



## Just the Facts...

### *Guidance on the Use of Heaters Inside Tents and Other Enclosed Shelters*

1. Commanders should only allow the use of U.S. Army-approved vented heaters. These heaters meet all military field heating requirements. They are multi-fueled, nonpowered, portable heaters that vent potentially harmful (and potentially deadly) gases to the outside and are proven safe and effective. An overview and description of the new family of space heaters [e.g., H-45 Space Heater Medium, Space Heater Arctic (SHA), Space Heater Small (SHS), Space Heater Convective (SHC), and Thermoelectric Fan (TEF)] can be obtained at the following Product Manager Force Sustainment Systems (PM FSS) website:

[http://peocscss.tacom.army.mil/pmFP/pm\\_fss/product\\_areas.htm#F](http://peocscss.tacom.army.mil/pmFP/pm_fss/product_areas.htm#F)

An article on the New Family of Space Heaters (FOSH) can be found in the October 2003 issue of Countermeasure: <http://safety.army.mil/home.html>

To obtain these heaters via a funded requisition, units should use the following Defense Supply Center Philadelphia web site:

<http://www.dscp.dla.mil/gi/general/ols.htm>

2. All heaters, both vented and unvented (not ducted), if improperly used and maintained, pose a risk of fire and carbon monoxide (CO) poisoning. To ensure safe heater operation inside tents or other enclosed areas, slightly open a flap, door or window to allow the introduction of fresh make up air and/or use in accordance with the Technical Manual.

Personnel that set up and operate heaters must be trained and licensed in accordance with Chapters 6 and 7 of Army Regulation 600-55, 31 Dec 93, Motor Vehicle and Equipment Operator Selection, Training, Testing and Licensing:

[http://www.usapa.army.mil/USAPA\\_PUB\\_search\\_P.asp](http://www.usapa.army.mil/USAPA_PUB_search_P.asp)  
[http://www.usapa.army.mil/USAPA\\_PUB\\_search\\_P.asp](http://www.usapa.army.mil/USAPA_PUB_search_P.asp)

The responsible unit fire or safety representative must inspect each heater before use.

3. Acquisition of commercial nonstandard heaters is justifiable only in mission-critical circumstances. If nonstandard heaters are used, the first general officer in the unit's chain of command should approve the purchase and or use of nonstandard heaters.

a. Personal (individually owned) heaters and commercial portable gas (e.g., propane, natural gas, etc.) heaters must not be used under any circumstances.

b. Unvented kerosene heater use is restricted to areas where people do not sleep (such as guard houses, ranges, or training areas) or when approved by the Commander as interim emergency heating.

4. If operational necessity demands that Commanders accept the risk of using an unvented kerosene heater in tents or other enclosed shelters, a complete risk assessment should be done (balancing the risk of cold stress and risks of using the heater), and the acquisition and use approved by safety and health, and fire protection personnel. At a minimum, implement the following steps when using unvented kerosene heaters:

a. Inspect, set up, operate, and maintain the heater in accordance with the manufacturer's instructions.

b. Ensure the heater meets the standard requirements of and bears the labels of the Underwriters Laboratories (UL), Inc. and the National Kerosene Heater Association's (NKHA).

c. Use only water-clear No. 1-K Kerosene in the heater. When No. 1-K Kerosene is unavailable, JA-1 or JP-8 fuel may be used, but then only as an interim fuel, and only when an effort is made to quickly obtain No. 1-K Kerosene to replace the JP-8 or JA-1 fuel.

d. Store kerosene outside (and a minimum of 50 feet from tents, shelters, and vehicles) and in a sealed container labeled "No. 1-K Kerosene."

e. Do not place the heater directly on the fabric floor of the tent; place on a firm and level fireproof base (e.g., sheet metal sand box) located in a marked area free of and a reasonable distance from clothing or other materials that can burn (e.g., bedding, people).

f. Operate the heater only when a fire guard/watch is on duty; otherwise, ensure the heater is turned off before going to sleep or leaving the tent or shelter. Brief the fire watch on the procedures for fire fighting and how to recognize signs of CO poisoning (see item 6, below).

g. Use the heater in well-ventilated tents and other well-ventilated enclosed structures.

h. Have the air measured (by safety or health personnel) for CO the first time the heater is used, and periodically thereafter. Personnel are also encouraged to use continuous CO detectors/alarms inside their tents or other enclosed shelters, such as those that are UL2034 listed for Recreational Vehicles (RVs) and unconditioned areas (such as attics and garages) or other CO detectors/alarms if they are of similar or superior performance in the environments and conditions encountered – the tactical situation warrants whether this recommendation should be followed.

5. Safety and Health Training on Use of Tents, Enclosed Shelters, and Heaters. Ensure units are trained in the associated safety and health issues. Training should include the recommendations, above, and include the following subjects: proper tent ventilation; corrective actions to take under extreme weather conditions (e.g., such as clearing built-up snow from around small tents and shelters to ensure proper air infiltration into them); and the recognition, prevention, and control of fire and CO hazards when using heaters. Training should include fire drills. Train all individuals to recognize potential sources of CO and the symptoms of CO poisoning.

6. Consult USACHPPM Fact Sheet 65-040-0503 (Tent Heaters – Individual) and 65-045-0503 (Tent Heaters – Medical) for details of signs and symptoms of CO poisoning, as well as for further information on the medical aspects of using tent heaters, <http://chppm-www.apgea.army.mil/fs.htm>.

7. It should be noted that some U.S. Army Commands (e.g., Training and Doctrine Command) have written policies on the use of vented and unvented space heaters within their command, which include prohibiting the use of any unvented portable space heater (e.g., propane, kerosene, etc.) in tents or enclosures during field training or operations, as well as recommending against the use of CO detectors within tents or enclosures/shelters.