

## RELATED TERMS

- Bunker Gear
- Helmets
- Gloves



**Lessons Learned  
Information Sharing**  
www.LLIS.gov

## PRIMARY DISCIPLINES

- Emergency Management
- Search and Rescue
- Fire

# LESSON LEARNED

## Large-Scale Building Collapse: Light-Weight Protective Gear for Emergency Responders

### SUMMARY

Following a large-scale building collapse, incident command (IC) and fire commanders should be aware that typical firefighter gear may be too hot, heavy, and bulky for extended search and rescue work in the collapse area. In place of firefighter gear, commanders should consider outfitting fire and other emergency responders in lighter-weight protective gear.

### DESCRIPTION

On April 19, 1995, a massive terrorist bomb ripped through the Alfred P. Murrah Federal Building in Oklahoma City, collapsing major portions of the structure. Within the first hours of the initial response, emergency managers realized that typical firefighter gear was too cumbersome for emergency responders to conduct extended search and rescue operations in the building collapse area.

Firefighting gear unnecessarily increased the physical burden and heat stress placed on responders. Standard-issued firefighting boots were excessively bulky and lacked the support needed for maneuvering over unstable debris in the collapse area. Firefighting helmets were difficult to fit into tight spots and became uncomfortable during twelve-hour shifts. Firefighting suits were also overly heavy and hot for extended search and rescue work.

In response, IC decided to outfit responders in lighter-weight protective gear more appropriate for extended search and rescue efforts in a building collapse area. Nearby Tinker Air Force Base generously donated military fatigues, boot socks, and hardhats. The military helped logistics personnel locate a supplier of lightweight, steel-toed, steel-shanked, waterproof, leather boots. The supplier shipped a tractor-trailer load of these boots overnight. In addition, the citizens of Oklahoma City donated large supplies of rain gear, leather gloves, eye protection, back braces, and elbow and knee pads. All such gear proved invaluable in protecting responders in the collapse area without causing them undue fatigue or heat stress.

Following a large-scale building collapse, IC and fire commanders should recognize that typical firefighting gear might be unsuitable for extended search and rescue operations in the collapse area. Commanders should consider outfitting responders in lighter-weight protective gear.

**CITATION**

- The City of Oklahoma City. *Final Report: Alfred P. Murrah Federal Building Bombing, April 19, 1995.* July 1996.  
([LLIS.gov ID# 9849](#))

**DISCLAIMER**

*Lessons Learned Information Sharing (LLIS.gov)* is the US Department of Homeland Security/Federal Emergency Management Agency's national online network of lessons learned, best practices, and innovative ideas for the emergency response and homeland security communities. The Web site and its contents are provided for informational purposes only, without warranty or guarantee of any kind, and do not represent the official positions of the US Department of Homeland Security. For more information on *LLIS.gov*, please email [Feedback@llis.dhs.gov](mailto:Feedback@llis.dhs.gov) or visit [www.llis.gov](http://www.llis.gov).