



BNFL-5232-EP-01

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**IDAHO NATIONAL ENGINEERING AND  
ENVIRONMENTAL LABORATORY**

**ADVANCED MIXED WASTE TREATMENT PROJECT**

Emergency Plan/RCRA Contingency Plan for the  
AMWTP

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**BNFL INC.**

**April 10, 2001**

**Prepared for**

**Advanced Mixed Waste Treatment Project  
Contract DE-AC07-97ID13481**

| MC#1

**For Information Only**



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**Approved by:**

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**BNFL Inc. ES&H Manager**

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**Date**

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**BNFL Inc. Quality Assurance Manager**

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**Date**

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**BNFL Inc. General Manager**

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**Date**

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**DOE-ID Project Manager**

\_\_\_\_\_  
**Date**

**For Information Only**



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## 1.0 Introduction

### 1.1 Purpose

This procedure supplements the INEEL (Idaho National Engineering and Environmental Laboratory) Emergency Plan/RCRA (Resource Conservation and Recovery Act) Contingency Plan by supplying facility-specific information for the Advanced Mixed Waste Treatment Project. The INEEL base plan format has been followed in this document to provide integration of the AMWTP Emergency/RCRA Contingency Plan with the existing INEEL emergency plans as well as with the DOE-ID Emergency Organization to ensure coordination of notification and response activities. In some sections of this procedure, no specific information is required because all of the necessary information is included in the INEEL base plan.

This plan provides the overall process to respond to and mitigate any consequences of emergencies that might arise at the AMWTP. This plan is the primary component in defining and directing the AMWTP Emergency Planning Program. The plan is implemented by detailed Emergency Plan Implementing Procedures (EPIs) which address specific tasks. This plan implements appropriate portions of 29 Code of Federal Regulations (CFR) and 40 CFR 264 and 265. Because the TSA-RE contains radiological and hazardous chemical materials in excess of threshold quantities defined in 10 CFR 30.7, Schedule C; 40 CFR 355, Appendix A; and 29 CFR 1910 this plan implements appropriate portions of these regulations as well.

This plan is applicable for the AMWTP during Phase 2 construction and waste stewardship activities. The technical basis for this plan is the Advanced Mixed Waste Treatment Project Basis for Interim Operation-TSA-RE Stewardship and Construction Activities, BNFL-5232-TSA-RE-BIO-01, Idaho Falls, Idaho.

### 1.2 AMWTP Description

The AMWTP is located within the Radioactive Waste Management Complex (RWMC) facility area of the Idaho National Engineering and Environmental Laboratory (INEEL). Currently the AMWTP includes construction activities that include modifications to buildings WMF-634 (Waste Characterization Facility) and WMF-636 (TSA-RE) and the construction of the Advanced Mixed Waste Treatment Facility (AMWTF). Figure 1-1 shows the RWMC area including the AMWTP and associated buildings. Figure 1-2 shows the AMWTP and associated buildings.

#### WMF-634

WMF-634 is an existing engineered metal building designed to store waste prior to shipment to WIPP. WMF-634 is currently being modified to serve as a waste characterization facility for the AMWTP. WMF-634 contains no radioactive or hazardous materials during phase 2.

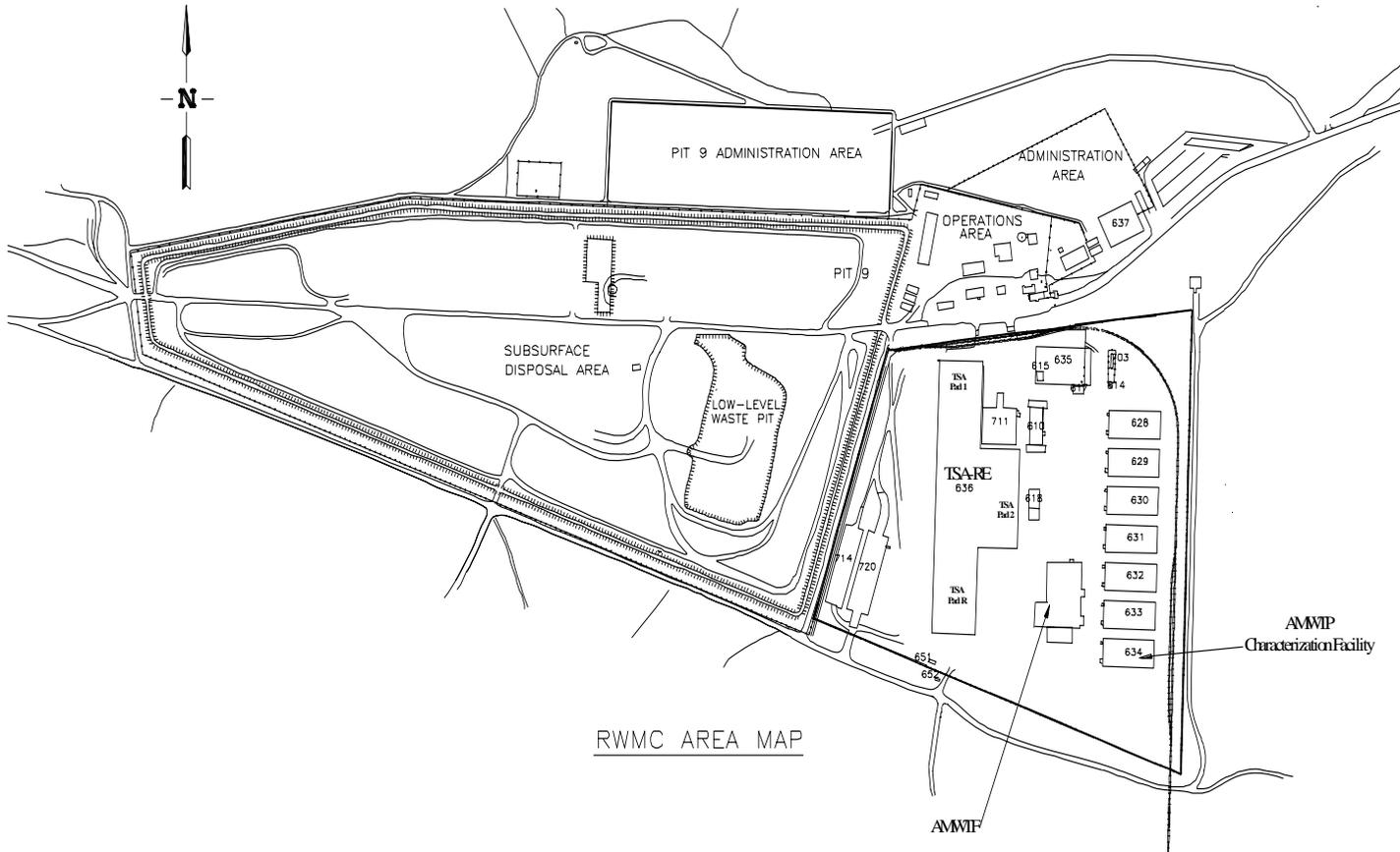
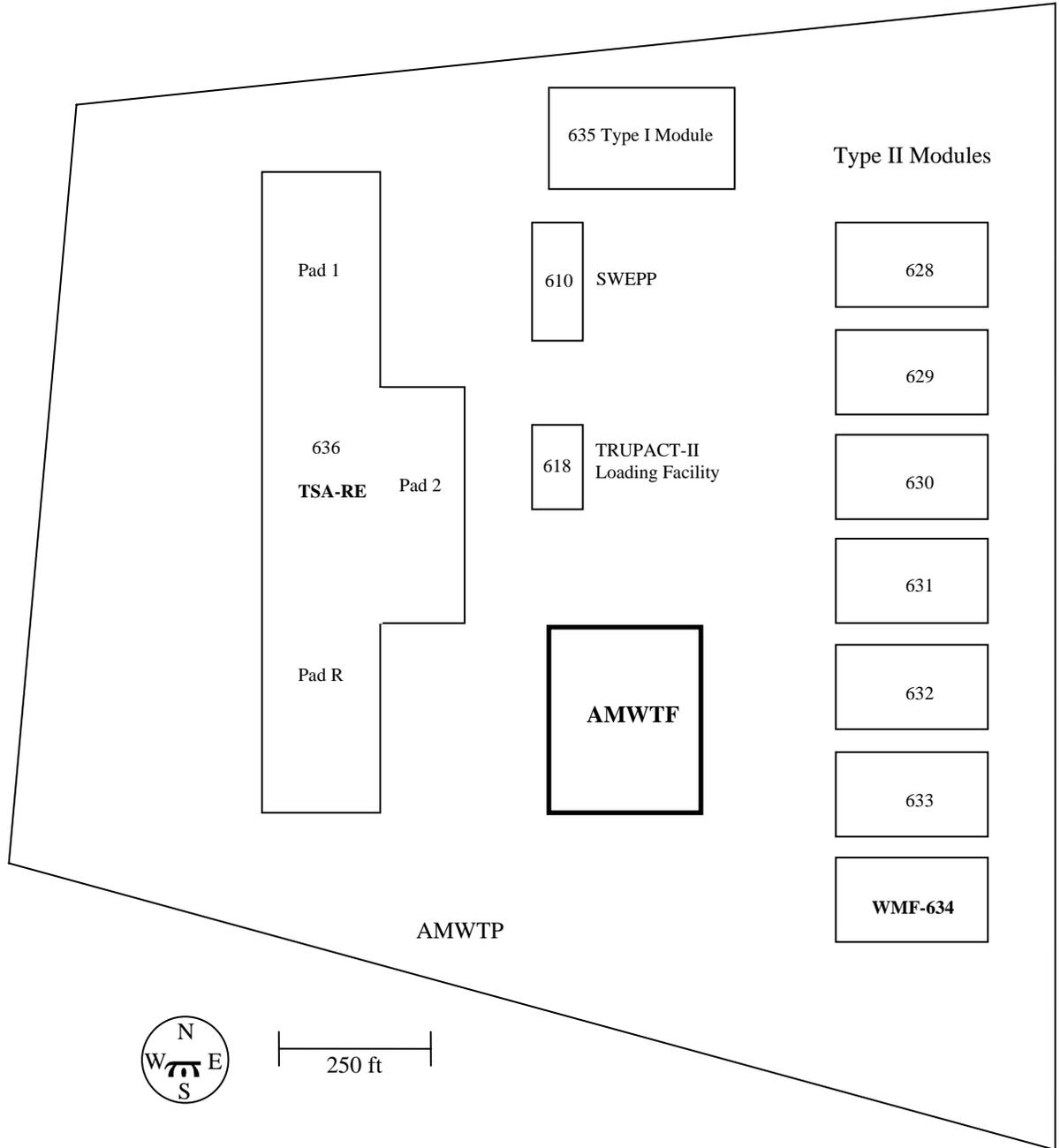


Figure 1-1. RWMC Area Map



AMWTF - Advanced Mixed Waste Treatment Facility  
 TSA-RE - transuranic Storage Area – Retrieval Enclosure  
 WMF-634 – Waste Characterization Facility

**Figure 1-2.** General layout of Advanced Mixed Waste Treatment Project facilities.



Modifications to 634 include: insulating the entire building, additions to heating system, addition of two control rooms with independent HVAC and fire detection and protection, addition of a coring room with independent ventilation systems and fire detection and protection, installation of characterization equipment and conveyors, installation of box assay shield wall, addition of forklift access to drum assay systems, and addition of a monorail hoist support from the coring room roof.

### **WMF-636 (TSA-RE)**

The TSA-RE (WMF-636) is an existing engineered metal building situated at the RWMC at the INEEL. Over 100,000 waste containers containing transuranic and alpha low-level mixed waste are stored on TSA Pad 1, Pad 2, and Pad R within the TSA-RE. Ninety percent of the containers are 55-gallon steel drums and the remainder of the containers are boxes.

The TSA-1 and TSA-2 pads are earthen-covered, asphalt surfaced, storage pads. The TSA-R pad is a partially earthen-covered, asphalt surfaced, storage pad. Prior to the waste stacks being covered with the earthen berm, the stacked containers were covered with plywood and then polyvinyl sheeting.

The pads in the TSA-RE were each constructed with a lateral slope across the width, and a slight (approximately 1%) slope along the length that forms a shallow sloping trough to prevent water accumulation. The TSA-1 and TSA-2 were constructed with a downhill slope towards the north, and the TSA-R was constructed with a downhill slope to the south. Included on the interior of the retrieval enclosure are engineered trenches that will further direct water drainage to one of four underground 20,000-gallon drain tanks.

Fire protection in the retrieval enclosure is provided by eight dry-pipe sprinkler systems. The original design was a pre-action sprinkler system but was later converted to a dry pipe sprinkler system. Manual pull boxes initiate local and remote alarm signals. Additional manual fire suppression equipment is available for workers in the TSA-RE during construction activities. The RWMC fire alarm system, which serves all TSA facilities, is linked to the INEEL central fire alarm monitoring system. Any alarm condition is transmitted to the INEEL system's computer located at the fire station at the Central Facilities Area (CFA). The computer activates an alarm printer and audible signal in the fire station and notifies the INEEL Warning Communication Center (WCC).

BNFL Inc.'s mission is to maintain responsible stewardship of the waste stored within the TSA-RE in a manner that keeps the waste safely isolated from the environment and the public while minimizing hazards to the workforce. In performing its mission, BNFL Inc. emphasizes processes that ensure the waste remains contained, and provides for effective monitoring of the waste.

### **AMWTF**

The AMWTF will be constructed on the southern portion of the 56-acre TSA, between the existing TSA-RE building to the west, and the seven Type II modules to the east (see

Figure 1-1). The AMWTF building layout is designed for the material handling and process flow requirements of the facility.

The AMWTF will be a two-story industrial structure with a rooftop mechanical penthouse and attached utility building. The overall dimensions for the AMWTF first (ground) floor will be approximately 230 ft x 275 ft (excluding the utility building). The general building height will be about 44 ft. The AMWTF will house approximately 52,000 ft<sup>2</sup> per floor. The rooftop mechanical penthouse will enclose approximately 15,500 ft<sup>2</sup> of additional space and the roof will be about 67 ft above ground level. The utility building, attached to the south end of the AMWTF, will be about 64 ft x 114 ft. The main stack, also on the south end of the building, will extend above the roof of the utility building. The stack (actually an open rectangular steel frame that supports the individual flues) will be approximately 90 ft high.

### 1.3 Hazards Assessment

A hazards analysis has been performed for the TSA-RE. This hazards analysis, contained in the AMWTF TSA-RE BIO (BNFL 2001), provides the basis for development of the AMWTF Emergency Action Levels (EALs) and default protective actions needed to best ensure the safety of workers and the public. Detailed information about the hazards analysis is contained in the TSA-RE BIO (BNFL 2001). This hazards analysis evaluated the possible accident scenarios that could result in the release of radioactive or hazardous materials during Phase 2 activities at the AMWTF. This analysis indicates that energetic events such as potential fires would be required to have a substantive release from the waste. The waste stored within the TSA-RE contains hazardous chemical inventories that exceed threshold quantities. In all cases, the scenarios analyzed indicated that hazardous materials do not pose a credible threat for initiating an operational emergency. Also, in each case, the protective actions taken in response to the potential radiological threats would also be appropriate for the hazardous materials. Radiological hazards in the waste stored within the TSA-RE include Am-241, Pu-238, -239, -240, -241, U-233, and Cm-244, mixed fission products, and activation products. All scenarios evaluated resulted in site area emergency classifications, alert classifications or less than alert classifications.

### 1.4 Population Distribution

There are no permanent residents at the INEEL. Larger communities near the INEEL (with corresponding 1990 populations) include Idaho Falls (43,929), Blackfoot (9,646), and Pocatello (46,080). The communities nearest the AMWTF are Atomic City (population 25), approximately 19.4 km (12.1 miles) to the southeast, and Butte City (population 59), approximately 19.4 km (12.1 miles) to the northwest. The total 1990 Butte County population is 3,342, with Arco, the largest town in Butte County, having 1,106 residents. Population densities in Butte, Bonneville, Bingham, Jefferson, and Clark counties are 1.3, 39.2, 17.9, 15.1, and 0.5 persons per square mile, respectively. Figure 1-3 shows the population distribution around the AMWTF.

Atomic City, Idaho, located less than 1 mile from the southern INEEL boundary, is the closest permanent community to the AMWTF. About 25 people live in Atomic City. More



detailed information regarding population distributions is available in the INEEL Emergency Preparedness Maps and Information document. Figure 1-3 shows the population distribution surrounding the AMWTP.

## 1.5 Utility Systems

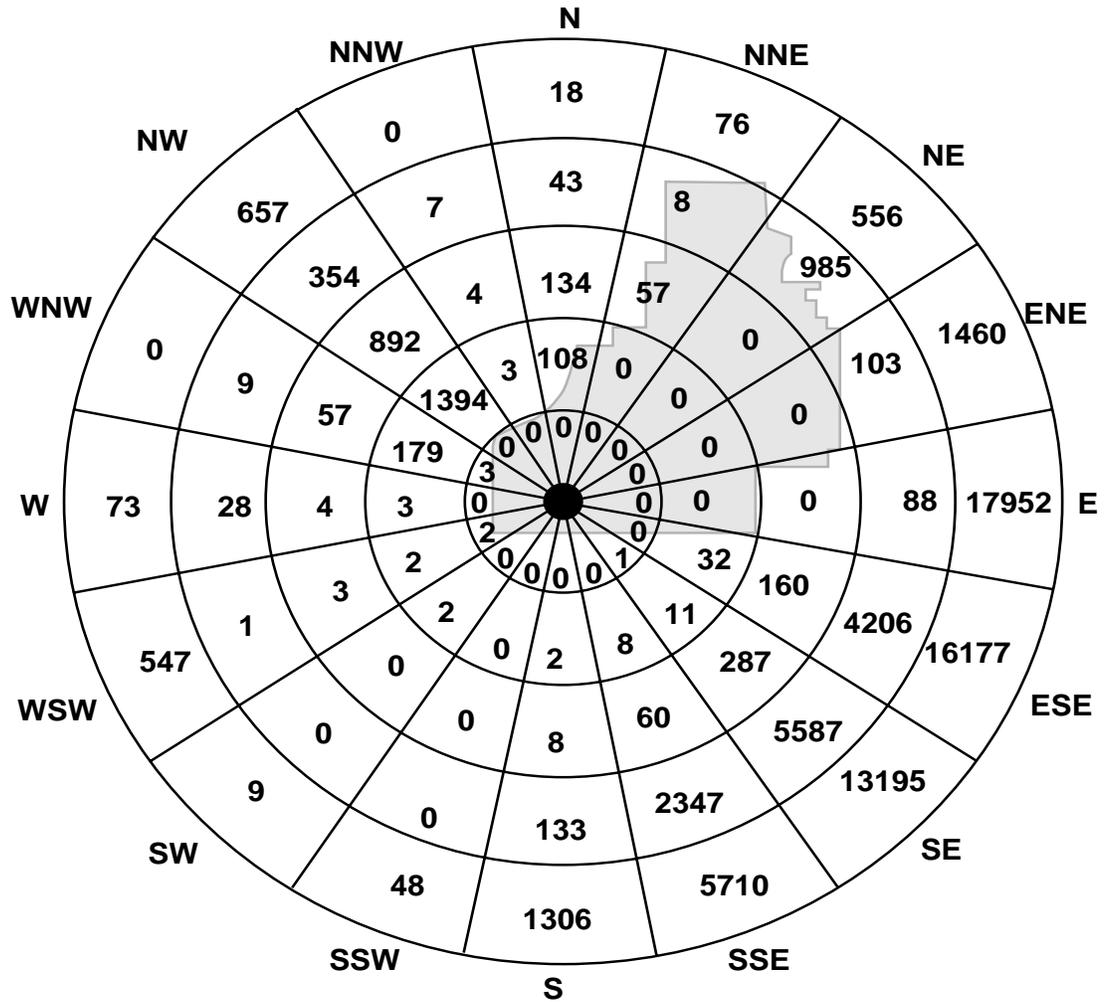
Power is supplied to the TSA-RE via the electrical distribution systems supplying the RWMC that is supplied by a 12.5kV, 3-phase transformer line from the Scoville Substation at the Central Facilities Area (CFA), via EBR-I. When power to the TSA-RE is interrupted, an un-interruptible power supply (UPS) provides power for emergency lighting.

Sewer service for the TSA-RE is provided by the RWMC sewer system that consists of lined and unlined cells located south of the RWMC. Potable and industrial water to the TSA-RE is supplied by the RWMC Facility Potable and Industrial Water Supply Systems. The RWMC potable and industrial water is supplied by a 240 gallon per minute deep well pump located in WMF-603. The water is pumped into WMF-709 and WMF-727; both are 250,000-gallon water storage tanks. Water is distributed throughout the RWMC by two 250 gallon per minute supply pumps.

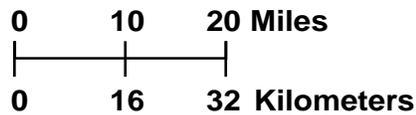
Normal access to the AMWTP is via Van Buren Boulevard and the RWMC Emergency Road to the Advanced Mixed Waste Treatment Project (AMWTP) construction gate located on the south side of the RWMC TSA, a distance of approximately 11km (6.8 miles) to the CFA Fire Station. These roads are all-weather routes intended for heavy truck use. Alternate evacuation routes have been designated should the normal RWMC access roads be unavailable. These routes are east to Farragut Boulevard leading to State Highway 20/26 and west to road T-12 leading to State Highway 20/26. These routes are shown in Figure D-1 of Appendix D of this plan.

The propane system supplying the TSA-RE is provided by the RWMC maintained propane tank, WMF-703, a 30,000-gallon storage tank. Remote filling and dispensing stations with emergency valve isolation capability and fire protection systems is provided for the storage tank.

**TOTAL POPULATION = 74,620**



SRV07



**Figure 1-3.** Population surrounding the AMWTP located at the RWMC



## 2.0 Emergency Response Organization

All information for this section is contained in the INEEL Base Plan with the exception of the following subsections.

### 2.1 Emergency Management Operations

#### 2.1.1 Emergency Management Personnel (Response)

Figure 2-1 depicts the AMWTP Command Post's Emergency Response Organization (ERO). As shown on this figure, the Emergency Coordinator is the minimum position to be staffed to make the Command Post operational. During emergencies originating within the AMWTP the Command Post will be manned with a BNFL Inc. Emergency Coordinator; the normal RWMC ERO personnel will man all other positions. RWMC may provide an alternate Emergency Coordinator to assist the BNFL Inc. Emergency Coordinator as required or requested.

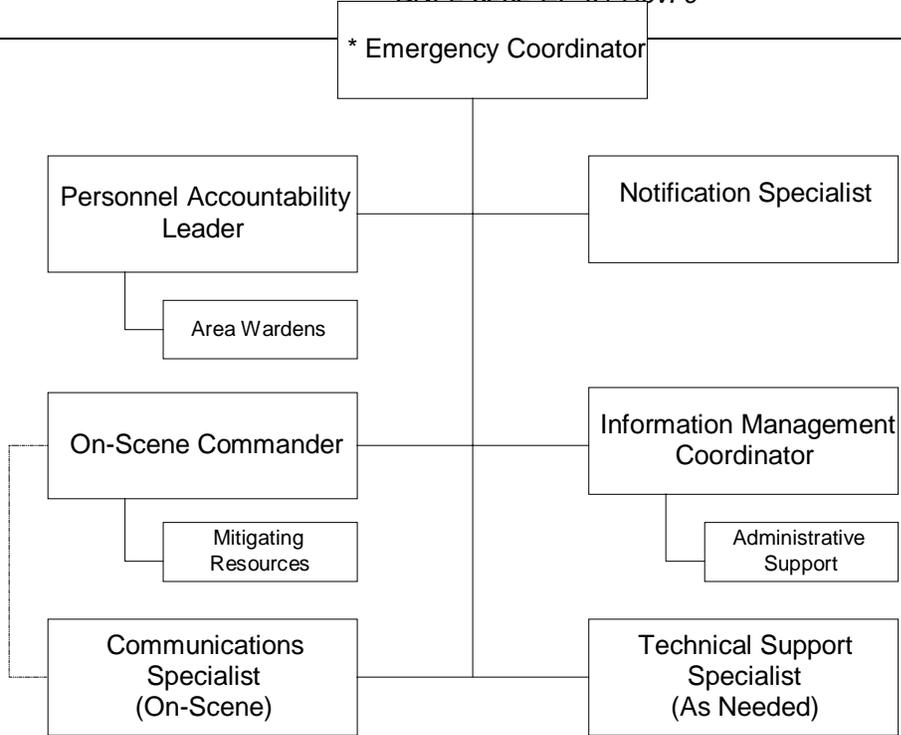
The EC or designated alternate is familiar with all aspects of the INEEL Emergency Plan/RCRA Contingency Plan, the AMWTP Emergency Plan/RCRA Contingency Plan, all operations and activities at the AMWTP, the location and characteristics of waste located within the AMWTP, the location of records for the facility, and the facility layout. Appendix I lists the names, addresses, and telephone numbers of the primary EC and potential designated alternates and specifies the EC succession of authority.

#### 2.1.2 INEEL Emergency Operations Center (EOC) Management Personnel (Response)

The BNFL Inc. senior manager or designee is the BNFL Liaison Officer to the Emergency Director for the INEEL EOC. The BNFL Inc. Liaison Officer is responsible for overall strategic management and for policy-making decisions involving BNFL Inc. facilities. General duties of the BNFL Inc. Liaison Officer include:

- Providing information and liaison support to the INEEL ED regarding the AMWTP.
- Making strategic decisions affecting BNFL Inc. facilities and property.
- Approving all information releases affecting BNFL Inc. facilities and property.
- Concur with Protective Action Recommendations (PAR) made to public officials when this function is transferred to the EOC from EC/EAM.

Concur with authorizing use of emergency exposure limits that affect BNFL Inc. personnel.



**Notes:**

1. The Emergency Coordinator is the minimum ERO position to make the Command Post operational
  2. All positions except for the Emergency Coordinator, On-Scene Commander, and Area Wardens are normally manned by RWMC qualified CP personnel
- \* minimum position to man the CP

**Figure 2-1** TSA-RE Command Post's Emergency Response Organization (ERO)



## 3.0 Offsite Response Interfaces

### 3.1 Overview

Federal, state, local, and tribal agencies participate with the Public Safety Liaison in the INEEL Offsite Emergency Planning Program, which, through agreements, defines cooperative emergency policies and procedures. Formal documentation of the participants defined role is recorded in federal interagency agreements, internal DOE agreements or directives, legislation and federal regulations, state regulations, and state and local emergency plans. Mutual aid agreements are documented in memoranda of understandings (MOUs), memoranda of agreements (MOAs), or letters of agreement. All affected offsite agencies, cited in the INEEL base plan, have entered into mutual aid agreements with DOE-ID. Additionally, BNFL, Inc. has entered into a Tri-Party Memorandum of Agreement with DOE and Bechtel BWXT, LLC to identify interfaces between the affected parties to acknowledge each party's responsibilities to work towards the successful completion of the AMWTP.



## 4.0 Operational Emergency Event Classes

### 4.1 Emergency Action Levels

The hazards analysis for the AMWTP (BNFL 2001) indicates that the worst case accident for the AMWTP is a site area emergency due to a fire in the TSA-RE that involves transuranic waste. While hazardous materials are present in the TSA-RE the hazards analysis indicates that incidents involving hazardous materials are not likely to be serious enough to warrant declaring an operational emergency. Emergency Action Levels (EAL) have been developed for the AMWTP. The EALs provide specific criteria for appropriately classifying operational emergencies.

### 4.2 AMWTP EALs

The AMWTP EALs are specific, predetermined, observable criteria used to determine the emergency classification and initial protective actions for operational emergencies. The AMWTP has performed a hazard analysis (BNFL 2001) to evaluate possible accident scenarios that could result in the release of radioactive or hazardous materials during Phase 2 activities at the AMWTP. This analysis indicates that energetic events such as potential fires would be required to have a substantive release from the waste stored at the TSA-RE. EALs were developed for the AMWTP as a result of this hazard analysis and are shown on the following pages.

#### 4.2.1 Responsibility for Classifying the Occurrence

The Emergency Coordinator (EC) will determine the occurrence category and, if applicable, the emergency class. The EC will declare the emergency level that most closely corresponds to apparent conditions, regardless of whether it can be determined that a specific EAL has been exceeded.

## AMWTP Emergency Action Levels



**1. Fire**  
**A. Alert**

<b>EAL</b>	<b>Area</b>	<b>Initiating Event/Condition</b>	<b>Protective Action</b>	<b>Related EAL(s)</b>
1.A.1	TSA-RE	Direct observation of a fire involving the TSA-RE <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	1.B.1 3.A.1 4.A.1
1.A.2	TSA-RE	Direct observation of a range fire having the potential to affect the TSA-RE <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	As required by conditions	1.B.2



**1. Fire**  
**B. Site Area Emergency**

<b>EAL</b>	<b>Area</b>	<b>Initiating Event/Condition</b>	<b>Protective Action</b>	<b>Related EAL(s)</b>
1.B.1	TSA-RE	Direct observation of a fire involving the TSA-RE <b>WITH</b> the breach of more than 18 boxes or 33 drums of TRU	1. If weather permits: A. Evacuate all nonessential personnel at least 3 km from the release B. Evacuate visitors from EBR-1 area (as a precaution)  2. If weather does not permit: A. Shelter all nonessential personnel between 100m and 3km from the release. B. Shelter all visitors at EBR-1 (as a precaution)	1.A.1 3.B.1 4.B.1
1.B.2	TSA-RE	Direct observation of a range fire having the potential to affect the TSA-RE <b>WITH</b> the potential to breach more than 18 boxes or 33 drums of TRU	1. If weather permits: A. Evacuate all nonessential personnel at least 3 km from the release B. Evacuate visitors from EBR-1 area (as a precaution)  2. If weather does not permit: A. Shelter all nonessential personnel between 100m and 3km from the release. B. Shelter all visitors at EBR-1 (as a precaution)	1.A.2

**1. Fire**  
**C. General Emergency**

None Considered Credible



## 2. Explosion

### A. Alert

EAL	Area	Initiating Event/Condition	Protective Action	Related EAL(s)
2.A.1	TSA-RE	Direct observation of a fire/explosion involving the TSA-RE <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	2.B.1 1.A.1 3.A.1 4.A.1

## 2. Explosion

### B. Site Area Emergency

EAL	Area	Initiating Event/Condition	Protective Action	Related EAL(s)
2.B.1	TSA-RE	Direct observation of a fire/explosion involving the TSA-RE <b>WITH</b> the breach of more than 18 boxes or 33 drums of TRU	<ol style="list-style-type: none"> <li>1. If weather permits:               <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution)</li> </ol> </li> <li>2. If weather does not permit:               <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	2.A.1 3.B.1 4.B.1

## 2. Explosion

### C. General Emergency

None Considered Credible



### 3. Radiological Release

#### A. Alert

EAL	Area	Initiating Event/Condition	Protective Action	Related EAL(s)
3.A.1	TSA-RE	Direct observation of a fire involving the TSA-RE <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	3.B.1 1.A.1
3.A.2	TSA-RE	Direct observation of an earthquake or volcanic eruption impacting the TSA-RE <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	3.B.2 4.A.2 5.A.2 11.A.2 12.A.2
3.A.3	TSA-RE	Direct observation of high winds impacting the TSA-RE that causes structural damage <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	3.B.3 4.A.3 5.A.3 11.A.3 12.A.3
3.A.4	TSA-RE	Direct observation of a breached box or drum of TRU during construction activities	Evacuate all nonessential personnel at least 100 m in all directions from the building	



**3. Radiological Release**  
**B. Site Area Emergency**

<b>EAL</b>	<b>Area</b>	<b>Initiating Event/Condition</b>	<b>Protective Action</b>	<b>Related EAL(s)</b>
3.B.1	TSA-RE	Direct observation of a fire involving the TSA-RE  <b>WITH</b> the breach of more than 18 boxes or 33 drums of TRU	<ol style="list-style-type: none"> <li>1. If weather permits:               <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release.</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution).</li> </ol> </li> <li>2. If weather does not permit:               <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	3.A.1 1.B.1 4.B.1 5.B.1 11.B.1 12.B.1
3.B.2	TSA-RE	Direct observation of an earthquake or volcanic eruption impacting the TSA-RE  <b>WITH</b> the breach of more than 18 boxes or 33 drums of TRU	<ol style="list-style-type: none"> <li>1. If weather permits:               <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release.</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution).</li> </ol> </li> <li>2. If weather does not permit:               <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	3.A.2 4.B.2 5.B.2 11.B.2 12.B.2



**3. Radiological Release**  
**B. Site Area Emergency (cont.)**

3.B.3	TSA-RE	<p>Direct observation of high winds impacting the TSA-RE that causes structural damage to the TSA-RE</p> <p><b>WITH</b></p> <p>the breach of more than 18 boxes or 33 drums of TRU</p>	<p>1. If weather permits:</p> <p>A. Evacuate all nonessential personnel at least 3 km from the release</p> <p>B. Evacuate visitors from EBR-1 area (as a precaution)</p> <p>2. If weather does not permit:</p> <p>A. Shelter all nonessential personnel between 100m and 3km from the release.</p> <p>B. Shelter all visitors at EBR-1 (as a precaution)</p>	<p>3.A.3 4.B.3 5.B.3 11.B.3 12.B.3</p>
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**3. Radiological Release**  
**C. General Emergency**

None Considered Credible



#### 4. Non Radiological Hazardous Material Release

##### A. Alert

EAL	Area	Initiating Event/Condition	Protective Action	Related EAL(s)
4.A.1	TSA-RE	Direct observation of a fire involving the TSA-RE <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	4.B.1 1.A.1 3.A.1 5.A.1 11.A.1 12.A.1
4.A.2	TSA-RE	Direct observation of an earthquake or volcanic eruption impacting the TSA-RE <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	4.B.2 3.A.2 5.A.2 11.A.2 12.A.2
4.A.3	TSA-RE	Direct observation of high winds impacting the TSA-RE that causes structural damage <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	4.B.3 3.A.3 5.A.3 11.A.3 12.A.3
4.A.4	TSA-RE	Direct observation of a breached box or drum of TRU during construction activities	Evacuate all nonessential personnel at least 100 m in all directions from the building	3.A.4 11.A.4

**4. Non Radiological Hazardous Material Release**  
**B. Site Area Emergency**

<b>EAL</b>	<b>Area</b>	<b>Initiating Event/Condition</b>	<b>Protective Action</b>	<b>Related EAL(s)</b>
4.B.1	TSA-RE	<p>Direct observation of a fire involving the TSA-RE</p> <p><b>WITH</b></p> <p>the breach of more than 18 boxes or 33 drums of TRU</p>	<ol style="list-style-type: none"> <li>1. If weather permits:               <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release.</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution).</li> </ol> </li> <li>2. If weather does not permit:               <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	<p>3.A.1</p> <p>1.B.1</p> <p>3.B.1</p> <p>5.B.1</p> <p>11.B.1</p> <p>12.B.1</p>
4.B.2	TSA-RE	<p>Direct observation of an earthquake or volcanic eruption impacting the TSA-RE</p> <p><b>WITH</b></p> <p>the breach of more than 18 boxes or 33 drums of TRU</p>	<ol style="list-style-type: none"> <li>1. If weather permits:               <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release.</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution).</li> </ol> </li> <li>2. If weather does not permit:               <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	<p>3.A.2</p> <p>3.B.2</p> <p>5.B.2</p> <p>11.B.2</p> <p>12.B.2</p>



**4. Non Radiological Hazardous Material Release**  
**B. Site Area Emergency (cont.)**

4.B.3	TSA-RE	Direct observation of high winds impacting the TSA-RE that causes structural damage to the TSA-RE <p style="text-align: center;"><b>WITH</b></p> the breach of more than 18 boxes or 33 drums of TRU	<ol style="list-style-type: none"> <li>1. If weather permits:           <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution)</li> </ol> </li> <li>2. If weather does not permit:           <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	3.A.3 3.B.3 5.B.3 11.B.3 12.B.3
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**4. Non Radiological Hazardous Material Release**  
**C. General Emergency**

None Considered Credible



## 5. Natural Phenomena

### A. Alert

EAL	Area	Initiating Event/Condition	Protective Action	Related EAL(s)
5.A.1	TSA-RE	Direct observation of an earthquake or volcanic eruption that involves fire in the TSA-RE <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	5.B.1 1.A.1 11.A.1 12.A.1
5.A.2	TSA-RE	Direct observation of an earthquake or volcanic eruption causing structural damage to the TSA-RE <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	5.B.2 3.A.2 4.A.2 11.A.2 12.A.2
5.A.3	TSA-RE	Direct observation of high winds impacting the TSA-RE that causes structural damage <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	5.B.3 3.A.3 4.A.3 11.A.3 12.A.3



**5. Natural Phenomena**  
**B. Site Area Emergency**

<b>EAL</b>	<b>Area</b>	<b>Initiating Event/Condition</b>	<b>Protective Action</b>	<b>Related EAL(s)</b>
5.B.1	TSA-RE	Direct observation of an earthquake or volcanic eruption that involves fire in the TSA-RE  <b>WITH</b> the breach of more than 18 boxes or 33 drums of TRU	<ol style="list-style-type: none"> <li>1. If weather permits:               <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release.</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution).</li> </ol> </li> <li>2. If weather does not permit:               <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	5.A.1 1.B.1 3.B.1 4.B.1 11.B.1 12.B.1
5.B.2	TSA-RE	Direct observation of an earthquake or volcanic eruption causing structural damage to the TSA-RE  <b>WITH</b> the breach of more than 18 boxes or 33 drums of TRU	<ol style="list-style-type: none"> <li>1. If weather permits:               <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release.</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution).</li> </ol> </li> <li>2. If weather does not permit:               <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	5.A.2 3.B.2 4.B.2 11.B.2 12.B.2



**5. Natural Phenomena**  
**B. Site Area Emergency (cont.)**

5.B.3	TSA-RE	Direct observation of high winds impacting the TSA-RE that causes structural damage to the TSA-RE <b>WITH</b> the breach of more than 18 boxes or 33 drums of TRU	<ol style="list-style-type: none"> <li>1. If weather permits:           <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution)</li> </ol> </li> <li>2. If weather does not permit:           <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	5.A.3 3.B.3 4.B.3 11.B.3 12.B.3
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**5. Natural Phenomena**  
**C. General Emergency**

None Considered Credible



**6. Loss of Off-Site Power**  
**A. Alert**

None Considered Credible

**6. Loss of Off-Site Power**  
**B. Site Area Emergency**

None Considered Credible

**6. Loss of Off-Site Power**  
**C. General Emergency**

None Considered Credible



**7. Reactor Loss of Cooling  
A. Alert**

None Considered Credible

**7. Reactor Loss of Cooling  
B. Site Area Emergency**

None Considered Credible

**7. Reactor Loss of Cooling  
C. General Emergency**

None Considered Credible



**8. Reactor Loss of Control**  
**A. Alert**

None Considered Credible

**8. Reactor Loss of Control**  
**B. Site Area Emergency**

None Considered Credible

**8. Reactor Loss of Control**  
**C. General Emergency**

None Considered Credible



**9. Transportation Accident**  
**A. Alert**

Refer to INEEL Transportation Emergency Plan Addendum 9

**9. Transportation Accident**  
**B. Site Area Emergency**

Refer to INEEL Transportation Emergency Plan Addendum 9

**9. Transportation Accident**  
**C. General Emergency**

Refer to INEEL Transportation Emergency Plan Addendum 9



**10. Criticality**

**A. Alert**

None Considered Credible

**10. Criticality**

**B. Site Area Emergency**

None Considered Credible

**10. Criticality**

**C. General Emergency**

None Considered Credible



## 11. Barrier Status

### A. Alert

EAL	Area	Initiating Event/Condition	Protective Action	Related EAL(s)
11.A.1	TSA-RE	Direct observation of a fire involving the TSA-RE <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	11.B.1 1.A.1 3.A.1 4.A.1 5.A.1 12.A.1
11.A.2	TSA-RE	Direct observation of an earthquake or volcanic eruption impacting the TSA-RE <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	11.B.2 3.A.2 4.A.2 5.A.2 12.A.2
11.A.3	TSA-RE	Direct observation of high winds impacting the TSA-RE that causes structural damage <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	11.B.3 3.A.3 4.A.3 5.A.3 12.A.3
11.A.4	TSA-RE	Direct observation of a breached box or drum of TRU during construction activities	Evacuate all nonessential personnel at least 100 m in all directions from the building	3.A.4 4.A.4



**11. Barrier Status**  
**B. Site Area Emergency**

<b>EAL</b>	<b>Area</b>	<b>Initiating Event/Condition</b>	<b>Protective Action</b>	<b>Related EAL(s)</b>
11.B.1	TSA-RE	Direct observation of a fire involving the TSA-RE  <b>WITH</b> the breach of more than 18 boxes or 33 drums of TRU	<ol style="list-style-type: none"> <li>1. If weather permits:               <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release.</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution).</li> </ol> </li> <li>2. If weather does not permit:               <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	11.A.1 1.B.1 3.B.1 4.B.1 5.B.1 12.B.1
11.B.2	TSA-RE	Direct observation of an earthquake or volcanic eruption impacting the TSA-RE  <b>WITH</b> the breach of more than 18 boxes or 33 drums of TRU	<ol style="list-style-type: none"> <li>1. If weather permits:               <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release.</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution).</li> </ol> </li> <li>2. If weather does not permit:               <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	11.A.2 3.B.2 4.B.2 5.B.2 12.B.2



**11. Barrier Status**  
**B. Site Area Emergency (continued)**

11.B.3	TSA-RE	Direct observation of high winds impacting the TSA-RE that causes structural damage to the TSA-RE <p style="text-align: center;"><b>WITH</b></p> the breach of more than 18 boxes or 33 drums of TRU	<ol style="list-style-type: none"> <li>1. If weather permits:           <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution)</li> </ol> </li> <li>2. If weather does not permit:           <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	11.A.3 3.B.3 4.B.3 5.B.3 12.B.3
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**11. Barrier Status**  
**C. General Emergency**

None Considered Credible



**12. External Event**  
**A. Alert**

<b>EAL</b>	<b>Area</b>	<b>Initiating Event/Condition</b>	<b>Protective Action</b>	<b>Related EAL(s)</b>
12.A.1	TSA-RE	Direct observation of an earthquake or volcanic eruption that involves fire in the TSA-RE <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	12.B.1 1.A.1 3.A.1 4.A.1 5.A.1 11.A.1
12.A.2	TSA-RE	Direct observation of an earthquake or volcanic eruption causing structural damage to the TSA-RE <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	12.B.2 3.A.2 4.A.2 5.A.2 11.A.2
12.A.3	TSA-RE	Direct observation of high winds impacting the TSA-RE that causes structural damage <b>WITH</b> the potential to breach 1 to 18 boxes or 1 to 33 drums of TRU	Evacuate all nonessential personnel at least 100 m in all directions from the building	12.B.3 3.A.3 4.A.3 5.A.3 11.A.3



**12. External Event**  
**B. Site Area Emergency**

<b>EAL</b>	<b>Area</b>	<b>Initiating Event/Condition</b>	<b>Protective Action</b>	<b>Related EAL(s)</b>
12.B.1	TSA-RE	Direct observation of an earthquake or volcanic eruption that involves fire in the TSA-RE  <b>WITH</b> the breach of more than 18 boxes or 33 drums of TRU	<ol style="list-style-type: none"> <li>1. If weather permits:               <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release.</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution).</li> </ol> </li> <li>2. If weather does not permit:               <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	12.A.1 1.B.1 3.B.1 4.B.1 5.B.1 11.B.1
12.B.2	TSA-RE	Direct observation of an earthquake or volcanic eruption causing structural damage to the TSA-RE  <b>WITH</b> the breach of more than 18 boxes or 33 drums of TRU	<ol style="list-style-type: none"> <li>1. If weather permits:               <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release.</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution).</li> </ol> </li> <li>2. If weather does not permit:               <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	12.A.2 3.B.2 4.B.2 5.B.2 11.B.2



**12. External Event**  
**B. Site Area Emergency (cont.)**

12.B.3	TSA-RE	Direct observation of high winds impacting the TSA-RE that causes structural damage to the TSA-RE <p style="text-align: center;"><b>WITH</b></p> the breach of more than 18 boxes or 33 drums of TRU	<ol style="list-style-type: none"> <li>1. If weather permits:           <ol style="list-style-type: none"> <li>A. Evacuate all nonessential personnel at least 3 km from the release</li> <li>B. Evacuate visitors from EBR-1 area (as a precaution)</li> </ol> </li> <li>2. If weather does not permit:           <ol style="list-style-type: none"> <li>A. Shelter all nonessential personnel between 100m and 3km from the release.</li> <li>B. Shelter all visitors at EBR-1 (as a precaution)</li> </ol> </li> </ol>	5.A.3 3.B.3 4.B.3 11.B.3 12.B.3
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**12. External Event**  
**C. General Emergency**

None Considered Credible



### 13. Safeguards and Security

#### A. Alert

EAL	Area	Initiating Event/Condition	Protective Action	Related EAL(s)
13.A.1	AMWTP	A credible detonation of a confirmed or suspicious explosive device	Evacuate all personnel 900 m away from the explosive device.	
13.A.2	AMWTP	An actual terrorist attack or sabotage event.	Activate a “take cover” alarm signal.	
13.A.3	AMWTP	Kidnapping or the taking of hostage(s).	Evacuate and control affected location.	
13.A.4	AMWTP	Damage of destruction by nature or malevolent means sufficient to expose classified information to unauthorized disclosure.	Cordon off and control affected area.	

### 13. Safeguards and Security

#### B. Site Area Emergency

EAL	Area	Initiating Event/Condition	Protective Action	Related EAL(s)
13.B.1	AMWTP	An actual terrorist attack or sabotage event that cannot be controlled nor contained.	Activate a “take cover” alarm signal.	
13.B.2	AMWTP	A credible detonation of a confirmed or suspicious explosive device that cannot be controlled nor contained.	Evacuate all personnel 900 m away from the explosive device.	

### 13. Safeguards and Security

#### C. General Emergency

None Considered Credible



## 5.0 Notifications and Communications

All information for this section is contained in the INEEL Base Plan.



## 6.0 Consequence Assessment

All information for this section is contained in the INEEL Base Plan.



## 7.0 Protective Actions

All information for this section is contained in the INEEL Base Plan with the exception of the following subsections. (Note: The subsection numbers below match the corresponding subsections of the INEEL Base Plan)

### 7.1 Principal Protective Action Options

See Section 7 of the INEEL Emergency Plan/RCRA Contingency Plan and Section 4 of this plan to find the TSA-RE predetermined protective actions.

#### 7.1.1 Emergency Action Levels

When a “take cover” alarm is triggered, AMWTP personnel take shelter in the nearest available nonaffected building or as directed by the Emergency Notification System (ENS). Most buildings in the vicinity of the TSA-RE within the AMWTP construction boundary offer limited protection from airborne contamination and direct radiation. For this reason “take cover” is a short term protective action and is generally ordered as a preliminary measure when considering or implementing a facility evacuation or for an event that will be very short in duration or for a security related event.

#### 7.1.2 Evacuation

Depending on the nature and severity of the event, the AMWTP EC may order an all area evacuation of the TSA-RE and the AMWTP construction areas or may limit the evacuation to specific areas under the authority of BNFL Inc. Facility maps and evacuation routes are shown in Appendix D. Figure D-1 of Appendix D shows the primary and alternate evacuation routes from the RWMC area. Figure D-3 shows the evacuation routes from the TSA-RE. The alternate evacuation routes consist of gravel roads maintained by the INEEL maintenance organizations as a secondary priority after the principal INEEL access roads. Because the alternate evacuation routes are gravel roads, weather and climate conditions such as severe storms or spring thaws may prevent the roads from being used.

During an evacuation of the RWMC or AMWTP, AMWTP personnel will use government provided busses to evacuate the site if the evacuation occurs during the regular dayshift, Monday through Thursday. If the evacuation occurs on back shift or weekends, the evacuation will be by privately owned vehicles; personnel will be encouraged to car-pool during the evacuation if feasible. If privately owned vehicles are obstructed, available busses may be requested by the EC from the INEEL Management and Operating (M & O) contractor. The primary evacuation route for AMWTP is Adams Boulevard unless otherwise directed. T-12 and Farragut Boulevard are the alternate routes. Farragut Boulevard should only be used if directed by the CFA Emergency Action Manager (EAM). AMWTP personnel will proceed to a location specified by the CFA EAM.



In the event of an emergency requiring a total area evacuation, personnel will be sheltered in buildings upwind of the release until the evacuation by either INEEL M&O busses or privately owned vehicles is possible. If for any reason the primary and alternate evacuation routes are unusable, ambulatory personnel will be directed to walk to the nearest hard-surfaced road where evacuation busses could be staged. Personnel unable to walk will be transported via alternate methods such as four-wheel drive vehicles.

### **7.1.3 Protective Action Criteria for Radiological Incidents**

Radiological materials present in the TSA-RE in quantities that exceed specific screening criteria are described in the AMWTP TSA-RE BIO (BNFL 2001). These materials are considered in developing the AMWTP emergency plan. Based on the hazards analysis, transuranic and the associated internal radiation doses are the principle radiological concern for credible accident scenarios at the TSA-RE. The hazards analysis describes these accident scenarios, identifies the specific radiological hazards for the TSA-RE, and details the potential consequences of the postulated accident scenarios. The results of the hazards analysis are included in the AMWTP EALs presented in Section 4 of this plan.

### **7.1.4 Protective Action Criteria for Non-Radiological Incidents**

#### **7.1.4.1 Emergency Response Planning Guidelines Criteria**

As previously described, hazardous materials present in the TSA-RE in quantities that exceed specific screening criteria are considered in developing the TSA-RE emergency plan. Based on the hazards analysis, all releases of hazardous materials would be classified as “less than an alert” and are bounded by the classification determined for the release of radiological materials. The hazards analysis lists the quantities and locations of hazardous materials in the TSA-RE.

#### **7.1.5 Personnel Accountability**

Individual access to the AMWTP is controlled at the Construction Access Control Trailer (CACT) located at the access gate to the AMWTP construction area. A record of personnel entering the AMWTP will be maintained at the CACT. In the event an evacuation protective action is ordered, personnel within the AMWTP are directed to gather in an evacuation assembly area for performing accountability and to facilitate releasing to privately owned vehicles or loading onto the INEEL M&O evacuation busses. The designated evacuation/assembly areas for the AMWTP are contained in Appendix D.

Area Wardens are tasked with performing personnel accountability. During the evacuation process, the construction supervisors perform a sweep of the TSA-RE to locate missing persons. After personnel have gathered in the assembly area, the construction supervisors obtain from the CACT a copy of the log of workers in the TSA-RE and complete the accountability process. Once accountability has been completed, the results are reported to the command post.



## 8.0 Medical Support

All information for this section is contained in the INEEL Base Plan.



## 9.0 Recovery and Re-entry

All information for this section is contained in the INEEL Base Plan with the exception of the following subsections. (Note: The subsection numbers below match the corresponding subsections of the INEEL Base Plan)

### 9.1 Terminating an Emergency Event

The EC takes the necessary actions to assure a smooth transition from emergency response to recovery. These actions include designating a Recovery Manager early in the emergency phase and deciding how best to utilize emergency response organization (ERO) resources in the recovery organizations. The EC releases emergency response personnel or places personnel on stand-by, depending on the potential need for responders during initial recovery and the time that initial recovery will begin. The EC documents existing conditions and turns the situation over to either a directing authority or the recovery organization as appropriate.

### 9.2 Debriefing or Critique

As soon as reasonably practicable after the emergency is terminated the EC or the assigned Recovery Manager assembles all participating personnel to verify existing conditions, review the event in detail, and determine and assign corrective actions.

### 9.3 Recovery Organization

The recovery organization can include the following teams: Recovery Decisions Team, Administrative Support Team, Projects and Activities Team, Personnel Team, Security Team, and the Long Term Recovery Team. Activation of these teams corresponds to the seriousness and complexity of the emergency. Senior BNFL Inc. management personnel directs activation of these teams in consultation with the EC, the ED, and the DOE-ID Manager/Duty Officer, when such consultation is appropriate.

Upon determination of the emergency classification and the appropriate protective action recommendations, a recovery manager will be identified. The participation of non-BNFL Inc. personnel is obtained through contracts, formal agreements, or DOE direction.

### 9.4 RCRA Reporting

When this plan is implemented in response to a fire, explosion, or release of hazardous waste or hazardous waste constituents that could threaten human health or the environment, this will constitute an activation of the facility's RCRA contingency plan. The time, date, and details of the incident will be noted in the operating record of the facility. Within 15 days of the event, a written report on the incident will be submitted to the EPA Regional Administrator. The report will include the following:



1. Name, address, and telephone number of BNFL Inc.
2. Name, address, and telephone number of the incident facility
3. Date, time, and type of incident
4. Name and quantity of material(s) involved
5. The extent of injuries, if any
6. An assessment of actual or potential hazards to human health or the environment, where applicable
7. Estimated quantity and disposition of recovered material that resulted from the incident.



## 10.0 Public Information

All information for this section is contained in the INEEL Base Plan with the exception of the following subsections. (Note: The subsection numbers below match the corresponding subsections of the INEEL Base Plan)

In general, information concerning emergency conditions at the AMWTP will not be released to any agency outside of BNFL Inc., U.S. Department of Energy Idaho Operations Office (DOE-ID), and associated emergency response agencies without prior approval of the BNFL Inc. Liaison Officer to the INEEL Emergency Operations Center (EOC). After the first pre-approved press release is released, all news releases will be reviewed and approved by the BNFL Inc. Liaison Officer, INEEL Emergency Director (ED), and DOE-ID Manager/Duty Officer if the EOC is activated. Otherwise, the AMWTP Business Communications Specialist is responsible for approval.

### 10.1 Public Information Organization

During an emergency, INEEL news releases affecting the AMWTP are written in the EOC. The EOC public information function is to write the news release; obtain a classification review; obtain release approval from the BNFL Inc. Liaison Officer, ED, DOE-ID Manager/Duty Officer, and the PID; and transmit the news release to the Public Information Center (PIC).

## 11.0 Emergency Facilities and Equipment

### 11.1 Emergency Facilities

#### 11.1.1 Command Post

The AMWTP TSA-RE Command Post (CP) is located in WMF-637, conference room A. The AMWTP uses the same command post equipment normally utilized by the RWMC when the command post is activated for RWMC emergencies. When activated, ERO personnel from both the AMWTP and RWMC rearrange the room to support CP functions. Figure 11-1 shows a typical CP arrangement. The alternate CP is in CF-609 at the Central Facilities Area, which also functions as the ECC for the INEEL. Emergency equipment located in the CP includes:

- Reference documents, drawings, and forms
- Dedicated telephone lines and facsimile machine
- Personal computer/meteorological information station
- Hand held radio with mounting station and external antenna

### 11.2 Emergency Equipment

Equipment maintained to support the TSA-RE permitted facility is listed in Appendix H.

#### 11.2.1 Communications Equipment

Communications systems used at the TSA-RE include commercial telephone, commercial cellular phones, and the INEEL trunked radio network. The telephone lines and trunked radio serving the CP and the Emergency Notification System (ENS), described in section 11.2.4, support emergency response. All other communication systems, though not dedicated to emergency response, are available at the AMWTP to provide prompt communications among principal response organizations, emergency response personnel, and appropriate federal, state, and local officials.

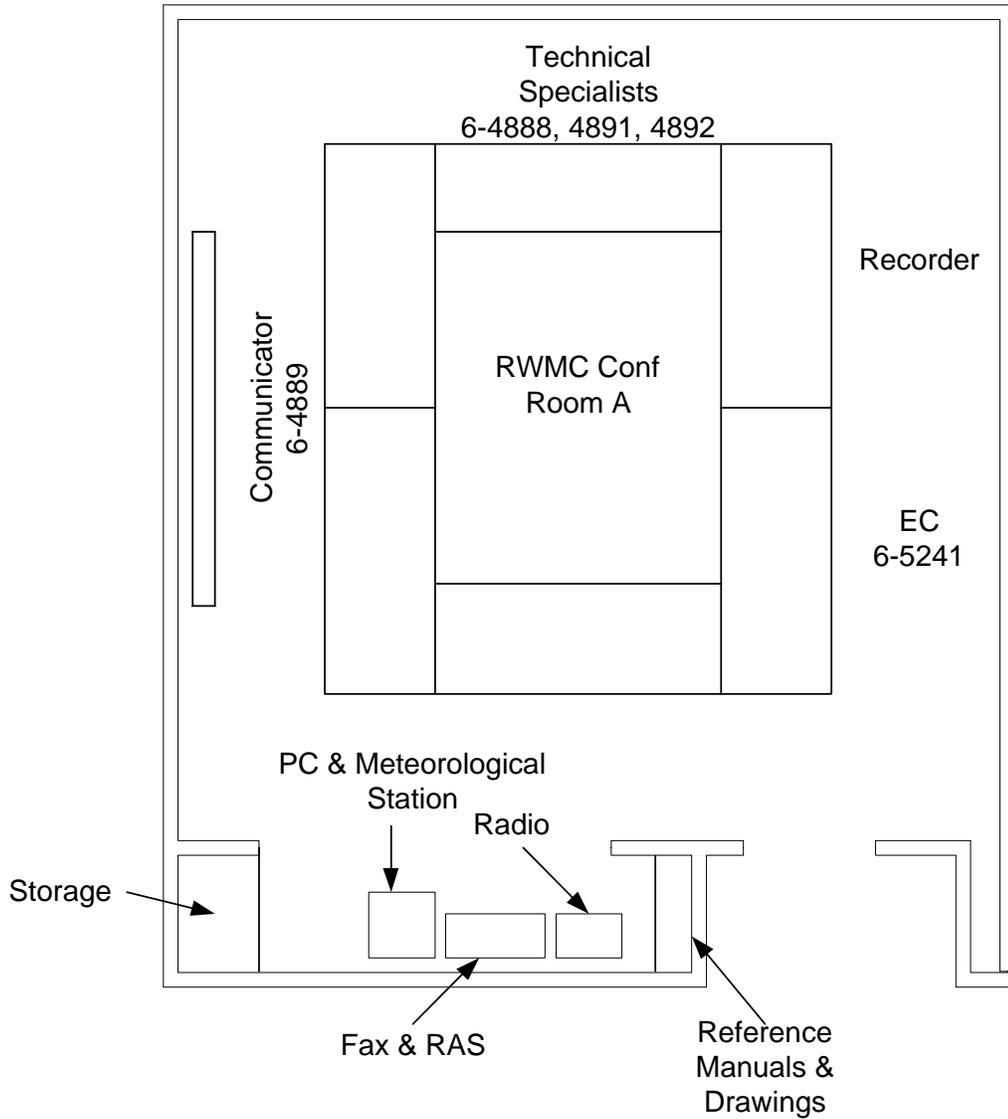


Figure 11-1 AWMTP Command Post Configuration



## **11.2.4 Alarm Equipment**

### **11.2.4.1 Emergency Notification System**

The RWMC evacuation siren and the take cover alarm as well as the emergency voice paging system are operated from the emergency notification system (ENS) control panel located in the WMF-637 CP. Three additional ENS control panels are located within the RWMC area. Take cover and evacuation alarms are clearly audible in all areas of the RWMC including the AMWTP. ENS voice paging announcements are audible in all areas of the RWMC except for the Subsurface Disposal Area (SDA). Visual notification of an evacuation alarm is also provided by flashing beacons installed on top of power poles northeast of the TSA, on the SDA east fence line, and the SDA south fence line.

All evacuation signals are received at the INEEL Alarm Center (CF-666) and at the INEEL WCC in Idaho Falls, Idaho. System trouble alarms are also received at the INEEL Alarm Center (CF-666). Un-interruptable power supplies ensure that the ENS remains operational when normal power is lost.

### **11.2.4.2 Fire Alarm Subsystem**

The fire alarm system is discussed in Section 11.2.5 below.

### **11.2.4.3 Radiation Protection Alarms**

There are no constant air monitors (CAMS) nor radiation monitor alarms (RAMS) associated with the AMWTP during Phase II construction activities.

## **11.2.5 Rescue Team Equipment**

The INEEL Fire Department has been designated as the first responder for incidents occurring at the AMWTP. AMWTP personnel do not perform specialized rescue operations.

## **11.2.7 Transportation Equipment**

### **11.2.7.1 Evacuation**

The AMWTP relies on privately owned vehicles to support evacuation during normal working hours.

### **11.2.11 Fire Fighting Equipment**

AMWTP fire protection systems consist of a combination of remote and local alarms and automatic sprinkler systems. Fire alarms are triggered either automatically in response to a fire or manually at a pull box. Once activated, the fire alarm system activates a local alarm, transmits an



alarm signal to the INEEL Fire Department, and prints out a record of the alarm at a printer located in WMF-637.

Water is supplied to the fire protection system by a 240 gallon per minute deep well pump located in WMF-603. The water is pumped into WMF-709 and WMF-727, both are 250,000 gallon water storage tanks. Two 2,000 gallon per minute firewater pumps, one electrically powered and the other diesel powered, provide the required flow for the RWMC sprinkler systems. A third pump, a 1,500 gallon per minute electrically powered pump, is housed in WMF-603. The pump provides protection from a redundant water source and can be fed into the fire water distribution system. The fire water pumps have auto-start features to ensure system pressure. The diesel pump will start automatically in the event of a loss of power, it will continue to run until it is shut off manually. A controller for each pump is installed in the pump house to facilitate manual operation and operational testing.

Portable and emergency response fire protection instruments and equipment maintained at the AMWTP are listed in Appendix H of this plan.

#### **11.2.12 Emergency Power Equipment**

AMWTP does not have any emergency power capabilities

#### **11.2.13 Logistics Support Equipment**

Heavy equipment located at the AMWTP, though not dedicated to emergency use, may be used to support emergency response if needed.



## 12.0 Training

All information for this section is contained in the INEEL Base Plan with the exception of the following subsections. (Note: The subsection numbers below match the corresponding subsections of the INEEL Base Plan)

### 12.5 Outline of ERO Training Activities

The ERO Training Program provides a structured approach by which AMWTP ERO members acquire required duty orientation and job-specific knowledge for application to man the Command Post at the RWMC during an emergency.

#### 12.5.1 ERO Training Requirements

The AMWTP maintains a formal training program for the initiation and qualification of ERO personnel assigned to the AMWTP. ERO personnel first receive general information regarding ERO assignment requirements and orientation, then are trained in the specific functions according to position. Opportunity to practice the use of facilities, equipment, appropriate procedures, and checklists is provided during training. Prior to participating on the ERO during an actual emergency, two qualification requirements must be met.

1. Complete required training
2. Participate in an emergency drill in the assigned position

#### 12.5.2 *Requalification Requirements*

Completion of required reading assignments is tracked by the AMWTP Training Organization.

#### 12.5.3 *Requalification Extensions*

AMWTP training procedures are implemented when the requalification period needs to be extended for ERO members. Extensions must be approved by the AMWTP ES&H Manager. AMWTP training procedures allow for extensions for all training, not just requalification training. Requests for extensions exceeding 30 days must be approved by the AMWTP General Manager. When no requalification extension is requested, the ERO member's qualification lapses on the expiration by the previous qualification. When the qualification lapses, the ERO member cannot be included in the duty rotation and cannot be called to respond. A letter from the AMWTP Training Organization indicating this qualification lapse will be sent to the ERO member and his/her manager. Upon completion of the deficiencies in requalification training or drills, the ERO member can once again participate as an active member of the ERO.



## 12.10 Position Responsibilities

### 12.10.2 EP Training Program Management

The AMWTP ES&H Manager has overall responsibility for the training of the AMWTP ERO staff. The ES&H Manager has delegated responsibility for the ERO Training Program to the AMWTP Training Lead.

The responsibilities of the AMWTP Training Lead include the following requirements associated with the ERO Training Program:

- Developing and maintaining a comprehensive required training program plan,
- Ensure training is provided to the ERO staff
- Coordinating and integrating the ERO Training Program with other AMWTP training programs
- Identifying and coordinating adequate resources for training program implementation, including facilities, equipment, budget, etc.
- Identifying training needs and providing for development, scheduling, and delivery of training
- Ensuring that training is conducted by qualified personnel
- Providing program self-assessment to include evaluating instruction and reviewing materials.

## 12.12 EP Training Program Application

### 12.12.2 Training Implementation

#### 12.12.1.5 Exceptions from Training/Credit for Previous Experience

Qualified personnel (who have satisfactorily completed training programs comparable in content and in performance standards) may be excepted from portions of training on an individual case basis. Exceptions from training will be based on a review of historical training records (e.g., transcripts), personal interviews, and/or on test-out exams based on the objectives stated for the training program or course. The ES&H Manager must approve any training exception.

Exceptions to training are most frequently requested when ERO members are transferred from one INEEL facility to the AMWTP and wish to remain on the ERO. In these instances, the facility emergency planner for the facility from which the ERO member is being transferred



provides a record of training completion to the AMWTP ES&H Manager at the AMWTP. The ES&H Manager will use the training/drill completion information from the previous facility to determine the training needs to fill the position at the AMWTP. If the ERO member transfers to a same title position in the new job site ERO, that individual MAY NOT be automatically qualified. ERO members new to the AMWTP must complete additional ERO training in the position at the AMWTP. This would include EP010000, Emergency Management Orientation; EP020000, Facility Activation and Orientation; EP040000, Emergency Communications and Equipment; and EP080000 Facility Operations and Hazards Orientation (specific to the AMWTP); or EP340000, Emergency Management Orientation for Support Personnel. If the ERO member is assigned to a new ERO position, he/she will be required to attend the above listed “facility orientation” training, complete any other training for which a failure to meet initial training requirements exists, and participate in a drill.

When the trainee has completed all of the training requirements for the new position, a list of the training completed along with a request for granting of qualification is provided to the ES&H Manager for approval.

## **12.13 EP Training Program Administration**

### **12.13.1 Records**

#### ***12.13.1.1 General Records Documentation***

##### ***Training Program Records***

Training Program records are retained by the AMWTP Training Organization.

### **12.13.2 Initial ERO Qualification Administration**

#### ***12.13.2.3 Verification of Initial Qualification***

Initial ERO qualification will be verified by the AMWTP Training Organization reviewing the training record prior to issuing qualification certificates. If training and/or drill requirements are incomplete according to the individual training records, no certificate will be issued.

### **12.13.3 ERO Required Initial Training by Position**

#### ***12.13.3.4 EOC Personnel***

##### ***BNFL Inc. Liaison Officer***

Emergency Management Orientation



## 13.0 Drills and Exercises

All information for this section is contained in the INEEL Base Plan with the exception of the following subsections. (Note: The subsection numbers below match the corresponding subsections of the INEEL Base Plan)

### 13.1 Drills

The AMWTP will conduct sufficient drills of varying complexity to allow all members to participate in at least one drill or exercise per year. The AMWTP Training Organization will coordinate the scheduling of drills with the various INEEL facilities through the INEEL EP Directorate.

Exercises, tabletop drills, and walkthrough drills executed by the AMWTP solely for the benefit of the AMWTP will be conducted in accordance with the AMWTP Training Organization's Drill Program.



## 14.0 Program Administration

All information for this section is contained in the INEEL Base Plan with the exception of the following subsections. (Note: The subsection numbers below match the corresponding subsections of the INEEL Base Plan)

### 14.1 Program Administrators

The AMWTP General Manager has appointed (through delegation of authority) the AMWTP ES&H Manager to be the emergency preparedness program administrator. As the emergency management program administrator, the ES&H Manager has the responsibility to:

- Ensure facility-specific hazards analysis are developed and maintained
- Ensure emergency plans and implementing procedures are developed and maintained, using facility-specific hazards analysis as the basis of development
- Ensure memoranda of agreement/memoranda of understanding (MOA/MOU) are developed, maintained, and updated
- Ensure verifiable records (training, internal assessment, drill and exercise participation) are developed and maintained and that a system is in place that ensures records are consistently maintained.

AMWTP Emergency Preparedness

Program Administrator	Cal Ozaki
Work Phone	208-524-8484
Work Address	1970 E. 17 <sup>th</sup> St Suite 203 Idaho Falls, ID 83404

### 14.2 Document Control

#### 14.2.1 Emergency Plan Control

The AMWTP Emergency Plan/RCRA Contingency Plan is controlled by AMWTP Document Control. AMWTP Document Control oversees distribution of documents (i.e., processes requests for the plan and distributes revisions of the plan to persons on the controlled document list).

Anyone associated with the EP process may request a change to the plan. Changes are routed through the EP Program Administrator. The EP Program Administrator regulates all changes to the document. All changes to the plan are handled in accordance with AMWTP document control procedures. Minor changes (i.e., equipment, maps) will be approved by the EP Program Administrator. Major changes (changes that affect the plan itself) will be made only after



designated operations, safety and environmental oversight personnel have reviewed the proposed revisions. Facility managers have responsibility to designate appropriate personnel to review plan revisions. Facility managers should concur with, in conjunction with the EP Program Administrator approval, all major revisions to the plan.

#### **14.2.2 Control of Other Emergency Management Documents**

EPIs – AMWTP-specific emergency plan implementing procedures (EPI) are controlled by AMWTP Document Control. These procedures are reviewed and revised as necessary in conjunction with the annual review of the plan.

Addenda – The AMWTP addenda to the INEEL Base Plan is controlled by AMWTP Document Control.

#### **14.3 Self Assessment**

As part of AMWTP's annual quality assurance and emergency readiness assurance, the AMWTP Quality Assurance organization conducts annual internal assessments of the AMWTP EP program. This assessment does not include any portion of the INEEL's base plan or any EP plans controlled by the INEEL M&O contractor. This group is not directly responsible for administering the EP program or any emergency response activity. The EP self-assessment program is in accordance with AMWTP QA programs.

##### **14.3.1 Tracking and Resolving Areas of Concern**

Areas of concern identified in the EP program during drills and exercises, and actual emergencies are noted and discussed during critiques of the event. Methods are determined to resolve these concerns and a schedule is determined for implementing the resolution. Deficiencies and violations are entered into the AMWTP's corrective action tracking system. They are tracked until resolved.



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Appendix A – Acronyms and Initialisms

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## Appendix A - Acronyms and Initialisms

(Additional information for this appendix is contained in the INEEL Base Plan.)

ACGIH	American Conference of Governmental Industrial Hygienists
AMWTP	Advanced Mixed Waste Treatment Project
BIO	Basis for Interim Operations
BLO	BNFL, Inc. Liaison Officer
BNFL	British Nuclear Fuels Limited
CAMs	Constant Air Monitors
DOE-EOC	Department of Energy – Emergency Operations Center
DPM	Disintegration Per Minute
ENS	Emergency Notification System
ES&H	Environmental, Safety, and Health
FR	Facility Representative
IIR	Initial Incident Report
INEEL	Idaho National Engineering and Environmental Laboratory
NESR	Nuclear Explosive Safety Rule
NOV	Notice of Violation
OMB	Office of Management and Budget
OSR	Operational Safety Requirement
ORPS	Occurrence Reporting and Processing System
OR	Occurrence Report
PAP	Personnel Assurance Program
QA	Quality Assurance
RAMs	Radiation Monitor Alarms
ROM	Retrieval Operations Manager
TS	Technical Specification
TSA-RE	Transuranic Storage Area – Retrieval Enclosure
TSR	Technical Safety Requirement
SSC	System, Structure, or Component
STL	Shift Team Leader
UPS	Un-interruptible Power Supply
USQ	Unreviewed Safety Question



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*Appendix B – Definitions  
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## **Appendix B - Definitions**

All information for this appendix is contained in the INEEL Base Plan.



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*Appendix C – MOUs and MOAs*

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## **Appendix C**

### **Memorandums of Understanding and Memorandums of Agreement**

(Additional information for this appendix is contained in the INEEL Base Plan.)

ADVANCED MIXED WASTE TREATMENT PROJECT TRI-PARTY  
MEMORANDUM OF AGREEMENT For BNFL Inc., Department of Energy,  
and Bechtel BWXT Idaho, LLC DOE/ID-10520 (Rev 2) December 21,2000



## Appendix D – Maps

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D.3	TSA-RE Evacuation Map .....	D-3

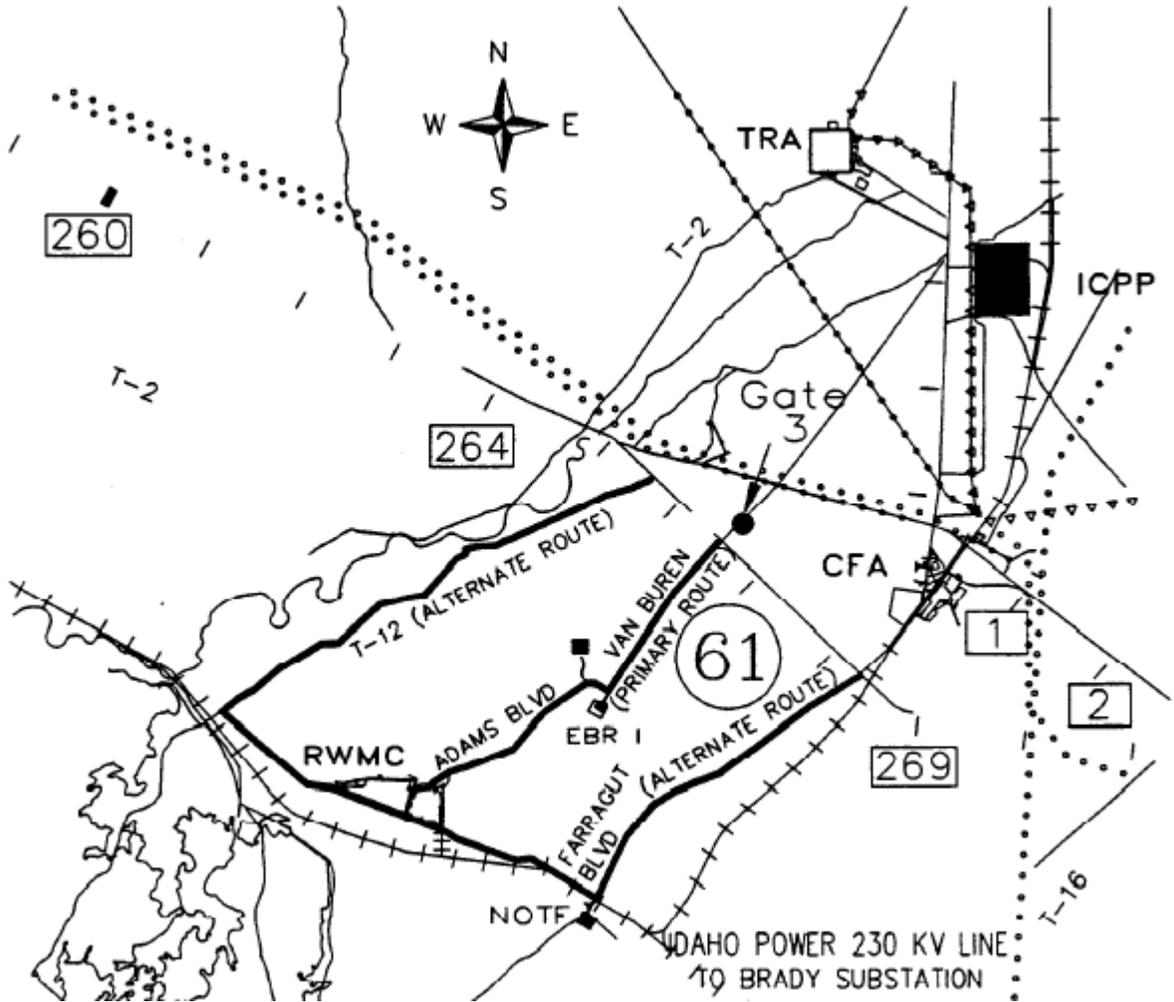


Figure D-1 AMWTP Evacuation Routes



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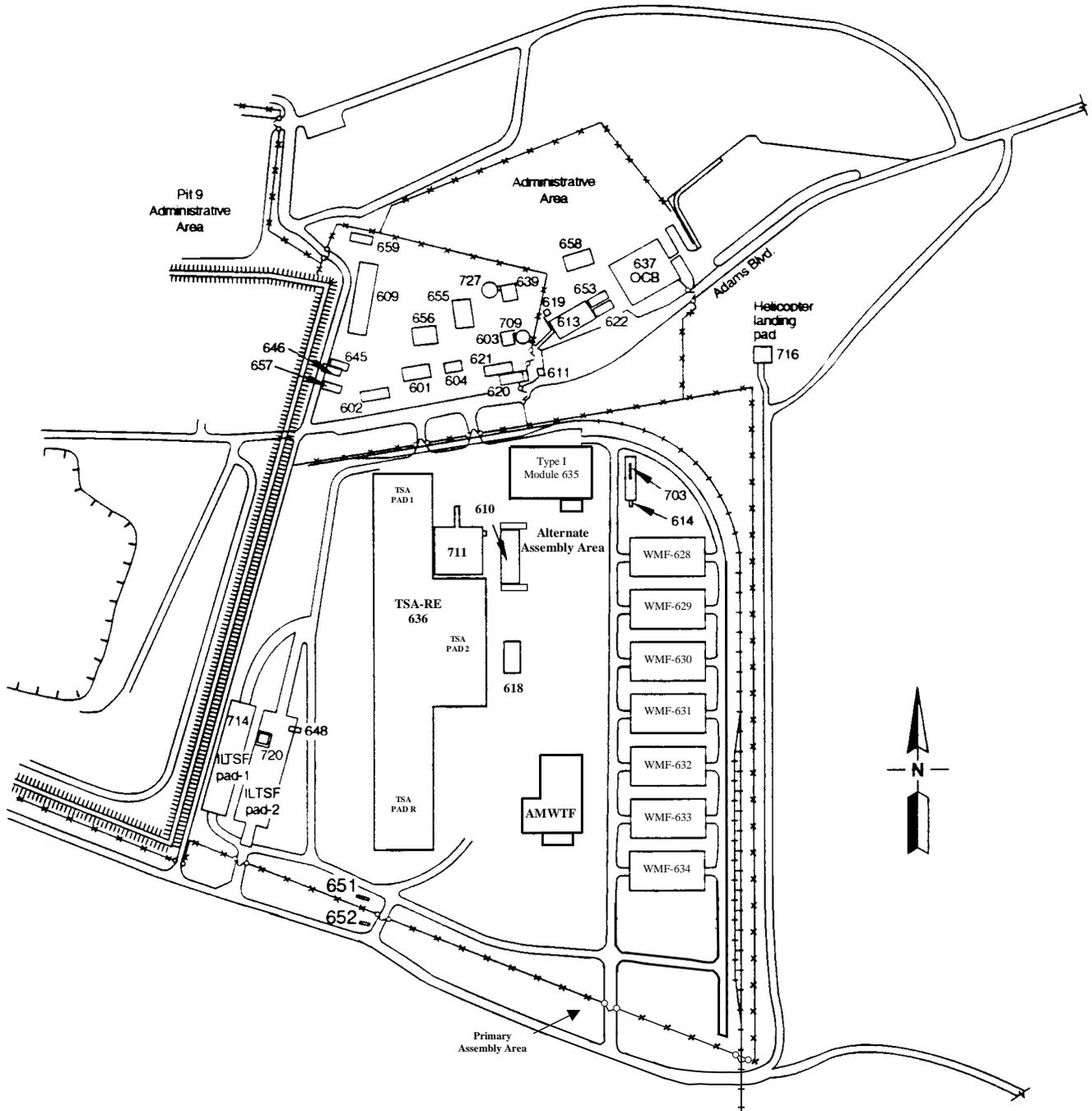


Figure D-2 AMWTP Assembly Area

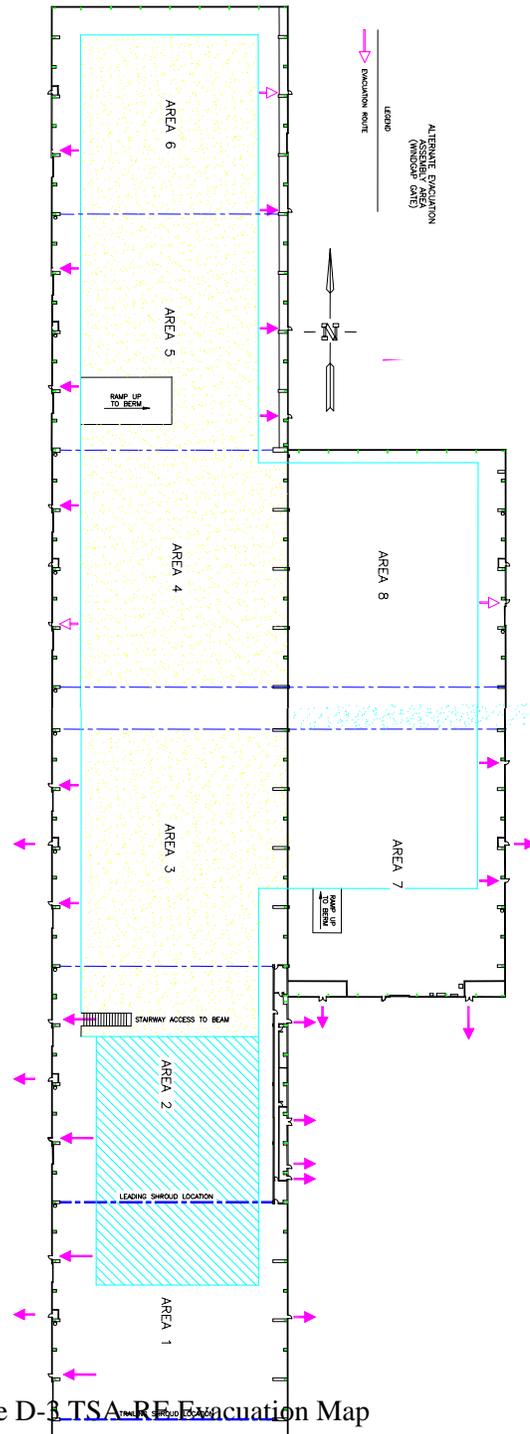


Figure D-3 TSA RE Evacuation Map



## Appendix E – Plan Application Cross References

Additional information for this appendix is contained in the INEEL Base Plan.



## ***Appendix F – References and Related Documents***

(Additional information for this appendix is contained in the INEEL Base Plan.)

BNFL, 2001, Advanced Mixed Waste Treatment Project Basis for Interim Operation-TSA-RE Stewardship and Construction Activities, BNFL-5232-AMWTP-BIO-0, Idaho Falls, Idaho March 2001.

BNFL, 2000, Occurrence Categorization, Notification, and Report Processing BNFL-5232-OCNRP-01 Rev 00.

BNFL, Inc. Procedure PC06-001.1, "Environment, Safety and Health Incident Reporting."

DOE Order 151.1A, *Comprehensive Emergency Management System*.

DOE-ID, 1996, Advanced Mixed Waste Treatment Project, Contract No. DE-AC07-97ID13481, U.S. Department of Energy, Idaho Operations Office, Idaho Falls, Idaho, December 20.



## Appendix G – Spill Plan

A spill plan is not required for the AMWTP during Phase II activities



## Appendix H – Emergency Equipment Lists

### Emergency Equipment List

#### First Aid Equipment

Stretcher with blanket	1	TSA-RE Office Space
First Aid Kit	2	TSA-RE Office Space
SCBA	4	TSA-RE Office Space
Spare SCBA Bottles	8	TSA-RE Office Space

#### Radiological Controls Equipment

Anti-C Gloves	12 pr	TSA-RE Office Space
Latex Gloves	12 pr	TSA-RE Office Space
Cotton Glove Liners	12 pr	TSA-RE Office Space
Yellow Booties	12 pr	TSA-RE Office Space
Rubber Boots	12 pr	TSA-RE Office Space
Disposable Coveralls (Tyvex)	w/ hoods 12 sets	TSA-RE Office Space
Tape	2 rolls	TSA-RE Office Space
Yellow and Magenta Rope	100'	TSA-RE Office Space
Yellow Poly Bags various sizes	2 doz	TSA-RE Office Space
Rope stands	10	TSA-RE Office Space
Rad Signs (various)	-	TSA-RE Office Space
Labels	1 doz	TSA-RE Office Space
Large area wipes	1 doz	TSA-RE Office Space
Smears and Envelopes	1 doz	TSA-RE Office Space
Air Sample Filters	1 doz	TSA-RE Office Space
Plastic Sheeting	1 doz	TSA-RE Office Space

#### Other Equipment

Respirators	10	TSA-RE Office Space
Air Sampler, AC Powered	1	TSA-RE Office Space
Air Sampler, DC Powered	1	TSA-RE Office Space
Micro Portable Survey Instruments,	2	TSA-RE Office Space
Alpha/Beta Portable Survey Instruments	3	TSA-RE Office Space
HEPA Vacuum	1	TSA-RE Office Space



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Appendix H – Emergency Equipment Lists

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**Decontamination Equipment**

Water, Soap, and Soft Brush  
Waterless hand cleaner  
Tape  
Wipes (for drying)  
Plastic bucket  
Pens/Pencils  
Portable Eyewash Station

TSA-RE Office Space  
TSA-RE Work Area

**Portable Fire Fighting Equipment – WMF-636**

Fire Extinguisher, 17 lb, ABC  
Fire Extinguisher, 100 lb, CO2  
Fire Extinguisher, 100 lb, CO2

WMF-636 Head End Control Room  
WMF-636 Pad 2 South Wall  
WMF-636 Compressor Room  
WMF-636 Change Room North Wall  
WMF-636 HVAC Control Room  
WMF-636 Pad R East Wall North End  
WMF-636 Pad R Center of East Wall  
WMF-636 Pad R Center of South Wall  
WMF-636 Pad R West Wall South End  
WMF-636 Pad R West Wall North End  
WMF-636 Pad R South End Center  
WMF-636 Pad R North End East Side  
WMF-636 Portable Air Lock  
WMF-636 Pad 2, Wheeled Cart  
WMF-636 Pad 2, Wheeled Cart

**Portable Fire Fighting Equipment – WMF-634**

Fire Extinguisher, 17 lb, ABC  
Fire Extinguisher, 17 lb, ABC

WMF-634 South Wall West End  
WMF-634 North Wall West End  
WMF-634 North Wall East End  
WMF-634 West Door  
WMF-634 South Door  
WMF-634 South Wall East End  
WMF-634 East Door  
WMF-634 Electrical Room

**Misc. Fire Fighting Equipment**

2-Way Radios  
Fire Hydrants  
Manual Fire Alarm Boxes

TSA-RE Office Space  
Adjacent to WMF-636  
At all exit doors



**RCRA Required Spill Equipment**

Acid Neutralizer, 2.5 lb	2	TSA-RE Office Space
Caustic Neutralizer, 2.0 lb	2	TSA-RE Office Space
Solvent Absorber, 1 lb	2	TSA-RE Office Space
Spill Disposal Plastic Bags	6	TSA-RE Office Space
Hand Scoop	1	TSA-RE Office Space
pH Paper, box	1	TSA-RE Office Space
Nitrile Gloves	2	TSA-RE Office Space
Splash Goggles	2	TSA-RE Office Space
Shovels	2	TSA-RE Office Space
Overpack Containers	5	TSA-RE Office Space



## Appendix I – Emergency Coordinators

### AMWTP Emergency Coordinators

#### Emergency Coordinators

Name	Duty Phone	Duty Pager	Home Phone	Home Address
Jeff Hahn	524-8484 Ext. 102	526-4444-3502	552-1869	4201 E Christy Lane Idaho Falls, ID 83406
Joe Hickey	524-8484 Ext. 128	526-4444-3501	528-7849	2946 Bluebird Lane Idaho Falls, ID 83402
Robin Rickman	524-8484 Ext. 130	526-4444-3500	552-1988	2170 Rendezvous Road Idaho Falls, ID 83402
Hal Roberts	526-3431	526-4444-3497	745-0174	315 Bennet Rigby, ID 83442
Dave Preston	524-8484 Ext. 165	526-4444-3499	552-6406	3234 Londonderry Idaho Falls, ID 83404



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*Appendix J – Protective Action Supplements  
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## **Appendix J – Protective Action Supplements**

There are no protective action supplements applicable to the AMWTP.



## **Appendix K – Chemical Spill Avoidance and Response Plans**

A chemical spill avoidance and response plan is not required for the AMWTP during Phase II Activities.



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*Appendix L – TAA Specific Information  
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## **Appendix L – TAA Specific Information**

There is no TAA Specific Information applicable to the AMWTP.