

**WP 12-ER3906**

Revision 2

# Categorization and Classification of Operational Emergencies

Management Control Procedure

EFFECTIVE DATE: 06/24/09

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APPROVED FOR USE

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## **INTRODUCTION** <sup>1, 2, 3</sup>

This procedure provides the instructions for the Facility Shift Manager (FSM) or designee to determine if an event at the Waste Isolation Pilot Plant (WIPP) is to be categorized as an operational emergency (OE) and, if a hazardous material (radiological and/or non-radiological) operational emergency needs to be classified as an Alert, Site Area Emergency (SAE), or General Emergency (GE). Classification of operational emergencies is required for events that represent a specific threat to workers and the public due to the release OR potential release of hazardous materials. If the operational emergency (OE) is classified as an Alert, SAE, or GE, this procedure identifies the Emergency Action Levels (EALs) and the protective actions required for each type of event classification.

DOE Order 151.1C requires that OEs be categorized and classified (if necessary) as promptly as possible, but no later than 15 minutes after event recognition, identification, or discovery. The early recognition, identification, or discovery of an OE is critical for timely emergency responses, and warnings to be most effective. Operational emergencies that cannot be classified using the described events may be classified as Discretionary Classifications and Protective Actions.

This procedure provides instructions for notifying the required external agencies.

This procedure is used in conjunction with the event-specific emergency response procedures (WP 12-ER series), and WP 12-HP4000, which provide the initial and subsequent response actions unique to each event.

Records generated by this procedure include the following, which are maintained by Emergency Management as part of the exercise or event file:

- Attachment 1 - Initial Notification Information for Operational Emergencies
- Attachment 2 – Follow-Up Notification Information for Operational Emergencies (as necessary)
- Attachment 3 – External Agency Notification

### **Responsibilities:**

#### Facility Shift Manager (FSM)

- Determines whether an event is an OE and the classification for that event.
- Initiates notifications internally and to external agencies.
- Notifies FMD and DOE Facility Representative of categorization/classification.
- Initiates protective actions as needed.

- With the assistance of the Consequences Assessment Team, performs ongoing assessments of the event.
- Upgrades classification, if warranted.
- Terminates the event in accordance with WP12-ER3903.

#### Crisis Manager/Deputy Crisis Manager

- Ensures that the event has been categorized/classified correctly.
- Ensures notifications have been completed.

#### Consequence Assessment Team Members

- Assists the Crisis Manager in verifying the categorization/classification of the event.
- Performs ongoing assessments of the event to upgrade the classification, if needed.
- Advises the FSM on changes to protective actions.

## REFERENCES

### BASELINE DOCUMENTS

- DOE Order 151.1C, Comprehensive Emergency Management System
- DOE/WIPP 08-3378, Emergency Planning Hazard Assessment for the Waste Isolation Pilot Plant Waste Disposal
- WP 12-9, WIPP Emergency Management Program

### REFERENCED DOCUMENTS

- WP 12-ER3002, Emergency Operations Center Activation
- WP 12-ER3903, Termination, Reentry and Recovery
- WP 12-ER4907, Evacuation/Sheltering in Place
- WP 12-ES3918, Reporting Occurrences in Accordance with DOE Order 231.1A
- WP 12-HP4000, Emergency Radiological Control Responses

## PRECAUTIONS AND LIMITATIONS

- For operational emergencies that require classification (i.e., Alert, SAE, GE), external agencies in Attachment 3 must be notified within 15 minutes after event recognition/identification/discovery.
- For operational emergencies not requiring further classification, agencies in Attachment 3 must be notified within 30 minutes after event recognition/identification/discovery.
- The FSM or designee needs to evaluate each situation, event, or issue that has been observed and/or reported and determine if the conditions warrant declaration as an OE.
- In some cases, the Recognition, Identification, and Discovery of an OE may be very clear from the onset of the event and in these cases an OE should be declared promptly.
- There are also times when an event has taken place or is in progress and does not initially meet the criteria for an OE. It may be determined at a later time after further information is obtained or when conditions change requiring an OE to be declared.

## PERFORMANCE

### 1.0 CATEGORIZATION AND CLASSIFICATION

- 1.1 FSM or Designee, determines if the event is an operational emergency using Table 1, Categorization of Operational Emergencies.
- 1.2 FSM or Designee, if categorized as an operational emergency, activates the Emergency Operations Center (EOC) and Joint Information Center (JIC) using WP 12-ER3002.
- 1.3 FSM, **IF** the operational emergency involves the release or potential release of hazardous materials, **THEN** determine the classification.
  - 1.3.1 For SURFACE events, use Table 2, Classification and Protective Actions for Surface Operational Emergencies.
  - 1.3.2 For UNDERGROUND events, use Table 4, Classification and Protective Actions for Underground Operational Emergencies.

- 1.3.3 For OEs that do not have site-specific classification and protective actions, use Table 8, Discretionary Classifications and Protective Actions.
- 1.4 **IF** the operational emergency classification review is determined to be less than an Alert,  
**THEN GO TO** Step 3.1.
- 1.5 To allow declaration of the level of emergency that most closely corresponds to the apparent conditions, regardless whether a specific EAL has been exceeded, go to Table 7, Generic WIPP Emergency Action Levels for Hazardous Material Facilities Other than the WHB or the U/G Storage Areas.

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**NOTE**

Sections 2.0 and 3.0 are normally completed concurrently.

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**2.0 NOTIFICATION**

- 2.1 FSM or designee, complete Attachment 1, Initial Notification Information for Operational Emergencies, with the most current information, and provide it to the EOC Crisis Manager for distribution in accordance with WP 12-ER3002.
- 2.2 FSM, notify the FMD and DOE Facility Representative of OE categorization/classification
- 2.3 FSM, notify the CBFO EOC Representative. If CBFO EOC Representative is not available, notify DOE/HQ EOC by telephone (202-586-8100) of the event.
- 2.4 FSM or designee, use the WIPP automated notification system to complete notifications. Make notifications according to Attachment 3, and include the information in Attachment 1.
- 2.5 Using the automated notification system, activate the scenario. If automated system is or becomes inoperable, **GO TO** Step 2.6.
- 2.5.1 Dial 8616.
- 2.5.2 At the prompt, enter your User ID number followed by #.

- 2.5.3 At the prompt, enter your Security PIN (same as User ID) followed by #.
- [ A ] Follow the prompts given to start a scenario:
  - [ B ] Enter scenario number followed by #.
  - [ C ] Enter scenario PIN (same as scenario number) followed by #.
  - [ D ] Follow instructions to change recorded message):
    1. Press 1 to hear the current message, OR
    2. Press 2 to re-record a message, AND
    3. Press 3 to activate the scenario,
    4. Press # to return to the main menu.

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**NOTE**

When the scenario is built and the Communicator prompts again to start a scenario, user has the option to press #, to end the call, OR start another scenario.

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- 2.6 Complete notifications using the phone contacts provided in Attachment 3, External Agency Notification.
- 2.7 Complete Attachment 2 to address condition changes, as necessary.
- 2.8 Return to Step 2.5 to Make follow-up notifications to external agencies according to Attachment 3, and include the information in Attachment 2 as necessary.
- 2.9 Provide copy of Attachment 2 (if applicable) to the EOC Crisis Manager for distribution in accordance with WP 12-ER3002.
- 3.0 PROTECTIVE ACTIONS
- 3.1 For operational emergencies not requiring further classification, FSM use Table 6, Protective Actions for Operational Emergencies Not Requiring Classification, to complete appropriate protective actions.

- 3.2 Default protective actions are required to be identified with the specific EAL according to DOE O 151.1C. Additional emergency actions are listed as follows:
    - 3.2.1 For SURFACE events, use Table 3.
    - 3.2.2 For UNDERGROUND events, use Table 5.
  - 3.3 With the assistance of the Crisis Management Team, FSM perform ongoing assessment of the event for the potential to upgrade the classification and protective actions.
  - 3.4 FSM, upgrade classification as necessary as additional information becomes available, and/or a change in consequence assessment determination, and/or changing field conditions occur.
- 4.0 TERMINATION OF THE EVENT
- 4.1 FSM, terminate the event in accordance with WP 12-ER3903, Termination, Reentry, and Recovery.

## Attachment 1 – Initial Notification Information for Operational Emergencies

To be completed by the FSM or designee for notification to external agencies (see Step 2.1)		
1	Name and location of facility	Waste Isolation Pilot Plant 26 miles southeast of Carlsbad, NM
2	Name and phone number of personnel reporting the incident to the outside agency	
3	Name, address, and phone number of the person in charge of or responsible for the facility (RCRA Emergency Coordinator)	Waste Isolation Pilot Plant 26 Mile southeast of Carlsbad, NM (575) 234-8457 or (575) 234-8125
4	Date and time of the incident (include time zone)	
5	Type or source of incident (fire, explosion, release)  Brief description of incident	
6	Categorization and classification (if applicable) of the incident and time of declaration	Categorization:  Time:
		Classification (If applicable):  Time:
7	Is there a release in progress?	Yes                  No
8	Type and quantity of materials involved (to the extent known)	

## Attachment 1 – Initial Notification Information for Operational Emergencies

9	Recommended protective actions with timing considerations, where applicable	
10	Type of actual/projected release and duration (source term or release characterization)	
11	Meteorological conditions, such as wind speed, wind direction, stability class, precipitation, etc.	
12	Actual or projected doses or dose rates that exceed Protective Action Criteria in exclusive use area (barbed wire fence)	
13	Extent of injuries, if any	
14	Possible hazard to human health and the environment (air, soil, water, wildlife, etc.) outside the facility	
15	The identity of any surface and/or groundwater involved or threatened, and the extent of actual and potential water pollution	
16	Steps being taken or proposed to contain and clean up the material involved	
Signature (FSM or Designee)		Date

## Attachment 2 – Follow-Up Notification Information for Operational Emergencies

To be completed by the FSM or designee for notification to external agencies (see Step 2.7)	
1	Name and location of Facility Waste Isolation Pilot Plant 26 miles southeast of Carlsbad, NM
2	Additional information on accident
3	Changes to classification of the incident and time of declaration. Classification Change: Time:
4	Type and quantity of materials involved to the extent known
5	Type and quantity of materials involved to the extent known
6	Type of actual/projected release and duration (source term or release characterization)
7	Meteorological conditions, such as wind speed, wind direction, stability class, precipitation, etc.
8	Actual or projected doses or dose rates that exceed Protective Action Criteria in exclusive use area (barbed wire fence)
9	Extent of injuries, if any
10	Possible hazard to human health and the environment (air, soil, water, wildlife, etc.) outside the facility
11	The identity of any surface and/or groundwater involved or threatened, and the extent of actual and potential water pollution
12	Steps being taken or proposed to contain and clean up the material involved
Revision #	
Time	
Printed Name (FSM or Designee)	
Signature	
Date	

## Attachment 3 – External Agency Notification

<b>EXTERNAL AGENCY NOTIFICATION</b>			
<b><i>THE FOLLOWING AGENCIES ARE REQUIRED TO BE NOTIFIED WITHIN THE 15/30 MINUTE TIME LIMITS (see Step 2.4)</i></b>			
<b>Date &amp; Time</b>	<b>Agency</b>	<b>Contact Numbers</b>	<b>Person Contacted</b>
Date: _____ Time: _____	DOE Headquarters EOC (To be contacted by phone)	(202) 586-8100	
Date: _____ Time: _____	Carlsbad Police Department <b>AND</b> Carlsbad Fire Department Dispatch	(575) 885-2111 or 911	
Date: _____ Time: _____	Eddy County Sheriff	(575) 887-7551	
Date: _____ Time: _____	Hobbs Police <b>AND</b> Hobbs Fire Department	(575) 397-9265 or (575) 392-5588	
<b><i>THE FOLLOWING AGENCIES TO BE CONTACTED AS SOON AS POSSIBLE</i></b>			
Date: _____ Time: _____	New Mexico State Police	(575) 885-3137 or (575) 392-5588	
Date: _____ Time: _____	Lea County Emergency Manager	(575) 396-8521 or (575) 396-3611	
Date: _____ Time: _____	Eddy County Local Emergency Planning Committee	(575) 628-5450 or (575) 885-3581	
Date: _____ Time: _____	New Mexico Environment Department (NMED)	24 Hr. Emergency Reporting Number (505) 827-9329 Fax: (505) 827-9368	
Date: _____ Time: _____	Department of Public Safety WIPP Coordinator	(505) 827-9221 Fax: (505) 829-3434	

**Attachment 3 – External Agency Notification**

<b>EXTERNAL AGENCY NOTIFICATION</b>			
Date: _____ Time: _____	State Emergency Response Commission, New Mexico Department of Homeland Security (State Hazmat Coordinator)	(505) 476-9681	
Date: _____ Time: _____	National Response Center	1-800-424-8802 Fax: (202) 479-7181	
Printed Name (FSM or Designee)	Signature	Date	

Table 1 – Categorization of Operational Emergencies

WIPP encourages a positive attitude toward assessing and reporting occurrences to ensure that management is kept informed of events that may:

- Affect or endanger the health and safety of employees or the public;
- Seriously impact the intended purpose of the WIPP facilities or programs; or
- Have a significant adverse effect on the environment.

Emergencies are reviewed for categorization in accordance with DOE O 151.1C and grouped into two broad categories: *operational emergencies* and *energy emergencies*. Energy emergencies are handled by the DOE Headquarters. This document addresses only operational emergencies.

**Operational Emergencies.** Operational Emergencies are unplanned, significant events or conditions that require time-urgent response from outside the immediate/affected site/facility or area of the incident. Such emergencies are caused by, involve, or affect DOE facilities, sites, or activities and represent, cause, or have the potential to cause the events or conditions. Incidents that can be controlled by employees or maintenance personnel in the immediate/affected site/facility or area are not Operational Emergencies. Incidents that do not pose a significant hazard to safety, health, and/or the environment and that do not require a time-urgent response are not Operational Emergencies. These less severe events are reported through WP 12-ES3918, Reporting Occurrences in Accordance with DOE Order 231.1A. **Note:** The initiating events described in these tables are not all-inclusive – some judgment on the part of the FSM is required.

Operational Emergencies are further divided into:

- *Events That Do Not Require Further Classification.* An Operational Emergency shall be declared when events occur that represent a significant degradation in the level of safety at a site/facility and require time-urgent response efforts from outside the site/facility. These events **do not** require further classification. See Table 6 for actions to take for these events.
- *Events Requiring Further Classification.* Events listed as Operational Emergencies that serve as initiating events for the release of hazardous material and that do require further classification (i.e., as Alert, Site Area Emergency, or General Emergency).

Table 1 – Categorization of Operational Emergencies

**NOTE: For a Hazardous Material Release:**

Direct and immediate attention must be given to the determination of a timely and accurate categorization and classification for any hazardous material incident. This categorization and classification using an EAL and other appropriate response tools will determine the appropriate protective actions and distances. Transmission of these protective actions and the requirements for implementation must be communicated to those requiring them as soon as possible.

**Definition of Hazardous Material Operational Emergencies Events Requiring Further Classification**

Operational Emergencies shall be classified as either an Alert, Site Area Emergency, or General Emergency, in order of increasing severity, when events occur that represent a specific threat to workers and the public due to the release or potential release of significant quantities of radiological and non-radiological hazardous materials. Classification aids in the rapid communication of critical information and the initiation of appropriate time-urgent emergency response actions. Events listed as Operational Emergencies that serve as initiating events for the release of hazardous materials will be classified under the provisions cited below.
<p><b>*ALERT.</b> An Alert shall be declared when events are predicted, are in progress, or have occurred that result in one or more of the following:</p> <ol style="list-style-type: none"> <li>1. An actual or potential substantial degradation in the level of control over hazardous materials (radiological and non-radiological). The radiation dose from any release to the environment of radioactive material or a concentration in air of other hazardous material is expected to exceed either: <ul style="list-style-type: none"> <li>• The applicable Protective Action Criteria (PAC) at or beyond 30 meters from the point of release to the environment or</li> <li>• A site-specific criterion corresponding to a small fraction of the applicable PAC at or beyond the facility boundary or exclusion zone boundary.</li> </ul> </li> <li>2. It is not expected that the applicable PAC will be exceeded at or beyond the facility boundary or exclusion zone boundary.</li> </ol>
1) An actual or potential substantial degradation in the level of safety or security of a facility or process that could, with further degradation, produce a Site Area Emergency or General Emergency.
2) An event involving hazardous material that based on the opinion, judgment, and/or experience of the FSM should be classified as an Alert.

<b>*SITE AREA EMERGENCY.</b> A Site Area Emergency shall be declared when events are predicted, in progress, or have occurred that result in one or more of the following situations.
1) An actual or potential major failure of functions necessary for the protection of workers or the public. The radiation dose from any release of radioactive material or concentration in air from any release of other hazardous material is expected to exceed the applicable PAC beyond the facility boundary or exclusive use area. The PAC is not exceeded at or beyond the exclusive use area (300 m).**
2) Actual or potential major degradation in the level of safety or security of a facility or process that could, with further degradation produce a General Emergency.
3) An event involving hazardous material that based on the opinion, judgment, and/or experience of the FSM should be classified as a Site Area Emergency.

Table 1 – Categorization of Operational Emergencies

<b>*GENERAL EMERGENCY.</b> A General Emergency shall be declared when events are predicted, in progress, or have occurred that result in one or more of the following situations.	
1)	Actual or imminent catastrophic reduction of facility safety or security systems with potential for the release of large quantities of hazardous material (radiological or non-radiological) to the environment. The radiation dose from any release of radioactive material or a concentration in air from any release of other hazardous material is expected to exceed the applicable PAC off-site (300 m). Protective Action Recommendations to outside agencies are required.
2)	An event involving hazardous material that based on the opinion, judgment, and/or experience of the FSM should be classified as a General Emergency.

**\* Hazardous Material Release**

Direct and immediate attention must be given to the determination of a timely and accurate categorization and classification for any hazardous material incident. This categorization and classification using and EAL and other appropriate response tools will determine the appropriate protective actions and distances. Transmission of these protective actions and the requirements for implementation must be communicated to those requiring them as soon as possible.

- \*\*** Any public highways or other public unescorted access areas that are affected by an emergency declaration must be evacuated and access control established within one hour of the emergency declaration.

### Definition of Health and Safety Operational Emergencies

<b>HEALTH AND SAFETY.</b> The following events or conditions represent, cause, or have the potential to cause serious health and safety impacts to workers or members of the public.	
1)	Discovery of radioactive or other hazardous material contamination from past DOE operations that is causing or may reasonably be expected to cause uncontrolled personnel exposures exceeding protective action criteria.
2)	An offsite hazardous material event not associated with DOE operations that is observed to have or is predicted to have an impact on a DOE site such that protective actions are required for on-site DOE workers.
3)	An occurrence that causes or can reasonably be expected to cause significant structural damage to DOE facilities, with confirmed or suspected personnel injury or death or substantial degradation of health and safety.
4)	Any facility evacuation in response to an actual occurrence that requires time-urgent response by specialist personnel, such as hazardous material responders or mutual aid groups not normally assigned to the affected facility.
5)	An unplanned nuclear criticality resulting in actual or potential facility damage.
6)	Any non-transportation-related mass casualty event.
7)	A Health and Safety related event that based on the opinion, judgment, and/or experience of the FSM should be categorized as a Health and Safety Operational Emergency.

Table 1 – Categorization of Operational Emergencies

**Definition of Environmental Operational Emergencies**

<b>ENVIRONMENT.</b> The following events or conditions represent, cause, or have the potential to cause serious detrimental effects on the environment.	
1)	Any actual or potential release of hazardous material or regulated pollutant to the environment, in a quantity greater than five times the Reportable Quantity (RQ) specified for such material in 40 CFR §302.4, that could result in significant offsite consequences such as major wildlife kills, wetland degradation, aquifer contamination, or the need to secure downstream water supply intakes.
2)	An event involving the environment that based on the opinion, judgment, and/or experience of the FSM should be categorized as an Environmental Operational Emergency.

**Definition of Safeguards and Security Operational Emergencies**

<b>SECURITY AND SAFEGUARDS.</b> The following events or conditions represent, cause, or have the potential to cause degradation of security or safeguards conditions with actual or potential direct harm to people or the environment.	
1)	Actual unplanned detonation of an explosive device or a credible threatened detonation resulting from the location of a confirmed or suspicious explosive device.
2)	An actual terrorist attack or sabotage event involving a DOE site/facility or operation.
3)	Kidnapping or the taking of hostage(s) involving a DOE site/facility or operation.
4)	Actual theft or loss of a Category II quantity of Special Nuclear Materials or other hazardous material that, if released, could endanger workers, the public, or the environment. <b>Note:</b> The release or potential release of hazardous materials must also be categorized as a Hazardous Material Operational Emergency and classified appropriately.
5)	Damage or destruction of a site or facility by natural or malevolent means sufficient to expose classified information to unauthorized disclosure.
6)	An event involving the environment that based on the opinion, judgment, and/or experience of the FSM should be categorized as a Safeguards and Security Operational Emergency.

**Definition of Transportation Operational Emergencies**

<b>OFF-SITE NNSA/DOE TRANSPORTATION ACTIVITIES.</b> The following events or conditions represent an actual or potential release of radiological or non-radiological hazardous materials from a DOE shipment.	
1)	The radiation dose from any release of radioactive material or the concentration in air from any release of other hazardous material is expected to require establishment of protective actions beyond the initial protective action zone as defined in DOT Emergency Response Guide Book as amended or updated.
2)	An event involving the environment that based on the opinion, judgment, and/or experience of the FSM should be categorized as a Transportation Operational Emergency.

Table 2 – Classification and Protective Actions for Surface Operational Emergencies		
<b>SURFACE ACCIDENT SUMMARY</b>	<b>EAL</b>	<b>PAGE</b>
<b>Operational Emergencies Requiring Classification</b>		
Large Fire in WHB Affecting CH Containers ( <b>without HEPA filtration</b> )	GE-1.1	15
Collapse of WHB ( <b>without HEPA filtration</b> )	GE-1.2	16
Aircraft Crash into WHB (No Fire) ( <b>without HEPA filtration</b> )	GE-1.3	16
Aircraft Crash into WHB Causing Fire ( <b>without HEPA filtration</b> )	GE-1.4	17
Small Fire (One CH Container) in WHB ( <b>without HEPA filtration</b> )	SAE-1.1	19
Security Event in a WIPP Facility Resulting in an Actual or Imminent Catastrophic Release of Radioactive material Involving a Waste Assembly ( <b>without HEPA filtration</b> )	GE-4.1	17
Security Event in a WIPP Facility Resulting in Actual or Imminent Degradation in Safety Systems and Release of Radioactive Material Involving a Waste Assembly ( <b>without HEPA filtration</b> )	SAE-4.1	20
<b>Operational Emergencies NOT Requiring Classification</b>		
Large Fire in WHB Involving Waste Containers ( <b>with HEPA Filtration</b> )	NA	--
Waste Handling Equipment (Forklift) Collides into Stored CH Waste Containers ( <b>with HEPA filtration</b> )	NA	--
Waste Handling Equipment (Forklift) Punctures Waste Container ( <b>with HEPA filtration</b> )	NA	--
Payload or Waste Assembly Dropped from TRUDOCK Crane or a Waste Hoist Failure ( <b>with HEPA filtration</b> )	NA	--
RH Waste Containers Dropped from Grapple or Crane ( <b>with HEPA filtration</b> )	NA	--
Small Fire (One Waste Container) in WHB ( <b>with HEPA filtration</b> )	NA	--

Table 2 – Classification and Protective Actions for Surface Operational Emergencies

<b>CLASSIFICATION AND PROTECTIVE ACTIONS FOR SURFACE OPERATIONAL EMERGENCIES</b>			
<b>DESCRIPTION</b>	<b>INDICATORS</b>	<b>CLASSIFICATION</b>	<b>MAXIMUM DISTANCE FOR PROTECTIVE ACTIONS</b>
<p><b>GE-1.1</b>  <b>LARGE FIRE IN WHB Affecting CH Waste Containers</b> resulting in a <b>release without HEPA filtration</b> to the atmosphere</p> <p><u>2 or more containers affected</u></p> <p style="text-align: center;"><b><u>Max Source Term</u></b></p> <p style="text-align: center;"><b>6.4E-2 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Direct observation of direct flame impingement on containers (e.g., electrical forklift fire)</li> </ul> <p style="text-align: center;"><b>AND/OR</b></p> <ul style="list-style-type: none"> <li>• Activation of Zone 1 fire alarms indicated on WHB Fire Alarm or Surface Fire Alarm displays</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Confirmation of release by logical indicators (e.g., CAM 152 or 153 Radiation Alarm on Surface CAM Location [2301] display in CMR or report of local CAM alarm from CH Bay), or Portable CAM used in place of TRUDOCK CAMs.</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Indication of ventilation system failure in the Central Monitoring Room (CMR) for WHB (e.g., loss of CH Area DP on CH Area HVAC (2570) display)</li> </ul>	<p>General Emergency (GE)</p>	<p>770 meters</p>
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors; provide protective action recommendations to outside agencies to shelter in place or evacuate those unable to shelter in place. For additional actions, see Table 3, Actions for Surface Operational Emergencies</p>			

Table 2 – Classification and Protective Actions for Surface Operational Emergencies

CLASSIFICATION AND PROTECTIVE ACTIONS FOR SURFACE OPERATIONAL EMERGENCIES			
DESCRIPTION	INDICATORS	CLASSIFICATION	MAXIMUM DISTANCE FOR PROTECTIVE ACTIONS
<b>GE-1.2</b> <b>COLLAPSE OF WHB</b> resulting in a <b>release without HEPA filtration</b> to the atmosphere  <u>Max Source Term</u>  <b>3.4E-1 PE-Ci</b>	<ul style="list-style-type: none"> <li>Direct observation of collapse</li> </ul>	GE	2,400 meters
<b>Protective Actions:</b> Evacuate immediate area; all others remain indoors; provide protective action recommendations to outside agencies to shelter in place or evacuate those unable to shelter in place. For additional actions, see Table 3, Actions for Surface Operational Emergencies			
<b>GE-1.3</b> <b>AIRCRAFT CRASH INTO WHB (NO FIRE)</b> resulting in a <u>direct release</u> to the atmosphere as indicated by:  <u>Max Source Term</u>  <b>1.9E-1 PE-Ci</b>	<ul style="list-style-type: none"> <li>Direct observation</li> </ul>	GE	1,660 meters
<b>Protective Actions:</b> Evacuate immediate area; all others remain indoors; provide protective action recommendations to outside agencies to shelter in place or evacuate those unable to shelter in place. For additional actions, see Table 3, Actions for Surface Operational Emergencies.			

Table 2 – Classification and Protective Actions for Surface Operational Emergencies

CLASSIFICATION AND PROTECTIVE ACTIONS FOR SURFACE OPERATIONAL EMERGENCIES			
DESCRIPTION	INDICATORS	CLASSIFICATION	MAXIMUM DISTANCE FOR PROTECTIVE ACTIONS
<p><b>GE-1.4</b>  <b>AIRCRAFT CRASH INTO WHB</b>  <b>CAUSING FIRE</b> resulting in a <b>release</b>  <b>without HEPA filtration</b> to the  atmosphere</p> <p><b><u>Max Source Term</u></b></p> <p><b>5.8E-1 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Direct observation</li> </ul>	GE	2930 meters
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors; provide protective action recommendations to outside agencies to shelter in place or evacuate those unable to shelter in place. For additional actions, see Table 3, Actions for Surface Operational Emergencies</p>			

Table 2 – Classification and Protective Actions for Surface Operational Emergencies

<b>CLASSIFICATION AND PROTECTIVE ACTIONS FOR SURFACE OPERATIONAL EMERGENCIES</b>			
<b>DESCRIPTION</b>	<b>INDICATORS</b>	<b>CLASSIFICATION</b>	<b>MAXIMUM DISTANCE FOR PROTECTIVE ACTIONS</b>
<p><b>SAE-1.1</b>  <b>SMALL FIRE (ONE CH CONTAINER) IN WHB resulting in a release without HEPA filtration to the atmosphere</b></p> <p><b>SURFACE</b></p> <p><b><u>Max Source Term</u></b></p> <p><b>6.4E-3 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Direct observation</li> </ul> <p style="text-align: center;"><b>AND/OR</b></p> <ul style="list-style-type: none"> <li>• Activation of Zone 1 fire alarms indicated on WHB Fire Alarm (2122) or Surface Fire Alarm (2120) displays in CMR</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Confirmation of release by logical indicators (e.g., CAM 152 or 153 Radiation Alarm on Surface CAM Location (2301) display in CMR or report of local CAM alarm from CH Bay), or Portable CAM used in place of TRUDOCK CAMs</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Indication of ventilation system failure in the Central Monitoring Room (CMR) for WHB (e.g., loss of CH Area DP on CH Area HVAC [2570] display)</li> </ul>	SAE	200 meters
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors. For additional actions, see Table 3, Actions for Surface Operational Emergencies.</p>			

Table 2 – Classification and Protective Actions for Surface Operational Emergencies

<b>CLASSIFICATION AND PROTECTIVE ACTIONS FOR SURFACE OPERATIONAL EMERGENCIES</b>			
<b>DESCRIPTION</b>	<b>INDICATORS</b>	<b>CLASSIFICATION</b>	<b>MAXIMUM DISTANCE FOR PROTECTIVE ACTIONS</b>
<p><b>GE-4.1</b>  <b>SECURITY EVENT IN A WIPP FACILITY RESULTING IN AN ACTUAL OR IMMINENT CATASTROPHIC RELEASE OF RADIOACTIVE MATERIAL</b> resulting in a <b>release without HEPA filtration</b> to the atmosphere</p> <p style="text-align: center;"><b><u>Max Source Term</u></b>  <b>2.0E+0 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Direct observation</li> </ul>	GE	8510 meters
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors; provide protective action recommendations to outside agencies to shelter in place or evacuate those unable to shelter in place. For additional actions, see Table 3, Actions for Surface Operational Emergencies.</p>			
<p><b>SAE-4.1</b>  <b>SECURITY EVENT IN A WIPP FACILITY RESULTING IN AN ACTUAL OR IMMINENT DEGRADATION IN SAFETY SYSTEMS AND RELEASE OF RADIOACTIVE MATERIAL</b> resulting in a <b>release without HEPA filtration</b> to the atmosphere</p> <p style="text-align: center;"><b><u>Max Source Term</u></b>  <b>1.0E-2 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Directt Observation</li> </ul>	SAE	300 meters
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors. For additional actions, see Table 3, Actions for Surface Operational Emergencies.</p>			

Table 2 – Classification and Protective Actions for Surface Operational Emergencies

Table 3 – Actions for Surface Operational Emergencies with EALs

Protective Actions for Surface		
ALERT	SITE AREA EMERGENCY (SAE)	GENERAL EMERGENCY
<ul style="list-style-type: none"> <li>• <b>NOTIFY</b> site personnel.</li> <li>• <b>ACTIVATE</b> Emergency Response Teams, EOC, and JIC.</li> <li>• <b>ISOLATE</b> affected area and <b>ERECT</b> boundaries.</li> <li>• <b>IDENTIFY</b> exposed personnel and determine extent of exposure.</li> <li>• <b>PROVIDE</b> appropriate medical assistance.</li> <li>• <b>PERFORM</b> analysis of Station "C" to confirm no contamination exhausted (when applicable).</li> <li>• <b>SHELTER-IN-PLACE OR EVACUATE</b> site personnel, upwind if possible.</li> <li>• <b>BLOCK ACCESS</b> to the PPA.</li> <li>• <b>PERFORM</b> Consequence Assessment by Monitoring/Modeling the Plume.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>NOTIFY</b> personnel outside the PPA using Site Notification System (SNS).</li> <li>• <b>BLOCK ACCESS</b> to the PPA and Parking Lot.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>NOTIFY</b> affected plant personnel and subcontractors outside the PPA by cell phone or radio to <b>EVACUATE</b> to an upwind location or <b>SHELTER</b> in place.</li> <li>• <b>NOTIFY</b> local and state authorities outside the Exclusive Use Area (300 m) to EVACUATE to an upwind location or shelter in place residents in the downwind direction from the source of release.</li> <li>• <b>SECURE</b> access to WIPP access roads using law enforcement agencies or site resources.</li> <li>• <b>PREPARE</b> public notification for exposed individuals if the contamination exceeds the PAC beyond the EPZ.</li> <li>• <b>IDENTIFY</b> exposed personnel and determine extent of exposure and maintain accountability for future evaluation.</li> <li>• Request the DOE to <b>ACTIVATE</b> the RAP Team by contacting the Albuquerque RAP Office at (505) 845-4667.</li> </ul>

Table 4 – Classification and Protective Actions for Underground Operational Emergencies

<b>UNDERGROUND ACCIDENT SUMMARY</b>	<b>EAL</b>	<b>PAGE</b>
<b>Operational Emergencies Requiring Classification</b>		
Large Pool Fire in U/G Involving CH Waste Containers <b>(without HEPA filtration)</b>	GE-1.5	24
Waste Handling Equipment (Forklift) Punctures CH Waste Container(s) in U/G <b>(without HEPA filtration)</b>	GE-1.6	25
Transporter Collides with U/G CH Waste Array <b>(without HEPA filtration)</b>	GE-1.7	26
RH Vehicle Collides with U/G CH Waste Array <b>(without HEPA filtration)</b>	GE-1.8	27
Waste Assembly Dropped Down Waste Shaft <b>(without HEPA filtration)</b>	GE-1.9	28
Small Fire (One CH Container) in U/G <b>(without HEPA filtration)</b>	SAE-1.2	29
CH Waste Assemblies Dropped or Dislodged from Transport Vehicle <b>(without HEPA filtration)</b>	A-1.1	30
Security Event in a WIPP Facility Resulting in an Actual or Imminent Catastrophic Release of Radioactive material Involving a Waste Assembly of Any container Type <b>(without HEPA filtration)</b>	GE-4.1	31
Security Event in a WIPP Facility Resulting in Actual or Imminent Degradation in Safety Systems and Release of Radioactive Material Involving a Waste Assembly of Any Container Type <b>(without HEPA filtration)</b>	SAE-4.1	31
<b>NOTE: For each of these events, the manual switch to HEPA filtration either does not occur or it takes longer than 5 minutes to occur.</b>		

<b>Operational Emergencies NOT Requiring Classification</b>		
Waste Handling Equipment (Forklift) Punctures Waste Container(s) <b>(with HEPA filtration)</b>	NA	--
Transporter Collides with UG CH Waste Array <b>(with HEPA filtration)</b>	NA	--
RH Vehicle Collides with UG CH Waste Array <b>(with HEPA filtration)</b>	NA	--
Waste Assembly Dropped or Dislodged from Transport Vehicle <b>(with HEPA filtration)</b>	NA	--

Table 4 – Classification and Protective Actions for Underground Operational Emergencies

<b>CLASSIFICATION AND PROTECTIVE ACTIONS FOR UNDERGROUND OPERATIONAL EMERGENCIES</b>			
<b>DESCRIPTION</b>	<b>INDICATORS</b>	<b>CLASSIFICATION</b>	<b>MAXIMUM DISTANCE FOR PROTECTIVE ACTIONS</b>
<p><b>GE-1.5</b>  <b>LARGE POOL FIRE IN UNDERGROUND INVOLVING CH WASTE CONTAINERS</b> resulting in a release without HEPA filtration to the atmosphere</p> <p><b><u>Max Source Term</u></b></p> <p><b>3.8E-1 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Direct observation (e.g., fuel pool fire) of direct flame impingement upon waste containers</li> </ul> <p style="text-align: center;"><b>AND/OR</b></p> <ul style="list-style-type: none"> <li>• Activation of fire alarms on Underground Fire Alarms (2110) display in CMR</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Confirmation of release by logical indicators (e.g., Alpha/Beta CAM 149, 150, 151, or 152 HI-HI Rad Alarm display in CMR), or Portable CAM used in their place.</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Failure to divert underground ventilation system through HEPA within 5 minutes of recognition of the underground event</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>• Indication of UG ventilation system failure on Exhaust Filter Building Fan/HEPA Control (2530) display in the Central Monitoring Room (CMR)</li> </ul>	<p><b>GENERAL EMERGENCY (GE)</b></p>	<p>2,240 meters</p>
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors; provide protective action recommendations to outside agencies to shelter in place or evacuate those unable to shelter in place. For additional actions, see Table 5, Actions for Underground Operational Emergencies.</p>			

Table 4 – Classification and Protective Actions for Underground Operational Emergencies

<b>CLASSIFICATION AND PROTECTIVE ACTIONS FOR UNDERGROUND OPERATIONAL EMERGENCIES</b>			
DESCRIPTION	INDICATORS	CLASSIFICATION	MAXIMUM DISTANCE FOR PROTECTIVE ACTIONS
<p><b>GE-1.6</b>  <b>WASTE HANDLING EQUIPMENT (FORKLIFT) PUNCTURES CH CONTAINERS IN THE UG</b> resulting in a <b>release without HEPA filtration</b> to the atmosphere</p> <p style="text-align: center;"><b><u>Max Source Term</u></b></p> <p style="text-align: center;"><b>1.4E-2 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Direct observation</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Confirmation of release by logical indicators (e.g., Alpha/Beta CAM 149, 150, 151, or 152 HI-HI Rad Alarm display in CMR, or Portable CAM used in their place, requiring a ventilation shift to filtration)</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Failure to divert underground ventilation system through HEPA within 5 minutes of recognition of underground event</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>• Indication of UG ventilation system failure on Exhaust Filter Building Fan/HEPA Control (2530) display in the Central Monitoring Room (CMR)</li> </ul>	<p>GE</p>	<p>360 meters</p>
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors; provide protective action recommendations to outside agencies to shelter in place or evacuate those unable to shelter in place. For additional actions, see Table 5, Actions for Underground Operational Emergencies.</p>			

Table 4 – Classification and Protective Actions for Underground Operational Emergencies

<b>CLASSIFICATION AND PROTECTIVE ACTIONS FOR UNDERGROUND OPERATIONAL EMERGENCIES</b>			
<b>DESCRIPTION</b>	<b>INDICATORS</b>	<b>CLASSIFICATION</b>	<b>MAXIMUM DISTANCE FOR PROTECTIVE ACTIONS</b>
<p><b>GE-1.7</b>  <b>TRANSPORTER COLLIDES WITH UG CH WASTE ARRAY</b> resulting in a <b>release without HEPA filtration</b> to the atmosphere</p> <p style="text-align: center;"><b><u>Max Source Term</u></b></p> <p style="text-align: center;"><b>3.7E-2 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Direct observation</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Confirmation of release by logical indicators (e.g., Alpha/Beta CAM 149, 150, 151, or 152 HI-HI Rad Alarm display in CMR, or Portable CAM used in their place, requiring a ventilation shift to filtration)</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Failure to divert underground ventilation system through HEPA within 5 minutes of recognition of underground event</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>• Indication of UG ventilation system failure on Exhaust Filter Building Fan/HEPA Control (2530) display in the Central Monitoring Room (CMR)</li> </ul>	GE	640 meters
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors; provide protective action recommendations to outside agencies to shelter in place or evacuate those unable to shelter in place. For additional actions, see Table 5, Actions for Underground Operational Emergencies.</p>			

Table 4 – Classification and Protective Actions for Underground Operational Emergencies

<b>CLASSIFICATION AND PROTECTIVE ACTIONS FOR UNDERGROUND OPERATIONAL EMERGENCIES</b>			
<b>DESCRIPTION</b>	<b>INDICATORS</b>	<b>CLASSIFICATION</b>	<b>MAXIMUM DISTANCE FOR PROTECTIVE ACTIONS</b>
<p><b>GE-1.8</b>  <b>RH VEHICLE COLLIDES WITH UG CH WASTE ARRAY</b> resulting in a <b>release without HEPA filtration</b> to the atmosphere</p> <p style="text-align: center;"><b><u>Max Source Term</u></b></p> <p style="text-align: center;"><b>4.3E-2 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Direct observation</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Confirmation of release by logical indicators (e.g., Alpha/Beta CAM 149, 150, 151, or 152 HI-HI Rad Alarm display in CMR, or Portable CAM used in their place, requiring a ventilation shift to filtration)</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Failure to divert underground ventilation system through HEPA within 5 minutes of recognition of the underground event</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>• Indication of UG ventilation system failure on Exhaust Filter Building Fan/HEPA Control (2530) display in the Central Monitoring Room (CMR)</li> </ul>	GE	700 meters
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors; provide protective action recommendations to outside agencies to shelter in place or evacuate those unable to shelter in place. For additional actions, see Table 5, Actions for Underground Operational Emergencies.</p>			

Table 4 – Classification and Protective Actions for Underground Operational Emergencies

CLASSIFICATION AND PROTECTIVE ACTIONS FOR UNDERGROUND OPERATIONAL EMERGENCIES			
DESCRIPTION	INDICATORS	CLASSIFICATION	MAXIMUM DISTANCE FOR PROTECTIVE ACTIONS
<p><b>GE-1.9</b>  <b>WASTE ASSEMBLY DROPPED DOWN</b>  <b>WASTE SHAFT</b> resulting in a <b>release</b>  <b>without HEPA filtration</b> to the  atmosphere</p> <p style="text-align: center;"><b><u>Max Source Term</u></b></p> <p style="text-align: center;"><b>2.0E-0 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Direct observation</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Confirmation of release by logical indicators</li> </ul> <p><b>NOTE:</b> Due to the ventilation configuration, a switch to HEPA filtration after the incident will not occur quick enough to prevent a release to the environment</p>	<p>GE</p>	<p>8510 meters</p>
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors; provide protective action recommendations to outside agencies to shelter in place or evacuate those unable to shelter in place. For additional actions, see Table 5, Actions for Underground Operational Emergencies.</p>			

Table 4 – Classification and Protective Actions for Underground Operational Emergencies

<b>CLASSIFICATION AND PROTECTIVE ACTIONS FOR UNDERGROUND OPERATIONAL EMERGENCIES</b>			
<b>DESCRIPTION</b>	<b>INDICATORS</b>	<b>CLASSIFICATION</b>	<b>MAXIMUM DISTANCE FOR PROTECTIVE ACTIONS</b>
<p><b>SAE-1.2</b>  <b>SMALL FIRE (ONE CH CONTAINER) IN THE UG</b> resulting in a <b>release without HEPA filtration</b> to the atmosphere</p> <p><b>UNDERGROUND</b></p> <p><u><b>Max Source Term</b></u></p> <p><b>6.4E-3 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Direct Observation</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>• Activation of on Underground Fire Alarms (2110) display in CMR</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Confirmation of release by logical indicators (e.g., Alpha/Beta CAM 149, 150, 151, or 152 HI-HI Rad Alarm display in CMR, or Portable CAM used in their place, requiring a ventilation shift to filtration)</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>• Failure to divert underground ventilation system through HEPA within 5 minutes of recognition of the underground event</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>• Indication of UG ventilation system failure on Exhaust Filter Building Fan/HEPA Control (2530) display in the Central Monitoring Room (CMR)</li> </ul>	<p><b>SITE AREA EMERGENCY (SAE)</b></p>	<p>200 meters</p>
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors. For additional actions, see Table 5, Actions for Underground Operational Emergencies.</p>			

Table 4 – Classification and Protective Actions for Underground Operational Emergencies

<b>CLASSIFICATION AND PROTECTIVE ACTIONS FOR UNDERGROUND OPERATIONAL EMERGENCIES</b>			
<b>DESCRIPTION</b>	<b>INDICATORS</b>	<b>CLASSIFICATION</b>	<b>MAXIMUM DISTANCE FOR PROTECTIVE ACTIONS</b>
<p><b>A-1.1</b>  <b>CH WASTE ASSEMBLIES DROPPED OR DISLODGED FROM TRANSPORT VEHICLE</b> resulting in a <b>release without HEPA filtration</b> to the atmosphere</p> <p style="text-align: center;"><b><u>Max Source Term</u></b></p> <p style="text-align: center;"><b>9.6E-4 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Direct observation</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Confirmation of release by logical indicators (e.g., Alpha/Beta CAM 149, 150, 151, or 152 HI-HI Rad Alarm display in CMR, or Portable CAM used in their place, requiring a ventilation shift)</li> </ul> <p style="text-align: center;"><b>AND</b></p> <ul style="list-style-type: none"> <li>• Failure to divert underground ventilation system through HEPA within 5 minutes of recognition of the underground event</li> </ul> <p style="text-align: center;"><b>OR</b></p> <ul style="list-style-type: none"> <li>• Indication of UG ventilation system failure on Exhaust Filter Building Fan/HEPA Control (2530) display in the Central Monitoring Room (CMR)</li> </ul>	ALERT	60 meters
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors. For additional actions, see Table 5, Actions for Underground Operational Emergencies.</p>			

Table 4 – Classification and Protective Actions for Underground Operational Emergencies

CLASSIFICATION AND PROTECTIVE ACTIONS FOR UNDERGROUND OPERATIONAL EMERGENCIES			
DESCRIPTION	INDICATORS	CLASSIFICATION	MAXIMUM DISTANCE FOR PROTECTIVE ACTIONS
<p><b>GE-4.1</b>  <b>SECURITY EVENT IN A WIPP FACILITY RESULTING IN AN ACTUAL OR IMMINENT CATASTROPHIC RELEASE OF RADIOACTIVE MATERIAL</b> resulting in a <b>release without HEPA filtration</b> to the atmosphere</p> <p style="text-align: center;"><b><u>Max Source Term</u></b>  <b>2.0E+0 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Direct observation</li> </ul>	GE	8510 meters
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors; provide protective action recommendations to outside agencies to shelter in place or evacuate those unable to shelter in place. For additional actions, see Table 5, Actions for U/G Operational Emergencies.</p>			
<p><b>SAE-4.1</b>  <b>SECURITY EVENT IN A WIPP FACILITY RESULTING IN AN ACTUAL OR IMMINENT DEGRADATION IN SAFETY SYSTEMS AND RELEASE OF RADIOACTIVE MATERIAL</b> resulting in a <b>release without HEPA filtration</b> to the atmosphere</p> <p style="text-align: center;"><b><u>Max Source Term</u></b>  <b>1.0E-2 PE-Ci</b></p>	<ul style="list-style-type: none"> <li>• Direct Observation</li> </ul>	SAE	300 meters
<p><b>Protective Actions:</b> Evacuate immediate area; all others remain indoors. For additional actions, see Table 5, Actions for U/G Operational Emergencies.</p>			

Table 5 – Actions for Underground Operational Emergencies with EALs

Protective Actions for U/G		
ALERT	SITE AREA EMERGENCY (SAE)	GENERAL EMERGENCY
<ul style="list-style-type: none"> <li>• <b>NOTIFY</b> site personnel.</li> <li>• <b>SHELTER-IN-PLACE OR EVACUATE</b> site personnel, upwind if possible.</li> <li>• <b>ACTIVATE</b> Emergency Response Teams, EOC, and JIC.</li> <li>• <b>RELOCATE</b> affected personnel to egress station</li> <li>• <b>ISOLATE</b> affected area and <b>ERECT</b> boundaries.</li> <li>• <b>IDENTIFY</b> exposed personnel and determine extent of exposure.</li> <li>• <b>PROVIDE</b> appropriate medical assistance.</li> <li>• <b>PERFORM</b> analysis of Station "A" and/or "B", as applicable, to confirm no contamination exhausted.</li> <li>• <b>BLOCK ACCESS</b> to/from the PPA.</li> <li>• <b>PERFORM</b> Consequence Assessment by Monitoring/Modeling the Plume.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>NOTIFY</b> personnel outside the PPA using SNS.</li> <li>• <b>ACTIVATE</b> Emergency Response Teams, EOC, and JIC.</li> <li>• <b>BLOCK ACCESS</b> to/from the PPA and Parking Lot.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>NOTIFY</b> affected plant personnel and subcontractors outside the PPA by cell phone or radio to <b>EVACUATE</b> to an upwind location or <b>SHELTER</b> in place.</li> <li>• <b>NOTIFY</b> local and state authorities outside the Exclusive Use Area (300m) to EVACUATE to an upwind location or shelter in place residents in the downwind direction from the source of release.</li> <li>• <b>SECURE</b> access to WIPP access roads using law enforcement agencies or site resources.</li> <li>• <b>PREPARE</b> public notification for exposed individuals if the contamination exceeds the PAC beyond the EPZ.</li> <li>• <b>IDENTIFY</b> exposed personnel and determine extent of exposure and maintain accountability for future evaluation.</li> <li>• Request DOE to <b>ACTIVATE</b> the RAP Team by contacting the Albuquerque RAP Office at (505) 845-4667.</li> </ul>

Table 6 – Actions for Operational Emergencies Not Requiring Classification

<b>SURFACE OPERATIONAL EMERGENCY</b>
<b>NOTIFY</b> on-site personnel of the emergency.
<b>ACTIVATE</b> Emergency Response Teams
<b>EVACUATE</b> affected personnel (as necessary).
<b>ISOLATE</b> all affected areas and <b>ERECT</b> boundaries.
<b>IDENTIFY</b> exposed personnel and determine extent of exposure.
<b>PROVIDE</b> appropriate medical assistance.
<b>PERFORM</b> analysis of Station C to confirm no contamination exhausted through HEPA system (when applicable).
<b>CONTINUE</b> ongoing Consequence Assessment.

<b>UNDERGROUND (U/G) OPERATIONAL EMERGENCY</b>
<b>NOTIFY</b> on-site personnel of the emergency.
<b>ACTIVATE</b> Emergency Response Teams.
<b>EVACUATE</b> affected personnel to the egress station(s).
<b>ISOLATE</b> affected area of the U/G and <b>ERECT</b> boundaries.
<b>IDENTIFY</b> exposed personnel and determine extent of exposure.
<b>PROVIDE</b> appropriate medical assistance.
<b>PERFORM</b> analysis of Station "A" to confirm no contamination exhausted to environment prior to shift to HEPA filtration (when applicable).
<b>PERFORM</b> analysis of Station "B" to confirm no contamination if a shift-to-filtration has occurred (when applicable).
<b>CONTINUE</b> ongoing Consequence Assessment.

Table 7 – Generic WIPP Emergency Action Levels for Hazardous Material Facilities Other than the WHB or Underground Storage Areas

Incident	Alert* (30 - 100 m)	Site Area Emergency* (100 - 300 m)	General Emergency * (> 300 m)
<b>Natural Disaster:</b>			
High Winds/Tornadoes	High wind causing major damage to one or more hazardous material structures.	Tornado visually seen striking a hazardous material facility causing extensive damage.	N/A
Winter Storm	Accumulation of snow on a hazardous material facility approaches roof design load limits.	N/A	N/A
Wildland Fire	Major fire <u>not</u> under control that is within 5 miles of the site and is approaching WIPP.	Major fire <u>not</u> under control that is approaching WIPP and threatens hazardous material facilities.	N/A
Earthquakes	A seismic event felt by personnel, with some breakage of windows and disturbance of tall objects at a hazardous material facility.	A seismic event with evidence of falling building debris or that causes severe damage in a hazardous material facility.	N/A
<b>Fire</b>			
Fire	A fire in a hazardous material or radiologically controlled area that may result in exposure to workers, but will not exceed the applicable PAC at the facility boundary.	A fire in a hazardous material or radiologically controlled area that may result in a release to the environment which is expected to exceed the applicable PAC at or beyond 100 m but not beyond 300 m.	A fire in a hazardous material facility resulting in a release of hazardous material to the environment or the general public that exceeds the PAC at 300 m.
<b>Explosion</b>			
Explosion	An unplanned explosion in a hazardous material operations area resulting in structural or process related damage.	An explosion causing major damage and/or injury in a hazardous material area/facility.	An explosion in a hazardous material area/facility resulting in a release of hazardous material to the environment or the general public which exceeds the PAC.
<b>Loss of Control of Hazardous Material:</b>			
Chemical Release	Release > PAC at 30 m that requires evacuation of a building.	Release > PAC at a facility boundary or that requires evacuation of multiple buildings.	Release > PAC off-site 300 m.

Table 7 – Generic WIPP Emergency Action Levels for Hazardous Material Facilities Other than the WHB or Underground Storage Areas

Incident	Alert* (30 - 100 m)	Site Area Emergency* (100 - 300 m)	General Emergency * (> 300 m)
<b>Exposure to Radiation:</b>			
Radioactive Plume	>1 rem Total Effective Dose Equivalent in a facility from an accidental release of radioactive material to WIPP workers.	>1 rem Total Effective Dose Equivalent, calculated at a facility boundary, from an accidental release of radioactive material to WIPP workers.	>1 rem Total Effective Dose Equivalent from an accidental release of radioactive material to the general public (off-site) (300 m).
<u>Hazardous Material Operational Emergencies</u>	The dose from a release of hazardous materials (radiological or non-radiological) expected to exceed the appropriate PAC at 30 m.	The dose from a release of hazardous materials (radiological or nonradiological) expected to exceed the appropriate PAC at the facility boundary but not expected to exceed appropriate PAC off-site.	The dose from a release of hazardous materials (radiological or non-radiological) that can reasonably be expected to exceed PAC off-site.
<u>Safeguards and Security Operational Emergencies</u>	An actual or potential substantial degradation of the level of safety or security of a hazardous facility or hazardous material process that could, with further degradation, produce a Site Area Emergency or General Emergency.	An actual or potential major degradation in the level of safety or security of a hazardous facility or hazardous material process that could, with further degradation, produce a General Emergency.	An actual or potential catastrophic release of hazardous material

\* Recommended Protective Actions – Evacuate the immediate structure/facility and potentially affected personnel located outside. Shelter in place downwind potentially affected personnel.

Table 8 – Discretionary Classification and Protective Actions

## Discretionary Classification and Protective Actions

Description	Indicators	Classification	Maximum Distance for Protective Actions (Radiological)	Maximum Distance for Protective Actions (Chemical)
<b>5.1 - Miscellaneous</b> Any degradation of safety not otherwise directly covered in other specific EALs.	FSM Judgment	Alert, SAE, or GE	N/A	N/A
<b>5.2 - Radiological Release</b> Any release of radioactive material to the atmosphere producing actual or predicted dose to a person at or beyond 30 meters, in excess of 1 rem.	Direct observation and sample or measurement of air concentration outside the facility and to the environment which could potentially result in an individual exceeding the PAC (1 rem)	Alert	N/A	N/A
<b>5.3 - Radiological Release</b> Any release of radioactive material to the atmosphere producing actual or predicted dose to a person at or beyond 100 meters, in excess of 1 rem.	Direct observation and sample or measurement of air concentration outside the facility and to the environment which could potentially result in an individual exceeding the PAC (1 rem)	SAE	N/A	N/A
<b>5.4 - Radiological Release</b> Any release of radioactive material to the atmosphere producing actual or predicted dose to a person at or beyond 300 meters, in excess of 1 rem.	Direct observation and sample or measurement of air concentration outside the facility and to the environment which could potentially result in an individual exceeding the PAC (1 rem)	GE	N/A	N/A

## Discretionary Rad EAL Notes:

- EALs 5.2, 5.3, and 5.4 allow for event classification based upon field measurement results or based on dispersion calculations.
- Field measurements are conducted in accordance with WP 12-HP1100 and WP 12-HP3500 for the use of specific instrumentation for obtaining field samples and/or measurements and the method for relating results to the applicable EPA PAGs.

Table 8 – Discretionary Classification and Protective Actions

## Discretionary Classification and Protective Actions

Description	Indicators	Classification	Maximum Distance for Protective Actions (Radiological)	Maximum Distance for Protective Actions (Chemical)
<b>5.5 - Hazardous Chemical</b> Any release of a hazardous chemical to the atmosphere producing actual or predicted peak concentrations at or beyond 30 meters, in excess of any applicable AEGL-2 or equivalent value for that chemical	Direct observation and sample or measurement of air concentration outside the facility in an excess of an applicable AEGL-2 concentration.	Alert	N/A	N/A
<b>5.6 - Hazardous Chemical</b> Any release of a hazardous chemical to the atmosphere producing actual or predicted peak concentrations at or beyond 100meters, in excess of any applicable AEGL-2 or equivalent value for that chemical	Direct observation and sample or measurement of air concentration outside the facility in an excess of an applicable AEGL-2 concentration.	SAE	N/A	N/A
<b>5.7 - Hazardous Chemical</b> Any release of a hazardous chemical to the atmosphere producing actual or predicted peak concentrations at or beyond 300 meters, in excess of any applicable AEGL-2 or equivalent values for that chemical	Direct observation and sample or measurement of air concentration outside the facility in an excess of an applicable AEGL-2 concentration.	GE	N/A	N/A

## Discretionary HazMat EAL Notes:

1. EALs 5.5, 5.6, and 5.7 allow for event classification based upon field measurement results or based upon dispersion calculations.
2. The use of WP 12-IH.02-4 enables the use of specific instrumentation for obtaining field samples and/or measurements and provides the user with a method for comparing field conditions to the applicable Emergency Response Planning Guidelines or other occupational exposure limits.