

# Information Bulletin

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**Title:** Take Cover in the Right Place

**Date:** August 15, 2006

**Identifier:** 2006-RL-HNF-0030

**Lessons Learned Summary:** The goal of a take cover (or shelter in place) is to quickly and conservatively protect personnel without creating subsequent personnel safety issues. When notified of an emergency take cover, personnel must factor in human needs over a period of several hours when choosing a building in which to shelter. Sheltering in a building without basic services could create conditions that are extremely uncomfortable for personnel and potentially lead to situations that could cause emergency responders to divert attention from the actual event. Personnel in close proximity to an Area undergoing an emergency take cover need to follow appropriate take cover actions.

**Discussion of Activities:** On June 7, 2006 an unsecured waste box fell from a forklift onto the ground during transport to a staging area at the Plutonium Finishing Plant (PFP). There were no personnel injuries or container breaches. The driver and work team moved upwind of the container, and a precautionary "Take Cover" alert for the PFP Complex was issued and later expanded to include the 200 West Area. The alert was later relaxed after radiological survey results were found to be negative.

**Analysis:** This lessons learned focuses on the issues associated with response to the 200 West Area take cover portion of this event. Although, for the most part the take cover actions were implemented effectively, isolated problems did occur.

The crash phone message for the 200 West Area take cover directed personnel to take cover and secure ventilation as appropriate. The term "appropriate" led personnel to believe that they could determine whether or not to secure ventilation based on wind direction and environmental conditions. The term "appropriate" applies to facility processes for ensuring ventilation can be safely shut down. For example, if a facility manager determines that securing a ventilation system would result in a loss of containment, then it would not necessarily be appropriate for that particular ventilation system to be secured.

In addition, the standard radio message informs personnel in the 600 Area adjacent to 200 West Area that they must take cover. Some personnel were not sure whether their location in the 600 Area would be considered adjacent, resulting in conflicting actions in some facilities.

Some personnel sheltered immediately in confined places such as vehicles or small instrument buildings and in buildings without basic services such as restrooms, telephones, running water, etc. These types of situations could be more hazardous to personnel than quickly moving to a suitable facility when directed to take cover.

**Recommendations:** Personnel working in the 600 Area need to be aware of their proximity to operational areas (200 East Area, 200 West Area, etc). If personnel are working close to these areas and receive a radio announcement or hear the take cover siren, they should implement take cover actions. Facilities adjacent to areas that would need to take cover are also on the area crash phones so if personnel receive a crash phone message for that area, they should assume that they need to take the actions described in the message.

Upon receiving information that a take cover has been initiated, personnel should quickly move to the nearest building with adequate services and take cover by closing all doors and windows and shutting off external ventilation systems and fans.

With a little planning, it may be possible to identify in advance the buildings that could be used to take cover for workers who routinely work outside or in remote locations. Pre-Job Briefing Checklists include emergency response actions and provide a great opportunity to discuss "what if" scenarios and other relevant information.

Considerations that need to be covered and understood by all personnel include:

- Where are the hazardous facilities around my work location?
- Is the nearest building appropriate for take cover?
  - Does it have restrooms?
  - Are communications capabilities available?
  - Will it heat up or cool down quickly once the ventilation is shut off (small building)?
  - Is there a better location close by that is more suitable?
- If caught in a vehicle, drive to the nearest occupied location, exit the vehicle and enter the building (remember unoccupied buildings are normally locked).
- Someone to contact if you have to take cover in a remote building.

**Cost Savings/Avoidance:** NA

**Work Function:** Emergency Management

**Hazards:** Personnel Injury/Exposure - Airborne Materials/Radiation Contamination

**Keywords:** emergency response, protective actions, take cover, shelter in place

**Originator:** Fluor Hanford, Inc., Submitted by Steve Faulk (509) 376-0688

**Contact:** Project Hanford Lessons Learned Coordinator; (509) 372-2166; e-mail: [PHMC\\_Lessons\\_Learned@rl.gov](mailto:PHMC_Lessons_Learned@rl.gov)

**References:** Occurrence Report EM-RL--PHMC-PFP-2006-0015

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