Hanford Facility RCRA Permit Modification Notification Forms

Part III, Operating Unit 5

325 Hazardous Waste Treatment Units

Index

Submitted by Co-Operator:
Eric G Damberg
Digitally signed by Eric G Damberg
Date: 2022.05.03 17:37:26 -07'00'

Eric G. Damberg Date

Reviewed by DOE Program Office:
DUANE CARTER
Digitally signed by DUANE CARTER
Date: 2022.05.04 09:01:12 -07'00'

Duane B. Carter Date

Hanford Facility RCRA Permit Modification Form	
Unit: ***325 Hazardous Waste Treatment Units***	Permit Part ***Part III, Operating Unit Group 5***

Description of Modification:

Addendum J, Contingency Plan

Replace 325 Building Emergency Procedure in Addendum J with Revision 27 dated March 14, 2022. See attached redline/strikeout for specific changes.

WAC 173-303-830 Modification Class	Class 1	Class 1	Class 2	Class 3
Please mark the Modification Class:	X			

Enter relevant WAC 173-303-830, Appendix I Modification citation number:
A.1 Administrative and Informational changes

Modification Concurrence: [X] Yes [ ] No

Reviewed by Ecology:
Digitally signed by Schleif, Stephanie (ECY)
Date: 2022.06.23 10:15:34 -07'00'

S. N. Schleif — Date

Revision Instructions:

Replace OUG-5 Contingency Plan (Rev 26.1) with Rev 27.

Commented [WRS1]: This is a red-line document compare of Rev. 26.1 and Rev. 27. This revision number field is not reflecting the revision numbers accurately.

Document Owner/Approval	PT Saueressig	**Author**	~~PT Saueressig~~NC Colborn
Concurrence	JS Beck	AW Luksic	MD Ellefson
	TL VanArsdale	DA Rohrig	H Newsome~~RP Douglass~~
	KJ Carroll	MJ Stephenson	~~H Newsome~~
USQ/USQT/USI Reviewer/No.	JE Harvey	~~RPL-2021-468S, R0~~RPL-2022-085S, R0	**Equip. Cat.** N/A

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1.0 General Information

The 325 Building/Radiochemical Processing Laboratory (325RPL) Building Emergency Procedure (BEP) has been designed to provide information necessary to minimize risks to personnel, facilities, programs, and the environment in the event of an emergency. This procedure applies to all resident staff, visitors, vendors, contractor, and subcontractor personnel. If an event is of a security nature (e.g., bomb threat, hostage situation, or other act of violence), security procedures may supersede this procedure and will be assessed on a case-by-case basis.

This facility contains both radioactive and hazardous materials in operations, storage, and handling. 325RPL poses a possible significant hazard to adjacent facilities, personnel, programs, and the environment.

This BEP includes the contingency plans and emergency procedures for dangerous (hazardous) waste management activities as referenced by the following Washington Administrative Codes (WAC):

- WAC-173-303-201, "Preparedness, Prevention, Emergency Procedures and Contingency Plans for Large Quantity Generators"
- WAC-173-303-340, "Preparedness and Prevention"
- WAC-173-303-350, "Contingency Plan and Emergency Procedures"
- WAC-173-303-360, "Emergencies"

This plan must be implemented whenever an emergency threatens human health and the environment.[1]

- fire
- explosion
- loss of service systems
- medical emergency
- bomb threats
- criticality
- criminal activity
- incidents at other facilities
- natural hazards or natural forces
- spill/release to the environment requiring assistance
- hazardous materials release.

Expected responses are those actions which are intended to minimize the effects of a situation while providing optimum protection to personnel. Expected responses include notification to the Pacific Northwest National Laboratory (PNNL) Security Operations Center (SOC), Building Manager (BM), Building Emergency Response Organization (BERO), and personnel in the facility. This procedure also provides plans for notifying personnel to take safe actions such as "take cover," "evacuate," or other actions dictated by an event. The procedure provides for formal notification and reporting.

[1] Section 1.0, Paragraph 4: Permit requirement

Other emergency response agencies available to assist the 325RPL Building Emergency Director (BED) and Incident Commander (IC) from offsite are described in U.S. Department of Energy Richland Operations Office (DOE/RL) 94-02, *Hanford Emergency Management Plan*, Section 3.0. **[WAC 173-303-350 (3)(d)]**

The 325RPL BED and alternate BEDs will receive annual training from PNNL Emergency Preparedness (EP).

PNNL policy is to provide for the safety of its staff, contractor/subcontractor personnel, visitors, and members of the public in case of an emergency incident. PNNL line management has the responsibility to execute this policy and to see that all staff understands their own responsibilities and actions to be taken in an emergency. Every staff member is responsible for using the appropriate safety instructions and procedures and remaining alert to unsafe conditions or acts while performing his or her job. All personnel are responsible for responding to emergency conditions to minimize adverse impacts.

In the event of an emergency condition in the facility, members of the 325RPL BERO will perform his or her duties as described in this procedure. Specific emergency actions for response to events will be applicable as specified in this BEP. Those BERO members whose assistance is needed to mitigate a lesser event will be notified by telephone or personal contact by the 325RPL BED or delegate. Occupants of the facility who are not members of the BERO shall follow the standard PNNL Emergency Preparedness requirements in the How Do I...? (HDI) work control, *Basic Staff Practices*.

BERO members will use checklists during an incident. 325RPL BERO checklists comply with DOE-0223 RLEP 1.1 and are updated by the EP Program as necessary once changes have been received from the Hanford Site Emergency Preparedness Program.

The building fire alarm or criticality alarms are the primary means of evacuation and notification for full activation of the BERO. Emergency telephone numbers are listed in Section 3.0.

This procedure will be reviewed at least annually and amended if necessary or whenever any of the following occurs.

- The applicable regulations or the Hazardous Waste Treatment Unit (HWTU) permit is revised.
- The procedure fails in an emergency.
- The facility changes in a manner that materially increases or decreases the potential for fire, explosion, or release of hazardous waste or hazardous waste constituents, or in any way that changes the response necessary in an emergency.
- The emergency coordinating personnel list changes.
- The emergency equipment list changes.[2]

[2] Section 1.0, Paragraph 11: Permit Requirement

1.1 Facility Name

Name	325 Building/Radiochemical Processing Laboratory (325RPL)
Address	325 Cypress St., 300 Area, Richland, WA 99354
EPA Generator ID Number	WA 7890008967

1.2 Facility Location

325RPL is in the southern portion of the 300 Area, north of Cypress Street.

1.3 Owner/Operator

325RPL is owned and operated by the DOE and co-operated by PNNL. The 325RPL Manager is the senior line manager in the 325RPL and has overall responsibility for all aspects of operations in the facility. The 325RPL BM reports directly to the 325RPL Manager and supports operations and maintenance in the facility. The 325RPL BM is also the primary 325RPL BED.

1.4 Facility Description

The 325RPL Complex, as referred to in this BEP, consists of the following:

- 325RPL (Building)
- 325RPL Filter Building
- East Storage Yard located east of the 325RPL (includes the 3714 Pad)
- North Storage Pad located north of the 325RPL.

The 325RPL houses laboratories and specialized facilities including general-purpose chemical laboratories, the High Level Radiochemistry Facility (HLRF), the Shielded Analytical Laboratory, fissionable material storage areas, and 325RPL HWTU. The general-purpose laboratories characterize fuel, single- and double-shell tank waste, environmental samples, fusion/tritium samples, and other wastes. The radiochemistry facility includes areas for gloveboxes, hot cells, cask handling, storage (e.g., Floor Storage Containers, Shielded Storage Units), and isolation of isotopes for unique applications like medical use. Analytical laboratory operations are conducted on small amounts of highly radioactive materials such as samples of single-shell tank waste. The HWTU treats hazardous, mixed, low-level radioactive, and transuranic waste.

The 325RPL Filter Building is located on the northwest corner of the main 325RPL building and houses the final stage high-efficiency particulate air filters and the main exhaust fans.

The East Storage Yard is a fenced enclosure adjacent to the east side of the 325RPL and is designated as an outdoor Radioactive Material Area (RMA). The 3714 Pad has been analyzed for radioactive material handling. This has been included in the hazard analysis where release accidents and will be managed similar to the East Storage for response.

The North Storage Pad is the foundation pad of the former 328 Building and is designated as an outdoor RMA.

NOTE: Footnotes in this document note the provisions in the BEP that are subject to Resource Conservation and Recovery Act (RCRA) Permit# WA7890008967. These actions in the BEP implement RCRA permit requirements.

1.5 Hanford Site Emergency Sirens/Alarms[3]

NOTE: In the event of a "take cover" alarm, the BERO will respond to the 325RPL lunchroom/lobby area for 325RPL BED direction.

Hanford Site Emergency Sirens/Alarms		
Signal	**Meaning**	**Actions**
Slow whoop followed by a voice message	Fire/Evacuation	Vacate building and proceed to staging area.
Steady tone on whistle, or siren	Area Evacuation	Vacate building and proceed to staging area.
Wavering siren or short blasts on whistle or siren	Take Cover (Shelter)	Proceed to nearest, suitable take cover facility or stay indoors. Close all exterior doors, turn off all intake ventilation (only if it can be done safely), and notify manager of whereabouts. Personnel in vehicles shall proceed to the nearest, suitable take cover facility, self-segregate once inside, and notify their management. Staff should refrain from eating and drinking during a take cover event if physically able, until an appropriate evaluation of the event can be made.
AH-OO-GAH horn (howler) or flashing blue light (in high-noise areas)	Nuclear Criticality	Leave the building immediately (walk with purpose) through the closest exit, do NOT stop for a survey and get at least 15 feet of separation from the facility. Maintain a minimum of 15 feet distance during relocation to the primary staging area.
Variable color (red, amber) light with ringing bell or whistle	Airborne Radioactivity or Area Radiation Monitor	Stop work activities, immediately exit the area, and notify radiological control personnel.
Communicator Notification System (CNS), telephone call/text displayed from 509-375-2124	PNNL Emergency Communications	Lift receiver, say "**HELLO,"** listen to the message, and follow the actions designated.
Hanford Site Emergency Alerting System (HSEAS)	Hanford Site Emergency Communications	Lift receiver, say "**HELLO,**" listen to the message, and follow the actions designated. **NOTE:** This system is only applicable to facilities on the Hanford Site (i.e., 300/600 Areas).

1.6 Coordination Activities with Local Emergency Responders[4]

Interfaces and coordination with offsite agencies are in the planning, preparedness, response, and recovery elements of the Hanford Emergency Management Program. The DOE has developed and maintains agreements to formalize areas of understanding, cooperation, and support with offsite agencies. These agreements are applicable to all Hanford facilities, including the 325RPL. Summaries of these Memorandum of Agreements are given in DOE/RL 94-02, Table 3-1.

[3] Section 1.5: Permit Requirement
[4] Section 1.6: Permit Requirement

1.7 Deviations from Technical Safety Requirements

Emergency actions that depart from approved Technical Safety Requirements (TSR) may be taken when no actions consistent with the TSRs are immediately apparent, and when these actions are needed to protect workers, the public, or the environment from imminent and significant harm.

Such actions shall be approved, as a minimum, by the 325RPL BM, the 325RPL Manager, or the 325RPL BED. If emergency actions are taken, verbal notifications shall be made to the Pacific Northwest Site Office (PNSO) within two hours and by written reports to the DOE Headquarters within 24 hours. **[TSR AC 5.11]**

2.0 Purpose of the Building Emergency Procedure

This procedure describes the processes and information necessary in the event of an emergency for the 325RPL BERO members to react to the emergency and to perform the following actions:

- Maximize safety, minimize risk to life, and provide prompt efficient treatment for injured persons.
- Provide all members of the BERO with an understanding of their roles and responsibilities in the event of an emergency.
- Minimize the effects on the health and safety of personnel, property, the environment, programs, and the public.
- Provide prompt internal and external notifications to the responsible authorities.

2.1 Distribution

At a minimum, controlled document copies of this BEP will be located as follows:

- BED emergency response bag
- BM file
- 325RPL HWTU's Operating Records[5]
- Emergency Preparedness (EP) Program Office
- PNNL SOC
- Hanford Emergency Operations Center (EOC) (Hanford Site facilities only)
- Management Support Group (MSG) emergency response bags
- Alternate Incident Command Post (ICP).

2.2 Acronyms

See PNNL Abbreviations & Acronyms

325RPL	325 Building Radiochemical Processing Laboratory
BED	Building Emergency Director
BEP	Building Emergency Procedure
BERO	Building Emergency Response Organization
BM	Building Manager
CAA	Central Accumulation Area
CHA	Chemical Hazards Assessors
CNS	Communicator Notification System
CSM	Cognizant Space Manager
DOE	U.S. Department of Energy
DSA	Documented Safety Analysis
EAL	Emergency Action Levels
ECR	Environmental Compliance Representative
EIP	Emergency Information Posting
EOC	Emergency Operations Center
EP	Emergency Preparedness
EPA	Environmental Protection Agency (EPA Generator Identification Number)
ESM	electronic storage media

[5] Section 2.1, Bullet 3: Permit Requirement

F&IO	Facility and Infrastructure Operations
FOS	Facility Operations Specialist
FSR	Facility Services Representative
HDI	How Do I?
HFD	Hanford Fire Department
HLRF	High Level Radiochemistry Facility
HSEAS	Hanford Site Emergency Alerting System
HWTU	Hazardous Waste Treatment Unit
IC	Incident Command
ICP	Incident Command Post
IM	Incident Manager
IOPS	Integrated Operations System
LA/LAI	Limited Area/Limited Area Island
MSG	Management Support Group
NA	Not Applicable
PCM	Personnel Contamination Monitor
PNNL	Pacific Northwest National Laboratory
PNSO	Pacific Northwest Site Office
PPE	Personal Protective Equipment
RCRA	Resource Conservation and Recovery Act
RHA	Radiological Hazards Assessor
RMA	Radiological Material Area
RPT	Radiological Protection Technician
SAA	Satellite Accumulation Area
SAS	Staging Area Supervisor
SME	Subject Matter Expert
SOC	Security Operations Center
TDP	Testing Designated Position
TNS	Telephone Notification System
TSD	Treatment Storage Disposal
TSR	Technical Safety Requirements
UDAC	Unified Dose Assessment Center
WAC	Washington Administrative Code

2.3 Making Changes to the Building Emergency Procedure

PNNL-MA-110, *PNNL Emergency Management Plan,* requires the BED to keep the EP program manager advised of any changes to the BEPs. This may be accomplished by memo or email. The Waste Management Subject Matter Expert is also required to be notified before any changes are made to the BEP.

To request revisions to this procedure, refer to ADM-001, *Document Management.*

3.0 Building Emergency Response Organization

3.1 Emergency Telephone Numbers

In the event of an emergency, specific detailed facility information may be needed. Knowledge of the building, utilities, and radiation hazards can be obtained from the staff listed in the following table. Contact the PNNL SOC at 375-2400 if unable to contact any of these staff members using the numbers provided. **[WAC-173-303-350(3)(d)]**

Any Emergency – PNNL Security Operations Center (SOC): 375-2400				
NOTE: *With the appropriate approval, BED home addresses can be obtained at the PNNL SOC.*				
Responsibility	**Name**	**Office**	**Home**	**Cell**
***BED** [6]	Nick Colborn	371-6062		378-6309
~~***BED1**~~	~~Jorden Trent~~	~~371-6007~~		~~208-608-6361~~
***BED2**	Dan Wandler	375-5179		438-1053
***BED3**	Paul Saueressig	375-5352		619-3873
BED can be reached at all times by contacting SOC		375-2400		
Additional Management Contacts				
Utility Operations Work Team Lead	Jessey Brown	375-2105		528-2672
Nuclear Operations Work Team Lead	Joe Edwards	375-5422		827-7180
Fire Protection Engineer	Karl Bohlander	371-7895		366-0188
Safety and Health Representative	Richard Davis	371-7776		521-0505
MSG Lead	Eric Damberg	371-7904		430-6226
EOC RPL Tech Representatives	Adam Poloski	375-6854		703-789-6652
	Don Bachand	375-5255		539-1250
	John Trevino	371-7971		554-8531
Hazardous Waste Management Areas				
Satellite and Central Accumulation Areas	Chuck White	372-4497		551-6004
325 HWTUs TSD	Trevor VanArsdale	375-3814		531-6441
Environmental Compliance Representative	John Holland	375-5002		521-1211
Alternate ICP: 350 Building/Room 111		375-7565		
Environmental Support Contact *(regulatory notifications only)*		375-2400 375-2154		
Hanford Fire Department		375-2400 or 373-0911		
Medical and First Aid		375-2400		
Hazardous Materials Response Team (Hanford Fire Department)		375-2400		
Ambulance Services		375-2400		
Police Department		375-2400		
Hanford Patrol		373-3800		
PNNL Duty Officer(s) and PNNL Information Line		375-2154		
Off-Normal Event Reporting		375-2400		
Work-related injury/illness of a non-emergency nature: PNNL Occupational Health Clinic, LSB 1st Floor, Section E		371-7848		

** These are Testing Designated Positions (TDPs) per HDI Exhibit, Perform Substance Abuse Testing. Any changes to these positions require coordination through the TDP Administrator.*

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3.2 Building Emergency Response Organization

The 325RPL BERO is an emergency response organization with clearly defined responsibilities. The BERO consists of pre-designated and trained individuals assigned to emergency response

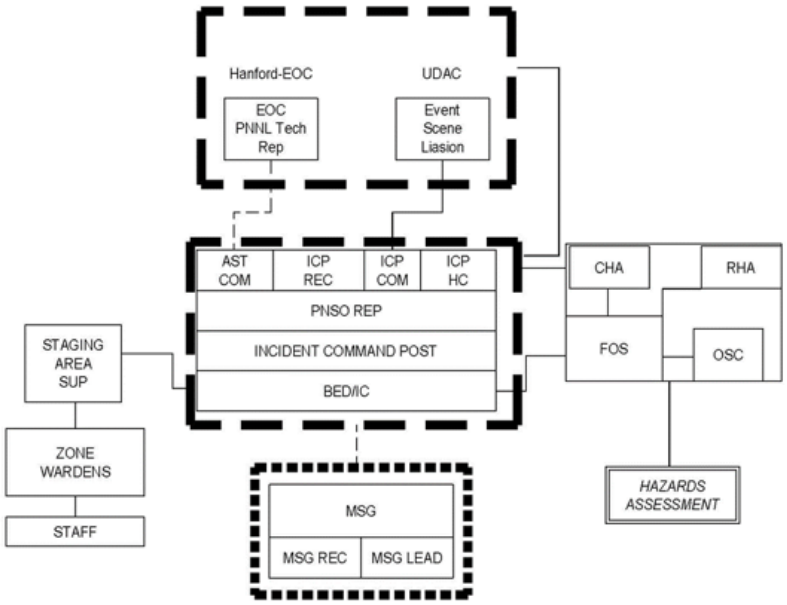
[6] Section 3.1, BED Information: Permit Requirement. See Permit Condition II.A.4.

activities associated with the 325RPL. In addition, other positions, and personnel in the 325RPL have responsibilities associated with emergency responses, preparedness, and notifications. Personnel listing for Incident Command Post Communicator, Assisting Communicator, Chemical Hazards Assessor, Incident Command Post Hazards Communicator, Radiological Hazards Assessor, Incident Command Post Recorder, Facility Operations Specialist, Staging Area Supervisor and PNSO Facility Representative maintained on the Emergency Preparedness website.

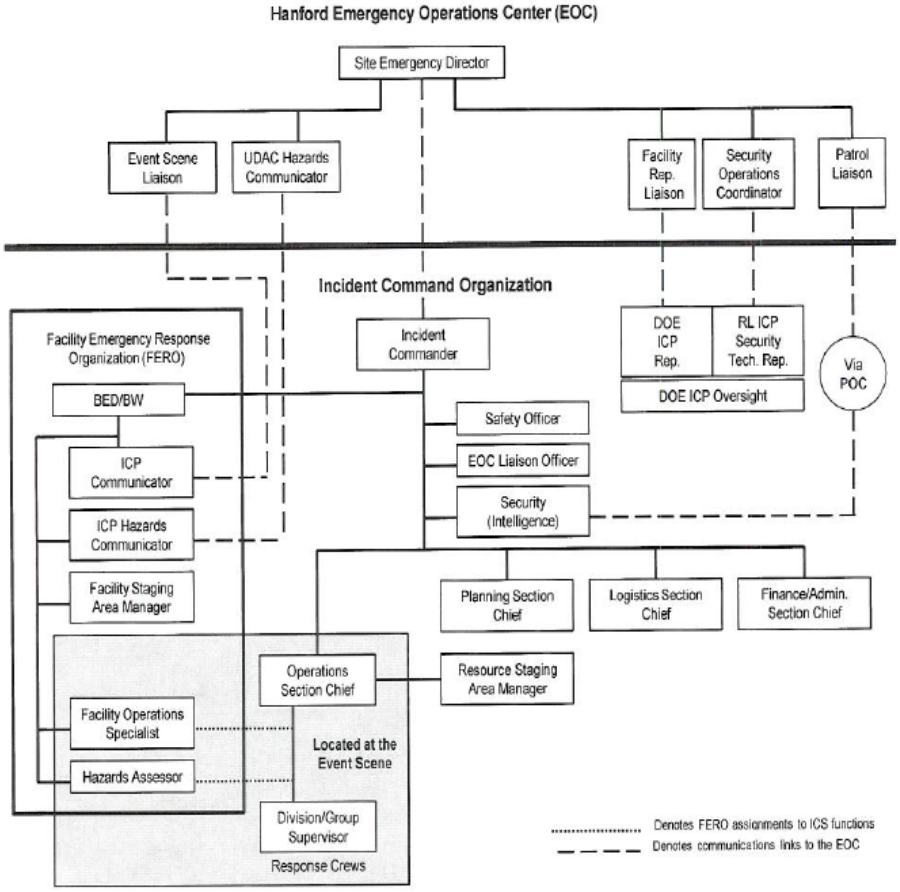
~~BERO Position~~	~~Primary Responder~~	~~1st Alternate~~	~~2nd Alternate~~
~~*Incident Command Post Communicator~~	~~Jake Bohlke~~ ~~Work: 375-5553~~ ~~Cell: 303-9613~~	~~Danny Schoepflin~~ ~~Work: 375-7216~~ ~~Cell: 430-5437~~	~~Rick Hermann~~ ~~Work: 372-6903~~ ~~Cell: 430-3288~~
~~Assisting Communicator~~	~~Troy Nietschmann~~ ~~Work: 372-4986~~ ~~Cell: 919-270-3461~~	~~Matt Kosmos~~ ~~Work: 375-2970~~ ~~Cell: 492-1332~~	~~Jason Cartwright~~ ~~Work: 375-4346~~ ~~Cell: 521-6476~~
~~Chemical Hazards Assessor~~	~~Richard Davis~~ ~~Work: 371-7776~~ ~~Cell: 521-0505~~	~~Jason Sweesy~~ ~~Work: 372-4122~~ ~~Cell: 438-4974~~	~~Doug Falk~~ ~~Work: 371-7097~~ ~~Cell: 308-9101~~
~~Incident Command Post Hazards Communicator~~	~~Kyle Maloy~~ ~~Work: 372-4357~~ ~~Cell: 509-231-0888~~	~~Richard Buckner~~ ~~Work: 372-6121~~ ~~Cell: 374-8911~~	~~Terry Milham~~ ~~Work: 375-5007~~ ~~Cell: 539-3910~~ ~~Home: 627-0200~~
~~Radiological Hazards Assessor~~	~~Jenny Martin~~ ~~Work: 375-5006~~ ~~Cell: 374-7581~~ ~~Home: 628-0561~~	~~Marilyn Wirth~~ ~~Work: 372-4046~~ ~~Cell: 724-413-1951~~	~~Travis Daves~~ ~~Work: 375-5557~~ ~~Cell: 942-4086~~
~~Incident Command Post Recorder~~	~~Rosie Garza~~ ~~Work: 375-5333~~	~~Lacey Englebert~~ ~~Work: 372-4671~~	~~Stacy Morgan~~ ~~Work: 371-7842~~
~~*Facility Operations Specialist~~	~~Dan Wandler~~ ~~Work: 375-5179~~ ~~Cell: 438-1053~~	~~Matt Kosmos~~ ~~Work: 375-2970~~ ~~Cell: 492-1332~~	~~Nick Colborn~~ ~~Work: 371-6062~~ ~~Cell: 378-6369~~
~~Staging Area Supervisor~~	~~Katrina Walker~~ ~~Work: 375-2487~~	~~Kate Moran~~ ~~Work: 375-6554~~ ~~Cell: 636-443-5583~~	~~Jason Cartwright~~ ~~Work: 375-4346~~ ~~Cell: 521-6476~~
~~PNSO Facility Representative~~	~~Patrick Swann~~ ~~Work: 372-4014~~ ~~Cell: 805-807-2183~~	~~Jeff Carlson~~ ~~Work: 372-4750~~ ~~Cell: 539-2044~~ ~~Home: 582-9769~~	~~Derek Wright~~ ~~Work: 372-4100~~ ~~Cell: 392-9872~~ ~~Home: 803-640-3605~~

~~** These are TDPs per HDI subject area Workplace Substance Abuse. Any changes to these positions require coordination through the TDP Administrator.*~~

3.3 Building Emergency Response Organization - Emergency Operations Center Interface



Legend			
AST	Assisting	IH	Industrial Hygenist
BED	Building Emergency Director	MSG	Management Support Group
CHA	Chemical Hazards Assessor	OSC	Operations Section Chief
COM	Communicator	PNSO	Pacific Northwest Site Office
CONT	Contractor	REC	Recorder
EOC	Emergency Operations Center	REP	Representative
FOS	Facility Operations Specialist	RHA	Radiological Hazards Assessor
HC	Hazards Communicator	SUP	Supervisor
IC	Incident Commander	UDAC	Unified Dose Assessment Center
ICP	Incident Command Post		



3.4 Building Emergency Directors and Alternates

The BED has the responsibility for the welfare and safety of the building personnel and for directing efforts to control, evaluate, and terminate the event if the building is the site of an event. The BED performs duties of the Emergency Coordinator as prescribed under WAC 173-303-360 until relieved by the IC and has the authority to commit the resources needed to carry out the BEP.

The BED manages facility operations and personnel during an emergency and is responsible for implementation of appropriate emergency procedures and their follow-up, 24 hours a day. The BED has the authority to commit the resources necessary to carry out emergency plan activities.[7] Activities include the following:

- directing configuration control over facility systems and components at the event scene

[7] Section 3.4, Paragraphs 1 and 2: Permit Requirement

- activating the BERO
- assessing the event scene[8]
- allocating personnel to conduct facility-specific emergency response actions within the affected facility boundary (including acting as, or delegating duty as the Facility Operations Specialist (FOS) and taking appropriate protective actions in response to events occurring in other onsite geographic areas or adjacent facilities)
- categorizing the incident and notifying the PNNL Environmental Support Contact and/or the EOC Shift Office[9]
- communicating with the Environmental Protection and Regulatory Programs
- initiating activation of the MSG
- reviewing the Emergency Action Level (EAL) criteria (*RLEP-1.0, Recognizing and Classifying Emergencies, Appendix 1-PNNL.325*) and providing EAL classification to the EOC Shift Office[10]
- directing implementation of initial preplanned area/site protective actions
- identifying an alternate staging area in the event of an extended building evacuation during adverse weather
- determining personnel accountability status
- performing the necessary steps in Attachment 5; EPIP-12.0: *Building Emergency Response Organization Checklists*
- verifying other BERO positions use checklists as appropriate
- verifying that preservation of evidence at the event scene is taken into consideration during the event
- developing and transmitting event reports to maintain accurate and complete records of events, decisions, and actions during an event
- verifying the appropriate alarms are sounded when necessary[11]
- providing information and assistance to the responding agencies as requested to mitigate the event, including:
  - identifying the character, exact source, amount, and extent of any released materials
  - taking reasonable measures (e.g., stopping processes/operations, collecting/ containing released waste, removing/isolating containers) necessary to make sure 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[12]
- approving reentry and/or rescue operations
- arranging care for any injured persons and contacting their line management
- notifying the waste management subject matter expert (SME) of any planned changes to the BEP

[8] Section 3.4, Paragraph 2, Bullet 3: Permit Requirement
[9] Section 3.4, Paragraph 2, Bullet 5: Permit Requirement
[10] Section 3.4, Paragraph 2, Bullet 8: Permit Requirement
[11] Section 3.4, Paragraph 2, Bullet 16: Permit Requirement
[12] Section 3.4, Paragraph 2, Bullet 17: Permit Requirement

- verifying hazardous spill/release events are logged in the HWTU operating records
- taking appropriate actions during adverse chemical conditions; see HDI Exhibit, *Respond to Spill or Adverse Chemical Condition*
- providing a thorough briefing to the Hanford Site emergency responder (e.g., Hanford Fire Department (HFD), Hanford Patrol)
- maintaining emergency equipment[13]
- verifying that the Environmental Support Contact will provide any necessary notifications to regulatory agencies, such as the Washington State Department of Ecology, and verifying that required written reports to regulatory agencies are completed within 15 days of event termination[14]
- performing an annual review and update of the 325RPL BEP
- planning, conducting, and documenting results of building emergency drills
- informing the EP program manager of any changes in 325RPL BEDs
- being thoroughly familiar with the following:
  - the 325RPL BEP
  - all operations and activities
  - locations and characteristics of waste handling
  - locations of all records
  - physical layout of the building and area of responsibility.[15]

3.5 Incident Command Post Communicator

The ICP Communicator conveys the event emergency classification to the EOC Shift Office by phoning the Patrol Operations Center at 911 or 373-0911 (cell) to initiate a conference telephone bridge between the Patrol Operations Center, EOC Shift Office, and ICP Communicator. This individual initiates and maintains a communication line between the Event Scene Liaison at the Hanford EOC and the ICP. As a precautionary measure, the BED makes sure that this position is staffed for all events. The ICP Communicator is responsible for completing Attachment 7; EPIP-12.0: *Building Emergency Response Organization Checklists*.

3.6 Assisting Communicator

The Assisting Communicator provides assistance to the BED and ICP Communicator by making initial and ongoing notifications during an event and communicating with the Event Technical Representative in the Hanford EOC during classified, operational emergencies. The Assisting Communicator is responsible for completing Attachment 12; EPIP-12.0: *Building Emergency Response Organization Checklists*.

3.7 Incident Command Post Recorder

The ICP Recorder records, in a timeline format, event-related notifications and activities associated with the direction administered and information received at the ICP.

[13] Section 3.4, Paragraph 2, Bullet 24: Permit Requirement
[14] Section 3.4, Paragraph 2, Bullet 25: Permit Requirement
[15] Section 3.4, Paragraph 2, Bullet 29: Permit Requirement

3.8 Management Support Group Lead

The MSG Lead assists the BED as requested.

The MSG Lead convenes the appropriate staff to fill positions in the MSG as the incident requires. The MSG Lead notifies the PNNL Laboratory Director, other appropriate PNNL senior management, and PNSO. The MSG's purpose is to support the BED by being a resource for technical information, event mitigation strategies, event termination and recovery plans, and other support as directed or requested by the BED/IC. The coordination of support activities to the IC/ICP for a declared emergency on the Hanford Site is managed by the Hanford EOC.

A representative from PNSO has been established to coordinate with the MSG during large events. In smaller events, a PNSO Facility Representative coordinating with the BED will provide information and support to PNSO management regarding actions occurring at the event scene.

3.9 Management Support Group Liaison

NOTE: The MSG Liaison is dispatched to the ICP from the MSG Lead as defined in EPIP-2.0, *Management Support Group Procedure*. This function can be filled with an Alternate BED in the interim.

The MSG Liaison reports to the ICP to facilitate communications between the BED/IC and the MSG. The MSG Liaison is responsible for the following:

- establishing phone communications with the MSG, as needed, to communicate with the MSG
- conveying BED/IC requests for MSG support to the MSG
- communicating information from the MSG to the BED, IC, and other appropriate BERO members.

3.10 Staging Area Supervisor

The SAS will direct all activities at the building staging area and is responsible for the following:

- assisting in personnel accountability by receiving the status of building occupancy from the Zone Wardens and then informing the BED of facility status with regard to personnel, or if help is needed to locate or account for missing personnel
- assisting in area evacuation and take cover
- assisting with communications
- supporting the BED as requested
- maintaining a log of their activities or assigning a recorder (also referred to as a scribe) to do so
- completing Attachment 6; EPIP-12.0: *Building Emergency Response Organization Checklists*.

3.11 Zone Wardens

Zone Wardens provide the results of their accountability sweeps information to the BED via the SAS and assist in additional duties as determined by the BED. To accomplish this function, the Zone Wardens are responsible for the following:

- confirm that assigned zones have been vacated by staff and determine if aid and/or rescue is required
- aid those who need help in evacuating the building if it can be done safely

- report the occupancy status of the assigned zone and any additional observations to the SAS
- assist the SAS as requested
- maintain a familiarity with the BEP
- become knowledgeable of any staff in assigned zones that may require assistance in an emergency event.

NOTE: The function of the Zone Warden is to assist staff in evacuating the facility and reporting the occupancy status to the SAS. The function of Zone Wardens does not include search and rescue.

Zone Wardens should not enter any location in the facility where there are indications that a hazard may exist. The indications include such things as visible smoke, fire, unusual odors, local alarms, criticality alarms, spilled chemicals, and incapacitated personnel.

If a Zone Warden is not in the facility when the evacuation or take cover alarm is initiated, is a significant distance from their assigned zones, or has been isolated from their zone, they should report to the SAS at the staging area that their zone was not swept.

3.12 Facility Operations Specialist

The FOS is responsible for meeting emergency responders at the event scene and providing information on event status and initial actions that are underway. This position reports to the Operations Section Chief upon their arrival and provides facility expertise. The FOS is responsible for implementing Attachment 11; EPIP-12.0: *Building Emergency Response Organization Checklists*, and also maintains a log of activities, conversations, and directives given and received.

3.13 ICP Hazards Communicator

The ICP Hazards Communicator is a facility or process knowledgeable individual responsible for communicating data received from the Hazards Assessors to the Unified Dose Assessment Center (UDAC) for further consequence assessment during DOE-declared emergencies. This position is staffed only during DOE-declared emergencies at the request of the BED/IC. The ICP Hazards Communicator is responsible for the following:

- establishes and maintains an emergency response organization communication line with the UDAC Hazards Communicator to provide incident scene radiological or chemical data as reported by the Hazard Assessors
- keeps the IC and BED aware of all transmitted and received information
- maintains a log, or assigns a scribe to record all activities, including the date and time information was received or the time when action was taken
- responds to requests for information from UDAC and verifies that requests for information are relayed to the Hazards Assessor(s) for response
- implements Attachment 10 in EPIP-12.0: *Building Emergency Response Organization Checklists*.

3.14 Radiological Hazard Assessors

The Radiological Hazards Assessor (RHA) is responsible for coordinating and verifying accomplishment of radiological control functions throughout the event. This position coordinates with the Operations Section Chief at any location and supervises Radiological Protection Technologist (RPT) activities.

The RHA is responsible for implementing the checklist duties for non-declared RCRA emergencies and DOE-declared emergencies, as appropriate. See Attachment 9 in EPIP-12.0*: Building Emergency Response Organization Checklists*. In conjunction with the Chemical Hazards Assessor (CHA), RHAs make recommendations for personal protective equipment (PPE) to the HFD.

3.15 Chemical Hazard Assessors

This position may be staffed by an Industrial Hygienist assigned to support the HFD. The CHA provides technical expertise in chemical and toxicological hazard identification, evaluation, reactivity, and dispersion modeling to the HFD. The CHA may also serve as a chemical/decontamination safety officer, if so designated by the IC.

The CHA initially reports to the ICP for an event briefing and then coordinates with the HFD Operations Section Chief; he/she provides technical support for non-radiological hazardous material response. Typically, the 325RPL Industrial Hygienist and the Industrial Hygienist assigned to the HFD staff this position. In conjunction with the RHA, this individual will recommend PPE to the HFD.

When the CHA is activated to respond to an emergency,

Attachment 8 in EPIP-12.0: *Building Emergency Response Organization Checklists* must be completed.

3.16 Individual Staff Member Responsibilities

Individual staff members are responsible for the following:

- Announcing or activating the appropriate alarm, calling the PNNL SOC (375-2400), and notifying management upon observing an emergency.[16]
- Avoiding exposure to harmful and life-threatening conditions.
- During emergencies, if it can be done safely, securing classified documents and electronic storage media (ESM) before leaving Limited Areas (LAs). If this cannot be done safely: 1) take the classified documents and ESM, if time permits; 2) report to the staging area, and 3) inform the BED and then call 375-2400 to report an incident of security concern.
- If evacuating due to a fire alarm and wearing special PPE or anti-contamination clothing, segregating oneself from others at the staging area until surveyed by a RPT.
- Providing the BED with any information to assist in evaluating the emergency condition.
- Remaining at the staging area and follow the instructions of the BED and SAS.[17]
- Reading and understanding the Emergency Information Posting (EIP) and BEP.
- Knowing the location of the BEP on the 325RPL webpage and HDI Work Control, *Basic Staff Practices*.
- Wearing an EP information card.
- Knowing the location of the nearest fire alarm pull box.
- Signing into/out of the accountability log.

[16] Section 3.16, Bullet 1: Permit Requirement
[17] Section 3.16, Bullet 6: Permit Requirement

NOTE: When evacuating 325RPL due to a fire or a criticality alarm, all personnel are required to exit Radiological Control Areas without performing radiological exit surveys. Those personnel shall segregate themselves from others at the staging area until surveyed by RPTs.

3.17 PNNL Incident Manager

The PNNL IM is used during complex events, such as those affecting multiple PNNL-managed facilities and those extending over multiple days. The PNNL IM will assume responsibility for incident management. This includes managing the overall event on behalf of PNNL, overseeing BEDs, and coordinating with the PNNL MSG. The PNNL IM will most likely be activated by the MSG Lead. When activated to respond to an emergency, Attachment 13; EPIP-12.0: *Building Emergency Response Organization Checklists* must be completed. Primary BEDs will continue to manage operations at their facilities, but the overall incident management and distribution of resources will be the responsibility of the PNNL IM.

3.18 Facility Visitor Responsibilities

The safety of building visitors is the responsibility of the facility host who shall assure that visitors are provided a safe and orderly evacuation. The facility host will report the visitor status to the SAS as soon as is practical after an evacuation. Visitors will sign into the accountability log.

3.19 Supervisors/Manager Responsibilities

Account for all staff members. Report missing or injured staff members to the SAS and if requested, assist the SAS.

3.20 Unique Program Laboratory Expertise

The technical knowledge of specific programs/laboratory activities are usually known by the laboratory occupant or program manager. When applicable, Cognizant Space Managers (CSMs), alternate CSMs, and team leads may be contacted in regard to emergencies or off normal events in assigned laboratories. Hazard Awareness Summaries containing this information are posted throughout the 325RPL Complex.

3.21 Waste Management Staff Responsibilities

Waste Management Staff oversee operations in hazardous waste management areas. Field Services Representatives (FSRs) co-manage satellite accumulation areas (SAAs) in research laboratories and support spaces. The FSR maintains a current list of SAAs. The FSR also manages the central accumulation areas (CAAs) in Rooms 201, 202 and 529. The FSR maintains an inventory of waste in each CAA. Treatment, Storage, and Disposal (TSD) areas consist of Rooms 32, 200, 201, 202, 203, 520, 524, 528, 610, 3714 Pad, and portions of Rooms 603 and 604A. Materials and Waste Operations Staff manage these areas and maintain a current inventory of waste.

3.22 Environment, Safety, and Health Advisor Responsibilities

The Worker Safety and Health Representative will provide guidance for establishing safety requirements for mitigation and recovery actions. This includes coordinating any support needed from other disciplines of the PNNL Environment, Health, Safety, and Security Directorate (i.e., Environmental Compliance Representatives (ECRs), Radiological Control, Hygiene, and FSRs). The ECRs and FSRs maintain familiarity with current hazardous waste management areas and provide support to the BED in case of an emergency.

The Environmental Support Contact will provide any necessary notifications to regulatory agencies such as the Washington State Department of Ecology and will transmit required written reports to regulatory agencies within 15 days of event termination[18].

3.23 Line Management

The responsibilities of line management include the following activities:

- accounting for staff members
- reporting missing or injured staff members to the SAS
- assisting the SAS if requested
- performing the necessary actions addressed in HDI
- acting as a health advocate for injured or ill staff members
- keeping the BED informed of changes in programmatic activities that could affect an emergency event
- providing or verifying training for staff members
- providing training for unescorted visitors for whom he/she is responsible
- keeping the BED and Zone Wardens informed of staff members who may require assistance in an emergency event
- providing staff, who are residents in the 325RPL or are qualified Fissionable Material Handlers, with a Personal Nuclear Accident Dosimeter.

3.24 New Staff Assigned to 325RPL

325RPL personnel needing unescorted prox access need to have the required training assigned through IOPS or Lab Assist. Personnel that do not have the required training need to be escorted. The required training course is 1280, *RPL General Employee Training*.

[18] Section 3.22, Paragraph 2: Permit Requirement

4.0 Implementation of the Building Emergency Procedure (BEP)[19]

The decision to implement the BEP should be made whenever unusual or emergency conditions exist that require the response of facility or emergency personnel and the establishment of an ICP.

For events involving dangerous waste, the BED must use the following criteria to determine if an event is subject to the contingency plan implementation and notifications requirements of WAC 173-303-350 and WAC 173-303-360:

(1) The event involved an unplanned spill, release, fire, or explosion;

AND

(2a) The unplanned spill or release involved a dangerous waste, or the material involved became a dangerous waste as a result of the event (e.g., product that is not recoverable for reuse without processing),

OR

(2b) The unplanned fire or explosion occurred at a facility or transportation activity subject to RCRA contingency planning requirements;

AND

(3) The emergency circumstance poses a threat to human health or the environment.

Based on evaluation of the event, the BED or alternate BED will implement the BEP to the extent necessary to protect human health and the environment. The BED has the authority to commit the resources necessary to carry out the actions required by the BEP.

The BED will direct that additional checklists identified in the BEP be initiated and completed. When the materials and quantities involved in the incident have been identified, it should be possible to evaluate the magnitude of the hazard.

During an emergency event, the BED will take all reasonable measures to assure that fires, explosions, and releases do not occur, recur, or spread to other dangerous waste in the facility. Measures include stopping processes and operations, collecting, and containing released waste, and removing or isolating containers as appropriate.

In any emergency, priority is given to protection of the health and safety of persons in the immediate area. Containment and cleanup are secondary choices. When responding to minor spill events, onsite personnel will generally perform immediate cleanup of minor spill or releases using facility equipment. Remediation of such spills and releases would not normally constitute activation of the BEP. A spill or release of dangerous waste is considered ‘minor’ if **ALL** of the following are true:

- the spill is either contained, or if outside a secondary containment, is minor in quantity (generally less than 10 gallons of liquid or 100 pounds of solids)
- the composition of the material or waste is known and can be immediately determined from the label, manifest, Safety Data Sheet, or other records

[19] Section 4.0, Permit Requirement

- the spill does not threaten the health and safety of building occupants such that an area evacuation is necessary
- response personnel have appropriate training and equipment to expeditiously remediate the spill or release.

5.0 Facility Hazards

325RPL contains both radioactive and hazardous chemicals that pose a potential hazard to the public, adjacent facilities, personnel, programs, and the environment during an emergency. Because the location of hazardous materials and equipment within the facility can change on a frequent basis due to specific research needs, a variety of informational tools have been created and integrated into daily operations. Some of the tools available within the facility include the following:

- *Map Information Tool*
- Chemical Management System
- Radioactive Material Tracking System
- Integrated Waste Management System
- 325RPL Operating Envelope webpage
- Integrated Operations System (also known commonly as IOPS) which includes the Hazard Awareness Summaries for each hazardous space in the 325RPL Complex~~-~~ associated with F&IO spaces
- Lab Assist which allows for a new platform for work planning and controls

5.1 Hazardous Materials

325RPL contains the following hazardous materials:

- chemicals exhibiting one or more hazards (e.g., corrosives, oxidizers, flammable solids and liquids, and poisons).
- radioactive materials
- hazardous wastes, including listed wastes and wastes exhibiting one or more of the following characteristics: corrosivity, reactivity, ignitability, toxicity, and environmental persistence
- mixed wastes (i.e., wastes containing both radioactive and hazardous components).

Hazards associated with these materials vary depending on type, quantity, and concentration of the materials involved in the incident as well as the type of incident.

During an emergency, the PNNL Chemical Management System may be consulted to determine the identity and quantity of hazardous chemicals located in affected areas of the facility. The listing of hazardous waste satellite and central accumulation areas are available on the Integrated Waste Management System (IWMS) which is maintained by the Materials and Waste Operations organization and IWMS may also be consulted to identify the location and types of wastes (hazardous and mixed) located in the facility. The inventory of waste stored in the 325RPL HWTUs RCRA-permitted unit may be determined by consulting with the Materials and Waste Operations organization IWMS database.

Arrangements for local response agencies (fire, police, and medical and emergency response teams) are required to assist in pre-emergency planning. These arrangements include familiarization with the properties of hazardous waste handled at the facility and associated hazards. The Emergency Preparedness Office provides these coordination efforts with input from individual BEDs and others, as appropriate.

5.2 Physical (Industrial) Hazards

The 325RPL Building contains industrial hazards such as high-voltage equipment, high-temperature equipment, elevated work areas, and overhead hazards. Refer to the Integrated Operations System Hazard Awareness Summaries that are posted at the entrance to each space for specific details.

5.3 Dangerous (Hazardous) and Mixed Waste

See Section 5.0. Hazardous and mixed (hazardous and radioactive) waste is managed in satellite accumulation areas (SAAs), CAAs, and RCRA-permitted TSD areas in RPL. Waste in these areas may be radioactive, ignitable, corrosive, reactive or toxic. The current locations of areas that manage dangerous and mixed waste are maintained in the Integrated Waste Management System.

5.4 Radioactive Materials

See Section 5.0. The type and quantity of radioactive material present in a specific room is maintained in the Radioactive Material Tracking database.

5.5 Criticality

The 325RPL Building is a Hazard Category 2 non-reactor nuclear facility designed as a multi-purpose research facility. Fissionable materials are stored and used in various lab spaces (Criticality Safety Controlled Areas). Limits and controls for mitigating the criticality hazards are described in the posted Criticality Safety Specifications. A fissionable material line manager and fissionable material handler supervisor are assigned responsibility for each controlled area.

PNNL-DSA-325, *Radiochemical Processing Laboratory Documented Safety Analysis* (325RPL's Documented Safety Analysis [DSA]), analyzes various scenarios regarding potential criticality incidents and establishes a Nuclear Criticality Safety Program as a safety management program. The Nuclear Criticality Safety Program evaluates fissionable material handling and storage at the 325RPL and provides engineered features, limits, and administrative controls necessary to assure the possibility of a criticality event remains extremely unlikely.

The criticality safety risk of firefighting within each controlled area is evaluated and areas are posted with appropriate symbols when a limitation on the use of water or other extinguishing agents is warranted. These limitations are also identified within the HFD Pre-incident Plan.

A criticality accident at the 325RPL is a credible event. A Criticality Alarm System is maintained to mitigate the impact of an accidental criticality on facility staff and visitors through rapid notification and an immediate evacuation. The system is tested on a semi-annual basis.

6.0 Potential Emergency Conditions and Appropriate Response

6.1 Explosion/Fire/Fire Alarm[20]

NOTE: During these events, it is likely that facility integrity may be compromised and that the facility will also experience a concurrent loss of electrical power and/or control of the building ventilation systems. If this is the case, refer to Section 6.2, Hazardous Material/Dangerous or Mixed Waste Spill and Section 6.6, Loss of Electrical Power/Reduced Ventilation for concurrent actions as appropriate.

[20] Section 6.1, Permit Requirement

If you are involved with, or are in close proximity to, an explosion, a fire (or discovery of a fire), or have indication that the fire alarm is sounding, perform the following:

6.1.1 Fire/Explosion

6.1.1.1 Sound the alarm by pulling the fire alarm pull box. See the guidance for the exception to this step below.

Exceptions to pulling the fire alarm:

- If the fire is occurring outside of the facility (e.g., at the ESY, NSP or the 3714 Pad) and pulling the fire alarm could result in building occupants evacuating the building into a hazard (i.e., building occupants exiting via the nearest exit and potentially via the fire or plume), consider the public address system in place of the fire alarm, or in addition to, as appropriate.

  or

- If a simple and safe action can be taken that will immediately and positively extinguish a small fire (e.g., pulling the plug on a malfunctioning lab instrument, isolating a fuel source such as quickly closing a valve that is immediately at hand, smothering the flame), then pulling the fire alarm pull box is not necessary, and the fire may be extinguished prior to calling the PNNL SOC at 375-2400.

NOTE: If appropriate, the BED will classify the event using the 325RPL EALs.

6.1.1.2 Evacuate the building through the nearest exit that can be safely used.

6.1.1.3 Once in a safe location, notify the PNNL SOC at 375-2400 and provide the following information (if known):

- nature and location of the event
- conditions of the event appear to be degrading, (i.e., the fire appears to be escalating or building structures are being compromised)
- your name and callback telephone number
- time event began or was discovered
- number and condition of any injured personnel
- names and amounts of any chemicals involved or that may be burning as a result of a fire.

NOTE: The fire department can be notified directly by calling 911 or 373-0911 (cell). If the fire department was contacted using the cell option, also call the PNNL SOC at 375-2400 as soon as possible to initiate PNNL management notifications and emergency response.

6.1.1.4 If time permits, and without putting yourself in jeopardy, you may fight the fire under the following conditions:

- you have directed someone to pull the fire alarm pull box
- you have verified that someone has called the PNNL SOC at 375-2400, 911, or 373-0911 (cell)
- you are willing, able, and knowledgeable about the selection of the proper fire extinguisher and its use

NOTE: Fire extinguishers equipped with the glove piercing tips are for HFD use only.

- if the fire is in a hot cell, attempt to smother the fire, if smothering does not work then use the fire extinguishing system, if you are trained to do so
- if the fire is in a glovebox, do not attempt to fight the fire using the gloves. Isolate supply air to the glovebox if safe to do so
- if the fire is small, you know what material is burning, the fire does not involve significant quantities of hazardous materials and does not present a personnel exposure hazard to smoke or significant heat.

6.1.1.5 If you have chosen to fight the fire, and after the fire is believed to be out, call the PNNL SOC at 375-2400 and inform them of your actions.

- Unless there are significant amounts of smoke or fumes, remain in the proximity of the fire to verify that the fire does not re-flash.
- In the event the fire re-flashes, perform the actions above starting with Step 6.1.1 but do not attempt to fight the fire on your own.

6.1.2 Fire Alarm

NOTE: If appropriate, the BED will classify the event using the 325RPL EALs.

6.1.2.1 If time permits, and without placing yourself in jeopardy, verify the following:

- equipment is shutdown or is in a safe configuration
- nuclear and classified materials are secured.

6.1.2.2 Zone Wardens perform an accountability sweep of their assigned areas.

6.1.2.3 Evacuate the building through the nearest exit that can safely be used.

6.1.2.4 Assemble at the staging area located at the lower south parking lot, south end of Lane #9.

- Zone Wardens report the status of accountability sweeps to the SAS.
- If classified materials (e.g., documents, ESM, or test materials) are removed from the LA or left unsecured within the LA:
  - inform the SAS that classified material has been left in an unsecured condition or has been removed from the LA
  - call the PNNL SOC at 375-2400 and report the details surrounding the classified materials security event
  - The SAS shall provide information to the BED concerning the classified material.
- Personnel who are wearing PPE clothing or are suspected of being contaminated shall be segregated from other building occupants and shall be surveyed by radiological control personnel. PPE will be discarded as directed by the RPT.
- Zone Wardens and all staff are to remain at the staging area and follow the instructions of the BED.

6.2 Hazardous Material/Dangerous or Mixed Waste Spill[21]

NOTE: If appropriate, the BED will classify the event using the 325RPL EALs.

6.2.1 Minor Spills

For minor spills or releases that are relatively small in size, perform the following:

NOTE: A spill or release of dangerous waste is considered minor if ALL of the following are true. If ANY of the following are NOT true, refer to Section 6.2.2:

• the spill or release either is contained or, if outside of a secondary containment, is minor in quantity (i.e., generally less than 10 gallons of liquid or 100 pounds of solids).

• the composition of the material or waste is known and can be immediately determined from the label, manifest, SDS, or other records.

• the spill or release does not threaten the health and safety of building occupants such that a building evacuation is necessary.

• response personnel have appropriate training and equipment to expeditiously remediate the spill or release.

6.2.1.1 Move personnel away from the substance.

6.2.1.2 Notify nearby personnel of the emergency.

6.2.1.3 Prevent personnel exposure by restricting access to the spill area by setting up barricades, closing doors, etc.

6.2.1.4 Notify the PNNL SOC at 375-2400 and provide the following:

- nature and location of the event
- names of chemicals involved, amounts, sources, and known hazards about the chemicals
- if the spill has been contained
- if any material has been released to the environment
- any corrective actions in progress
- names of anyone contaminated or injured in connection with the incident
- other hazards that may or may not be related to the spill
- time incident began or was discovered
- current status of the event (e.g., spill contained or not contained)
- name, location, and callback telephone number of the person reporting the incident.

6.2.1.5 Notify the BED, CSM, and the Safety and Health Representative.

6.2.1.6 Take steps to contain the spill or release *only* if:

- the identity of the substance is known.
- the hazards of the substance are known (e.g., flammable, toxic, radioactive, and corrosive material) and can either be controlled or do not present an immediate threat.

[21] Section 6.2, Permit Requirement

- appropriate PPE and control and cleanup supplies are readily available.
- the individuals performing the task have had training related to spill and leak control and can safely perform the actions without assistance, or assistance is readily available from other trained personnel.

6.2.1.7 Steps to contain the spill and/or release may include the following, as appropriate:

- build a containment of absorbent materials and restrict access to the affected area.
- tighten closures, tip the container to stop the leak, and use plugging, patching materials, or over packing.
- perform initial cleanup of the spill area by transferring contents to appropriate non-leaking containers using the appropriate procedures and tools.

6.2.2 Major Spills

For a major spill/release, or tank spills, perform the following:

NOTE: If appropriate, the BED will classify the event using the 325RPL EALs.

6.2.2.1 If the spill or release threatens the health and safety of building occupants such that a building evacuation is necessary, initiate a building evacuation by pulling the fire alarm and perform the actions below. If a building evacuation is not necessary, continue at Section 6.2.2.2.

- Assemble at the staging area located at the lower south parking lot, south end of Lane #9.
- Zone Wardens report to the SAS.
- If classified materials (e.g., documents, ESM, or test materials) are removed from the LA or left unsecured within the LA:
  - inform the SAS that classified material has been left in an unsecured condition or has been removed from a LA
  - call the PNNL SOC at 375-2400 and report the details surrounding the classified materials security event
  - SAS shall provide information to the BED concerning the classified material.
- Personnel who are wearing PPE clothing, or are suspected of being contaminated, shall be segregated from other building occupants, and shall be surveyed by radiological control personnel. PPE will be discarded as directed by the RPT.
- Zone Wardens and all staff are to remain at the staging area and follow the instructions of the BED.

6.2.2.2 Move personnel away from the substance.

6.2.2.3 Notify nearby personnel of the emergency.

6.2.2.4 Notify the PNNL SOC at 375-2400 and provide the following.

- name, location, and callback telephone number of the person reporting the incident
- names of chemicals involved and amounts involved in the incident
- location of incident (identify as closely as possible and include information about multiple building numbers)

- time incident began or was discovered
- where the materials involved are going or might go, such as into secondary containment, under doors, through air ducts, etc.
- source and cause, if known
- names of anyone contaminated or injured in connection with the incident
- any corrective actions in progress
- anyone else who the discoverer has contacted
- any known hazards
- location and time the chemical condition or spill occurred
- if any material was released to the environment (e.g., to a stack or a sewer system)
- the status of the situation.

6.2.2.5 Prevent personnel exposure (e.g., set up barricades).

6.2.2.6 Contact the CSM.

6.2.2.7 Notify the Safety and Health Representative.

6.2.2.8 Take steps to contain the spill *only* if:

- the identity of the substance is known
- hazards of the substance are known (i.e., flammable, toxic, radioactive, or corrosive material) and can either be controlled or they do not present an immediate threat
- appropriate protective equipment and control or cleanup supplies are readily available
- individuals performing the task have had training related to spill or leak control and can safely perform the actions without assistance, or assistance is readily available from other trained personnel.

6.2.2.9 Initiate actions to mitigate a tank spill or leak using trained personnel:

- stop the source of the leak if possible (e.g., by shutting valves or turning off pumps).
- prevent further additions of liquid to the tank.
- visually inspect the tank system to determine the source of the leak.
- remove as much of the liquid from the tank as is necessary to prevent further leakage within 24 hours or the earliest practicable time.
- remove any leakage contained in a secondary containment within 24 hours, or as soon as possible.
- prevent any further leakage or migration of the leak to soils or surface waters.

6.2.2.10 Notify the BED, the CSM, and the Safety and Health Representative of any pertinent information that you may have.

- Discoverer of the spill will provide a synopsis of the event and the actions taken to the BED, CSM, and the Safety and Health Representative.
- BED will direct spill event mitigation activities upon completion of the event briefing.

6.2.3 For Events that Involve Transportation and/or Damaged Packaging of Hazardous Material or Dangerous Waste that Arrives at the 325RPL:

6.2.3.1 DO NOT move the shipment.

6.2.3.2 Notify the BED, CSM, and the Safety and Health Representative.

- The receiver of the shipment or discoverer of the damaged package will provide a synopsis of the situation and the actions taken, if any, to the BED, CSM, and the Safety and Health Representative.

6.2.3.3 The BED will evaluate the event and initiate appropriate actions for events/spills per Section 6.2.1 or Section 6.2.2 as appropriate.

- Treat any release from the package as a hazardous material spill and perform response actions as appropriate.

6.3 Unusual, Irritating or Strong Odors[22]

6.3.1 If an unusual odor is detected and the source is unknown, the type and location of the odor should be reported to the BED and the BED will determine the appropriate actions.

6.3.1.1 If the odor is determined to be potentially dangerous, then:

- Initiate a building evacuation by pulling the fire alarm.
- Assemble at the staging area located at the lower south parking lot, south end of Lane #9.
- Zone Wardens report to the SAS.
- If classified materials (e.g., documents, ESM, or test materials) are removed from the LA or left unsecured within the LA:
  - inform the SAS that classified material has been left in an unsecured condition or has been removed from the LA
  - call the PNNL SOC at 375-2400 and report the details surrounding the classified materials security event.
  - SAS shall provide information to the BED concerning the classified material.
- Personnel who are wearing PPE clothing or are suspected of being contaminated shall be segregated from other building occupants and shall be surveyed by radiological control personnel. PPE will be discarded as directed by the RPT.
- Zone Wardens and all staff are to remain at the staging area and must follow the instructions of the BED.

6.4 Potential Radiological Material Release

NOTE: If appropriate, the BED will classify the event using the 325RPL EALs.

NOTE: The RPT may provide radiological survey data in Becquerel's. A Becquerel is a SI unit of radioactivity equal to one disintegration per second. Conversion to disintegration per minute: multiply total Becquerel's by 60.

6.4.1 Area Radiation Monitor

[22] Section 6.3, Permit Requirement

- Stop work.
- Alert personnel in the area.
- Exit the Radiologically Controlled Area that is being monitored by the Area Radiation Monitor.
- Notify the RPT and the BED.
- Notify the PNNL SOC at 375-2400.

6.4.2 Continuous Air Monitor or ALPHA Sentry Continuous Air Monitor

- Stop work.
- Alert personnel in the area.
- Exit the area being monitored by the continuous air monitor and move into a separate air space.
- Notify the RPT and the BED.
- Notify the PNNL SOC at 375-2400.

6.4.3 Glove Box Differential Pressure Alarm

- Stop work.
- Alert personnel in the area.
- Exit the immediate area.
- Notify the RPT and the BED.
- Notify the PNNL SOC at 375-2400.

6.4.4 Hot Cell Differential Pressure Alarm

- Stop work.
- Alert personnel in the area.
- Exit the immediate area.
- Notify the RPT and the BED.
- Notify the PNNL SOC at 375-2400.

6.4.5 Stack Monitor Alarm

- Alert RPT (stack qualified) and BM.
- Stop work associated with release.
- Notify Effluent Management.
- Notify PNNL SOC at 375-2400.
- Notify BED, if not the BM.

6.5 Criticality and Criticality Safety Limit Violations

6.5.1 In the Event of a Potential Criticality Safety Limit Violation, Perform the Following:

The staff member discovering an actual or potential criticality safety limit violation shall follow the steps below (also described in the operating documents):

- Stop work immediately in the area without making any changes to present conditions.
- Verify that any fissionable materials or other equipment and materials close enough to interact with fissionable materials are not moved or disturbed.
- Immediately notify the BM. If not available, call the PNNL SOC at 375-2400 and state the problem.

6.5.1.1 Upon notification, the BM shall:

- call the PNNL SOC at 375-2400 and state the problem
- notify the Fissionable Material Line Manager and supervisor for the controlled area
- contact the Nuclear Criticality Safety Program Manager (509-539-9366) or Nuclear Safety and Facility Authorization Manager (509-947-2344) to obtain nuclear criticality safety program staff support.

6.5.1.2 Upon notification, the Fissionable Material Line Manager shall:

- verify that all work activities in the affected area are stopped
- post warning signs at appropriate locations requiring permission from the Fissionable Material Line Manager to enter the area.

6.5.1.3 Upon notification, the Nuclear Criticality Safety Program Manager shall:

- confirm whether a limit violation exists
- determine if a second contingency still provides for prevention of criticality or other danger if limit has been violated.

6.5.1.4 Nuclear criticality safety violations are identified as a loss of documented controls in the *Event Classifiers Procedure*. The BM shall initiate the associated reporting, critique, and corrective action process defined in the HDI Workflow, Report an Event or Unwanted Condition..

6.5.1.5 The Nuclear Criticality Safety Program Manager will assist the BM in developing a Recovery Plan based on a thorough review of the situation and potential hazards associated with the violation.

6.5.2 In the Event of a Criticality Alarm, Perform the Following:

NOTE: If appropriate, the BED will classify the event using the 325RPL EALs.

6.5.2.1 Leave the building immediately (walk with purpose) through the closest exit, DO NOT stop for a survey, and get at least 15 feet of separation from the facility. Maintain a minimum of 15 feet distance during relocation to the primary staging area.

6.5.2.2 Zone Wardens are also directed to leave the building immediately without performing accountability sweeps of their zones.

NOTE: Choose a path around barriers that will maximize your distance from the building but maintain at least 15 feet of separation from the facility. When past the obstacle, maintain the distance from the building and continue to the primary staging area. See Appendices G and H, Staging Area Map and Alternate Staging Areas for suggested routes.

6.5.2.3 Proceed to the staging area along a path that does not take you closer to the building.

6.5.2.4 Assemble at the staging area located at the lower south parking lot, south end of Lane #9. Consider moving to the alternate staging area (350 Building).

- Initiate RCP-8.1.02, Quick Sort Survey of Personnel.
- Immediately report any positive quick sort to the BED.
- Zone Wardens report to the SAS.
- If classified materials (e.g., documents, ESM, or test materials) are removed from the LA or left unsecured within the LA:
  - inform the SAS that classified material has been left in an unsecured condition or has been removed from the LA
  - call the PNNL SOC at 375-2400 and report the details surrounding the classified materials security event
  - SAS shall provide information to the BED concerning the classified material.
- Personnel who are wearing PPE clothing or are suspected of being contaminated shall be segregated from other building occupants and shall be surveyed by radiological control personnel. PPE will be discarded as directed by the RPT.
- Determine the radiation dose levels at the staging area and in the evacuated area following a criticality accident.
- Report dose rates and report findings to the BED.
- Zone Wardens and all staff are to remain at the staging area and follow the instructions of the BED.
- Notify PNNL first responders supporting the Hanford Fire Department to set their Electronic Personal Dosimeters to 3 rem/hour rate to keep them far enough away from the criticality event location and to limit dose from a pulse.

6.5.2.5 Consider the following to support recovery plan and/or actions:

- responders wear full respirators or supplied air system to limit inhalation dose.
- electronic Personal Dosimeters should be set at the normal level of 100 mrem/hr total.
- provide shortest route for retrieval of Fixed Nuclear Accident Dosimeters.
- retrieve fixed nuclear accident dosimeters in order to reconstruct the dose of the accident.
- if fixed nuclear accident dosimeters are not retrievable, chemical reagents can be used.

6.6 Loss of Electrical Power/Reduced Ventilation

NOTE: Electrical power and reduced ventilation outages have not resulted in the migration of contamination in the Radiological Buffer Area (RBA). Timely radiological response to laboratory spaces may occur during the activity of placing the laboratory in a safe condition (6.6.1.1) therefore the remaining actions in the section may not be required.

6.6.1 In the Event of a Loss of or a Significant Interruption to Building Electrical Power AND/OR a Reduction in Ventilation Flow, Perform the Following:

6.6.1.1 Place laboratory or room in safe condition per the following:

- verify fume hoods and sashes are closed
- verify equipment is shutdown
- verify nuclear materials are secure
- verify that classified materials are secure
- verify all hazardous materials are secure
- verify that all equipment and heat generating devices inside of laboratory gloveboxes and inside of hot cells are shut down
- doff Personnel Protective Equipment (PPE)

6.6.1.2 Exit laboratory and assemble at the boundary of the Radiological Buffer Area (RBA).

- Survey (if working with radiological material) prior to exiting the RBA.
- Supply information to the BM on condition of the laboratory:
  - classified materials (e.g., documents, ESM, or test materials) are removed from the LA or left unsecured within the LA
  - inform the SAS that classified material has been left in an unsecured condition or has been removed from the LA
  - call the PNNL SOC at 375-2400 and report the details surrounding the classified materials security event

6.6.1.3 BM will assign personnel to activate the flashing red warning light at the north hallway entrance.

6.6.1.4 Perform radiological surveys of the affected facility prior to re-entry.

6.7 Natural Phenomena Events

NOTE: If appropriate, the BED will classify the event using the RPL EALs.

Natural phenomena events considered as having a probability of occurring and, as such, addressed in this procedure include seismic event/earthquake, volcanic eruption/ash fall, high wind/tornado, flood, and range fire.

If these events were to occur, Hanford Telephone Notification System messages will most likely be sent before, during, or immediately following the event. Regardless of the receipt of a phone message, the BED will direct activities within the facility in accordance with this procedure and provided by phone messages as appropriate.

Should it become necessary to evacuate the facility, the BED will report the evacuation to the PNNL SOC at 375-2400 and the EOC Shift Office at 376-2900.

6.8 Bomb Threats/Suspicious Objects

NOTE: If appropriate, the BED will classify the event using the RPL EALs.

6.8.1 If a Suspicious Object is Discovered, or the Placement of Such an Object is Observed, Perform the Following Actions:

6.8.1.1 Do not move, open, or otherwise disturb any suspicious objects.

6.8.1.2 Notify the PNNL SOC at 375-2400 and the 325RPL BED using office telephones only.

6.8.1.3 Evacuate the facility, taking the following actions. DO NOT USE THE FIRE ALARM PULL BOX TO INITIATE THE EVACUATION as frequencies can detonate devices.

- Warn others in the immediate vicinity.
- Leave the building immediately via the closest exit.
- Zone Wardens are also directed to leave the building immediately without performing accountability sweeps of their zones.

6.8.1.4 Do NOT use cellular phones, radios, or other radio frequency generating equipment within 100 feet of 325RPL.

6.8.1.5 Assemble at the staging area located at the lower south parking lot, south end of Lane #9.

- Zone Wardens report to the SAS.
- If classified materials (e.g., documents, ESM, or test materials) are removed from the LA or left unsecured within the LA:
  - inform the SAS that classified material has been left in an unsecured condition or has been removed from a LA
  - call the PNNL SOC at 375-2400 and report the details surrounding the classified materials security event
  - SAS shall provide information to the BED concerning the classified material.
- Personnel who are wearing PPE clothing or are suspected of being contaminated shall be segregated from other building occupants and shall be surveyed by radiological control personnel. PPE will be discarded as directed by the RPT.
- Zone Wardens and all staff are to remain at the staging area and follow the instructions of the BED.
- The staging area will be relocated a minimum of 300 feet away from the facility.

6.8.2 If a Telephone Bomb Threat is Received

6.8.2.1 Use the *PNNL Bomb Threat Card* to record the message exactly as dictated and attempt to obtain the following information:

- When will it go off?
- Where is it is located?
- What does it look like?
- What kind is it?
- Why was it was placed?
- Who placed it?
- How you know so much about it?
- Where are you calling from?
- What's your name and address?

6.8.2.2 Notify the PNNL SOC at 375-2400 and provide the information given by the caller.

6.8.2.3 Upon completion of the notifications to the PNNL SOC, also notify the 325RPL BED and provide the information obtained from the caller.

6.8.3 If a Written Bomb Threat is Received

6.8.3.1 Notify the PNNL SOC at 375-2400.

6.8.3.2 Provide the written bomb threat to the 325RPL BED who will forward it to the PNNL SME Safeguards and Security Management Official.

6.9 Active Shooter in the Building

6.9.1 When Condition is Observed

6.9.1.1 RUN – Immediately try to get out of the facility to a safe location out of immediate sight of the building and call 375-2400.

6.9.1.2 HIDE – If evacuation is not possible or safe, take cover in an office with the door closed and lights off. Lock the door if possible and call 375-2400.

6.9.1.3 FIGHT – If the active shooter has confronted you and evacuation or taking cover is not possible, staff should take whatever actions are necessary to get to safety which may include fighting the intruder or other. This is a last resort step.

6.9.1.4 BED Response:

Public announcement (PA), if possible, depending on the situation.

6.9.1.5 Do not move any suspicious objects.

6.9.1.6 Provide emergency responders with appropriate information upon arrival.

6.9.1.7 Keep staff from entering the affected area.

6.9.1.8 Classify the event using the 325RPL EALs, if appropriate.

6.9.1.9 Activate the MSG by calling 375-2400 and requesting activation.

6.9.1.10 Request medical assistance, if necessary.

6.10 Notice of a PNNL Lockdown

6.10.1 When Condition is Observed

6.10.1.1 Staff will be notified of a PNNL lockdown over the telephone through the CNS.

6.10.1.2 Immediately get behind a closed door if possible or hidden out of sight.

6.10.1.3 Place projects into safe shutdown mode.

6.10.1.4 Do not allow anyone into the facility.

6.10.1.5 Await further instructions via the CNS.

6.11 Declared Emergency in the 300 Area

6.11.1 Personnel will evacuate the facility or take cover as directed by the BED.

6.11.2 If the declared emergency originates in the 325RPL, the BED shall take actions that are in accordance with the BEP and inform other 300 Area contractors and facility owners of the emergency declaration in accordance with their emergency procedures.

7.0 Facility Take Cover — Shutdown of Heating, Ventilation, and Air-Conditioning System

7.1.1 If Outside of the 325RPL, PERFORM the Following:

7.1.1.1 Take cover inside the nearest building.

7.1.1.2 If the building you take cover in is not the 325RPL, attempt to contact your Line Manager or Team Lead and have them report your whereabouts to the 325RPL SAS.

7.1.1.3 If unable to contact your management, report to the BERO for the building where you are located so your personal accountability may be made.

7.1.1.4 Follow directions provided by that building's emergency organization or BED.

7.1.2 If You Take Cover Inside the 325RPL, Remain Inside the 325RPL:

7.1.2.1 Assemble in the lunchroom.

7.1.2.2 Staff should refrain from eating and drinking during a take cover event, if physically able, until an appropriate evaluation of the event can be made.

7.1.2.3 The BED will direct the shutdown of the 325RPL heating and ventilation (H&V) as needed per SOP-325-003, *325RPL Building Heating, Ventilation and Air Conditioning Emergency Shutdown*.

7.1.2.4 If classified materials (e.g., documents, ESM, or test materials) are removed from the LA, or left unsecured within the LA:

- inform the SAS that classified material has been left in an unsecured condition, has been removed from the LA, and the status/location of the classified material
- call the PNNL SOC at 375-2400 and report the details surrounding the classified materials as a security event and provide details as necessary
- SAS shall provide information to the 325RPL BED concerning the classified material.

7.1.2.5 Personnel who are wearing PPE clothing or are suspected of being contaminated shall be segregated from other building occupants and shall be surveyed by radiological control personnel. PPE will be discarded as directed by the RPT.

7.1.2.6 Zone Wardens for Zones 2 and 8 are requested to activate the flashing red warning lights.

7.1.2.7 Zone Wardens, and all staff are to remain in the lunchroom and follow the instructions of the BED.

8.0 Utility Disconnects

Utility disconnects may be necessary under extreme emergency conditions. The 325RPL BED will determine if utility disconnects need to be disconnected/shut. Locations of the utility disconnects or valves are identified in Sections 8.1 through 8.11.

8.1 Electrical

The 325RPL main electrical control center switchgear is located on the second floor (northwest corner) in Room 904. Use extreme caution if disconnecting this power.

8.2 Potable/Process Water

The internal valves are located in the southwest corner of Room 22 in the basement. The external ground valve, SCW-1-VLV (blue cover, operating handle located in 325RPL Shop) is located outside at the southwest corner of the 325RPL Building.

8.3 Gas Supplies

The P-10 gas distribution system is located at the northeast end of the north gas cylinder dock. Turn cylinders off as directed by the 325RPL BED.

8.4 Steam

The high-pressure steam supply valves are located above the Power Operator's workstation entry door on the second floor east equipment room. Steam to the 325RPL may also be isolated using valves inside the boiler annex (325BA) if access to the 325RPL Building is not possible.

8.5 Air

The main air compressor may be isolated in one of two ways: by opening the electrical disconnect (S-DIS-074) for the main air compressor or by closing valve CA-186-VLV; both of the components are located adjacent to the main air compressor in the second floor mechanical room. If time permits, the preferred method of shutting down the main air compressor is to press the STOP pushbutton located on the front of the compressor.

8.6 Compressed Air

To remove all sources of compressed air, the standby compressor (located in the northwest corner of the basement) must also be isolated or shutdown in addition to isolating the main air compressor. Isolation of the standby compressor is accomplished by opening the electrical S-DIS-073 or closing valve CA-96-VLV; both components are located adjacent to the standby air compressor. If time permits, the preferred method of shutting down the standby air compressor is to place the control switch— located on the top of the compressor controller—in the OFF position.

8.7 Ventilation

The ventilation facility exhaust and supply fan controls are in the following locations:

- Power Operator's workstation (Room 900)
- Power Operator's METASYS workstations in any PNNL facility may be used to secure the 325RPL main supply and exhaust fans as well as a majority of the building H&V

- in the north part of the basement, west of the elevator
- additional exhaust fan controls are on the starter enclosure for each exhaust fan inside the 325RPL Filter Building.

External shutdown of the main exhaust and supply fans may be accomplished under extreme circumstances by removing both normal and standby electrical power from the building. A more controlled external shutdown of the main exhaust and supply fans is a complicated evolution involving multiple operating locations that must be accomplished in a specific sequence under supervision of 325RPL knowledgeable staff to prevent the risk of loss of building containment due to creation of a positive pressure inside the building.

8.8 Fire Protection Supply Water

Fire Suppression Supply Water Post Indicator Valves (red) for Risers 1 through 5 are located outside 325RPL in the following locations:

- Riser 1 PIV is located at the northwest corner of the 325RPL building
- Riser 2 PIV is located north of the 325RPL
- Riser 3 PIV is located southwest of the 325RPL (room 209A)
- Riser 4 PIV is located southeast of the 325RPL-A annex
- Riser 5 PIV is located southeast of the 325RPL-A annex.

8.9 Dry Pipe Butterfly Valve (Riser 6)

The butterfly valve for the dry pipe fire suppression system on the north gas cylinder dock is located on the second floor in the east equipment room at the north wall. Suppression water for this system is supplied from Riser 2 and may be isolated external to 325RPL by shutting the PIV for Riser 2.

8.10 325RPL Ramp Sump Pump

Water runoff down the 325RPL basement truck ramp at the southwest corner of the building is collected in a sump at the bottom of the ramp. The associated sump pump empties the sump as needed to prevent it from overflowing into the 325RPL basement through the roll-up door. The sump pump discharges to the street in front of the 325RPL.

Potentially contaminated fire suppression water runoff from inside the 325RPL basement could also enter this sump and be pumped to the street in front of the building resulting in an unacceptable spread of contamination.

The local disconnect for the sump pump is located inside the south roll-up door on the east side of the door.

8.11 325RPL Decontamination Shower/Sink

A decontamination shower and sink are located in Room 426 with a tempered water supply for use as an emergency decontamination system. The contaminated water is routed to two 250-gallon storage tanks.

The system is designed with the drains directed to one of the two tanks. A high-level alarm activates locally when the selected tank reaches 66 percent volume. The high-level alarm is used to prevent overfilling of the tank. The water supply is manually isolated to allow valve alignment to the second

tank for water receipt. The high-high alarm at 75 percent of the tank volume will automatically isolate water to the shower or sink. The tanks have a common overflow for upset conditions (i.e., automatic water isolation fails and improper valve alignment).

9.0 Termination, Incident Recovery, and Restart

9.1 Termination

The IC, in consultation with the 325RPL BED, will recommend termination of the event when conditions indicate that it is safe to do so. Attachment 1 in EPIP-3.0: *PNNL Recovery Procedure*, should be completed before any recommendation is made to terminate a declared emergency.

9.2 Recovery

Depending on the circumstances of the event, a recovery team consisting of the IC, 325RPL BED, and appropriate SMEs, will work with the identified Recovery Director to develop and recommend a recovery plan for restoring the facility to operable status. Emphasis will be placed on the careful cleanup of released material and contaminated debris to minimize further risk to personnel, the public, or the environment while preserving evidence at the event scene. All waste materials generated by the cleanup will be containerized in drums or other appropriate containers and stored in an approved storage area pending characterization and determination of the final treatment and disposal requirements. The recovery plan will be reviewed and approved and must meet the requirements of EPIP-3.0: *PNNL Recovery Procedure* .

The 325RPL BED is responsible for assuring that emergency equipment is clean and fit for its intended use prior to resumption of operations. Equipment used during an incident will be decontaminated (if practicable) or disposed of as spill debris. Decontaminated equipment will be checked for proper operation prior to storage for subsequent use. Consumables and disposed materials will be restocked and fire extinguishers will be recharged or replaced.

For emergency events involving the TSD, a satellite accumulation area or a central accumulation area, the recovery plan will include the appropriate notification of the Washington State Department of Ecology and appropriate local authorities of recovery actions taken prior to restart. The Environmental Support Contact will also provide a written report to the Department of Ecology within 15 days after the incident or within 30 days after the incident for a release from a tank system to the environment that does not result in an activation of the contingency plan.[23]

NOTE: For classified events, re-entry and recovery activities are made in coordination with the Hanford EOC Recovery Manager.

9.2.1 Emergency Decontamination Facilities

The 325RPL facility has decontamination capability as discussed in Section 8.11. Radiological control personnel are the only staff that may perform personnel decontamination.

If an evacuation of the 325RPL Building occurs and re-entry is not possible to decontaminate affected personnel, radiological control supervision may use the 3410 Building personnel decontamination facility located in Room 1601. In the event that the affected personnel are injured, they should be transported directly to a hospital. If large group decontamination facilities are required, request assistance from the HFD Mobile Decontamination Facility.

[23] Section 9.2, Paragraphs 1, 2, and 3: Permit requirement

9.2.2 Emergency Radiological Exposure Guidelines

In extremely rare cases, emergency exposure to radiation may be required to rescue personnel or protect major property. Emergency exposure may be authorized in accordance with the provisions contained in 10 CFR 835, "Occupational Radiation Protection." The dose limits for personnel performing these operations are listed in Table 9.1.

NOTE: Only RadWorker 2 trained staff are allowed to volunteer for receiving emergency radiological exposures.

The lens of the eye dose limit should be three times the listed values. The shallow dose limit to the skin of the whole body and the extremities is 10 times the listed values.

Table 9.1. Emergency Dose Limits

Dose Limit (Total Effective Dose Equivalent) in rem	Activity Performed	Conditions
5	All	NA
10	Protecting major property	Only on a voluntary basis where lower dose limit not practicable
25	Lifesaving or protection of large populations	Only on a voluntary basis where lower dose limit not practicable
> 25	Lifesaving or protection of large populations	Only on a voluntary basis to personnel fully aware of the risk involved

9.3 Restart

In most cases, EPIP-3.0: *PNNL Recovery Procedure* contains the event closeout form and will be sufficient for supporting recovery from an event and actions needed for resumption of normal operations. For complex events with significant facility damage or a need for incident staffing for more than 48 hours, a recovery plan and process will be required. Restart of the facility following complex emergencies will be conducted with a recovery plan developed using EPIP-3.0, *Recovery Plan* and led by a Recovery Director identified by the MSG. The recovery plan will be developed with support from both the 325RPL Manager and 325RPL BM.

The following documents should be consulted, used as reference, and implemented if needed.

- EPIP-3.0, *PNNL Recovery Procedure*
- PNNL Guides for Post-Natural Phenomena Hazard Building Inspection
- PNNL-BCP, *Pacific Northwest National Laboratory Business Continuity Plan*

For severe damage to the facility due to natural phenomena (e.g., extreme weather conditions, seismic events, wildfires, or external flooding) or other causes (e.g., severe fire, physical attack, explosions, or events in neighboring facilities), the recovery plan shall describe the process for a systems engineering assessment and evaluation of the facility including environmental protection, mission critical and other essential systems (safety significant and equipment important to safety). The purpose of these assessments is to define actions needed to place the facility into a safe configuration within the safety basis requirements pending any resumption of operations.

Recovery for events that involve a container storage area within the HWTU require the container storage and containment system to be evaluated before restart.

If the event involved a tank system leak, repairs must be certified by an independent, qualified, registered, professional engineer.

Before operations are resumed in the facility, all emergency equipment used during the emergency shall be cleaned and restored to usable, operable condition.[24]

[24] Section 9.3, Last three paragraphs: Permit Requirement

10.0 Emergency Equipment[25]

Support equipment available to assist in responding to an emergency can be found by referring to DOE/RL 94-02, Section 11.2, and the HFD emergency equipment listing in DOE/RL 94-02, Appendix C.

Sufficient space is maintained around the exterior of the 325RPL to allow access of personnel and equipment responding to fires, spills, or other emergencies. Unobstructed fire lanes run from 325RPL entrances to allow emergency vehicle access to the facility and the nearby fire hydrants. Interior space is designed to allow access by emergency response personnel while maintaining barriers to contain releases of gaseous or liquid waste and hazardous substances as defined in WAC 173-303-040 [and/or WAC 173-303-201 for CAAs or SAAs]. Exit (egress) paths from rooms containing dangerous waste are maintained in an unobstructed manner at all times.

10.1 Portable Emergency Equipment

None

10.2 Fire Control Equipment

- Portable Class ABC fire extinguishers are located throughout the facility. Each Class ABC extinguisher is capable of suppressing fires involving ordinary combustible materials, flammable liquids, oils, paints, flammable gases, and fires involving electrical equipment. Class D fire extinguishers are located in areas vulnerable to Class D fires if reactive metals are stored there (e.g., dangerous waste storage room). Manual dry chemical fire extinguishers are installed in the Shielded Analytical Laboratory hot cells and are available outside the HLRF A and B hot cells. Fire extinguisher locations are identified on the floor plans (Appendices A through C).
- Portable Class ABC fire extinguishers with piercing tips are located in each lab that contains a glovebox. These extinguishers are for the HFD use only; 325RPL staff have not been trained in their use. The piercing tipped fire extinguisher locations are identified on the floor plans (Appendices A through C).
- 325RPL is equipped with an automatic fire detection, alarm, and suppression system. Five wet pipe sprinklers and one dry pipe sprinkler system provide automatic fire suppression. The fire suppression system is maintained at adequate volume and pressure to support fire suppression.
- A Mobile Command Post Vehicle can be obtained from the HFD at 373-2230. The HFD Battalion Commander will approve and dispatch the vehicle.

10.3 Communications Equipment/Warning Systems

- **Fire Alarm Pull Boxes** are located throughout the facility. The primary locations are at all exits of the facility. All locations are shown on the floor plans (Appendices A through C).
- **Hanford Site Emergency Alerting System** uses the existing telephone system to notify employees of emergency information. When the phone is answered, a recorded message will provide event information and inform staff of protective actions they are expected to take.
- **PNNL CNS** is a system that will allow emergency messages to be communicated quickly to all staff via the PNNL phone system, other subscribed phones (e.g., text or voice call to personal cell phones), and the PNNL email system. Phones at PNNL in offices, conference rooms, labs, and common areas such as lobbies, conference rooms, and lunchrooms are notified by the system. When the phone is answered, a recorded message will provide event information and inform staff

[25] Section 10, Permit Requirement

of protective actions they are expected to take. This can be activated by having the BM, IM, or MSG Lead call 375-2400.

- A **Criticality Alarm System** is present in the building. The system is equipped with neutron-sensitive criticality detectors. The Criticality Alarm System alarms in locations where the expected dose from an accidental criticality may exceed 12-rads in free air. The system is tested and maintained in accordance with preventive maintenance procedures.

NOTE: These systems are not considered emergency equipment and may not be available during all types of emergencies.

- Other non-emergency communications equipment installed in 325RPL include the following:
  - public address system (375-3700 on the VOIP phones)
  - public address system in the fire alarm control panel
  - commercial telephone system that may also be used to summon assistance during an emergency
  - handheld radios provided by the BED.

10.4 Personal Protective Equipment

Safety showers and eyewash units are installed at several locations throughout the facility including waste storage areas. All locations are shown on the floor plans (Appendices A through C).

Personnel protective clothing and respiratory equipment is available in the facility for use during both routine and emergency operations. This equipment includes the following:

- chemically resistant suits, aprons, boots, and gloves
- protective glasses
- chemical goggles
- face shields
- full-face respirators with extra cartridges
- radiological clothing.

Kits containing a variety of radiation monitoring instruments, forms, and equipment are available for use in an emergency. PNNL maintains these kits, which contain protective apparel, instruments, and equipment for personnel decontamination and other immediate emergency needs. These supplies and equipment are only adequate to fulfill immediate needs during the initial stages of an emergency.

10.5 Spill Control and Containment Supplies

Spill supplies are located throughout the facility and are maintained by the CSMs. Additional spill kit materials can be obtained in Room 527. The amount of material maintained varies depending on the amount of waste being accumulated at the individual central accumulation area. The following emergency equipment is maintained in (or adjacent to) each of the hazardous waste central accumulation areas:

- commercially available granular absorbent (e.g. diatomaceous earth)
- absorbent pads
- commercially available acid neutralizer (e.g. granular sodium bicarbonate) – required in accumulation areas containing liquid acidic wastes

- commercially available caustic neutralizer (e.g. dilute boric acid solution) – required in accumulation areas containing liquid caustic wastes
- personal protective equipment, including the following:
  - safety glasses with side shields
  - lab coats
  - leather gloves
  - chemical-resistant gloves (e.g., nitrile).

11.0 Evacuation of Persons and Visitors

- 325RPL occupants shall be aware of visitors that may require evacuation. Alternate housing for any staff that is sensitive to excessive hot or cold conditions (temperately disabled) may be required due to emergency response actions.

NOTE: Alternate staging area – in the event of an extended building evacuation during adverse weather, the 350 Building, or other indoor locations deemed safe, may be used for housing staff at the discretion of the 325RPL BED.[26]

- Facility and research management provide safety and emergency preparedness briefings for large visitor groups or tours. Individual visitors are briefed by their host.
- In all cases, the safety of building visitors is the responsibility of the host, who shall assure that visitors are provided a safe and orderly evacuation. The host shall verify that the visitor has signed in and report the visitor status to the appropriate Zone Warden as soon as practical, after the evacuation.

[26] Section 11, Note: Permit Requirement

12.0 Emergency Action Levels

12.1 300 Area Protective Actions

300 Area Onsite Protective Actions		
Classification	**Action**	**Implemented By**
Alert	• Evacuate or take cover for affected facility personnel.	Facility
	• Take cover[1] for the 300 Area. • Block traffic at: - southbound on Route 4S at milepost 18; - northbound on George Washington Way Extension (to 300 Area) at the intersection with George Washington Way; and - northbound on Stevens Drive at the intersection with Horn Rapids Rd.	POC (Quick Reaction Checklist)/EOC Shift Office
Site Area Emergency	• Evacuate or take cover for affected facility personnel.	Facility
	• Take cover[1] for 300 Area. • Block traffic at: - southbound on Route 4S at milepost 18; - northbound on George Washington Way Extension (to 300 Area) at the intersection with George Washington Way; and - northbound on Stevens Drive at the intersection with Horn Rapids Rd.	POC (Quick Reaction Checklist)/EOC Shift Office
	• Plan for subsequent 300 Area evacuation as required.	Hanford EOC

[1] Automatic take cover for entire areas will not be implemented during a seismic event. If a seismic event occurs, facility management will implement protective actions appropriate for their facility conditions. After a seismic event, site protective actions based upon incident assessment will be identified, planned, and communicated from Incident/Area Command and/or the Hanford EOC.

300 Area Onsite Protective Actions		
Classification	**Action**	**Implemented By**
General Emergency	• Evacuate or take cover for affected facility personnel.	Facility
	• Take cover[1] for 300 Area, HAMMER, Patrol Training Academy, WTP Simulator Building, and Cold Test Facility. • Block southbound traffic[2] on Route 4S at Milepost 18	POC (Quick Reaction Checklist)/EOC Shift Office
	• Plan for subsequent 300 Area evacuation as required.	Hanford EOC
[1] Automatic take cover for entire areas will not be implemented during a seismic event. If a seismic event occurs, facility management will implement protective actions appropriate for their facility conditions. After a seismic event, site protective actions based upon incident assessment will be identified, planned, and communicated from Incident/Area Command and/or the Hanford EOC. [2] Southern access control points are offsite and will be established by offsite agencies.		
300 Area Offsite Protective Actions and Recommendations		
Alert	• None	N/A
Site Area Emergency	• Implement evacuation of Columbia River from White Bluffs Ferry Landing to Leslie Groves Park.	Counties
General Emergency	• Implement evacuation of Columbia River from White Bluffs Ferry Landing to Leslie Groves Park.	Counties
	• Shelter-in-Place for Sections 2A, 3C, and 5.	Benton/Franklin Counties

12.2 325RPL Emergency Action Levels

The EAL Tables are published in RLEP 1.0, *Recognizing and Classifying Emergencies, Appendix 1-PNNL.325,* and can be obtained from the 325RPL BM.

13.0 Appendices

Appendix A – Emergency Equipment and Evacuation Routes – 1st Floor

Appendix B – Emergency Equipment and Evacuation Routes – 2nd Floor

Appendix C – Emergency Equipment and Evacuation Routes – Mezzanine and Basement

Appendix D – Zone Warden Map – 1st Floor

Appendix E – Zone Warden Map – 2nd Floor

Appendix F – Zone Warden Map – Mezzanine and Basement

Appendix G – 325RPL Staging Area Map

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Appendix I – Location of 325RPL in the 300 Area

Appendix J – RCRA Permit Applicability Matrix

Appendix K – RCRA Applicability Matrix for Generator Activities

14.0 References and Source Requirements

14.1 References (as revised)

ADM-001, *Document Management*

EPIP-2.0, *Management Support Group Procedure*

EPIP-3.0, *PNNL Recovery Procedure*

HDI Exhibit, *PNNL Workplace Substance Abuse Requirements and Protocol*

HDI Exhibit, *Respond to Spill or Adverse Chemical Condition*

HDI Work Control, *Basic Staff Practices*

HDI Workflow, *Report an Event or Unwanted Condition*

PNNL Guides for Post-Natural Phenomena Hazard Building Inspection

PNNL-BCP, *Pacific Northwest National Laboratory Business Continuity Plan*

PNNL-DSA-325, *Radiochemical Processing Laboratory Documented Safety Analysis*

PNNL-MA-110, *PNNL Emergency Management Plan*

RCP-8.1.02, *Quick Sort Survey of Personnel*

SOP-325-003, *325RPL Building Heating, Ventilation and Air Conditioning Emergency Shutdown*

14.2 Source Requirements (as amended)

10 CFR 835, "Occupational Radiation Protection," *Code of Federal Regulations*.

DOE/RL-94-02, *Hanford Emergency Management Plan,* U.S. Department of Energy Richland Operations Office.

DOE-0223, RL Emergency Implementing Procedures – Applicable to PNNL-Managed Facilities on the Hanford Site, U.S. Department of Energy Richland Office.

RCRA Site-Wide Permit WA7890008967, *Hanford Facility Dangerous Waste Permit,* Resource Conservation and Recovery Act of 1976.

ROD 12 *WAC 173-303 Dangerous Waste Regulations*

ROD 152, *29 CFR 1910, Labor/Occupational Safety and Health Standards*

ROD 519, *DOE CRD O 151.1D, Comprehensive Emergency Management System*

ROD 878, *DOE CRD O 420.1C, Chg. 2, Facility Safety*

ROD 885, *DOE CRD O 422.1, Admin Chg 2, Conduct of Operations*

ROD 1264, *Hanford Facility RCRA Permit Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit, Dangerous Waste Portion*

RLEP 1.0, *Recognizing and Classifying Emergencies, Appendix 1-PNNL.325*.

WAC-173-303-340, "Preparedness and Prevention," *Washington Administrative Code*, Olympia, Washington. http://apps.leg.wa.gov/WAC/default.aspx?cite=173-303-340.

WAC-173-303-350, "Contingency Plan and Emergency Procedures," *Washington Administrative Code*, Olympia, Washington. http://apps.leg.wa.gov/WAC/default.aspx?cite=173-303-350.

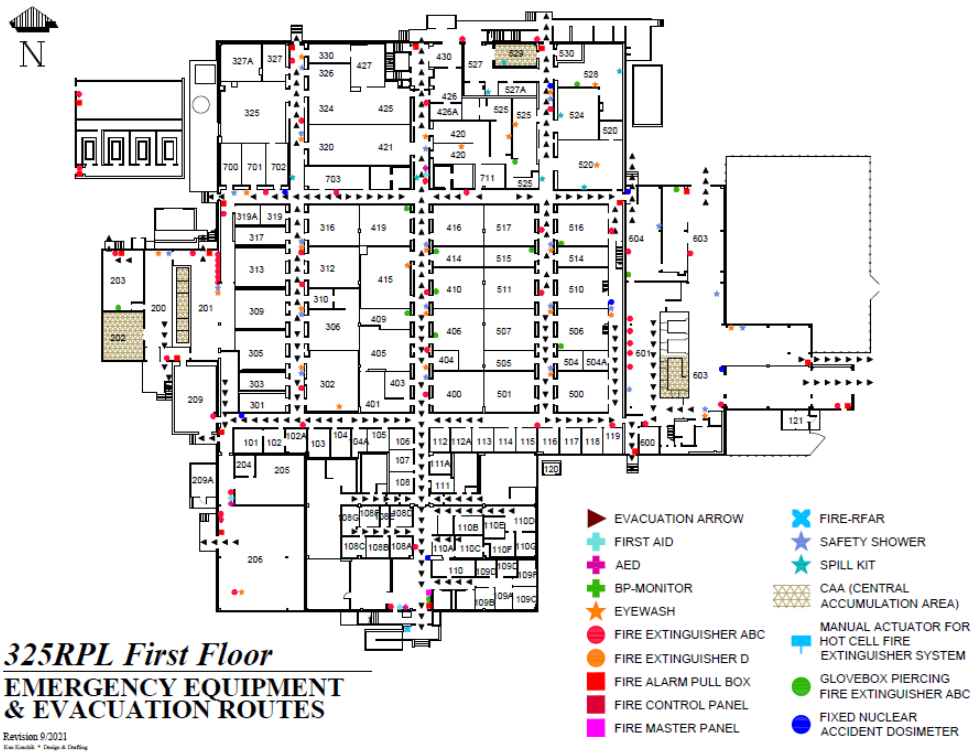
WAC-173-303-360, "Emergencies," *Washington Administrative Code*, Olympia, Washington. http://apps.leg.wa.gov/WAC/default.aspx?cite=173-303-360.

14.3 Emergency Preparedness Checklists (as revised)

EPIP-3.0: *PNNL Recovery Procedure*

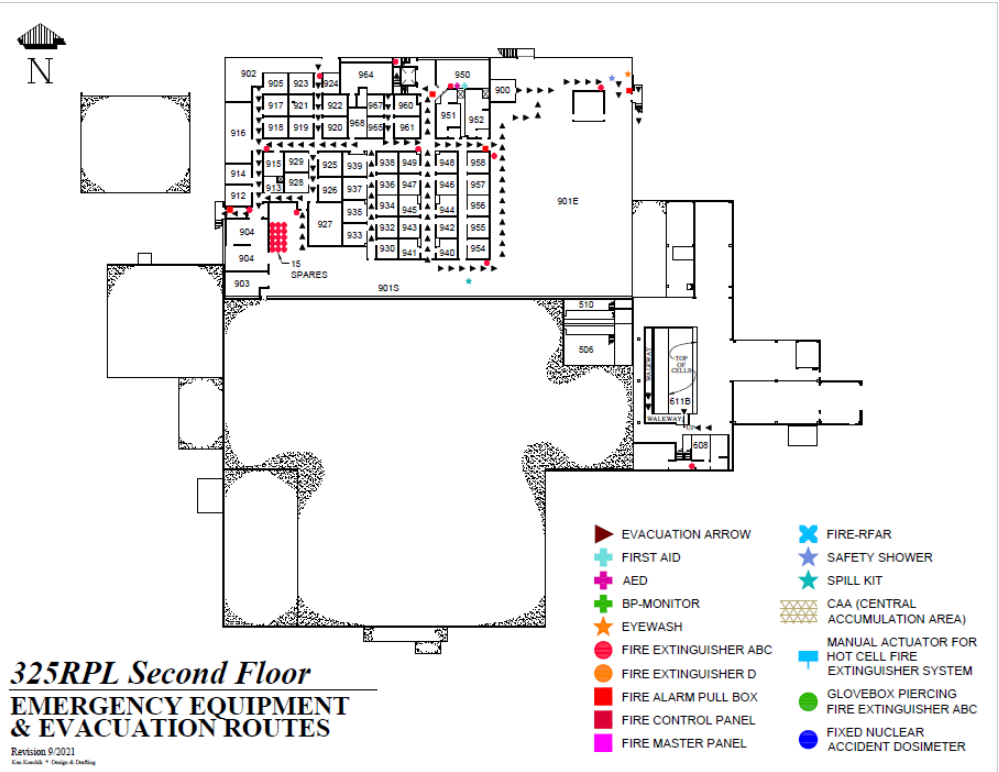
EPIP-12.0: *Building Emergency Response Organization Checklists*

Appendix A – Emergency Equipment and Evacuation Routes 1st Floor [27]



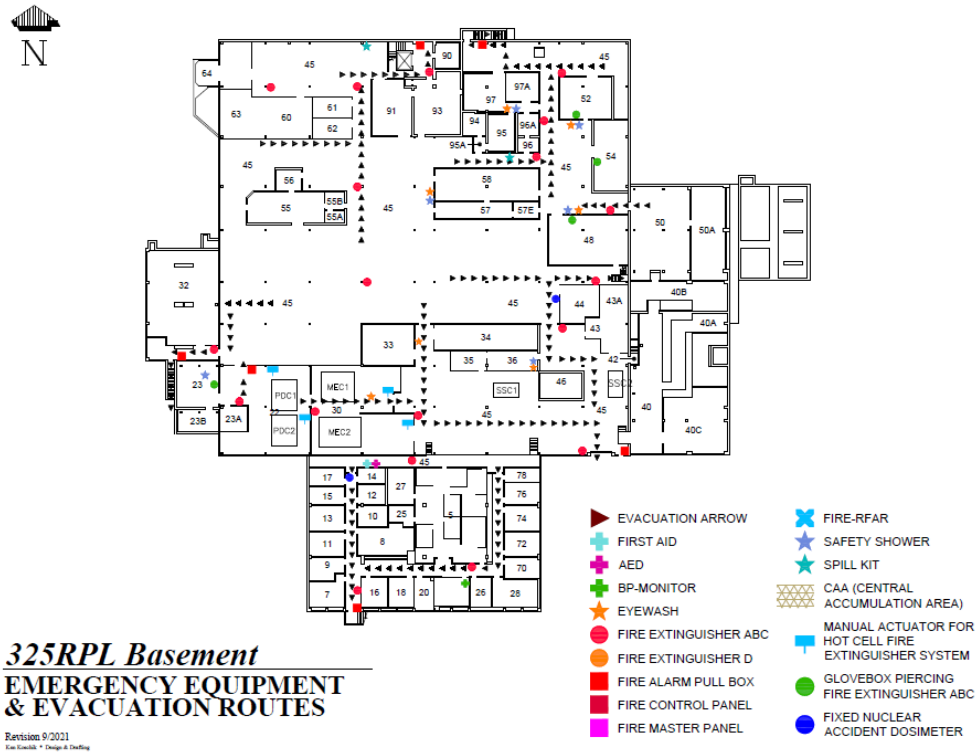
[27] Appendix A: Permit Requirement

Appendix B – Emergency Equipment and Evacuation Routes 2nd Floor[28]



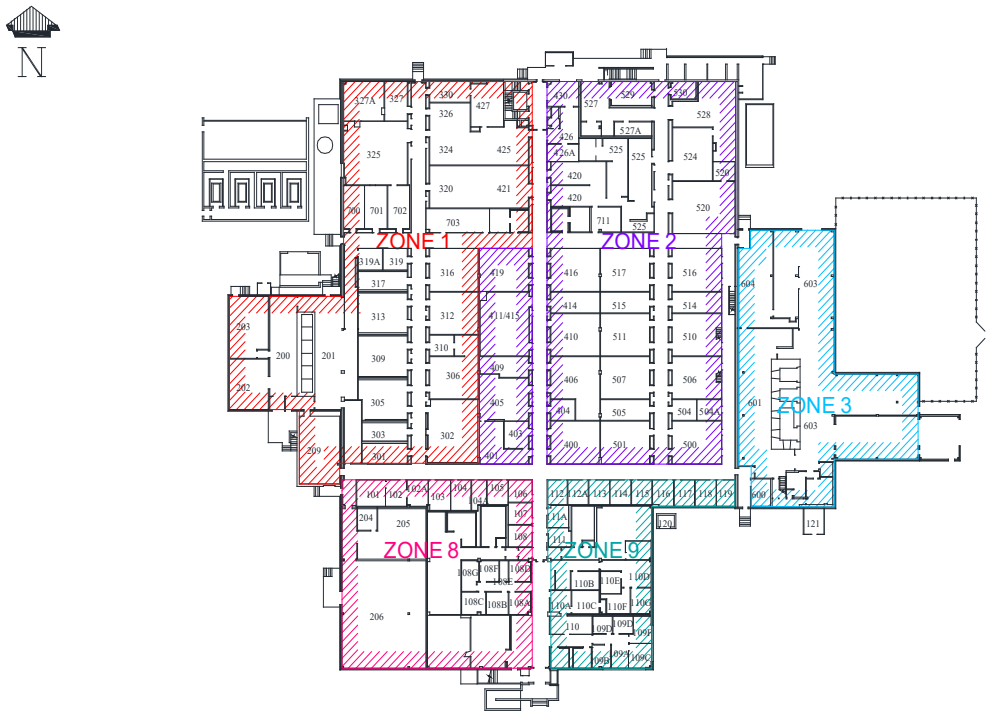
[28] Appendix B: Permit Requirement

Appendix C – Emergency Equipment and Evacuation Routes Mezzanine and Basement[29]



[29] Appendix C: Permit Requirement

Appendix D – Zone Warden Map – 1st Floor



325RPL First Floor

ZONE WARDEN MAP

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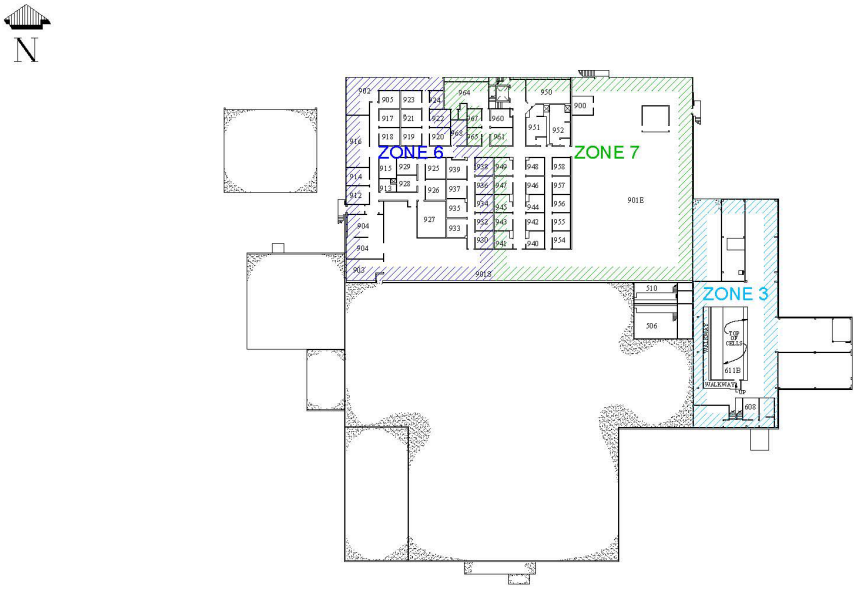
Appendix E – Zone Warden Map – 2nd Floor



325RPL Second Floor
ZONE WARDEN MAP

Revision 2/2020
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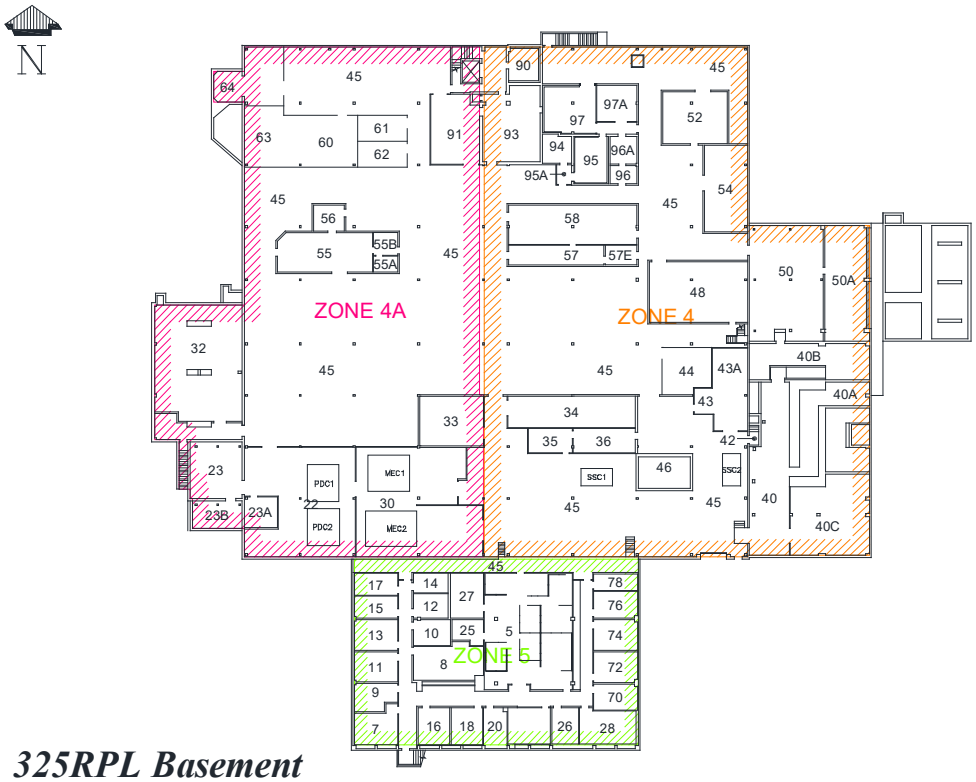
Appendix F – Zone Warden Map- Mezzanine and Basement



325RPL Basement

ZONE WARDEN MAP

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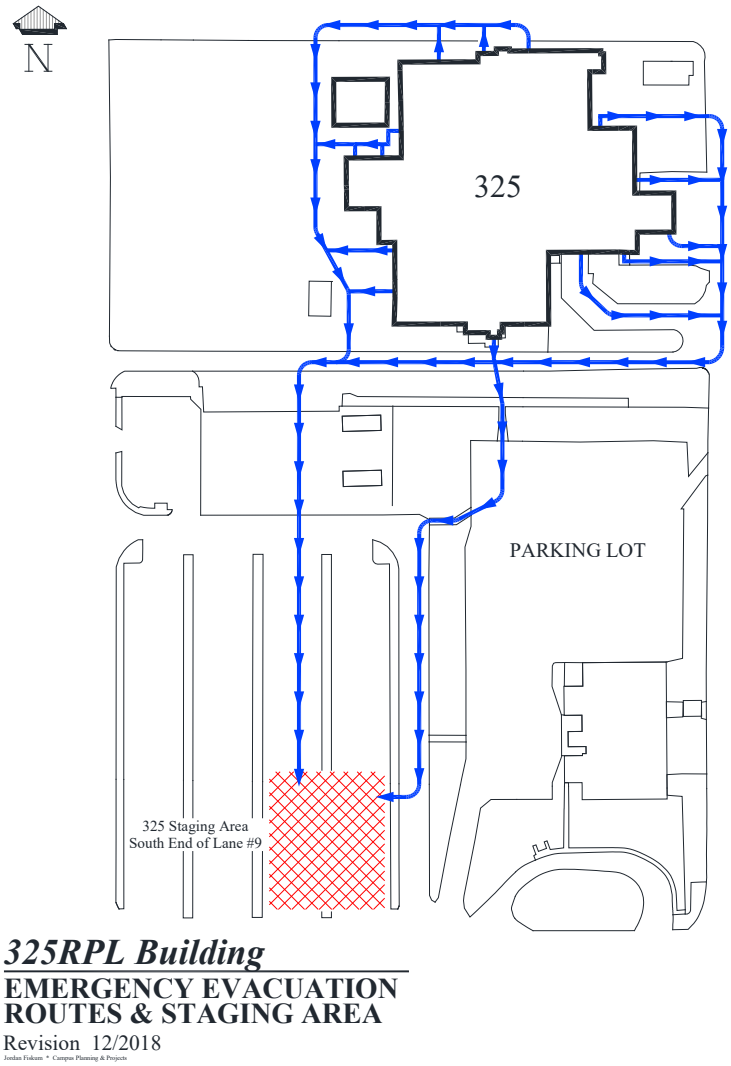
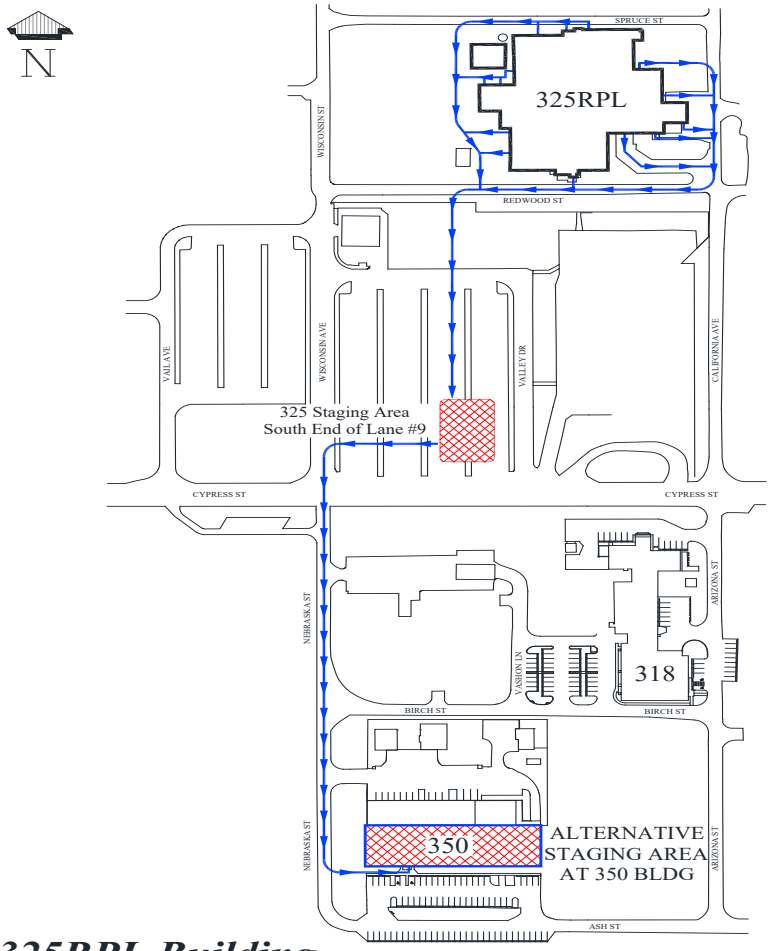
Appendix G – 325RPL Staging Area Map[30]



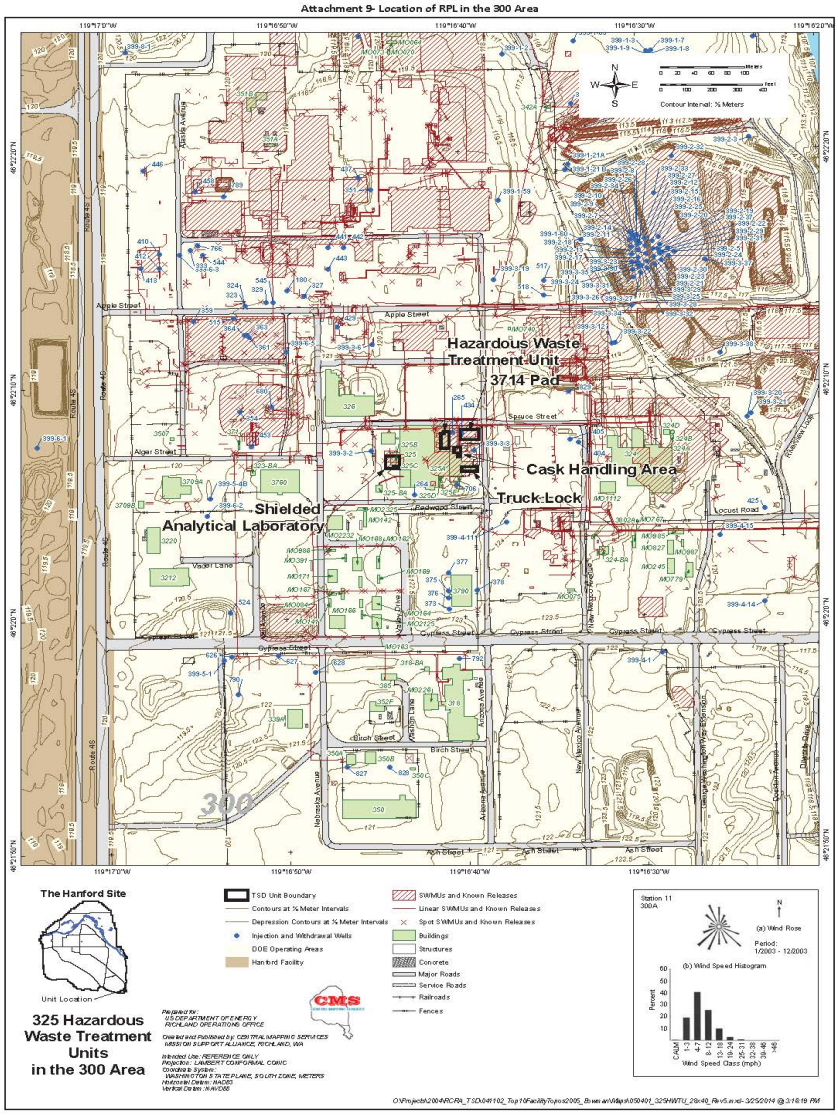
[30] Appendix G: Permit Requirement.

Appendix H – 325RPL Alternate Staging Area[31]



[31] Appendix H: Permit Requirement

Appendix I – Location of 325RPL in the 300 Area



Appendix J – RCRA Permit Applicability Matrix

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-340	Preparedness and prevention. Facilities must be designed, constructed, maintained, and operated to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden 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.	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-340(1)	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:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-340(1)(a)	(a) An internal communications or alarm system capable of providing immediate emergency instruction to facility personnel;	DOE/RL-94-02, Section 5.2.5.	BEP Section 10.3.
WAC 173-303-340(1)(b)	(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;	DOE/RL-94-02, Section 5.2.12.	BEP Section 10.3 Units summon assistance by calling the PNNL emergency number. No offsite assistance is requested by the unit itself.
WAC 173-303-340(1)(c)	(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	DOE/RL-94-02, Sections 11.2.2, 11.2.3, 11.2.4, 11.2.8 and Appendix C.	BEP Sections 10.2, 10.4 and 10.5
WAC 173-303-340(1)(d)	(d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.	DOE/RL-94-02, Sections 11.2.2 and 11.2.8.	BEP Section 10.2
WAC 173-303-340(1)(end)	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.	DOE/RL-94-02, Sections 11.2, 11.2.8, and 11.3.	BEP Section 3.4, second paragraph, 24th bullet
WAC 173-303-340(2)	Access to communications or alarms. Personnel must have immediate access to the signaling devices described in the situations below:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-340(2)(a)	(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;	DOE/RL-94-02, Section 5.2.12	BEP Section 10.3
WAC 173-303-340(2)(b)	(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.	DOE/RL-94-02, Section 5.2.12	BEP Section 10.3
WAC 173-303-340(3)	Aisle space. The owner or operator must maintain aisle space to allow the unobstructed movement of personnel. Fire protection equipment, spill control equipment, and decontamination equipment to any area of facility operation in an emergency, unless it can be demonstrated to the department that aisle space is not needed for any of these purposes.	Requirement is met at the unit level.	BEP Section 10.0 Parts III, V, and VI of the Hanford Facility Dangerous Waste Permit (WA7890008967) include description of how each unit meets this requirement.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-340(4)	Arrangements with local authorities. The owner or operator must attempt to make the following arrangements, as appropriate for the type of waste handled at his facility and the potential need for the services of these organizations, unless the hazards posed by wastes handled at the facility would not require these arrangements:	Introductory statement of requirement – requirements are in sections below.	Requirement is met at the site level.
WAC 173-303-340(4)(a)	(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;	The arrangements agreed to by local police, fire departments emergency response teams to coordinate emergency services are located in DOE/RL-94-02, Sections 3.4, 3.4.1.1, 3.4.1.2, 3.7, and Table 3-1.	Requirement is met at the site level. BEP Section 1.6
WAC 173-303-340(4)(b)	(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;	The arrangements agreed to by local hospitals to coordinate emergency services are located in DOE/RL-94-02, Sections 3.4.1.3, 3.7, and Table 3-1.	Requirement is met at the site level. BEP Section 1.6
WAC 173-303-340(4)(c)	(c) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and	The arrangements agreed to by state emergency response teams to coordinate emergency services are located in DOE/RL-94-02, Sections 3.3.1, 3.3.2, 3.7, and Table 3-1.	Requirement is met at the site level. BEP Section 1.6
WAC 173-303-340(4)(d)	(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.	Discussed in the Tri-County Mutual Aid Agreement MOU and Mutual Law Enforcement Assistance MOUs. DOE/RL-94-02, Section 3.7, and Table 3-1.	Requirement is met at the site level.
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.	If authorities decline, the documentation will be maintained in the Hanford Facility Operating Record.	Requirement is met at the site level.
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 non-sudden 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, Sections 1.1 and 1.2.	BEP section 1.0. Identified sections of the BEP/FRP are part of the contingency plan.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-350(2)	(2) Contingency plan. Each owner or operator must have a contingency plan at his facility for use in emergencies or sudden or non-sudden releases which threaten human health and the environment. If the owner or operator has already prepared a spill prevention control and countermeasures (SPCC) plan in accordance with Part 112 of Title 40 C.F.R. or Part 1510 of chapter V, or some other emergency or contingency plan, they need only amend that plan to incorporate dangerous waste management provisions that are sufficient to comply with the requirements of this section and WAC 173-303-360. The owner or operator may develop one contingency plan that meets all regulatory requirements. Ecology recommends that the plan be based on the National Response Team's Integrated Contingency Plan Guidance ("One Plan") as found at www.nrt.org. When modifications are made to non-dangerous waste (non-Hazardous Waste Management Act or non-dangerous waste regulation) provisions in an integrated contingency plan, the changes do not trigger the need for a dangerous waste permit modification.	DOE/RL-94-02, Sections 1.1 and 1.2. Portions of the Hanford emergency response program are used to meet requirements of WAC 173-303-350 and -360 under the provision of -350(2).	BEP section 1.0
WAC 173-303-350(3)(a)	The contingency plan must contain the following: (a) A description of the actions which facility personnel must take to comply with this Section and WAC 173-303-360;	DOE/RL-94-02, Section 1.3.4 provides an overview of how the Hanford Site responds to emergency events. More specific descriptions of actions to meet other requirements of this section and WAC 173-303-360 are identified in those sections of this matrix. The relationship of emergency procedures and description of actions is in footnote[32].	BEP Section 3.4, first and second paragraphs (building emergency director), Section 3.16, first and sixth bullets (all facility staff), and Sections 6.1, 6.2, and 6.3 (specific actions for fires, explosions, releases, odors)
WAC 173-303-350(3)(b)	The contingency plan must contain the following: (b) A description of the actions which will be taken in the event that a dangerous waste shipment, which is damaged or otherwise presents a hazard to the public health and the environment, arrives at the facility, and is not acceptable to the owner or operator, but cannot be transported, pursuant to the requirements of WAC 173-303-370(6), Manifest system, reasons for not accepting dangerous waste shipments;	Requirement is met at the unit level.	BEP Section 6.2.3

[32] Site-wide and facility/activity-specific emergency procedures are described and in some cases identified in this plan. The descriptions of actions in this plan are required to accurately describe the emergency procedures. Unless specifically incorporated into the RCRA Permit, these emergency procedures are not subject to permit modification requirements of permit condition 1.C.3 simply because they are described or referenced in this plan. If the emergency procedures change and the description is no longer accurate, the revision of the description is subject to permit modification requirements of permit condition 1.C.3.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-350(3)(c)	The contingency plan must contain the following: (c) A description of the arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services as required in WAC 173-303-340(4);	The arrangements agreed to by state emergency response teams to coordinate emergency services are located in 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.	Requirement is met at the site level. BEP Section 1.6
WAC 173-303-350(3)(d)	The contingency plan must contain the following: (d) A current list of names, addresses, and phone numbers (office and home) of all persons qualified to act as the emergency coordinator required under WAC 173-303-360(1). Where more than one person is listed, one must be named as primary emergency coordinator, and others must be listed in the order in which they will assume responsibility as alternates. For new facilities only, this list may be provided to the department at the time of facility certification (as required by WAC 173-303-810(14)(a)(i)), rather than as part of the permit application;	DOE/RL-94-02, Sections 2.2 and 2.2.1.1 discusses personnel job titles, which will fill duties and responsibilities of the Emergency Coordinator, described in WAC 173-303-360. A list of current assigned or "on-call" BEDs/BWs is maintained at the Patrol Operations Center per II.A.4. A list of BEDs/BWs for each Hanford TSD unit required to have an emergency coordinator is maintained in Permit Attachment 4A. Changing BEDs/BWs is a Class 1 modification, self-implemented.	BEP Section 3.1
WAC 173-303-350(3)(e)	The contingency plan must contain the following: (e) A list of all emergency equipment at the facility (such as fire extinguishing systems, spill control equipment, communications and alarm systems, and decontamination equipment), where this equipment is required. This list must be kept up to date. In addition, the plan must include the location and a physical description of each item on the list, and a brief outline of its capabilities.	DOE/RL-94-02, Sections 11.2 and 11.2.8, and Appendix C.	BEP Section 10 and Section 14, Appendices A-C
WAC 173-303-350(3)(f)	The contingency plan must contain the following: (f) An evacuation plan for facility personnel where there is a possibility that evacuation could be necessary. This plan must describe the signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes.	DOE/RL-94-02, Figure 7-3, and Table 5-1.	Section 1.5 (signals), Section 14, Appendices A, B, C, G, and H (routes)
WAC 173-303-350(4)	Copies of contingency plan. A copy of the contingency plan and all revisions to the plan shall be:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-350(4)(a)	(a) Maintained at the facility; and	DOE/RL-94-02, Section 14.3.7.	BEP Section 2.1 (copies of 325 BEP)
WAC 173-303-350(4)(b)	(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.	DOE/RL-94-02, Section 14.3.7.	Requirement is met at the site level.
WAC 173-303-350(5)	Amendments. The owner or operator shall review and immediately amend the contingency plan, if necessary, whenever:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-350(5)(a)	(a) Applicable regulations or the facility permit are revised;	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 1.0

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-350(5)(b)	(b) The plan fails in an emergency;	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 1.0
WAC 173-303-350(5)(c)	(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;	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 1.0
WAC 173-303-350(5)(d)	(d) The list of emergency coordinators changes; or	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 1.0
WAC 173-303-350(5)(e)	(e) The list of emergency equipment changes.	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 1.0
WAC 173-303-355(1)	Owners or operators must coordinate preparedness and prevention planning and contingency planning efforts, conducted under WAC 173-303-340 and -350 with local emergency planning committees established pursuant to Title III of the 1986 Superfund Amendments and Reauthorization Act.	DOE/RL-94-02, Sections 3.1, 3.1.1, and 3.4.	Requirement is met at the site level. BEP Section 1.6
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 modeling efforts.	DOE/RL-94-02, Sections 2.2.2.2.4, and 1.3.3.2.	Requirement is met at the site level. BEP Section 3.4, 2nd paragraph, 17th bullet (use of UDAC)
WAC 173-303-360(1)	Emergency coordinator. At all times, there must be at least one employee either on the facility premises or on call with the responsibility for coordinating all emergency response measures. This emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, required by WAC 173-303-350(2), all operations and activities at the facility, the location and properties of all wastes handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.	DOE/RL-94-02, Sections 2.2 and 2.2.1.1.	BEP Section 3.4 Permit Attachment 4A lists the BED/BW for each unit.
WAC 173-303-360(2)	Emergency procedures. The following procedures must be implemented in the event of an emergency.	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-360(2)(a)	(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:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-360(2)(a)(i)	(i) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and	DOE/RL-94-02, Sections 2.2.1.1.2(b), 2.2.1.1.3(b), and 5.2.5.	BEP Section 6.1.1.1, 6.2.2.1, and 6.3.1.1
WAC 173-303-360(2)(a)(ii)	(ii) Notify appropriate state or local agencies with designated response roles if their help is needed.	DOE/RL-94-02, Sections 1.3.4, and 5.2.1. Units summon assistance by calling the Hanford Patrol emergency number. No offsite assistance is requested by the unit itself.	BEP Section 3.4, 8th bullet

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-360(2)(b)	Emergency procedures. (b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials.	DOE/RL-94-02, Sections 2.2.1.1.2(f), 2.2.1.1.3(g), and 4.2.	BEP Section 3.4, 17th bullet
WAC 173-303-360(2)(c)	Emergency procedures. (c) Concurrently, the emergency coordinator shall assess possible hazards to human health and the environment (considering direct, indirect, immediate, and long-term effects) that may result from the release, fire, or explosion.	DOE/RL-94-02, Section 4.2, and 2.2.2.2.4.	BEP Section 3.4, 3rd, and 17th bullets; Section 4 criteria
WAC 173-303-360(2)(d)	Emergency procedures. (d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment, he must report his findings as follows:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-360(2)(d)(i)	(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	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, and 5.1.2.1.	BEP Section 3.4, 8th bullet
WAC 173-303-360(2)(d)(ii)	(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).	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, 5.1.2.1, and 5.1.2.2.	BEP Section 3.4, 25th bullet, Section 3.22
WAC 173-303-360(2)(e)	Emergency procedures. (e) His assessment report must include: (i) Name and telephone number of reporter; (ii) Name and address of facility; (iii) Time and type of incident (e.g., release, fire); (iv) Name and quantity of material(s) involved, to the extent known; (v) The extent of injuries, if any; and (vi) The possible hazards to human health or the environment outside the facility.	DOE/RL-94-02, Sections 2.2.1.1.2(d), 2.2.1.1.3(e), 5.1.1, 5.1.1.2, 5.1.2.1, and 5.1.2.2.	BEP Section 3.4, 25th bullet, Section 3.22
WAC 173-303-360(2)(f)	Emergency procedures. (f) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other dangerous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting, and containing released waste, and removing or isolating containers.	DOE/RL-94-02, Sections 2.2.1.1, 2.2.1.1.2(f) and 2.2.1.1.3(g).	BEP Section 3.4, 17th bullet
WAC 173-303-360(2)(g)	Emergency procedures. (g) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.	DOE/RL-94-02, Sections 2.2.1.1.2(f) and 2.2.1.1.3(g).	BEP Section 3.4, 17th bullet
WAC 173-303-360(2)(h)	Emergency procedures. (h) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.	DOE/RL-94-02, Section 9.2.3.	BEP Section 9.2, first paragraph
WAC 173-303-360(2)(i)	Emergency procedures. (i) The emergency coordinator must ensure that, in the affected area(s) of the facility:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-360(2)(i)(i)	(i) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and	DOE/RL-94-02, Section 9.2.3.	BEP Section 9.2, first and third paragraphs
WAC 173-303-360(2)(i)(ii)	(ii) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.	DOE/RL-94-02, Section 11.2.	BEP Section 9.2, second paragraph and 9.3, last paragraph

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-360(2)(j)	Emergency procedures. (j) The owner or operator must notify the department, and appropriate local authorities, that the facility is in compliance with (i) of this subsection before operations are resumed in the affected area(s) of the facility.	DOE/RL-94-02, Section 5.1.2.2.	BEP Section 3.4, 25th bullet; Section 3.22, second paragraph, and Section 9.2, third paragraph
WAC 173-303-360(2)(k)	Emergency procedures. (k) The owner or operator must note in the operating record the time, date, and details of any incident that requires implementing the contingency plan. Within fifteen days after the incident, he must submit a written report on the incident to the department. The report must include: (i) Name, address, and telephone number of the owner or operator; (ii) Name, address, and telephone number of the facility; (iii) Date, time, and type of incident (e.g., fire, explosion); (iv) Name and quantity of material(s) involved; (v) The extent of injuries, if any; (vi) An assessment of actual or potential hazards to human health or the environment, where this is applicable; (vii) Estimated quantity and disposition of recovered material that resulted from the incident; (viii) Cause of incident; and (ix) Description of corrective action taken to prevent reoccurrence of the incident.	DOE/RL-94-02, Sections 5.1.2.1 and 5.1.2.2.	BEP Section 3.4, 25th bullet; Section 3. 22, second paragraph, and Section 9.2, third paragraph

Appendix K – RCRA Applicability Matrix for Generator Activities

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-201	Preparedness and prevention. Facilities must be designed, constructed, maintained, and operated to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of dangerous waste, hazardous substance or dangerous waste constituents to air, soil, or surface or groundwater, which could threaten the public health or the environment. This section describes preparations and preventive measures, which help avoid or mitigate such situations.	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-201(1)	Applicability. The regulations of this section apply to those areas of a large quantity generator's facility where dangerous waste is generated or accumulated on site.	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-201(3)	Required equipment. All areas deemed applicable by subsection (1) of this section 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 large quantity generator may determine the most appropriate locations within its facility to locate equipment necessary to prepare for and respond to emergencies:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-201(3)(a)	(a) An internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to facility personnel;	DOE/RL-94-02, Section 5.2.5.	BEP Section 10.3.
WAC 173-303-201(3)(b)	(b) A device, such as a telephone (immediately available at the scene of operations) 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;	DOE/RL-94-02, Section 5.2.12.	BEP Section 10.3 Units summon assistance by calling the PNNL emergency number. No offsite assistance is requested by the unit itself.
WAC 173-303-201(3)(c)	(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	DOE/RL-94-02, Sections 11.2.2, 11.2.3, 11.2.4, 11.2.8 and Appendix C.	BEP Section 10.2, 10.4 and 10.5
WAC 173-303-201(3)(d)	(d) Water at adequate volume and pressure to supply water hose streams, foam producing equipment, automatic sprinklers, or water spray systems.	DOE/RL-94-02, Sections 11.2.2 and 11.2.8.	BEP Section 10.2
WAC 173-303-201(4)	Testing and maintenance of equipment. 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.	DOE/RL-94-02, Sections 11.2, 11.2.8, and 11.3.	BEP Section 3.4, second paragraph, 24th bullet
WAC 173-303-201(5)	Access to communications or alarms. Personnel must have immediate access to the signaling devices described in the situations below:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-201(5)(a)	(a) Whenever dangerous waste is being poured, mixed, spread, or otherwise handled, all personnel involved must have immediate access (e.g., direct or unimpeded 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 (3) of this section;	DOE/RL-94-02, Section 5.2.12	BEP Section 10.3
WAC 173-303-201(5)(b)	(b) If there is ever just one employee on the premises while the facility is operating, they must have immediate access (e.g., direct or unimpeded access) to a device, such as a telephone (immediately available at the scene of operation) or a hand-held, two-way radio, capable of summoning external emergency assistance, unless such a device is not required in subsection (3) of this Section.	DOE/RL-94-02, Section 5.2.12	BEP Section 10.3

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-201(6)	Aisle space. The generator 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.	Requirement is met at the unit level.	BEP Section 10.0
WAC 173-303-201(7)	Arrangements with local authorities. The large quantity generator must attempt to make the following arrangements, as appropriate for the type of waste handled at its 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:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-201(7)(a)	(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;	The arrangements agreed to by local police, fire departments emergency response teams to coordinate emergency services are located in DOE/RL-94-02, Sections 3.4, 3.4.1.1, 3.4.1.2, 3.7, and Table 3-1.	Requirement is met at the site level. BEP Section 1.6
WAC 173-303-201(7)(b)	(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;	The arrangements agreed to by local hospitals to coordinate emergency services are located in DOE/RL-94-02, Sections 3.4.1.3, 3.7, and Table 3-1.	Requirement is met at the site level. BEP Section 1.6
WAC 173-303-201(7)(c)	(c) Agreements with state emergency response teams, emergency response contractors, and equipment suppliers; and	The arrangements agreed to by state emergency response teams to coordinate emergency services are located in DOE/RL-94-02, Sections 3.3.1, 3.3.2, 3.7, and Table 3-1.	Requirement is met at the site level. BEP Section 1.6
WAC 173-303-201(7)(d)	(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.	Discussed in the Tri-County Mutual Aid Agreement MOU and Mutual Law Enforcement Assistance MOUs. DOE/RL-94-02, Section 3.7, and Table 3-1.	Requirement is met at the site level.
WAC 173-303-201(7)(e)	(e) Where state or local authorities decline to enter into such agreements, the generator must document the refusal in the operating record; and-	If authorities decline, the documentation will be maintained in the Hanford Facility Operating Record.	Requirement is met at the site level.
WAC 173-303-201(7)(f)	(f) A facility possessing twenty-four-hour response capabilities may seek a waiver from the authority having jurisdiction (AHJ) over the fire code with the facility's locality as far as organization necessary to respond to an emergency, provided the waiver is documented in the generator's operating record.		NA – The waiver is not being used in this facility.
WAC 173-303-201(8)	Contingency plan purpose and implementation.	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-201(8)(a)	(a) The large quantity generator must have a contingency plan for the facility. The purpose of a contingency plan and emergency procedures is to lessen the potential impact on the public health and the environment due to any emergency event such as, but not limited to, a fire, natural disaster, explosion, or unplanned sudden or non-sudden release of dangerous waste or dangerous waste constituents to air, soil, surface water, or groundwater.	DOE/RL-94-02, Sections 1.1 and 1.2.	BEP Section 1.0. Identified sections of the BEP are part of the contingency plan.
WAC 173-303-201(8)(b)	(b) A contingency plan must be developed to lessen the potential impacts of such emergency events, and the plan must be implemented immediately when such emergency events occur.	DOE/RL-94-02, Sections 1.1 and 1.2.	BEP Section 1.0. Identified sections of the BEP are part of the contingency plan.
WAC 173-303-201(9)	Contents of a contingency plan.	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-201(9)(a)	(a) Each large quantity generator must have a contingency plan at their facility for use in emergencies or sudden or non-sudden releases which threaten human health and the environment. If the generator has already prepared a spill prevention control and countermeasures (SPCC) plan in accordance with Part 112 of Title 40 C.F.R. or some other emergency or contingency plan, they need only amend that plan to incorporate dangerous waste management provisions that are sufficient to comply with the requirements of this section. The large quantity generator may develop one contingency plan that meets all regulatory requirements. Ecology recommends that the plan be based on the National Response Team's Integrated Contingency Plan Guidance ("One Plan").	DOE/RL-94-02, Sections 1.1 and 1.2. Portions of the Hanford emergency response program are used to meet requirements of WAC 173-303-201(8) through 201(14) under the provision of -201(9).	BEP Section 1.0 Identified sections of the BEP are part of the contingency plan.
WAC 173-303-201(9)(b)	(b) The contingency plan must contain the following: (i) A description of the actions which facility personnel must take to comply with subsections (8) and (14) of this section and WAC 173-303-145;	DOE/RL-94-02, Section 1.3.4 provides an overview of how the Hanford Site responds to emergency events. More specific descriptions of actions to meet other requirements of this section are identified in those sections of this matrix. Actions to comply with WAC 173-303-145 are addressed in DOE/RL-94-02, Section 5.1.2.	BEP Section 3.4, first and second paragraphs (building emergency director), Section 3.16, first and sixth bullets (all facility staff), and Sections 6.1, 6.2, and 6.3 (specific actions for fires, explosions, releases, odors)
WAC 173-303-201(9)(b)	The contingency plan must contain the following: (ii) 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 large quantity generator, but cannot be transported, pursuant to the requirements of WAC 173-303-370(6), manifest system, reasons for not accepting dangerous waste shipments;	Requirement is met at the unit level.	BEP Section 6.2.3

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-201(9)(b)	The contingency plan must contain the following: (iii) 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 subsection (7) of this section;	The arrangements agreed to by state emergency response teams to coordinate emergency services are located in 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.	Requirement is met at the site level. BEP Section 1.6
WAC 173-303-201(9)(b)	The contingency plan must contain the following: (iv) A current list of names, addresses, and telephone numbers of all persons qualified to act as the emergency coordinator required in this section and this list must be kept up to date. 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. In situations where the large quantity generator facility has an emergency coordinator continuously on duty because it operates a twenty-four hours per day, every day of the year, the plan may list the staff position (e.g., operations manager, shift coordinator, shift operations supervisor) as well as an emergency telephone number that can be guaranteed to be answered at all times;	DOE/RL-94-02, Sections 2.2 and 2.2.1.1 discusses personnel job titles, which will fill duties and responsibilities of the Emergency Coordinator, described in WAC 173-303-201(13). A list of current assigned or "on-call" BEDs/BWs is maintained at the Patrol Operations Center per II.A.4. A list of BEDs/BWs for central accumulation areas and satellite accumulation areas is maintained in Permit Attachment 4A. Changing BEDs/BWs on this list is not subject to permit modification requirements. Updates to the list will be provided to Ecology per II.A.4.a.	BEP Section 3.1
WAC 173-303-201(9)(b)	The contingency plan must contain the following: (v) 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.	DOE/RL-94-02, Sections 11.2 and 11.2.8, and Appendix C.	BEP Section 10 and Section 14, Appendices A-C
WAC 173-303-201(9)(b)	The contingency plan must contain the following: (vi) 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 (in cases where the primary routes could be blocked by releases of materials or fires).	DOE/RL-94-02, Figure 7-3, and Table 5-1.	Section 1.5 (signals), Section 14, Appendices A, B, C, G and H (routes)
WAC 173-303-201(10)	Copies of contingency plan. A copy of the contingency plan and all revisions to the plan shall be:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-201(10)(a)	(a) Maintained at the large quantity generator's facility; and	DOE/RL-94-02, Section 14.3.7.	BEP Section 2.1 (copies of 325 BEP)
WAC 173-303-201(10)(b)	(b) Submitted by the large quantity generator to all local police departments, fire departments, hospitals, and state and local emergency response teams that may be called upon to provide emergency services.	DOE/RL-94-02, Section 14.3.7.	Not applicable at the unit level. DOE is responsible for offering documents to offsite entities.
WAC 173-303-201(12)	Amendments. The large quantity generator must review and immediately amend the contingency plan, if necessary, whenever:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-201(12)(a)	(a) Applicable regulations or the facility permit are revised;	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 1.0
WAC 173-303-201(12)(b)	(b) The plan fails in an emergency;	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 1.0
WAC 173-303-201(12)(c)	(c) The generator's 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;	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 1.0
WAC 173-303-201(12)(d)	(d) The list of emergency coordinators changes; or	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 1.0
WAC 173-303-201(12)(e)	(e) The list of emergency equipment changes.	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 1.0
WAC 173-303-201(13)	Emergency coordinator. At all times, there must be at least one employee either on the facility premises or on call (that is, available to responds to an emergency by reaching the facility within a short period of time) 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 subsection (14) of this section.	DOE/RL-94-02, Sections 2.2 and 2.2.1.1.	BEP Section 3.4 Permit Attachment 4A lists the BED/BW for each unit.
WAC 173-303-201(14)	Emergency procedures. The following procedures must be implemented in the event of an emergency.	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-201(14)(a)	(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:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-201(14)(a)(i)	(i) Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and	DOE/RL-94-02, Sections 2.2.1.1.2(b), 2.2.1.1.3(b), and 5.2.5.	BEP Section 6.1.1.1, 6.2.2.1, and 6.3.1.1
WAC 173-303-201(14)(a)(ii)	(ii) Notify appropriate state or local agencies with designated response roles if their help is needed.	DOE/RL-94-02, Sections 1.3.4, and 5.2.1. Units summon assistance by calling the Hanford Patrol emergency number. No offsite assistance is requested by the unit itself.	BEP Section 3.4, 8th bullet
WAC 173-303-201(14)(b)	Emergency procedures. (b) Whenever there is a release, fire, or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and areal extent of any released materials.	DOE/RL-94-02, Sections 2.2.1.1.2(f), 2.2.1.1.3(g), and 4.2.	BEP Section 3.4, 17th bullet
WAC 173-303-201(14)(c)	Emergency procedures. (c) Concurrently, the emergency coordinator shall assess possible hazards to human health and the environment (considering direct, indirect, immediate, and long-term effects) that may result from the release, fire, or explosion.	DOE/RL-94-02, Section 4.2, and 2.2.2.2.4.	BEP Section 3.4, paragraph 2, 3rd, and 17th bullets; Section 4 criteria
WAC 173-303-201(14)(d)	Emergency procedures. (d) If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health or the environment, he must report his findings as follows:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-201(14)(d)(i)	(i) If their assessment indicates that evacuation of local areas may be advisable, they must immediately notify appropriate local authorities. They must be available to help appropriate officials decide whether local areas should be evacuated; and	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, and 5.1.2.1.	BEP Section 3.4, paragraph 2, 8th bullet

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-201(14)(d)(ii)	(ii) They 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).	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, 5.1.2.1, and 5.1.2.2.	BEP Section 3.4, paragraph 2, 25th bullet, Section 3.22
WAC 173-303-201(14)(e)	Emergency procedures. (e) His assessment report must include: (i) Name and telephone number of reporter; (ii) Name and address of facility; (iii) Time and type of incident (e.g., release, fire); (iv) Name and quantity of material(s) involved, to the extent known; (v) The extent of injuries, if any; and (vi) The possible hazards to human health or the environment outside the facility.	DOE/RL-94-02, Sections 2.2.1.1.2(d), 2.2.1.1.3(e), 5.1.1, 5.1.1.2, 5.1.2.1, and 5.1.2.2.	BEP Section 3.4, 25th bullet, Section 3.22
WAC 173-303-201(14)(f)	Emergency procedures. (f) During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other dangerous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting, and containing released waste, and removing or isolating containers.	DOE/RL-94-02, Sections 2.2.1.1, 2.2.1.1.2(f) and 2.2.1.1.3(g).	BEP Section 3.4, paragraph 2, 17th bullet
WAC 173-303-201(14)(g)	Emergency procedures. (g) If the facility stops operations in response to a fire, explosion, or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.	DOE/RL-94-02, Sections 2.2.1.1.2(f) and 2.2.1.1.3(g).	BEP Section 3.4, paragraph 2, 17th bullet
WAC 173-303-201(14)(h)	Emergency procedures. (h) Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire, or explosion at the facility.	DOE/RL-94-02, Section 9.2.3.	BEP Section 9.2, first paragraph
WAC 173-303-201(14)(i)	Emergency procedures. (i) The emergency coordinator must ensure that, in the affected area(s) of the facility:	Introductory statement of requirement – requirements are in sections below.	Introductory statement of requirement – requirements are in sections below.
WAC 173-303-201(14)(i)(i)	(i) No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and	DOE/RL-94-02, Section 9.2.3.	BEP Section 9.2, first and third paragraphs
WAC 173-303-201(14)(i)(ii)	(ii) All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.	DOE/RL-94-02, Section 11.2.	BEP Section 9.2, second paragraph and 9.3, last paragraph

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-201(14)(j)	Emergency procedures. (j) The large quantity generator must notify the department, and appropriate local authorities, that the facility is in compliance with (14)(i) of this section before operations are resumed in the affected area(s) of the facility.	DOE/RL-94-02, Section 5.1.2.2.	BEP Section 3.4, 25th bullet; Section 3.20, second paragraph, and Section 9.2, third paragraph
WAC 173-303-201(14)(k)	Emergency procedures. (k) The large quantity generator 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 generator; (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.	DOE/RL-94-02, Sections 5.1.2.1 and 5.1.2.2.	BEP Section 3.4, 25th bullet; Section 3. 22, second paragraph, and Section 9.2, third paragraph

Document Revision History

Template-BEP, Rev 1.1

Rev. #	Date	Description
27	03/14/2022	• Updated personnel in the first table in Section 3.1 (removed one BED) and added contact BED at any time through SOC 375-2400 • Removed the second table in Section 3.1 that had personnel listing for BERO positions. This will be maintained on the Emergency Preparedness website. • Added F&IO to Section 2.2 and 5.1 for clarification. • Removed RP Douglass from the concurrence list. • Added NC Colborn as the author.
26.1	10/12/2021	• Updated footnotes to remove permit requirements on the appendices per RS Wiegman/PT Saueressig request.
26	10/05/2021	• Update to current template • Changed personnel assignments in table located in section 3.1. • Changed personnel assignments in table located in section 3.2. • Corrected the attachment to number 13 in section 3.17. • Added Lab Assist to sections 3.24 and 5.0. • Added opening sentence to section 6.2.2,Major Spills. • Removed minor from step 6.2.3.7. • Updated section 8.4 Steam. • Corrected Riser #3 location in section 8.8. • Removed RPL-PLN-701, *RPL Business Continuity Plan* from section 14.1. • Updated figures in Appendices A-C to include Fixed Nuclear Accident Dosimeters. • Replaced AL Miracle with H Newsome during approvals cycle.
25	~~10/5~~2/24/2021	• Update template to rev 1.1. • Corrected Note in section 1.5. • Updated Sections 3.1 and 3.2 for newly qualified BERO personnel. • Corrected section 3.1 for Hazardous Materials Response Team. • Corrected legend for Section 3.3. • Updated document number for Emergency Action Levels in sections 3.4 and 12.2. • Clarified MSG Liaison coverage in Section 3.9 and made it consistent through procedure as MSG Lead (OTS-06017 closure). • Updated Section 3.6 for Assisting Communicator. • Corrected document titles. • Updated Attachment 1(now Appendix A) – Emergency Equipment and Evacuation Routes 1st Floor to include HLRF A Cell as part of the CAA. • Corrected wording (generator) and 2 references in Attachment 10 (now Appendix K) – RCRA Permit Applicability Matrix. • Corrected broken links. • Updated Attachments 1-11 to Appendices A-K. • Updated current footer information. • Updated Section 12.1 for "300 Area Protective Actions".
24	7/23/2020	BEP was revised as part of Class 3 RCRA Permit modification C3-HFSW-2016-01 to include the following changes. • Removed permit modification dates from footnotes. • Updated the three-step criteria in Section 4.0 to exactly match the Hanford Emergency Management Plan, DOE/RL-94-02 Rev. 7. • Added a paragraph about aisle space in Section 10.0. • Added a sentence about the fire suppression system water volume and flow to Section 10.2, 3rd bullet. • Added Attachment 10, RCRA Permit Applicability Matrix. • Added Attachment 11, RCRA Applicability Matrix for Generator Activities. • Updated the floorplan maps. • Section 3.2 Table, updated Facility Operations Specialist 2nd Alternate contact to Nick Colborn.
23	04/10/2020	• Added minor information to Section 1.4, Facility Description. • Updated personnel assignments in the Table in Section 3.1.

		• Updated personnel assignments in the Table in Section 3.2. • Updated Section 6.6, Loss of Electrical Power/Reduced Ventilation. • Created new links to EPIP-3.0 and EPIP-12.0 for check listed duties. • Update Attachment 1 (figure) to correct the location of the Central Accumulation Area as the SAL hot cells. • Updated Section 13.2, Sources Documents to accurately reflect the current RODs. • Added M&OP Managers to the concurrence review.
22.1	11/11/2019	• Added evacuation arrows to Attachments 1, 2 and 3
22	10/28/2019	• Minor editorial changes were made through out the procedure. • Section 1.4 added information associated with the 3714 Pad. • Table in Section 1.5 was updated for alarm actions. • Section 2.2 added HSEAS to the acronyms. • Updated personnel assignments in the Table in Section 3.2. • Sections 3.6, 3.8, 3.12, 3.13, 3.14 and 3.15 had minor editing to clarify actions. • Updated procedure title in Section 9.3. • Updated section 10.3 for the Hanford Site Emergency Alerting System. • Updated section 13.1 to removed retired procedures.
21	5/7/2019	• Section 1.3: Deleted sentence, "The 325RPL Manager is part of the Nuclear Operations Division within the Facilities and Operations (F&O) Directorate." • Section 3.2 Table: Updated phone number for the ICP Communicator and updated the 1st and 2nd alternate post recorder. • Step 5.3: Added the word "wastes" is missing in the last sentence. • Step 6.2.1: The three bullets should be part of the note before 6.2.1.1. • Step 6.1.2.7: Omitted the word "or": should be "Steps to contain the spill and/or release…". • Added ROD 519, *DOE CRD O 151.1D, Comprehensive Emergency Management System* to section 13.2. • Added exception for pulling fire alarm to Section 6.1.1.1: If the fire is occurring outside of the facility (e.g., at the ESY, NSP or the 3714 Pad) and pulling the fire alarm could result in building occupants evacuating the building into a hazard (i.e., building occupants exiting via the nearest exit and potentially via the fire or plume), consider the public address system in place of the fire alarm, or in addition to, as appropriate.
20	5/7/2019	• Reformatted to BEP Rev. 1 Template. • Added WAC-173-303-201 to Section 1.0. • Section 2.3, corrected title of procedure (ADM-001, *Document Management*). • Updated for new generator regulations. This included changing HWTU Permit Coordinator and the RCRA SME to the Waste Management SME. • Updated for identification of RMT and IWMS as sources of information about hazards in the facility. • Updated table in Section 3.1 with new personnel. • Updated table in Section 3.2 with personnel and rearranged alternates. • Broke out new section 3.21, Waste Management Staff responsibilities from Section 3.20 Unique Program Laboratory Expertise. • Added FSR to section 3.22. • Added tools to section 5.0: Radioactive Material Tracking System and Integrated Waste Management System. • Corrected section number to 5.0 in Sections 5.2 and 5.3 and added more information. • Updated section 5.3 to include Dangerous (Hazardous) waste and how it is managed. • Updated section 5.4 to include details for radioactive material management. • Deleted "Note 2" from step 6.5.2 because modeling of a criticality accident can be detected in the HLRF hot cells. • Corrected terminology in section 9.2. • Corrected terminology in section 10.5. • Updated 325 Basement figures (Attachments 3 and 6) for modifications to the Quiet Suite. Removed 94A, 94B, 98 and egress arrows from 50A. • Updated figures (Attachments 1, 2 and 3) for location of emergency equipment and updated the reference to the 90-day storage areas to the Central Accumulation Areas (CAA).

		• Updated Attachments 1-8 with the correct building number (325RPL). • Updated HDI references and F&O documents referenced as needed.
19	10/15/2018	• Updated approvals on coversheet to remove JE Kinzer and add ML Hayden • Updated Section 1.0 for grammatical correction and to include criticality alarm as primary means of evacuation. • Removed Randy Thornhill and added Don Bachand as EOC tech rep in Section 3.1 • Updated Table in Section 3.2 with new BERO members. • Updated Figure (Emergency Operations Center Interface) in Section 3.3. • Updated phone number is Section 3.6 for Tech Rep in EOC. • Deleted last paragraph from Section 3.22. • Updated Section 3.23. • Corrected Section 5.5 to better describe that fissionable material is stored in Criticality Safety Control Areas. • Corrected phone numbers in Section 6.5.1.1. • Updated Attachment 8 to remove demolished 300 Area buildings. • Corrected references in Section 14.1. • Added ROD to Section 14.2.
18	12/19/2017	• Updated Table in Section 3.1 for new MSG point of contact. • Updated Table in Section 3.2 with new BERO members. • Updated Section 8.9 to change valve type. • Section 2.1 deleted information webpage link. • Updated Concurrences
17	5/8/2017	• Removed AD Haller from concurrence and added HT Tilden. • Changed title to Materials and Waste Management Manager. • Changed hazards on coversheet to “See Section 5.0, Facility Hazards” • Updated Nuclear Criticality Actions in the table contained in Section 1.5 to read, “Leave the building immediately (walk with purpose) through the closest exit, do NOT stop for a survey and get at least 15 feet of separation from the facility. Maintain a minimum of 15 feet distance during relocation to the primary staging area.” • Deleted Power Operator Office from Section 2.1 for distribution of BEP. • Updated information on personnel and phone numbers in the table in Section 3.1. • Updated information on personnel and phone numbers in the table in Section 3.2. • Deleted (paper or electronic) when signing into the accountability log in Section 3.16. • Revised terminology in Step 6.5.1.4, “Nuclear criticality safety violations are identified as a loss of documented controls…” • Revised Step 6.5.2.1 to reflect walk with purpose and get at least 15 feet of separation from the building. • Revised Note after Step 6.5.2.2 to reflect walk with purpose and get at least 15 feet of separation from the building. Also, changed the reference to Attachments 7 and 8. • Added new Section 8.7, Ventilation which was previously part of Section 8.6, Compressed Air. • Deleted last part of sentence of first paragraph “located in Room 94B” in Section 8.11, 325RPL Decontamination Shower/Sink. • Changed the public address system phone number from” #1234 on BM phone” to “375-3700 on the VOIP phone”. • Added footnote Section 1.0, Paragraph 4 which had inadvertently dropped off since Revision 15. • Updated Footnote 18 to reference its new location in Section 3.21 which had inadvertently been overlooked since Revision 15.
16	5/23/2016	Updated the following: • Section 1.0 added that BERO members will use checklist and checklists are updated to changes received from the Hanford Site Emergency Preparedness Program. • Section 3.2 tables either added new personnel or switched order of primary and alternates. • Section 3.22 was changed so that PNNL staff member performing work in or having unescorted access approval into the 325RPL reviews the EIP annually. • Added new section 6.4.5, Stack Monitor Alarm with actions to be taken.

		• Added new section 6.5.2.5, for Criticality Actions to support recovery plan actions.