Protective Action Recommendations
Motivation

The OST Incident Commander will make an initial recommendation to local officials for PAR in the event of a significant incident that could lead to release of HAZMAT.
The Need to Shelter

• Not necessary to issue PAR if barriers appear intact.
• Dispersal of airborne HAZMAT is possible if SST/SGT is breached and an energy source is available.
Authority to Make Recommendations

- The IC recommends the appropriate PAR card.
- Local officials have the authority and responsibility to take any PAR needed.
Authority to Make Recommendations (Con’t.)

• DOE is obligated to make a timely and clear recommendation regarding PAR.
• IC will make an initial determination and notify local officials and OST.
Color Conditions Used In PAR

- **Yellow** – SST/SGT is breached, damaged, exposed to fire, or when condition of weapon(s) or containers(s) is unknown.

- **Red** – SST/SGT is breached, fire or explosion has occurred or is likely, or weapon(s) is exposed to fire or other energy source.

- SST/SGT is not damaged; no protective action required.
PAR Card Set

- Alpha
- Bravo
- Charlie I
- Charlie II
- Charlie III

- Delta I
- Delta II
- Delta III
- Echo I
- Echo II
- Echo III
Fire or Explosion Has Occurred

Empty SST/SGT and/or Escort Vehicle(s) with Munitions

SST/SGT or Escort Vehicle Not Damaged

Yellow

No Protective Actions Required
Bravo

Fire or Explosion Has Occurred

SST/SGT or Aircraft High-explosive Cargo
No Rad or Non-rad Hazardous Materials

SST/SGT or Aircraft Not Damaged

Yellow

No Protective Actions Required
Charlie I

- SST/SGT Breached, Fire or Explosion Has Occurred or is Likely: C1 Red
- Weapon/Assembly Exposed to Fire or Other Energy Source
- SST/SGT Breached, Cargo Damaged or Condition Unknown
- SST/SGT Intact but Exposed to Fire
- SST/SGT Not Damaged: No Protective Actions Required
Charlie II

- SST/SGT Breached, Fire or Explosion Has Occurred or is Likely
- Weapon/Assembly Exposed to Fire or Other Energy Source
- SST/SGT Breached, Cargo Damaged or Condition Unknown
- SST/SGT Intact but Exposed to Fire
- SST/SGT Not Damaged

C2 Red

C2 Yellow

No Protective Actions Required
Charlie III

SST/SGT Breached, Fire or Explosion Has Occurred or is Likely

C3 Red

Weapon/Assembly Exposed to Fire or Other Energy Source

C3 Yellow

SST/SGT Breached, Cargo Damaged or Condition Unknown

SST/SGT Intact but Exposed to Fire

SST/SGT Not Damaged

No Protective Actions Required
Delta I

- SST/SGT Breached, Fire or Explosion Has Occurred or is Likely
- SST/SGT Breached, Cargo Damaged or Condition Unknown
- SST/SGT Intact but Exposed to Fire
- SST/SGT Not Damaged

D1
Yellow

No Protective Actions Required
Delta II

SST/SGT Breached, Fire or Explosion Has Occurred or is Likely

SST/SGT Breached, Cargo Damaged or Condition Unknown

SST/SGT Intact but Exposed to Fire

SST/SGT Not Damaged

D2 Yellow

No Protective Actions Required
Delta III

- SST/SGT Breached, Fire or Explosion Has Occurred or is Likely
  - D3 Red

- SST/SGT Breached, Cargo Damaged or Condition Unknown
  - D3 Yellow

- SST/SGT Intact but Exposed to Fire
  - No Protective Actions Required

- SST/SGT Not Damaged
Echo I

- Aircraft/Vehicle Damaged, Fire or Explosion Has Occurred or Is Likely
- Cargo Damaged or Condition Unknown
- Cargo Not Damaged

E1 Yellow
No Protective Actions Required
Echo II

- Aircraft/Vehicle Damaged, Fire or Explosion Has Occurred or Is Likely
  - E2 Red

- Cargo Damaged or Condition Unknown
  - E2 Yellow

- Cargo Not Damaged
  - No Protective Actions Required
Echo III

- Aircraft/Vehicle Damaged, Fire or Explosion Has Occurred or Is Likely
  - E3 Red

- Cargo Damaged or Condition Unknown
  - E3 Yellow

- Cargo Not Damaged
  - No Protective Actions Required
**Trip Manifest**

### Departure

- **Depart (ANG):** AIR NATIONAL FIELD, KNOX AIR at: 00:00 EST 01/01/01
  - No street address available
  - KNOXVILLE AIRPORT, TN

- **Special instructions for departure:**

- **Load the following shipments before departure on this trip segment:**

<table>
<thead>
<tr>
<th>Shipment ID</th>
<th>Shipy.</th>
<th>Recvr.</th>
<th>Class</th>
<th>Qty</th>
<th>Wgt</th>
<th>Type/Size</th>
<th>Tie Down</th>
<th>Hazmat</th>
</tr>
</thead>
<tbody>
<tr>
<td>OR03Y0017</td>
<td>FZF1</td>
<td>AWA1</td>
<td>SRD</td>
<td>10</td>
<td>1080</td>
<td>DT-20 146</td>
<td>Type B</td>
<td>GUIDE 165 R-2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>GAL DRUM Container Manual</td>
<td>GUIDE 138 T-2</td>
<td>PAR CARD DELTA II</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>30Lx30Wx53H 146</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notes:</td>
<td>EMERGENCY RESPONSE: 865-574-7172</td>
<td>THIS IS D.P. MATERIAL.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cargo:</td>
<td>RAM-FISSILE NOS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Serial #:** Not Specified

- **Total Weight to Load:** 17400 lbs
- **Weight on Board:** 17400 lbs

### Arrival

- **Arrive (ANG):** AIR NATIONAL FIELD, KNOX AIR at: 11:11 EST 01/01/01
  - No street address available
  - KNOXVILLE AIRPORT, TN

- **Special instructions for arrival:**

- **Unload NO shipments after completing this trip segment.**

- **Weight on Board:** 17400 lbs

---

**Note:** The manifest includes transportation and handling instructions for shipments with hazardous materials, emphasizing safety protocols and emergency contact information.
Delta III

- SST/SGT Breached, Fire or Explosion Has Occurred or is Likely: Red
- SST/SGT Breached, Cargo Damaged or Condition Unknown: Yellow
- SST/SGT Intact but Exposed to Fire: Yellow
- SST/SGT Not Damaged: No Protective Actions Required
1. The United States Department of Energy recommends that state and local agencies **SHELTER IN PLACE** the public and nonessential emergency response personnel within 1/2 mile (800 meters) of the event scene based on a potential radioactive material release hazard.

2. For those sheltered in place, instruct personnel to close all windows, cover openings, and shut off heating and air conditioning or other ventilation systems that bring in air from outside. Stay inside, away from windows, and in basement or ground floor rooms if possible. Individuals should shelter in vehicles if other alternatives are not available.

3. Airborne particulate contamination and explosion are the primary hazard. Appropriate Protective actions should be taken by the personnel responsible for initiating or Conducting shelter-in-place/evacuation notifications to the public.

4. Restrict access to and movement in the sheltering zone as much as possible to avoid resuspending radioactive contamination that has settled on the ground. Essential movement in the area should be at slow speeds if possible.
The United States Department of Energy recommends that state and local agencies SHELTER IN PLACE the public and nonessential emergency response personnel within ½ mile (800 meters) of the event scene and in an area approximated by a 60-degree arc extending about 4.5 miles (7.3 km) downwind, based on a potential radioactive material release hazard.

For those sheltered in place, instruct personnel to close all windows, cover openings, and shut off heating and air conditioning or other ventilation systems that bring in air from outside. Stay inside, away from windows, and in basement or ground floor rooms if possible. Individuals should shelter in vehicles if other alternatives are not available.

Airborne particulate contamination and explosion are the primary hazard. Appropriate Protective actions should be taken by the personnel responsible for initiating or Conducting shelter-in-place/evacuation notifications to the public.

Restrict access to and movement in the sheltering zone as much as possible to avoid resuspending radioactive contamination that has settled on the ground. Essential movement in the area should be at slow speeds if possible.
PAR Updates

• Initial assessment is available within one hour and may be altered as circumstances change.
  – EM team assists in the one hour assessment and runs a Plume model if necessary.

• Recommendations rely on input from IC on scene.
PAR Updates (Con’t.)

• The IC is required to provide assessments every hour and reports to OST EM.

• EOC/ARG and RAP provides recommendations when the Sr. Energy Official assumes command.
Summary

• The PAR card set and matrix assist the IC to make initial determinations regarding the condition and state of cargo.

• Information must be provided to local officials immediately following the occurrence of an accident and as soon as practical when involved in a hostile environment.
Questions