This plan covers the following buildings and structures:

242-A Evaporator buildings and structures.

Approved:

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This document will be reviewed at least annually and updated if necessary by Facility Management unless Hanford Facility RCRA Permit coordination requirements provide otherwise.

BUILDING EMERGENCY PLAN

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1.0 GENERAL INFORMATION

The 242-A Evaporator is located on the Hanford Site, a 560-square-mile (1,450-square kilometer) U.S. Department of Energy (DOE) Richland Operations Office (RL) site in southeastern Washington State. The 242-A Evaporator is located in the East portion of the 200 Area near the center of the Hanford Site.

This plan contains a description of facility specific emergency planning and response and is used in conjunction with portions of the DOE/RL-94-02, *Hanford Emergency Management Plan*, to meet contingency plan requirements of Washington Administrative Code (WAC) 173-303. Pursuant to WAC 173-303, *Dangerous Waste Regulations*, DOE-RL as the owner or operator of the Hanford Facility is required to have a "contingency plan" for use in emergencies or sudden or non-sudden releases that threaten human health and the environment. Additionally, WAC 173-303-201(9) (for dangerous waste generator locations) and WAC 173-303-350(2) (for TSD facilities) allows the owner or operator to use documentation, other than a "contingency plan," so long as the other documentation incorporates dangerous waste management provisions sufficient to comply with the requirements of WAC 173-303-201, WAC 173-303-350, and WAC 173-303-360. This approach is used at Hanford. There is no specific document titled "Contingency Plan" for the Hanford Facility. Rather, specific portions of this plan combined with portions of contractor facility/activity-specific documentation (e.g., emergency plans/procedures) are maintained to meet the contingency plan requirements of WAC 173-303.

1.1 Facility Name

U.S. Department of Energy, Hanford Site
242-A Evaporator

1.2 Facility Location

Benton County, Washington within the 200 East Area.

Buildings/facilities covered by this plan are:

- 242-A Evaporator building
- 242-AB, 242-A Control Room
- 242-A-81 water service building
- Outside 242-A-702 old steam turbine building
- Central Accumulation Areas (CAAs) and Satellite Accumulation Areas (SAAs) located through the 242-A Evaporator.

1.3 Owner

U.S. Department of Energy
Richland Operations Office
PO Box 550
Richland, WA 99352

Manager

Washington River Protection Solutions (WRPS) LLC
P.O. Box 850
Richland, Washington 99352

1.4 Description of the Facility and Operations

The 242-A Building is a five story concrete structure compartmentalized by physical barriers and ventilation systems, into three areas: main process area, service, and operations. The main process area includes the evaporator room, pump room, condenser room, loadout and hot-equipment storage room, and ion-exchange room. The service area includes the aqueous make-up room (AMU), and the heating, ventilation, and air-conditioning (HVAC) room. The operations areas are located in the 242-A Evaporator Building and include change rooms, lunchrooms, offices, and storage rooms. The 242-A Evaporator is designed to reduce waste volume in the Double-Shell Tanks (DST) that is required for storing liquid waste generated at the Hanford Site. The 242-AB Building was constructed to house the upgraded 242-A Evaporator monitoring and control system (MCS). This building adjoins the 242-A Building and includes the control room (Room 18), and Process Control Module (PCM) (Room 19). The control room houses a computer-based MCS, which is used to operate and monitor the 242-A Evaporator. The PCM room houses HVAC units, computer equipment, and an uninterruptible power supply (UPS) system.

The 242-A Evaporator is connected to DST System tanks and valve pits through underground piping that is used for transferring feed and slurry solutions and miscellaneous drainage.

CAAs and SAAs are located throughout the facility as needed to support operations.

Water is supplied to the 242-A Evaporator to support operations and for the fire protection sprinkler systems. Water for the 242-A processes is supplied through the 242-A-81 water service building, which is located directly south of the 242-A Building. Water is supplied to the fire protection sprinkler systems through a separate water line.

2.0 PURPOSE

This plan describes the facility hazards and the actions that will be taken in response to upset and/or emergency conditions within the 242-A Evaporator. These events may include spills or releases caused by processing, fires and explosions, transportation activities, movement of materials, packaging, storage of hazardous materials, and natural and security contingencies. Sections 1.0, 3.1, 4.0, 7.1, 7.1.1, 7.1.2, 7.2, 7.2.1, 7.2.2, 7.2.3, 7.2.4, 7.2.5, 7.2.5.1, 7.3 and subsections, 7.6, 8.2, 8.2.1, 8.2.2, 9.0, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 11.0, 12.0, of the Building Emergency Plan (BEP) are enforceable sections meeting RCRA contingency planning requirements. Enforceable sections cannot be changed without coordinating the change with the Permit modification process. Attachment B of this BEP provides a crosswalk listing applicable WAC 173-303 requirements and how/where, the requirement is met.

3.0 FACILITY/BUILDING EMERGENCY RESPONSE ORGANIZATION

The facility/building emergency response organization (ERO) includes the Building Emergency Director (BED), facility subject-matter experts, and other operations personnel who are responsible for implementing emergency response actions at 242-A Evaporator.

The 242-A Evaporator facility/building ERO is responsible for implementing emergency response actions at the 242-A Evaporator. In the event of an emergency at 242-A or more than one facility, the Tank Farm BED will utilize a graded approach in accordance with Hanford Incident Command System (ICS) and assign appropriate Tank Farm ERO, to implement the on-scene response for each facility in coordination with the Incident Commander (IC) as appropriate. The BED maintains communication with the assigned personnel and/or the IC at each facility to enable him to fulfill the BED responsibilities as discussed in Section 3.1 below.

3.1 Building Emergency Director

Emergency response will be directed by the BED until the IC arrives. The BED, supported by facility/building ERO personnel, fulfills the role and meets the requirements of the "Emergency Coordinator" as defined in WAC 173-303-201 (for dangerous waste generator locations) and in WAC 173-303-360(1) (for permitted TSD facilities). During events, 242-A Evaporator personnel perform response duties under the direction of the BED. The senior responding Hanford Fire Department official will be the IC. If the event is determined to primarily be a security event, the Hanford Fire Department and Hanford Patrol will operate under a unified command system with Hanford Patrol making decisions pertaining to security. These individuals have the authority to request and obtain any resources necessary for protecting people and the environment.

The BED becomes a member of the Incident Command Organization and functions under the direction of the IC. In this role, the BED continues to manage and direct 242-A Evaporator operations. The BED position is staffed by the central shift manager 24-hours a day. The BED primary location is the Central Shift Office [274-AW].

As necessary, the BED will make the Operational Emergency categorization/ classification decision and also determine if the event is subject to the requirements of WAC 173-303-201(14)(d) or WAC 173-303-360(2)(d) prior to responding to the scene.

Security & Emergency Services maintains a complete listing of current, qualified BEDs. The list is maintained in the Central Shift Office (274-AW), co-located with this plan and also contained in Permit Attachment 4A. Names and home telephone numbers of the BEDs are available from the POC (373-3800) in accordance with Permit Condition II.A.4, and also available on the Hanford Intranet on the Tank Farms & 242-A Emergency Services Page.

3.2 Other Members

The BED will utilize the Incident Command System (ICS) supplemented by facility-specific emergency response procedures and DOE-0223, *Emergency Plan Implementing Procedures,* RLEP 1.1, *Hanford Incident Command System and Event Recognition and Classification*. The BED will appoint trained personnel to fill ERO positions as necessary from the *200 Area Tank Farms Emergency Response Organization Listing* to fill positions listed below.

- Incident Command Post (ICP) Communicator is responsible for making the classification notification and initiating and maintaining a communication line with the EOC.
- ICP Hazards Communicator is responsible for communicating data to the EOC for consequence assessment.
- Facility Operations Specialist is responsible for providing facility-specific knowledge to the OSC and coordinating facility resources for mitigating the incident.
- Chemical Hazard Assessor is responsible for providing technical support for non-radiological hazardous material response.
- Radiological Hazard Assessor is responsible for coordinating and ensuring accomplishment of radiological control functions throughout the incident scene.

The BED will notify other facility/building ERO to support the on-scene response by making contact with the ERO members listed on the 200 Area Emergency Response Organization Listing.

The complete Facility/Building ERO listing of positions, names of ERO members, work locations, and telephone numbers for the 242-A Evaporator is maintained in a separate location in a format determined appropriate by Tank Farm management. Copies are distributed to appropriate Tank Farm locations and maintained by Security & Emergency Services.

4.0 IMPLEMENTATION OF THE PLAN

The BED must assess each incident to determine the response necessary to protect the personnel, facility, and the environment. If assistance from Hanford Patrol or Hanford Fire Department is required, the Hanford Emergency Response Number (911 or 509-373-0911 if using a cell phone) must be used to contact the POC and request the desired assistance.

In accordance with WAC 173-303-201(14)(b) or WAC 173-303-360(2)(b), whenever there is a release, fire or explosion, the BED ensures that personnel identify the character, source, amount, and areal extent of any released materials. Identification can be made by activities that can include, but are not limited to, visual inspection of dangerous/mixed waste, sampling activities in the field, reference to inventory records, or by consulting with facility personnel. Samples of materials involved in an emergency might be taken and analyzed as appropriate. These activities must be performed with a sense of immediacy and shall include available information.

The BED shall use the following steps to determine if an emergency circumstance is subject to the contingency plan implementation and notification requirements of WAC 173-303-201 or WAC 173-303-350 and WAC 173-303-360:

1. The event involved an unplanned spill, release, fire, or explosion.

AND

2.a. 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

2.b. 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.

Additional guidance to assist the BED in determining the applicability of the requirements is maintained in DOE-0223, *DOE-RL Emergency Plan Implementing Procedures (RLEPs)*. This guidance is derived from Washington State Department of Ecology Dangerous Waste Permit application guidelines for implementation of the contingency plan and notifications to Washington State Department of Ecology (Ecology). Contractor environmental single points-of-contact are also available to assist the BED in determining the applicability of requirements.

If assessment of an event does not allow a definitive determination of the threat to human health and the environment, then the BED shall continue to implement the emergency procedures for the event, and through that process continue the assessment of the event.

If the BED determines that the event response requires contingency plan implementation, the BED must notify or direct the environmental organization makes environmental notifications in accordance with WAC 173-303-201(14)(d) or WAC 173-303-360(2)(d).

The following information must be included in the assessment report:

- The name and telephone number of reporter.
- The name and address of facility.
- The time and type of incident (e.g., release, fire).
- The name and quantity of material(s) involved, to the extent known.

- The extent of injuries, if any.
- The possible hazards to human health or the environment outside the facility.

5.0 FACILITY HAZARDS

This section is intended to provide an overview of hazardous materials, processes, and/or operations that may be encountered at the 242-A Evaporator.

5.1 Hazardous Materials

Potentially hazardous materials at the 242-A Evaporator are used for normal maintenance and support functions. These could include acids, caustics, oils, and solvents.

The 242-A Evaporator Shift Office maintains a specific list of hazardous materials in accordance with chemical management program, and utilizes the chemical inventory tracking system for current quantities. Copies of Safety Data Sheets (SDS)/Material Safety Data Sheets (MSDS) can be accessed on line through the contractor safety and health programs web page link.

5.2 Industrial Hazards

Industrial hazards associated with the 242 A Evaporator include chemical, steam (high temperature steam pipes, ruptured steam lines and steam filled rooms, and steam condensate induced water hammer), electrical equipment, pressurized equipment, high temperature equipment, rotating equipment, confined spaces, compressed gas cylinders, noise, elevated walking surfaces, and pressurized air and water systems. These industrial hazards do not pose a threat to the health and safety of the general public or the environment. Industrial hazards are addressed in the facility safety plan and maintenance programs.

5.3 Dangerous/Mixed Waste

5.3.1 Solid Form

Dangerous/mixed waste is generated at the 242-A Evaporator during sampling, decontamination, and maintenance activities. This waste is transported to a CAA as needed.

5.3.2 Liquid Form

Highly radioactive mixed waste solution is processed at the 242-A Evaporator and contained in the vapor-liquid separator (C-A-1), and ancillary equipment. Low-level radioactive mixed waste solution is contained in the condensate collection tank (TK-C-100), and ancillary equipment. Although the mixed waste solution contains chemicals that are hazardous (primary chemical compounds other than water include ammonia, sodium nitrate, sodium carbonate, sodium aluminate, sodium sulfate, and sodium hydroxide), the bounding consequence for spills or releases of this waste are based on its radiological components.

5.3.3 Gaseous Form

A waste blending error in the DST System or mixing of incompatible wastes could potentially generate large amounts of gaseous ammonia from the 242-A Evaporator vessel vent system during processing; however, slurry/feed controls are in place to constrain the characteristics of the feed.

5.3.4 Toxicological Hazards

Though evaporator operations do not entail the use of bulk quantity hazardous chemicals, the tank waste processed through the evaporator contains significant concentrations of hazardous chemicals. The tank waste contains many different chemicals and due to the nature of the storage conditions, other chemical

compounds are generated in the tanks. Historically, two chemicals have been of primary concern: ammonia and sodium hydroxide.

5.4 Radioactive Materials

The 242-A Evaporator contains significant quantities of radioactive material in the slurry when it is operating and very small quantities when shutdown between campaigns. Radioactive waste materials removed from radiation areas are packaged and transported to an approved radioactive waste storage facility. Radioactive materials in liquid form are mixed wastes and are described in Section 5.3.2.

Radioactive materials in gaseous form are emitted from the vessel vent and building exhaust ventilation systems. These systems have high-efficiency particulate air (HEPA) filters to remove radioactive particulate, reducing emissions to acceptable discharge levels. Failure of HEPA filters could result in a loss of confinement as described in Section 6.1.6.3.

5.5 Criticality

The 242-A Evaporator has been classified as a Limited Control facility. Limited Control is defined as a facility that may contain more than one-half of a minimum critical mass of fissionable material; however, criticality is prevented by the form and distribution of the material. Criticality alarms are not present at the 242-A Evaporator and criticality is not a credible event.

6.0 POTENTIAL EMERGENCY CONDITIONS

Potential emergency conditions, under both WAC 173-303 and DOE requirements fall into three basic categories: (1) operations (process upsets, fires, explosions, loss of utilities, spills, and releases); (2) natural phenomena (e.g., earthquakes); and (3) security contingencies (e.g., bomb threat, hostage situation). The following are conditions that may lead to an emergency at the 242-A Evaporator.

6.1 Facility Operations Emergencies

The following conditions could result in a potential emergency condition or require facility personnel to implement protective actions, and describes the condition and adverse effect to the facility. This information typically is derived from a safety analysis report, hazards evaluation, or risk assessment for the facility.

6.1.1 Loss of Utilities

A loss of utilities is not expected to lead to an emergency condition or require implementation of protective actions at the 242-A Evaporator. A case-by-case evaluation is required for each event to determine further loss of utility impacts. When a BED determines a loss of utility impact, actions are taken to ensure dangerous and/or mixed waste is being properly managed to the extent possible given event circumstances. Additional guidance is maintained in facility-specific abnormal operating procedures. As necessary, the BED will stop operations and take appropriate actions until the utility is restored. The facility has been designed with interlocks to safely shutdown the process when needed utilities are lost.

In general, a loss of utilities will not lead to an emergency event at the 242-A Evaporator. The facility is designed to safely shutdown the process as needed. If loss of utilities at the 242-A Evaporator results in a major process disruption/loss of plant control, notifications in Section 7.2.2 are performed. The following sections discuss loss of utilities for water systems, electrical power supply, steam, ventilation, and compressed air.

6.1.1.1 Loss of Water

Water can be used as seal water for the mechanical seals on the P-B-1 recirculation pump and P-B-2 slurry pump when the normal supply of process condensate is not available. If water is supplied to the seals, and loss of water occurs, failure of mechanical seals could occur, causing a spray release of mixed waste into the facility. The spray release scenario is discussed in Section 6.1.6.2. Interlocks are provided to stop the pumps on low seal water flow.

Water is supplied for cooling water to the EC-1, EC-2, and EC-3 condensers. Loss of water could result in a major process upset. If this event were to occur, the water particulates could be collected on the vessel vent HEPA filter, which could cause failure of the HEPA filter(s). Additional guidance is maintained in *242-A Response to Evaporator Loss of Raw Water System*.

6.1.1.2 Loss of Electricity

A loss of electricity would interrupt processing but would not produce an emergency event at the 242-A Evaporator. Upon a loss of power, the evaporator fails to a safe configuration by draining the system to DST feed tank 241-AW-102. The 242-A Control Room UPS provides temporary power to the MCS computer for process monitoring during shutdown of the evaporator system. Fire alarm control panels, emergency lighting, and exit lights operate on backup battery power to support safe exit from the facility if the emergency event warrants.

6.1.1.3 Loss of Steam

A loss of steam would interrupt the processing but would not produce an emergency event (see Section 5.2).

6.1.1.4 Loss of Ventilation System

The K1 and vessel ventilation systems are required for 242-A Evaporator processing; a loss of either ventilation system would require the 242-A Evaporator to be shutdown but would not result in an emergency condition. Additional guidance is maintained in *Response to 242-A Evaporator Loss of VCS Control.* A ventilation system shutdown due to a radiological material release is discussed in Section 6.1.6.1. A loss of confinement is discussed in Section 6.1.6.3.

The K1 ventilation system maintains contaminated areas of the 242-A Building at a negative pressure (with respect to atmospheric) to prevent contamination spread to uncontaminated areas. The ventilation system includes three banks of HEPA filters, two exhaust fans, and stack sampling and monitoring equipment. Normal operation is to run two HEPA banks, with the third on stand-by. Both fans are electrically powered; the K1 ventilation system is interlocked to shutdown the primary fan and prevent the secondary fan from starting if high radioactive particulate level is detected in the exhaust stream.

The vessel ventilation system maintains the condenser vent system and condensate collection tank (TK-C-100) tank under vacuum to prevent contamination spread from the processing equipment into the rooms. The vessel vent system includes a demister, pre-filter, heater, two HEPA filters in series, an exhaust fan, and stack sampling and monitoring equipment. The vessel ventilation monitoring system alarms in the control room if high radiation is detected.

6.1.1.5 Loss of Compressed Air System

A loss of compressed air would interrupt processing but would not produce an emergency event at the 242-A Evaporator.

A loss of compressed air at the 242-A Evaporator would cause the vapor-liquid separator (C-A-1) drain valves to open, draining the contents to DST feed tank 241-AW-102. As a result, the AW Tank Farm

personnel could receive an over pressurization alarm for DST feed tank 241-AW-102. Mitigating actions for the DST feed tank 241-AW-102 are taken as specified in tank farm abnormal operating procedures.

A loss of compressed air will initiate a water flush to the slurry receiver tank. This action could potentially overfill the slurry receiver tank if water is not secured. Additional guidance is maintained in *242-A Evaporator Loss of Compressed Air System.*

6.1.2 Major Process Disruption/Loss of Plant Control

A major process disruption/loss of plant control can be caused by failure of the MCS computer. Upon loss of the MCS, the Shift Manager is notified while an attempt is made to return the MCS to service.

A loss of MCS could cause the vapor-liquid separator (C-A-1) drain valves to open, draining the system to DST feed tank 241-AW-102, placing the facility in a safe configuration. As a result, the AW Tank Farm personnel could receive an over pressurization alarm for DST feed tank 241-AW-102. Additional guidance is provided in *242-A Evaporator Loss of MCS Control*. Mitigating actions for the DST feed tank 241-AW-102 are discussed in tank farm abnormal operating procedures.

6.1.3 Pressure Release

Sections 6.1.3.1 through 6.1.3.3 describe the results of pressure system failures at 242-A Evaporator.

6.1.3.1 Mixed Waste Release

Consequences of a pressure release of mixed waste during processing are radiological in nature and are discussed in Section 6.1.6.2.

6.1.3.2 Compressed Air Systems

Failure of compressed air systems may result in the loss of monitoring instrumentation and pneumatically operated valves.

6.1.3.3 Compressed Air Bottles

Failure of compressed air bottles may result in personal injury and/or the loss of personnel radiation monitoring systems.

6.1.4 Fire and/or Explosion

A fire/explosion could generate highly toxic and/or corrosive fumes depending on the location (fire occurring in the control room, aqueous make-up room, HVAC room, condenser room, pump room or evaporator with mixed waste present in the vapor-liquid separator (C-A-1), process recirculation loop, or in ancillary equipment). Flying debris could result from explosions or compressed gas cylinder failure. Process system disruption, loss of plant control, and breach of process system boundaries could result from the flying debris.

Additionally a deflagration or detonation could result as flammable gas accumulates in the evaporator headspace with an ignition source present, resulting in a deflagration or detonation that releases evaporator contents.

If mixed waste is present in the vapor-liquid separator (C-A-1), process recirculation loop, and ancillary equipment, and a fire occurs in the control room, aqueous make-up room, HVAC room, condenser room, pump room, or evaporator room and requiring fire department actions for suppression, emergency classification should be made as specified in criteria stated in DOE-0223, Appendix 1-2.M.

If an explosion is confirmed to have occurred at the 242-A Evaporator and the explosion threatens areas containing hazardous chemicals and/or radioactive material, or if the explosion breaches the external

242-A Building walls when the vapor-liquid separator (C-A-1) contains solution, emergency classification should be made as specified in DOE-0223, Appendix 1-2.M.

6.1.5 Hazardous Material Spill

A hazardous waste blending error in the DST System potentially could generate large amounts of ammonia gas from the 242-A Evaporator vent system during processing. The *242-A Emergency Planning Hazard Assessment* indicates such releases will not exceed OSHA exposure limits.

6.1.6 Dangerous/Mixed Waste Spill

Dangerous/mixed waste is not routinely generated at the 242-A Evaporator but could be generated during use of the aqueous make-up unit if a chemical makeup solution spills. Small quantities of dangerous/mixed waste slurry or process condensate could be spilled at the 242-A Evaporator during sampling. The hazards associated with a spill of dangerous/mixed waste may include potential exposure to radioactive, caustic, corrosive, and/or toxic material.

6.1.6.1 Ventilation System Release

A mixed waste spill could cause a radiological release in the K1 ventilation or vessel ventilation system, potentially exposing workers to harmful radiation or contamination. If there is a release of radioactive material, an emergency classification will be evaluated in accordance with criteria stated in DOE-0223, Appendix 1-2.M. A radioactive materials release may also involve personnel and/or environmental exposure.

6.1.6.2 Release of Mixed Waste into Facility

A catastrophic release of mixed waste into the pump, condenser, pump storage room, or evaporator rooms could cause a high radiation or radiological release, and would necessitate an emergency classification as specified in DOE-0223, Appendix 1-2.M. A release may also involve personnel and/or environmental exposure.

6.1.6.3 Loss of Confinement

A loss of confinement in the 242-A Building along with a loss of negative pressure in radiation areas could cause a radiological release, and would require an emergency classification as specified in DOE-0223, Appendix 1-2.M. A loss of confinement may also involve personnel and/or environmental exposure.

6.1.7 Transportation and /or Packaging Incidents

The 242-A Evaporator does not receive dangerous or mixed waste shipments. Slurry and process condensate waste samples, steam condensate and cooling water samples, and contaminated equipment and materials are packaged and transported from the 242-A facility to other Hanford facilities for processing, maintenance, analysis, and/or disposal. The potential consequences associated with transportation/shipment of hazardous materials, hazardous/dangerous or mixed waste, and radioactive material or waste could cause personnel exposure to radioactive, caustic, corrosive and/or toxic material as well as environmental damage by release to the air or ground (soil).

6.1.8 Radioactive Material Release

Section 5.3 provides information on gaseous and liquid waste forms. Sections 6.1.6.1 through 6.1.6.3 discuss the primary means of radiological release.

6.1.9 Criticality

Criticality is not a credible accident at the 242-A Evaporator (see Section 5.5).

6.2 Natural Phenomena

The following information presents a very basic standard description of the potential hazards of natural phenomena type events.

6.2.1 Seismic Event

Depending on the magnitude of the event, severe structural damage could occur resulting in serious injuries or fatalities and the release of hazardous or radioactive materials to the environment. Damaged electrical circuits and wiring could result in the initiation of fires.

Any seismic event that causes damage to the 242-A Evaporator building or K-1 ventilation system threatens radiological confinement and requires classification as specified in DOE-0223, Appendix 1-2.M.

6.2.2 Volcanic Eruption/Ash Fall

Though not expected to cause structural damage, the ash resulting from a volcanic eruption could cause shorts in electrical equipment and plug ventilation system filters.

6.2.3 High Winds/Tornadoes

High winds or tornadoes may cause structural damage to systems containing hazardous materials resulting in a release of the materials to the environment. When sustained high winds in 200 Area (more than 90 miles per hour) are observed, they may cause degradation of the facility safety equipment/confinement and/or barriers. Emergency classification is made as specified in DOE-0223, Appendix 1-2.M.

6.2.4 Flood

A flood is not credible at 242-A Evaporator as the facility is not within the Columbia River flood plain.

6.2.5 Range Fire

The hazards associated with a range fire are the same as those associated with a building fire plus potential site access restrictions and travel hazards.

6.2.6 Aircraft Crash

In addition to the potential for serious injuries or fatalities, an aircraft crash could result in the direct release of hazardous materials to the environment or cause a fire that could lead to a release.

6.3 Security Contingencies

Security contingencies are discussed in the following sections.

6.3.1 Bomb Threat/Explosive Device

A bomb threat may be received by anyone who answers the telephone or receives mail. The major effect on the 242-A Evaporator is that personnel will need to perform emergency shutdown before evacuating. If an explosive device detonates, the effects are the same as those discussed under fire and explosion.

6.3.2 Hostage Situation/Armed Intruder

A hostage situation or the entry of an armed hostile intruder(s) into a building/facility can pose an emergency condition and has the potential to adversely affect facility operations.

6.3.3 Suspicious Object

If a suspicious object is discovered, the major effect on the 242-A Evaporator is that personnel may need to perform an emergency shutdown of the facility before evacuation.

7.0 INCIDENT RESPONSE

The initial response to any emergency is to immediately protect the health and safety of persons in the affected area. Identification of released material is essential to determine appropriate protective actions. Containment, treatment, and disposal assessment are secondary responses.

The following sections describe the process for implementing basic protective actions as well as descriptions of response actions for the events listed in Section 6.0 of this plan. In addition, a section addressing prevention of secondary release, fires or explosions is provided. Attachment A provides a list of applicable procedures.

7.1 Protective Action Responses

Protective action responses are discussed in the following sections. The steps identified in the following description of actions do not have to be performed in sequence because of the unanticipated sequence of incident events.

In addition to the facility protective actions described below, the BED also reviews the site-wide and 242-A Evaporator emergency response procedure(s) for categorization and/or classification of the event and if necessary, initiates area protective actions and Hanford Site ERO activation. Operational Emergency categorization and/or classification is reported to the Hanford Emergency Operations Center (EOC), triggering notification to offsite officials that includes planned recommendations for protective actions if needed. Hanford EOC staff are responsible to coordinate protective action recommendations with offsite officials. A common set of initial response actions are performed by the event discoverer and the BED during all events. Those actions are described below and are not repeated in each following subsection.

The discoverer notifies the BED and initiates SWIM response as specified in the following sections.

- **S**tops work.
- **W**arns others in the vicinity.
- **I**solates the area.
- **M**inimizes exposure to the hazards.
    - The BED determines if emergency conditions exist requiring response from the Hanford Fire Department and evaluates the need to perform additional protective actions.
    - If the Hanford Fire Department resources are not needed, the event is mitigated with resources identified in Section 9.0 of this plan and proper notifications are made.
    - If the Hanford Fire Department resources are needed, the BED ensures notification to 911 from site phones (509-373-0911 from a cellular phone).
    - The BED ensures a representative is sent to meet the Hanford Fire Department.

- The BED provides a formal turnover to the IC when the IC arrives at the incident command post (ICP).
- The BED informs the Hanford Site ERO as to the extent of the emergency (including estimates of dangerous waste and mixed waste quantities released to the environment, if applicable).
- If operations are stopped in response to the event, the BED ensures that systems are monitored for leaks, pressure buildup, gas generation, and ruptures, if applicable.
- Hanford Fire Department stabilizes the event.

7.1.1 Evacuation Plan

The BED directs the evacuation; if an evacuation is ordered or the evacuation siren sounds (STEADY SIREN), personnel shall proceed to the primary or alternate staging areas (see Figure 2). The order to evacuate is given via an announcement over the public address system and/or facility radios. The Shift Manager or assigned operations personnel conducts a sweep of occupied buildings to ensure that all personnel and visitors have evacuated. For an immediate evacuation, accountability is performed at the staging area. When evacuation actions are complete, status is reported to the BED, who reports the status to the IC.

The BED determines the operating configuration of the facility and identifies any additional protective actions to limit personnel exposure to the hazard. Routes used for normal ingress and egress are the routes used for evacuation out of work areas. Routes that can be used to exit buildings and the location of staging areas are posted on the Facility Emergency Response Information Boards within each building. Evacuation routes and exits are clearly marked and evacuation routes are maintained clear of obstructions. For any event requiring a time urgent facility evacuation, 242-A personnel depress any seismic shutdown switch to activate a safe shutdown.

7.1.2 Take Cover

The BED initiates the take cover by directing that an announcement be made over facility radios, and by activating the 200 Area take cover alarm (WAVERING SIREN) by calling the POC using 911 from site phones (509-373-0911 from a cellular phone). Protective actions associated with operations include configuring, or shutting down, the ventilation systems. Determination of additional take cover actions is based on operating configuration, weather conditions, amount and duration of release, and other conditions, as applicable to the event and associated hazard. As a minimum, personnel exposure to the hazard is minimized. The BED ensures that take cover actions are taken at all occupied buildings identified in Section 1.2.

7.2 Response to Facility Operations Emergencies

Depending on the severity of the event, the BED reviews the site-wide procedures and 242-A Evaporator emergency response procedure(s) and, as required, categorizes and/or classifies the event. If necessary, the BED initiates area protective actions and Hanford Site ERO activation. For any event requiring a time urgent facility evacuation, activate any seismic shutdown switch.

The steps identified in the following description of actions do not have to be performed in sequence because of the unanticipated sequence of incident events.

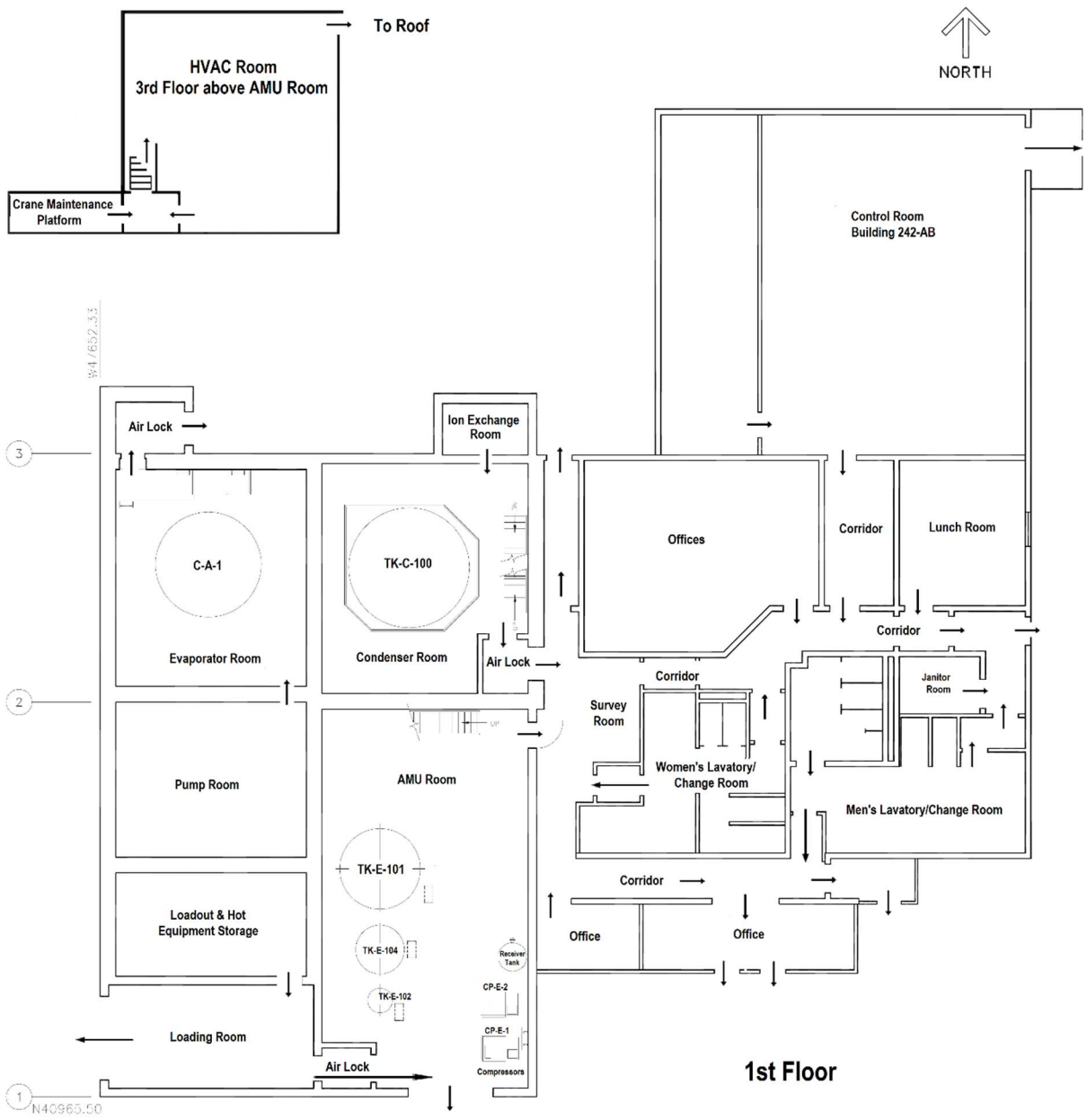

Figure 1. 242-A Evaporator Evacuation Routes

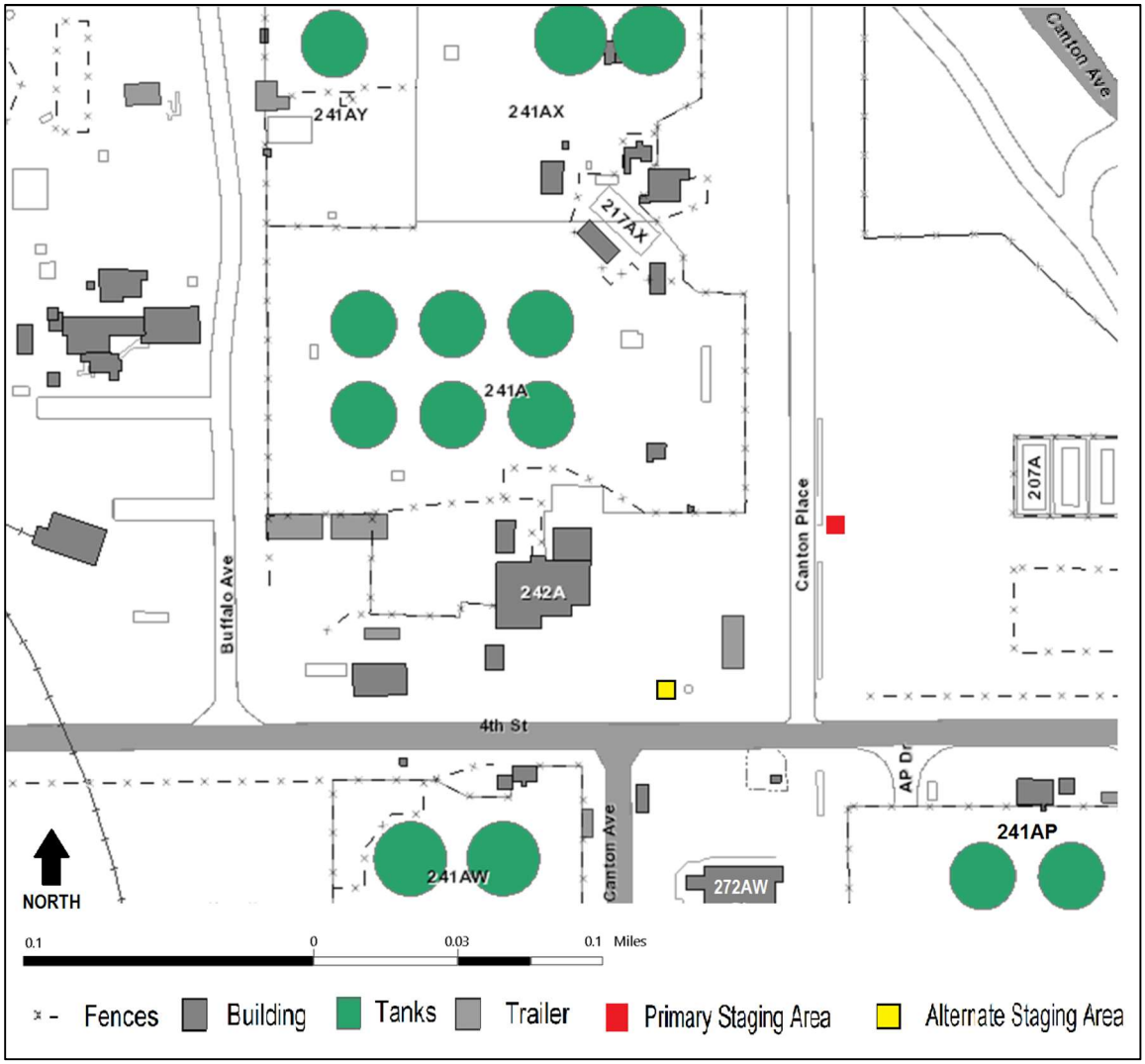

Figure 2. 242-A Evaporator Staging Areas

7.2.1 Loss of Utilities

The 242-A Evaporator is designed to safely shutdown upon a loss of utilities; as such, a loss of utilities in general will not lead to an emergency event at the 242-A Evaporator. A case-by-case evaluation is required for each event to determine loss of utility impacts. When a BED determines a loss of utility impact, actions are taken to ensure dangerous and/or mixed waste is being properly managed, to the extent possible given event circumstances. As necessary, the BED will stop operations and take appropriate actions until the utility is restored. If loss of utilities at the 242-A Evaporator results in a major process disruption/loss of plant control, additional actions and notifications per Section 7.2.2 are performed.

7.2.2 Major Process Disruption/Loss of Plant Control

Upon loss of the MCS, the control room operator stops all maintenance activities, instructs all non-essential personnel to leave the facility, and notifies the Shift Manager. The Shift Manager directs temporary backside inspections to monitor for malfunctioning equipment and instructs the control room operator to attempt a reboot of MCS components. If the reboot fails, then a manual shutdown of process operations may be performed.

7.2.3 Pressure Release

For response to pressure hazards (e.g. steam, raw water, sanitary water, compressed air, and pressurized cylinders) 242-A personnel perform SWIM actions (see Section 7.1), and inform the Shift Manager. 242-A personnel response includes troubleshooting to determine the cause and location of the pressure release, verification of valve line-ups to attempt securing of the release, and then shutdown of the respective system if determined necessary.

7.2.4 Fire and/or Explosion

In the event of a fire and/or explosion, the discoverer activates a fire alarm (pull box), calls 911 from site phones (509-373-0911 from a cellular phone), or verifies that 911 has been called. Automatic initiation of a fire alarm (through the smoke detectors and sprinkler systems) is also possible.

- Unless otherwise instructed, personnel shall evacuate the area/building by the nearest safe exit and proceed to the designated staging area for accountability.
- On actuation of the fire alarm, ONLY if time permits, personnel should shutdown equipment, secure waste and lock up classified materials (or hand carry them out). The alarm automatically signals the Hanford Fire Department.
- If the CA1 Vessel contains waste, an immediate shutdown of the evaporator may be directed. If so, then:
    - Monitoring of DST 241-AW-102 and the Slurry Receiving Tank level readings may be directed.
    - Securing of raw water may be directed.
    - Depending on the level readings for DST 241-AW-102 and the Slurry Receiving Tank, air compressors may need to be shutdown.
- The BED establishes the initial command post, obtains all necessary information pertaining to the incident, and sends a representative to meet Hanford Fire Department.
- The BED provides a formal turnover to the IC when the IC arrives at the initial command post.
- The BED informs the Hanford Site ERO as to the extent of the emergency (including estimates of dangerous waste and mixed waste quantities released to the environment).

- If operations are stopped in response to the fire, the BED ensures that systems are monitored for leaks, pressure buildup, gas generation, and ruptures.
- Hanford Fire Department firefighters extinguish the fire as necessary.

NOTE: Following a fire and/or explosion, WAC 173-303-640(7) will be addressed for the 242-A Evaporator regarding fitness for use.

7.2.5 Hazardous Material, Dangerous and/or Mixed Waste Spill

Spills of hazardous materials, dangerous or mixed waste can result from many sources including process leaks, container spills or leaks, damaged packages or shipments, or personnel error. Spills of mixed waste are complicated by the need to deal with the extra hazards posed by the presence of radioactive materials. Abnormal radiation actions also may be implemented if conditions are warranted. Timeframes for specific responses may be affected by radiological conditions.

The discoverer notifies the BED and initiates SWIM response (see Section 7.1).

Depending on indications, facility personnel may determine status of ventilation systems, and if necessary have radiological/chemical monitoring initiated.

NOTE: For response to leaks or spills and disposition of leaking or unfit-for-use tank systems, refer to WAC 173-303-640(7).

7.2.5.1 Damaged or Unacceptable Shipments

The 242-A Evaporator does not receive onsite transfers or off-site shipments of dangerous and/or mixed waste that require manifesting under WAC 173-303-370. The 242-A Evaporator is designed to receive waste from the DST System through transfer lines.

7.2.6 Radioactive Material Release

Upon indication of a potential radioactive material release, the Shift Manager directs personnel to a safe location. The Shift Manager performs accountability and directs facility personnel to investigate the cause of the release. If process operations are in progress and it is safe to do so, the Shift Manager may direct facility personnel to perform a 242-A Evaporator shutdown. Radiation surveys may be performed if necessary, and ventilation systems are evaluated for operation and potential shutdown to minimize contamination migration.

7.2.7 Criticality

Not applicable.

7.3 Response to Natural Phenomena

Depending on the severity of the event, the BED reviews site-wide and 242-A Evaporator emergency response procedure(s) as required; and categorizes and/or classifies the event. If necessary, the BED initiates area protective actions and Hanford Site ERO activation.

The steps identified in the following description of actions do not have to be performed in sequence because of the unanticipated sequence of incident events.

7.3.1 Seismic Event

The Hanford Site EROs' primary role in a seismic event is coordinating the initial response to injuries, fires, fire hazards, and acting to contain or control radioactive, and/or hazardous material releases.

Individuals should remain calm and stay away from windows, steam lines, and hazardous material storage locations. Once the shaking has subsided, individuals should evacuate carefully and assist personnel needing help. The location of any trapped individuals should be reported to the BED or is reported to 911 from site phones (509-373-0911 from a cellular phone). The BED takes whatever actions are necessary to minimize damage and personnel injuries. Responsibilities include the following:

- Coordinating searches for personnel and potential hazardous conditions (e.g., fires, spills).
- Conducting accountability.
- Securing utilities and facility operations.
- Arranging rescue efforts, and notifying 911 from site phones (509-373-0911 from a cellular phone) for assistance.
- Determining if hazardous materials were released.
- Determining current local meteorological conditions.
- Warning other facilities and implementing protective actions if release of hazardous materials poses an immediate danger.
- Providing personnel and resource assistance to other facilities, if required and possible.

7.3.2 Volcanic Eruption/Ash Fall

When notified of an impending ash fall, the BED will implement measures to minimize the impact of the ash fall. BED actions include the following:

- Installing filter media over building ventilation intakes.
- Installing filter media or protective coverings on outdoor equipment that may be adversely affected by the ash.
- Shutting down some or all operations and processes.
- Sealing secondary use exterior doors.

If other emergency conditions arise as a result of the ash fall (e.g., fires due to electrical shorts), response is as described in other sections of this plan.

7.3.3 High Winds/Tornadoes

Upon notification of impending high winds, the BED takes steps necessary to secure all outdoor waste and hazardous material containers and storage locations. All doors and windows are shut, and personnel are warned to use extreme caution when entering or exiting the building. Ventilation, utilities, and operations will be shut down as appropriate to lessen the severity of the impact.

7.3.4 Flood

Not applicable.

7.3.5 Range Fire

Responses to range fires are handled by preventive measures (e.g., keeping hazardous material, and waste accumulation areas free of combustible materials such as weeds and brush). If a range fire breaches the 242-A Evaporator boundary, the response is as described in Section 7.2.4.

7.3.6 Aircraft Crash

The response to an aircraft crash is the same as for a fire and/or explosion (Section 7.2.4).

7.4 Security Contingencies

The steps identified in the following description of actions do not have to be performed in sequence because of the unanticipated sequence of incident events. Attachment A provides a list of procedures.

7.4.1 Bomb Threat/Explosive Device

Sections 7.4.1.1 through 7.4.3 describe actions to be taken for security contingencies.

7.4.1.1 Telephone Threat

Individuals receiving telephoned threats attempt to get as much information as possible from the caller (using the bomb threat checklist if available). Upon conclusion of the call, or during the call if possible, notify the BED and Hanford Patrol by calling 911 (do not use wireless communications devices for reporting a bomb threat/explosive device unless beyond 100 feet from the suspected object).

When notified, the BED ensures the 242-A Evaporator protective actions have been taken and questions personnel at the staging area regarding any suspicious objects. When Hanford Patrol personnel arrive, follow their instructions.

7.4.1.2 Written Threat

Receivers of written threats handle the letter as little as possible. Notify the BED and Hanford Patrol by calling 911 (do not use wireless communications devices for reporting a bomb threat/explosive device unless beyond 100 feet from the suspected object). Depending on the content of the letter, the BED might evacuate the affected locations. The letter is turned over to Hanford Patrol and their instructions are followed.

7.4.2 Hostage Situation/Armed Intruder

The discoverer of a hostage situation or armed intruder reports the incident to 911 from site phones (509-373-0911 from a cellular phone) and to the BED if possible. Hanford Patrol will determine the remaining response actions.

7.4.3 Suspicious Object

The discoverer of a suspicious object reports this object to the BED and to 911 (do not use wireless communications devices for reporting a bomb threat/explosive device unless beyond 100 feet from the suspected object), if possible, and ensures that the object is not disturbed.

7.5 Response to Unexpected/Unidentified Odors

Not applicable.

7.6 Prevention of Recurrence or Spread of Fires, Explosions, or Releases

The BED, as part of the Incident Command Organization, takes the steps necessary to ensure that a secondary release, fire, or explosion does not occur. The BED will take measures, where applicable, to stop processes and operations; collect and contain released wastes and remove or isolate containers. The BED shall also monitor for leaks, pressure buildups, gas generation, or ruptures in valves, pipes or other equipment, whenever this is appropriate.

8.0 TERMINATION OF EVENT, INCIDENT RECOVERY, AND RESTART OF OPERATIONS

DOE/RL-94-02, Section 9.0, describes actions for event termination, incident recovery, restart of operations, and incompatible waste.

8.1 Termination of Event

For events where the Hanford EOC is activated, the Site Emergency Director has the authority to declare event termination. This decision is based on input from the BED, IC, and other ERO members. For events where the Hanford EOC is not activated, the IC and staff will declare event termination.

8.2 Incident Recovery and Restart of Operations

Immediately after an emergency, the BED 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 242-A Evaporator. A recovery plan is developed when necessary in accordance with DOE/RL-94-02, Section 9.2.

If this plan was implemented according to Section 4.0 of this plan, Ecology is notified that the 242-A Evaporator is in compliance with cleanup activities, as described in DOE/RL-94-02, Section 5.1.2.2, before operations can resume.

8.2.1 Incompatible Waste

After an event, the BED or the onsite recovery organization ensures that no waste that might be incompatible with the released material is treated, stored, and/or disposed of until cleanup is completed. Clean up actions are taken by 242-A Evaporator personnel or other assigned personnel. DOE/RL-94-02, Section 9.2.3, describes actions to be taken.

Waste from cleanup activities is designated and managed as newly generated waste. A field check for compatibility is performed before storage, as necessary. Incompatible wastes are not placed in the same container. Containers of waste are placed in approved storage areas appropriate for their compatibility class.

If incompatibility of waste was a factor in the incident, the BED or the onsite recovery organization ensures that the cause is corrected.

8.2.2 Post Emergency Equipment Maintenance and Decontamination

All equipment used during an incident is decontaminated (if practicable) or disposed of as spill debris. Decontaminated equipment is checked for proper operation before storage for subsequent use. Consumable and disposable materials are restocked.

The BED ensures that all equipment is cleaned and fit for its intended use before operations are resumed. Depleted stocks of neutralizing and absorbing materials are replenished.

9.0 EMERGENCY EQUIPMENT

Emergency resources and equipment for the 242-A Evaporator are presented in this section in accordance with WAC 173-303-340(1) and WAC 173-303-201(3); and WAC 173-303-350(3)(e) and WAC 173-303-201(9)(b). Emergency equipment must be tested and maintained to assure its proper operation in time of emergency. No personnel protective equipment (PPE) or fire extinguishers are used because a sprinkler system is maintained throughout the facility for fire suppression prior to the arrival of the Hanford Fire Department.

Sufficient space is maintained on the exterior of the 242-A Evaporator to allow access of personnel and equipment responding to fires, spills, or other emergencies in accordance with WAC 173-303-340(3) and WAC 173-303-201(6). Unobstructed fire lanes run from main entrance to allow emergency vehicle access to the main entrance and the nearby fire hydrant. The interior space is designed to allow access by emergency response personnel while maintaining barriers to contain releases of hazardous substances as defined in WAC 173-303-040, to meet the *requirements* of WAC 173-303-340(3) and/or WAC 173-303-201(6). Exit (egress) paths in the rooms containing dangerous waste are checked daily to ensure the walkways have not been obstructed.

9.1 Fixed Emergency Equipment

FIXED EMERGENCY EQUIPMENT		
Type	**Location**	**Capability**
Emergency lighting	242-A building	Provide temporary lighting
Eye wash station	Aqueous Makeup Room	Assist in decontamination/ flushing of chemicals/materials from personnel
Safety shower	Aqueous Makeup Room Condenser Room	
Water Supply	Riser PIV-119-R (near west entrance to 242-A building)	At adequate volume and pressure to support fire suppression
Wet pipe sprinkler system	242-A building	Support fire suppression

9.2 Portable Emergency Equipment

PORTABLE EMERGENCY EQUIPMENT		
Type	**Location**	**Capability**
Portable Safety Shower and Eye Wash Station	Staged as needed for special evolutions and maintenance	Assist in decontamination/ flushing of chemicals/ materials from the eyes, body, and face of personnel
Fire Extinguishers	242-A Evaporator building Outside 242-A-702 building Outside 242-A-81 building	Support fire suppression

9.3 Communications Equipment/Warning Systems

Whenever dangerous waste is being poured, mixed, spread, or otherwise handled, or if there is ever just a single employee on the premises while the facility is operating, the employee or employees involved must have immediate access to a telephone, portable radios, public address system (PAX), or fire alarm pull box capable of summoning emergency assistance.

COMMUNICATIONS EQUIPMENT		
TYPE	**LOCATION**	**CAPABILITY**
Fire alarm/pull boxes	AMU Room Condenser Room 242-A Control Room Loadout and Hot Equipment Storage Room	Activate the building fire alarm and notifies the Hanford Fire Department
PAX	AMU Room Condenser Room 242-A Control Room Loadout and Hot Equipment Storage Room	Provides communications and public address capabilities
2-Way Portable Radios	242-A Control Room	Communication to the 242-A Control Room
Telephone	242-A Control Room	Internal and external communication capable of summoning emergency assistance

NOTE: Site-wide communications and warning systems are identified in DOE/RL-94-02, Section 5.2.5.

9.4 Personal Protective Equipment

Not applicable.

9.5 Spill Control and Containment Supplies

SPILL KITS AND SPILL CONTROL EQUIPMENT		
Type	**Location**	**Capability**
Spill Response Kit (PPE and absorbents)	242-A building	Support containment and cleanup of hazardous material spills

9.6 Incident Command Post

The IC determines the location of the ICP based on the event and may use the Hanford Fire Department Mobile Command Unit if necessary. 274-AW maybe used by the BED for initial response management and may be used as the formal ICP as determined by the IC.

10.0 COORDINATION AGREEMENTS

RL has established a number of coordination agreements or memoranda of understanding (MOU) with various agencies to ensure proper response resource availability for incidents involving the Hanford Site. A description of the agreements is contained in DOE/RL-94-02, Section 3.0, Table 3-1.

11.0 REQUIRED REPORTS

Post incident written reports are required for certain incidents on the Hanford Site. The reports are described in DOE/RL-94-02, Sections 5.1.1.2.4 and 5.1.2.2.

Facility management must note in the 242-A Evaporator Operating Record, the time, date and details of any incident that requires implementation of the contingency plan (refer to Section 4.0 of this plan). Within 15 days after the incident, a written report must be submitted to Ecology. The report must include the elements specified in WAC 173-303-201(14)(k) or WAC 173-303-360(2)(k).

12.0 PLAN LOCATION AND AMENDMENTS

Copies of this plan are maintained at the following location:

- 242-A Evaporator Shift Office

Copies of this plan and the list of qualified BEDs are maintained at the following location:

- Central Shift Office (274-AW)

This plan will be reviewed and immediately amended as necessary, in accordance with DOE/RL-94-02, Section 14.3.1.1.

13.0 REFERENCES

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

DOE-0223, *Emergency Plan Implementing Procedures*, RLEP 1.0, "Recognizing and Classifying Emergencies", Appendix 1-2, 242-A Evaporator, U.S. Department of Energy Richland Operations Office.

DOE-0223, *Emergency Plan Implementing Procedures*, RLEP 1.1, "Hanford Incident Command System and Event Recognition and Classification", U.S. Department of Energy Richland Operations Office.

DOE-0223, *Emergency Plan Implementing Procedures*, RLEP 3.24, "Notification, Reporting, and Processing of Operations Information", U.S. Department of Energy Richland Operations Office.

DOE-0223, *Emergency Plan Implementing Procedures*, RLEP 3.4, "Emergency Termination, Reentry, and Recovery", U.S. Department of Energy Richland Operations Office.

Hanford Facility Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste, Permit Number WA7890008967, Washington State Department of Ecology, Olympia, Washington.

TFC-OPS-OPER-C-24, *Occurrence Reporting*, Washington River Protection Solutions, LLC, Richland, Washington.

Washington Administrative Code 173-303, *Washington State Dangerous Waste Regulations,* Washington State Department of Ecology, Olympia, Washington.

ATTACHMENT A –

LISTING OF PROCEDURES

U.S. Department of Energy Richland Operations Office DOE-0223, *Emergency Plan Implementing Procedures*, RLEP 1.0, *Recognizing and Classifying Emergencies,* Appendix 1-2,M*, 242-A Evaporator*.

U.S. Department of Energy Richland Operations Office DOE-0223, *Emergency Plan Implementing Procedures*, RLEP 1.1, *Hanford Incident Command System and Event Recognition and Classification*.

U.S. Department of Energy Richland Operations Office DOE-0223, *Emergency Plan Implementing Procedures*, RLEP 3.24, *Notification, Reporting, and Processing of Operations Information*.

U.S. Department of Energy Richland Operations Office DOE-0223, *Emergency Plan Implementing Procedures*, RLEP 3.4, *Emergency Termination, Reentry, and Recovery*.

200 Area Emergency Response Organization Listing, Washington River Protection Solutions, LLC, Richland, WA

Tank Farms Emergency Response Procedures

TF-ERP-001, *Tank Farms Take Cover/Personnel Accountability/and Area Evacuation*

TF-ERP-008, *Seismic Event Response*

Facility-Specific Abnormal Operating Procedures

TF-AOP-015, *Response to Reported Odors or Unexpected Changes to Vapor Conditions*

TF-AOP-EVAP-001, *Emergency Shutdown of Utility Support Systems*

TF-AOP-EVAP-002, *242-A Evaporator Loss of Electrical Power*

TF-AOP-EVAP-003, *242-A Response to Evaporator Loss of Raw Water System*

TF-AOP-EVAP-004, *242-A Response to Evaporator Loss of K-1 Ventilation System*

TF-AOP-EVAP-005, *242-A Response to Evaporator Loss of Steam System*

TF-AOP-EVAP-006, *242-A Evaporator Loss of Compressed Air System*

TF-AOP-EVAP-007, *242-A Evaporator Loss of MCS Control*

TF-AOP-EVAP-008, *242-A Evaporator Pressure Hazards*

TF-AOP-EVAP-009, *Response to Process Upset*

TF-AOP-EVAP-013, *Respond to Volcanic Eruption and Ashfall at the 242-A Evaporator*

TF-AOP-EVAP-014, *Response to 242-A Evaporator Loss of VCS Control*

242-A Facility-Specific Emergency Response Procedures

TF-ERP-EVAP-004, *242-A Evaporator Bomb Threat/Suspicious Object*

TF-ERP-EVAP-005, *242-A Respond to Evaporator High Radiological Release*

TF-ERP-EVAP-006, *242-A Evaporator Fire*

TF-ERP-EVAP-014, *242-A Evaporator High Winds/Tornado*

TF-ERP-EVAP-015, *242-A Respond to Waste-Feed Release into Pump Room or Evaporator Room*

ATTACHMENT B –

RCRA PERMIT APPLICABILITY MATRIX FOR TSD ACTIVITIES

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 nonsudden release of dangerous waste or dangerous waste constituents to air, soil, or surface or ground water, which could threaten the public health or the environment. This Section describes preparations and preventive measures, which help avoid or mitigate such situations.	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 9.3.
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 9.3 Units summon assistance by calling the Hanford Patrol 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 section 9.1, 9.2, 9.5
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 9.1
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 9.0
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 9.3

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
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 9.3
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.	Parts III, V, and VI of the Hanford Facility Dangerous Waste Permit (WA7890008967) include description of how each unit meets this requirement. For central accumulation areas, BEP Section 9.0
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.
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.
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.
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.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-350(1)	Purpose. The purpose of this Section and WAC 173-303-360 is to lessen the potential impact on the public health and the environment in the event of an emergency circumstance, including a fire, explosion, or unplanned sudden or nonsudden release of dangerous waste or dangerous waste constituents to air, soil, surface water, or ground water by a facility. A contingency plan must be developed to lessen the potential impacts of such emergency circumstances, and the plan must be implemented immediately in such emergency circumstances.	DOE/RL-94-02, Sections 1.1 and 1.2.	BEP section 1.0. Identified sections of the BEP/FRP are part of the contingency plan.
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 nonsudden 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 nondangerous waste (non-Hazardous Waste Management Act or nondangerous 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 Identified sections of the BEP/FRP are part of the contingency plan.
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[1].	BEP Section 7.1 and subsections and Section 7.2, 7.2.1, 7.2.2, 7.2.3, 7.2.4, 7.2.5, 7.2.5.1, 7.3 and subsections.

[1] 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 I.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 I.C.3.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
WAC 173-303-350(3)(b)	The contingency plan must contain the following: (b) A description of the actions which will be taken in the event that a dangerous waste shipment, which is damaged or otherwise presents a hazard to the public health and the environment, arrives at the facility, and is not acceptable to the owner or operator, but cannot be transported, pursuant to the requirements of WAC 173-303-370(5), Manifest system, reasons for not accepting dangerous waste shipments;	Requirement is met at the unit level.	BEP Section 7.2.5.1
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.
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 Sections 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 Sections 9.1, 9.2, 9.3, 9.4, 9.5 and 9.6
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.	BEP Section 7.1.1
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 12.0
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.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
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 12.0
WAC 173-303-350(5)(b)	(b) The plan fails in an emergency;	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 12.0
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 12.0
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 12.0
WAC 173-303-350(5)(e)	(e) The list of emergency equipment changes.	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 12.0
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.
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.
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 3.1 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 7.1 and subsections, and 7.2 and subsections

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
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 4.0
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 4.0
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 4.0
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 7.1
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 4.0
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 4.0
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 7.5
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 Sections 7.2.4 and 7.2.5
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 8.2

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
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 8.2.1
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 8.2.2
WAC 173-303-360(2)(j)	Emergency procedures. (j) The owner or operator must notify the department, and appropriate local authorities, that the facility is in compliance with (i) of this subsection before operations are resumed in the affected area(s) of the facility.	DOE/RL-94-02, Section 5.1.2.2.	BEP Section 8.2
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 11.0

ATTACHMENT C –

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 nonsudden 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 9.3.
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 9.3 Units summon assistance by calling the Hanford Patrol 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 9.1, 9.2, 9.5
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 9.1
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 9.0
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.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
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 9.3
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 9.3
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 9.0.
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.
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.
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.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
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 owner~~,~~ or operator 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 ~~that~~ the waiver is documented in the generator's operating record.		
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.
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 nonsudden 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 nonsudden 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.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
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 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 7.1 and subsections and Section 7.2, 7.2.1, 7.2.2, 7.2.3, 7.2.4, 7.2.5, 7.2.5.1
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 7.2.5.1
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.
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—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 Sections 3.1 The list of BEDs/BWs for CAAs and SAAs is maintained and collocated with the BEP.
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 Sections 9.1, 9.2, 9.3, 9.4, 9.5

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: (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.	BEP Section 7.1.1
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 12.0
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.	Requirement is met at the site 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.
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 12.0
WAC 173-303-201(12)(b)	(b) The plan fails in an emergency;	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 12.0
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 12.0
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 12.0
WAC 173-303-201(12)(e)	(e) The list of emergency equipment changes.	DOE/RL-94-02, Section 14.3.1.1.	BEP Section 12.0
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 3.1 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.

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
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 7.1 and subsections, and 7.2 and subsections
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 4.0
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 4.0
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 4.0
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 7.1
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 4.0
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 4.0
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 7.5

REQUIREMENT SOURCE	REQUIREMENT DESCRIPTION	SITE LEVEL (How/Where Met)	UNIT LEVEL (How/Where Met)
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 Sections 7.2.4 and 7.2.5
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 8.2
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 8.2.1
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 8.2.2
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 8.2
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 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 11.0

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