

## Appendix 72

## SPACE HEATERS

1. **BACKGROUND.** Over 3,300 people each year receive hospital treatment for injuries associated with space heaters. The most common injuries associated with all types of space heaters are contact burns resulting from touching heating elements, flames, or the exterior box of the space heater. Also common are burns resulting from the ignition of a garment or other fabric items like blankets and towels which touch the heater flame. A hazard associated with gas space heaters is carbon monoxide poisoning and even death due to faulty construction, installation, maintenance, or operation of the space heater. The carbon monoxide poisonings frequently result in deaths.

2. **INVESTIGATIVE PROCEDURES.** Determine the cause of the injury. The investigator is not limited to the questions suggested below. Each question can be approached in an open-ended fashion.

a. **Burn Injuries.** These can occur with any type of space heater.

(1) Did the victim come in contact with the heating element, flame, or hot exterior of the unit? Was there a sufficient guard device to prevent direct contact? Did the temperature of the exterior exceed the usual limit for this type of unit?

(2) Did the victim's clothing ignite from contact with heating element or flame? Was there a sufficient guard device to prevent clothing from coming too close to the heat source?

b. **Carbon Monoxide Injuries.** These are associated with gas space heaters.

(1) Was the heater vented? If vented, was the vent connected? (If you cannot determine this fact, so state.) Was the vent obstructed in any way--dirt, flue blockage? Was the vent defective in any way--broken, cracked?

(2) Was the heater unvented? If unvented, was the room properly ventilated? Was a window open to provide fresh air? (If you cannot determine these facts, so state.)

(3) For both vented and unvented heaters, were burners clean or dirty? Were burners defective (leaking, ruptured)? Was heater lit while gas was on?

3. **SPECIFIC PRODUCT FACTORS.** Some particularly important product factors are detailed below. The investigator is not limited to these questions.

a. **Heater Type.** Is the heater gas, electric, or other?

b. **Identification.** What is the brand name, model number, ANSI number, and

power rating of the heater? What is the temperature rating of the unit? Provide any available identification tags, etc.

c. Installation. Who installed the unit? Was the unit installation the unit? Was the unit installation properly? Were installation instructions available to the owner/victim if he installed the unit himself? Did the victim follow the instructions?

d. Openings. What was the location and purpose of:

- (1) Vent collar.
- (2) All openings.
- (3) Operation of the opening (lift, hinged, turn).

e. Vent (Chimney Connector).

- (1) Length (number of joints).
- (2) Diameter.
- (3) Number of bends.
- (4) How secured.
- (5) Material type.

4. ENVIRONMENTAL FACTORS. Some important environmental factors are detailed below. Do not feel limited to these factors.

a. Clearances. Measure the following:

- (1) Heater to wall(s).
- (2) Heater to ceiling.
- (3) Heater to floor.
- (4) Heater to combustibles.
- (5) Vent to wall(s).
- (6) Vent to ceiling.
- (7) Vent to combustibles.

b. Floor Covering. Specify the floor covering: rug, metal, wood, other.

c. Fuel. Specify if applicable, particularly if pot-bellied stoves are used as heaters.

- (1) When obtained.
- (2) How stored.
- (3) Ash disposal.

- c. Maintenance. When were the heater and its various components last cleaned?
  - d. Location of Heater. Describe the heater location in relation to normal living and/or bathroom, bedroom, other room?
5. SPECIFIC HUMAN FACTORS. Some important human factors are listed below. Do not feel limited to these questions.
- a. How experienced was the victim with space heaters? With this type of heater? With this particular heater?
  - b. Had the victim read and understood the operating instructions, if there were any?
  - c. Was the victim aware of the hazards involved with this type of space heater?
  - d. How was the heater used? Was it habitually used in this way?