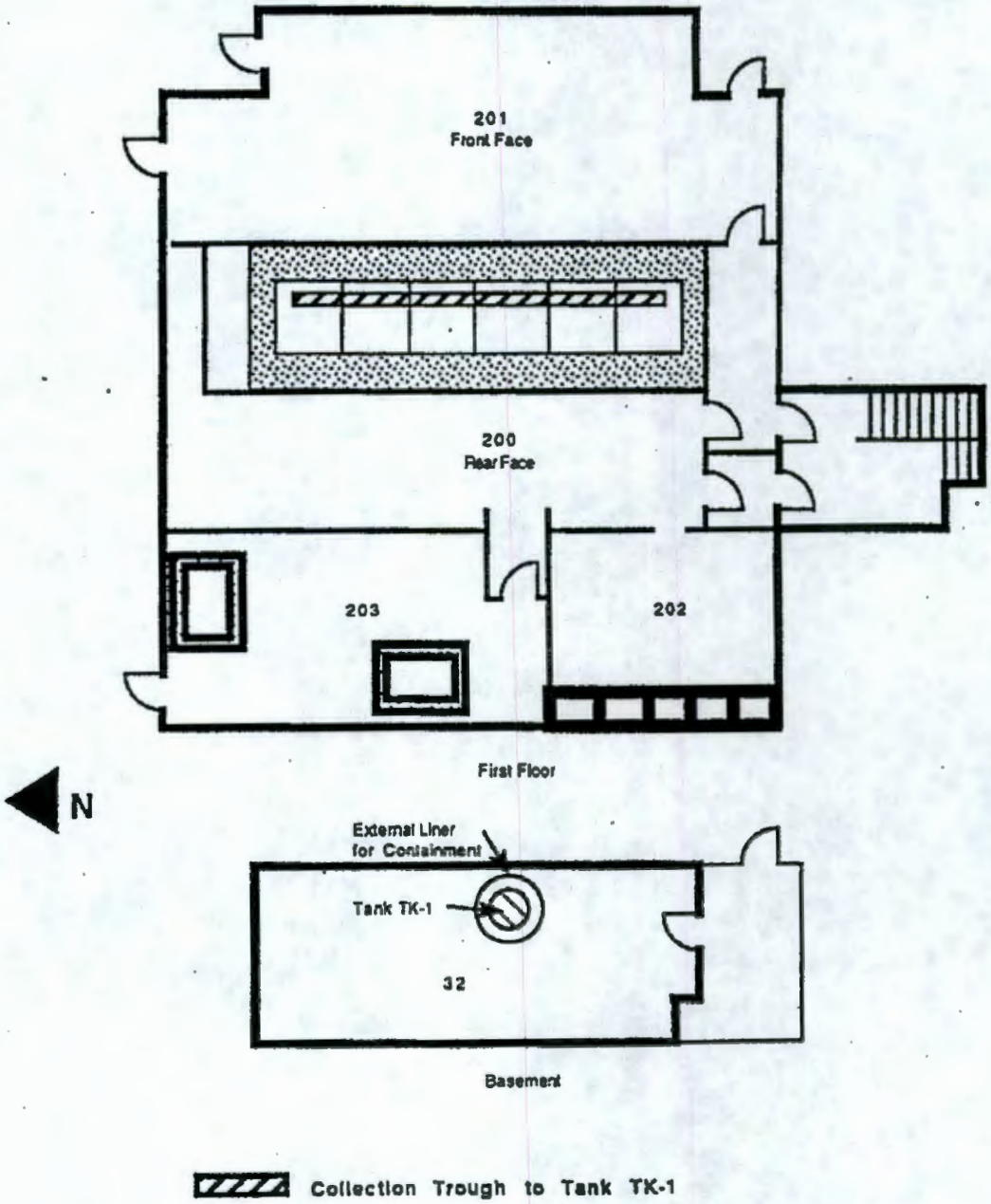


Table 4-1. Typical Storage Containers Used at the 325 Hazardous Waste Treatment Units.

Material of construction	Waste Capacity
Glass container/bottles	1 milliliter to 3.79 liters
Plastic containers/bottles	1 milliliter to 19 liters
Paint cans	0.47 liters to 4.73 liters
Steel containers	114 liters, 322 liters
Plastic-lined steel containers	114 liters, 208 liters
Steel "shielded" 208-liter container	Various nominal capacity depending on necessary shielding; 3.79 liters; 53 liters
Overpack containers	322 liters

APPENDIX 4A

Engineering Drawings

This page intentionally left blank.

APPENDIX 8A

TRAINING

APPENDIX 8A

CONTENTS

8.0 PERSONNEL TRAINING.....APP 8A-1

8.1 OUTLINE OF TRAINING PROGRAM [H-1].....APP 8A-1

8.1.1 Job Titles and Job Descriptions [H-1a].....APP 8A-2

8.1.1.1 325 Hazardous Waste Treatment Unit Job Positions and Descriptions.....APP 8A-2

8.1.1.2 Shielded Analytical Laboratory Job Titles and Descriptions.....APP 8A-3

8.1.1.3 325 Building Emergency Director.....APP 8A-3

8.1.2 Training Content, Frequency, and Techniques [H-1b].....APP 8A-3

8.1.3 Training Coordinator [H-1c].....APP 8A-4

8.1.4 Relevance of Training to Job Position [H-1d].....APP 8A-4

8.1.5 Training for Emergency Response [H-1e].....APP 8A-5

8.1.5.1 Procedures for Using, Inspecting, Repairing, and Replacing Unit Emergency and Monitoring Equipment.....APP 8A-6

8.1.5.2 Key Parameter for Automatic Waste Feed Cut-Off Systems.....APP 8A-6

8.1.5.3 Communications or Alarm Systems.....APP 8A-6

8.1.5.4 Response to Fires.....APP 8A-6

8.1.5.5 Response to Groundwater Contamination Incidents.....APP 8A-7

8.1.5.6 Shutdown of Operations.....APP 8A-7

8.2 IMPLEMENTATION OF TRAINING PROGRAM [H-2].....APP 8A-7

TABLE

Table 8-1. 325 Hazardous Waste Treatment Units Training Requirements.....8

APPENDIX 8A

8.0 PERSONNEL TRAINING

The 325 Hazardous Waste Treatment Units (325 HWTUs) training plan outlines the training program developed and implemented for the 325 HWTUs employees whose duties are identified as being associated with dangerous waste management. The 325 HWTUs training program uses existing training courses. The program is designed to ensure the 325 HWTUs operations comply with the training requirements instituted in accordance with WAC 173-303-330 (see Section 8.2).

8.1 OUTLINE OF TRAINING PROGRAM [H-1]

The training program was designed to ensure that the 325 HWTUs are operated and maintained in accordance with the requirements of the U.S. Environmental Protection Agency (EPA), Washington State Department of Ecology (Ecology), and the U.S. Department of Energy, Richland Operations Office (DOE-RL). The training program also is designed to prepare employees to operate and maintain the units in a safe, effective, efficient, and environmentally sound manner, and ensures that employees are prepared to respond in a prompt and effective manner should abnormal or emergency conditions occur. The 325 HWTUs management is responsible for identifying training requirements and providing personnel training. Training requirements for personnel outside of the 325 HWTUs is the responsibility of that person's management.

Pacific Northwest National Laboratory (PNNL) personnel not assigned to the 325 HWTUs may, on an occasional basis, assist with specific operations at this unit. Proper training for the job will be given to the personnel in these situations, before the beginning of any unsupervised work. This training shall be documented and kept on file at PNNL for future reference.

General requirements of a training program include:

- Teaching personnel to perform duties in compliance with Washington Administrative Code (WAC) 173-303 Dangerous Waste Regulations
- Instruction by a person knowledgeable of dangerous waste management procedures to include training relevant to the employee's position
- Development of a unit-specific program that includes instruction to familiarize personnel with applicable procedures, container management practices, spill response, and emergency procedures
- New employees must receive training within 6 months of employment and must be supervised until completion of training
- Employees must participate in an annual, biennial, and triennial requalification of training.

Management reevaluates the training program courses annually to ensure that dangerous waste training requirements continue to be met. These reevaluations could result in modifying or adding new material to the current training program.

Training requirements are provided in Table 1.

8.1.1 Job Titles and Job Descriptions [H-1a]

The HWTU Technical Specialist(s) is responsible for the proper acceptance, treatment, storage, and transport of dangerous waste at the HWTU. In addition, the HWTU Technical Specialist oversees dangerous waste pickup and transportation to the HWTU storage areas. When adequate volumes of waste have accumulated, the HWTU Technical Specialist is responsible for readying the waste for transfer. These duties could include packaging, labeling, manifesting, and recordkeeping to ensure compliance with applicable regulations. The Activity Manager will post and maintain a current list of the individuals working in the 325 HWTUs. This list will be updated as necessary and will contain the job title, name of person filling the position and their respective phone numbers. The list will be posted at the entrance to the HWTUs/SAL and a copy maintained as part of the Operating Record.

8.1.1.1 325 Hazardous Waste Treatment Unit Job Positions and Descriptions

The HWTU Activity Manager is responsible for the daily operation of the HWTU in compliance with regulations administered under the Resource Conservation and Recovery Act of 1976 (RCRA), WAC 173-303, and PNNL waste operating procedures.

The HWTU Activity Manager ultimately is responsible for assessing HWTU compliance, conducting inspections and overseeing any corrective actions that might result from the inspections, ensuring that waste handling and storing procedures are followed, and implementing the 325 HWTUs Contingency Plan and Emergency Procedures in coordination with the 325 Building Emergency Director (BED). In addition to these responsibilities, the HWTU Activity Manager directs new employees so that successful completion of introductory and on-the-job training is accomplished in the first 6 months of employment. The HWTU Activity Manager has final authority on acceptance of waste at the HWTU. The HWTU Activity Manager could review all waste disposal requests to ensure their accuracy and reliability, designate the waste, determine treatment and storage requirements, and oversee treatment of the waste. The HWTU Activity Manager also could perform waste management operations such as pickup and lab packing of small containers, oversight of waste shipping, and ensuring compliance with U.S. Department of Transportation regulations.

The HWTU Engineer/Scientist(s) is responsible for the proper acceptance, treatment, storage, and transport of dangerous waste at the HWTU. In addition, the HWTU Science/Engineer Associate oversees dangerous waste pickup and transportation to the HWTU storage areas. When adequate volumes of waste have accumulated, the HWTU Science/Engineer Associate is responsible for readying the waste for transfer. These duties could include packaging, labeling, manifesting, and recordkeeping to ensure compliance with applicable regulations.

The HWTU Technical Specialist(s) also performs waste management operations such as pickup and lab packing of small containers. The HWTU Technical Specialist(s) implements the 325 HWTUs Contingency Plan and Emergency Procedures in the absence of the HWTU Activity Manager.

The HWTU Technician(s) is responsible for the physical operations at the HWTU. This person is responsible for packaging, labeling, and preparing waste for transfer and assisting in any treatment or sampling activities and/or waste pickups. The HWTU Technician(s) also is responsible for performing minor maintenance and upkeep of the HWTU.

The HWTU Clerk(s) assists the technical specialist(s) and technicians(s) in recordkeeping and database maintenance, verification of waste inventories, and preparation of reports, labels, manifests, waste tracking forms, and other associated documentation.

8.1.1.2 Shielded Analytical Laboratory Job Titles and Descriptions.

The SAL Technical Group Leader (Supervisor) has responsibility for all operations within the SAL portion of the 325 HWTUs at the technical group management level. This includes all technical, managerial, and operational aspects of the SAL.

The SAL Technical Group Leader has responsibility for all aspects of the day-to-day operation of the SAL. Guidance and direction is provided to all personnel in the technical group. Final decision making for operations within the technical group rests with the SAL Technical Group Leader. The SAL Technical Group Leader is responsible for the daily operations of the SAL, including all aspects of mixed waste treatment activities. This includes ensuring compliance with RCRA, WAC 173-303, and PNNL waste operating procedures. The SAL Technical Group Leader also serves as a zone warden for the SAL and assists the 325 Building BED in the event of an offnormal event or emergency.

The SAL Waste Management Technician is responsible for the preparation and analysis of dangerous waste as performed in analytical chemistry hot cells and for the proper treatment and storage of mixed waste materials. The SAL Waste Management Technician is responsible for recordkeeping, waste designation, packaging, and transferring for the SAL portion of the 325 HWTUs. The position also involves all aspects of hot cell operation and master/slave manipulator operation, including the operation of analytical instrumentation situated in the hot cells.

The SAL Technical Specialist(s) and Technician(s) are responsible for the preparation and analysis of samples and conducting research activities as performed in analytical chemistry hot cells. The positions also involve all aspects of hot cell operation and master/slave manipulator operation, including the operation of analytical instrumentation situated in the hot cells.

The SAL Clerk(s) assists the Technical Group Leader in recordkeeping, database maintenance, and preparation of reports, labels, manifests, waste tracking forms, and other associated documentation.

325 Building Emergency Director.

The 325 Building BED has responsibility for directing emergency activities for the 325 Building, and serves as the Emergency Coordinator as described in WAC-173-303-360. This person will receive, in the event of an emergency, additional hazard information from the HWTU Activity Manager.

8.1.2 Training Content, Frequency, and Techniques [H-1b]

A list of required courses and associated training frequencies are provided in Table 1, and a brief description of these courses is processed in Sections 8.1.4 and 8.1.5. Personnel training could consist of both classroom and on-the-job training. Equivalent training that meets regulatory requirements could be taken in lieu of training identified in Table 1, with approval from the HWTU Activity Manager.

New employees at the 325 HWTUs must successfully complete the training program within 6 months after their employment or assignment to the unit or transfer to a new position within the unit. At a minimum, the training familiarizes personnel with emergency equipment and procedures, and unit operations. All current employees and new employees, upon completion of an initial qualification phase, will receive ongoing training relevant to the position for which they are employed. The continuing training received by each employee will be evaluated for relevance and completeness.

8.1.3 Training Coordinator [H-1c]

Training at PNNL is scheduled and provided by a number of specialists in their fields. The staff member's immediate line management has the responsibility for identifying training needs and coordinating completion of the training. The immediate line management is knowledgeable in dangerous waste management procedures.

PNNL also has a system that tracks and monitors training for employees. This coordination includes a system for flagging affected employees when additional training and/or followup is warranted.

8.1.4 Relevance of Training to Job Position [H-1d].

At a minimum, all Treatment, Storage, and Disposal (TSD) unit personnel will receive training commensurate with the level of knowledge necessary to ensure that each employee understands the general and specific aspects of their work environment. The titles and job descriptions of personnel involved in operating the 325 HWTUs are set forth in Section 8.1.1. All training for personnel is relevant to the positions in which they are employed. For normal operating conditions, the training includes the following.

- Laboratory Standard Hazard Communication –Initial: This course familiarizes the personnel with their rights under the right-to-know statutes. Information on material safety data sheets (MSDS) and their availability and on standard industrial hygiene terms also is covered.

- Radiological Worker I – General Radiation Safety–Biennial: This course gives information on radiological fundamentals, radiation work permits, the ALARA program, personnel monitoring, radiological postings and controls, and radiological emergencies. A brief refresher to this class is required during alternate years.

- Radiological Worker II – General Radiation Safety–Biennial: This course gives information on the basic characteristics of radiation, natural and manmade sources, biological effects and risks of radiation exposure, ALARA, contamination control, and warnings and alarms. A brief refresher to this class is required during alternate years.

- Advanced Waste Management [Hazardous (HAZ), Low Level (LLW), Mixed (MW), and Transuranic (TRU)] – Course #1084: This training covers PNNL dangerous and mixed waste procedures and issues and regulatory requirements applicable to PNNL operations.

- Hazardous Material Shipping Representative – Annual: This course introduces the requirements for transferring or shipping hazardous materials onsite and offsite.

- Radioactive Generator Training Annual (Course #844): This course provides details associated with the disposal of solid low-level waste. The course shows the waste certification process, along with the paperwork associated with the physical disposal process.

- Transuranic (TRU) Waste Packager Training – Annual: This class/ reading assignment covers the applicable requirements for packaging, storing, certifying, and shipping TRU waste.

- Laboratory Hood Safety Training – Biennial: This course explains the operation of, proper use of, and hazards associated with laboratory hoods.

- Glove Box Operational Safety – Biennial: This 1-hour course is designed to serve as the basis for new glove box users and to refresh the experienced glove box user in the proper procedures of using the glove box, including glove change and bag-out methods.

- Crane Hoist and Rigging Safety – Triennial: This course provides instruction in the safe operation of cranes and in proper rigging techniques.

- Lock and Tag: General Employee Orientation – Initial: This course introduces the requirements of the lock and tag policy to personnel who might be in areas where machinery or equipment could be locked and tagged out of service.

- Lock and Tag for Authorized Staff Members – Annual: This course familiarizes personnel with the duties of identifying hazardous energy and the methods for its control, the importance of verifying that hazardous energy is adequately controlled, and the means of properly installing and removing lockout/tagout devices.

- Operational Safety Requirements (OSRs) General Training – Biennial: This course is intended to provide a general understanding of OSRs, why the requirements are needed, the development process, and how the requirements are implemented.

- 325 Building OSR Checklist Training – Biennial: This course is conducted to ensure that all personnel who work on or with projects or building systems in the 325 Building are familiar with and fully understand the contents and significance of the specific OSRs as detailed in the OSR Checklist.

- 325 HWTUs Permit Application Review – Annually or whenever the permit is revised, whichever is more frequent: This requirement is fulfilled by reading and studying the Permit and the permit application documentation.

- 325 Technical/Administrative Procedures – Initially and whenever the procedure content is revised: This requirement is fulfilled by reading and studying the written procedures pertaining to the individual's work area. The procedures include the Waste Handling Organization Procedures for HWTU personnel and the TSD-related Analytical Chemistry Laboratory Procedures for SAL personnel.

Training is tracked and documented through the laboratory training database system (LTDS). Training records and class documentation are held on file in the operations offices at the 325 HWTUs as part of the Operating Records.

8.1.5 Training for Emergency Response [H-1e]

Training is provided to ensure that personnel are able to respond effectively to emergencies and are familiar with emergency procedures, emergency equipment, and emergency systems. Emergency response training areas include, but are not limited to, the following:

- Using, inspecting, repairing or replacing 325 HWTUs emergency and monitoring equipment

- Activating and responding to communications and alarm systems

- Responding to fires and explosions

- Shutting down operations.

8.1.5.1 Procedures for Using, Inspecting, Repairing, and Replacing Unit Emergency and Monitoring Equipment.

Personnel operating the 325 HWTUs are adequately trained to ensure prompt and effective response to emergency situations that might arise during operation. The following required safety courses address emergency response and outline procedures for using, inspecting, repairing, and replacing unit emergency and monitoring equipment.

- 325 Building Emergency Procedure and Contingency Plan--Annually or when changes are made, whichever is more frequent: This course familiarizes personnel with the specific responsibilities of the emergency procedures and the written contingency plan.

- Respiratory Protection–Annual: This course familiarizes the personnel with the proper use of air purifying respirators and their limitations. It also makes personnel aware of potential respiratory hazards, how to recognize the hazards, and what actions to take.

- Treatment, Storage, or Disposal (TSD) Facility Hazardous Waste Operations Training–24-hour initial training and an 8-hour annual refresher: This course provides extensive instruction on the use of field survey instruments such as combustible gas indicators, oxygen meters, detector tube systems, photo and flame ionization instruments, organic vapor analyzer (OVA) meters, and atmospheric sampling instruments. Other topics covered include heat-induced illnesses, OSHA's Emergency Response Standards, lists of personal protective equipment, hazardous materials classification systems, confined space work practices, liquid storage tanks, contamination control, toxicology, and medical monitoring.

- Emergency Safety Showers and Eyewash Stations–Initial: This 8-minute video course provides personnel with training on emergency safety showers and eyewash stations.

- Fire Extinguisher Use–Annual: This 1.5-hour course covers the actual use of a portable fire extinguisher. The types, uses, and limitations of portable fire extinguishers are discussed; the trainee demonstrates the ability to extinguish a combustible liquid fire.

8.1.5.2 Key Parameter for Automatic Waste Feed Cut-Off Systems.

The 325 HWTUs have no automatic waste feed systems.

8.1.5.3 Communications or Alarm Systems.

Personnel operating the 325 HWTUs are properly trained in handling communication devices, alarm systems, and recognizing and understanding the meaning of alarm sirens. In addition, the 325 Building Emergency Procedure, required reading for all 325 HWTUs personnel, also details communication and alarm systems, as well as proper response to each system during an emergency.

8.1.5.4 Response to Fires.

Personnel at the 325 HWTUs are adequately trained in response to fires. All personnel are trained annually in the implementation of the Contingency Plan, which outlines each person's immediate and sequential actions in the event of any emergency. In addition, responsible personnel receive training for proper handling, maintenance, and discharge of fire extinguishers and proper activation of alarm and fire suppressant systems.

8.1.5.5 Response to Groundwater Contamination Incidents.

Groundwater monitoring is not required for the 325 HWTUs.

8.1.5.6 Shutdown of Operations.

In the event of a shutdown of operations in the 325 HWTUs due to an emergency situation, personnel follow plans outlined in the 325 HWTUs Contingency Plan. As mentioned previously, all personnel are trained annually in the implementation of the Contingency Plan. The persons responsible for the decision to shut down either unit are the HWTU Task Manager, the SAL Technical Group Leader, the Building Emergency Director (BED) or any trained HWTUs staff member. The BED will be notified of any 325 HWTUs shutdown.

8.2 IMPLEMENTATION OF TRAINING PROGRAM [H-2]

The training program is currently being implemented. All personnel will receive training within 6 months of their date of hire or their transfer to a new position in the 325 HWTUs. Personnel will not work in unsupervised positions until they have successfully completed the appropriate training courses. Records documenting formal training are maintained at the 325 HWTUs; primary files are kept at the office of the PNNL Laboratory Training Coordinator. Training records of current employees will be kept until closure of the unit. Records of former employees are kept for at least 3 years from the date when the employee last worked at the 325 HWTUs.

Table 8-1. 325 Hazardous Waste Treatment Units Training Requirements

	TRAINING COURSE NAME	JOB POSITION								
		HWTU Personnel				SAL Personnel				
		AM	TS	T	C	GL	WT	T	C	BED
2	325 Building Emergency Procedure	A	A	A	A	A	A	A	A	A
3	325 HWTUs Contingency Plan	A	A	A	A	A	A	A	A	A
4	Laboratory Standard Hazard Communication	I	I	I	I	I	I	I	I	I
5	Radiological Worker I/Refresher	N	N	N	B	N	N	N	N	N
6	Radiological Worker II/Refresher	B	B	B	N	B	B	B	B	B
7	Respiratory Protection	A	A	A	N		N	A	A	N
8	Hazardous Waste Management	A	A	A	N	A	A	A	N	A
9	Hazardous Material Shipping Representative	B	B	N	N	N	B	N	N	N
10	24- & 8-Hour TSD Facility Hazardous Waste Operations	I/A	I/A	I/A	I/A	I/A	I/A	I/A	I/A	I/A
11	Radioactive Liquid Waste System Training	A	A	A	N	N	A	A	N	N
12	Low-Level Waste (LLW) Packager Training	A	A	A	N	A	A	N	N	N
13	Transuranic (TRU) Waste Packager	A	A	A	N	A	A	A	N	N
14	Emergency Safety Showers & Eyewash Stations	I	I	I	N	I	I	I	N	I
15	Laboratory Hood Safety	B	B	B	N	N	B	B	N	N
16	Glove Box Operational Safety	B	B	B	N	N	N	N	N	N
17	Lock & Tag for Authorized Staff Members	A	N	N	N	N	A	N	N	A
18	Lock & Tag General Employee Orientation	N	I	I	N	I	I	I	N	N
19	Crane-Hoist & Rigging Safety	T	T	T	N	N	T	T	N	N
20	Hands On Fire Extinguisher Use	A	A	A	N	N	A	N	N	N
21	Operational Safety Requirements General	B	B	B	B	B	B	B	B	B
22	325 Building OSR Checklist	B	B	B	B	B	B	B	B	B
23	325 HWTUs Permit Application Review	A	A	A	N	A	A	A	N	N
24	Applicable 325 TSD-related Operational Procedures	I*	I*	I*	N	I*	I*	I*	N	N

25 Job Position Key:
26 AM – HWTU Activity Manager
27 GL – SAL Technical Group Leader
28 WT – SAL Waste Technician
29 T – Unit/SAL Technical Specialist/Technician
28 TS – Unit Technical Specialist
29 C – Unit/SAL Clerk
30 BED – Building Emergency Director

31 Requirements Key
32 A – Annually
33 B – Biennially
34 I* – Initially, then when procedures are revised
35 I – Initially upon assignment to the unit
36 N – Not required
37 T – Triennially

CORRESPONDENCE DISTRIBUTION COVERSHEET

REGULATORY INFORMATION

Author	Addressee	Correspondence No.
J. E. Rasmussen/RL W. D. Adair/FDH R. D. Enge/PNNL	L. E. Ruud/DOEC	Incoming: 9957629 DOE-RL: 00-EAP-002 CC Recd: 10/11/99

Subject: QUARTERLY NOTIFICATION OF CLASS 1 MODIFICATION TO THE HANFORD FACILITY RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) PERMIT, DANGEROUS WASTE PORTION (DW PORTION) (QUARTER ENDING SEPTEMBER 30, 1999 - CONDITION I.C.3.)

DISTRIBUTION

Name	Location	w/att
Correspondence Control	A3-01	X
Fluor Daniel Hanford, Inc.		
S. B. Cherry	B3-15	X
A. M. Hopkins (Action Classifier)	L5-65	X
L. G. Juguilon	A0-22	X
A. G. Miskho (Action Classifier)	H6-06	X
J. K. Perry (Action Classifier)	A0-22	X
S. M. Price	A0-22	X
S. M. Price (Action Classifier)	A0-22	X
B&W Hanford Company		
K. A. Hadley (Action Classifier)	R3-56	X
Waste Management Federal Services of Hanford, Inc.		
C. K. Girres (Action Classifier)	T3-01	X
L. L. Powers (Action Classifier)	G1-27	X
U. S. Department Energy, Richland Operations Office		
E. M. Bowers (Action Classifier)	S7-55	X
C. E. Clark	A5-15	X
A. C. McKarns (Action Classifier)	A5-15	X
D. W. Templeton (Action Classifier)	L1-08	X

PHMC CORRESPONDENCE CONTROL

For Questions or Distribution/MSIN Corrections

Contact: Chris Hough @ 376-8111 or Tania Scharnhorst @ 372-3931

CC:MAIL ADDRESS: CORRESPONDENCE CONTROL-PHMC

A-6001-5387 (11/97) WEF008