

## APPENDIX B

### CARE OF CONTAMINATED CLOTHING AND EQUIPMENT AT MEDICAL TREATMENT FACILITIES

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#### **B-1. General**

a. Care must be taken to prevent the spread of chemical agents in the MTFs. The spread of chemical agents can injure patients and medical personnel. Chemically contaminated clothing, blankets, and other equipment must be kept out of the MTF. Contaminated items must be decontaminated or disposed of to prevent spread of contamination.

b. Contaminated clothing and equipment are removed from the casualty as soon as possible. However, clothing removal must not compromise the individual's medical condition.

#### **B-2. Disposition of Contaminated Clothing and Blankets**

a. An area downwind of the MTF or in a leeward exposed topside position afloat should be designated as a clothing dump. Contaminated blankets and clothing, except impermeable chemical protective overgarments and rubber gloves, are transferred to this dump as conditions permit. If possible, the contaminated material is placed in plastic bags, stored in closed airtight containers, or covered with earth to prevent the escape of toxic vapors. On land, this dump is at least 75 yards (meters) downwind from the MTF and living quarters. The dump should be clearly marked with standard chemical contamination markers (FM 8-10-7 and FM 3-3/FMFM 11-17).

b. Casualties are not admitted to or removed from an MTF or other enclosed spaces in clothing or blankets known to be contaminated. To do so may result in serious injury to other patients and medical personnel from contact with the liquid agent or from the vapor which accumulates in confined spaces.

c. The medical officer should notify the proper authority of the—

- Existence of the dump for contaminated clothing and blankets.
- Exact location and size of the dump.
- Type of chemical contamination.

#### **B-3. Replacement of Contaminated Blankets**

a. To prevent the supply of blankets from becoming exhausted, those lost by contamination must be replaced.

b. An informal check on the number of contaminated blankets sent to the clothing dump is kept so that the number of replacements required are known.

c. If conditions permit, replacements are requisitioned through the normal medical supply channels. If time or the tactical situation does not permit replacement through normal medical supply channels, replacements may be requested from the nearest source of supply with which the unit has contact.

d. Succeeding echelons in the medical supply chain should request replacement blankets promptly as their supplies are displaced forward.

#### **B-4. The Chemical Protective Ensemble**

a. All personnel handling or treating chemically contaminated casualties must be at MOPP 4 (para 1-7 a).

b. The chemical protective overgarment is not removed until the danger of contamination has been eliminated. Contaminated chemical protective overgarments may be worn safely for 24 hours or as prescribed in FM 3-4. Personnel must also be at MOPP 4 while decontaminating litters, ambulances, and other equipment. Field Manual 3-4 gives further guidance on individual protection using the complete ensemble and FM 3-5 contains the procedure to be followed in the MOPP gear exchange. It should be noted that wearing the chemical protective ensemble places limitations on the capability of medical personnel to treat a casualty.

#### **B-5. Disposition of Contaminated Gloves and Chemical Protective Overgarments**

a. *Air, Land, and Naval Operations.*

(1) Contaminated gloves and overgarments are placed in a closed plastic bag and segregated for further disposal.

(2) Ordinarily, medical units cannot decontaminate impermeable protective equipment. Such contaminated equipment is placed in chemical agent-tight containers to await later decontamination. If this is not possible, the items are discarded.

b. *Shipboard Operations.* For shipboard

operations at sea, contaminated clothing and materials are dumped over the side. In port, store items in metal cans with tight-fitting lids or airtight plastic bags for later disposal.

### B-6. Decontamination

Contaminated blankets and clothing are removed from the clothing dump by direction of the responsible officer. For specific information on decontamination, see FM 3-5.

*a. Impermeable Protective Clothing, Aprons, Gloves, and Boots.* Liquid contaminants on impermeable protective clothing should be neutralized or removed as quickly as possible. The quickest decontamination is that performed while clothing is being worn ((3) below). If slurry is not available, blot liquid off with available material (for example, rags). This should be done immediately if clothing is contaminated by splashes or large drops of chemical agent. Complete decontamination may be done by one of the following methods:

(1) *Aeration.* If the contamination is light or is caused by vapor, the articles can be decontaminated by airing outdoors in the wind and sunlight for several days.

(2) *Water.* Immerse heavily contaminated articles in hot soapy water at a temperature just below boiling for 1 hour. Do not stir or agitate. After 1 hour, remove the articles, rinse in clear water, and drain. While items are still hot and wet, pull apart any surfaces that are stuck together. Hang them up to dry. Repeat the process if necessary.

(3) *Slurry.* Decontaminate impregnated items (worn by depot personnel) by spraying or applying slurry immediately after contamination. After a few minutes, wash off the slurry with water. This can be done while the clothing is being worn.

*b. Protective Masks, Web, Canvas, and Leather Equipment.*

(1) *Protective masks.* Masks that have been exposed to droplets or vapor may be decontaminated as indicated below.

(a) If the mask is decontaminated immediately after contamination (thus avoiding absorption of the agent into the rubber), the following methods may be used:

1. Wash external parts of the mask with hot soapy water and rinse with clear water. Do not allow water to get into the filter elements. This method is practical for G-agents if the contamination is external and relatively light. Contaminated carriers may be scrubbed with hot soapy water, rinsed, drained, and air dried.

2. Decontaminate the mask by using the M291 Skin Decontaminating Kit or the M258A1 Skin Decontamination Kit (para 1-10). When using the M258A1 kit, use the DECON-2 WIPE

first, then DECON-1 WIPE. The procedure for the M258A1 is a reverse of the skin decontamination procedure. This is required so that you do not leave a residue on the lens from the DECON-2 WIPE.

(b) Mask and carriers lightly contaminated by vapor only may be decontaminated by airing in sunlight and wind.

(2) *Web and canvas equipment.* First-aid pouches and other web and canvas equipment may be decontaminated by boiling 1 hour in water. The addition of soap speeds this process against all agents, particularly the G-agents. After removal from the boiling water, rinse, air dry, and return the items to service. This kind of equipment can also be decontaminated by using bleach slurry and other methods (FM 3-5).

(3) *Leather equipment.* Leather quickly absorbs liquid chemical agents. Initial decontamination should be done as rapidly as possible by using the M295 DPIE. Perform thorough decontamination when the situation permits. For thorough decontamination, soak shoes, straps, and other leather equipment in water heated to 122°F to 131°F (50°C to 55°C) (about as hot as the hand can stand it) for 4 to 6 hours, then air dry without excess heat. See FM 3-5 for additional information on decontamination of leather equipment.

### B-7. Care of Litters

*a. Protection.* Provide emergency protection of canvas litters by covering them with materials such as ponchos, plastic sheeting, or shelter halves.

*b. Decontamination.*

(1) Canvas litter. If possible, take litters apart and decontaminate components as follows:

(a) *Canvas.* Decontaminate litter canvas by immersion in boiling water for 1 hour. If available, add 4 pounds of sodium carbonate (washing soda) to each 10 gallons of water. After boiling with washing soda, rinse with clear water.

(b) *Wood.* Apply a 30 percent aqueous slurry of bleach and let it react for 12 to 24 hours. Repeat applications if necessary. Then swab the wood dry and let it aerate at elevated temperatures, if possible.

(c) *Metal (unpainted).* Decontaminating solution number 2 is the most rapid and effective decontaminant for metals. It is effective for all chemical agents. Apply this solution to all contaminated surfaces by spray, broom, or swab; after 30 minutes, flush with water. After decontamination, aerate the metal outdoors for several hours.

(d) If the litter cannot be taken apart, decontaminate it with bleach slurry or by flushing it with hot soapy water. Then aerate the litter outdoors.

(2) *Decontaminable litter.* Apply a 5 percent chlorine solution to the entire surface of the litter and

handles/poles. If the 5 percent chlorine solution is not available, remove gross contamination by scraping with a stick or other object, then use the M295 DPIE. DO NOT use DS2 on the decontaminable litter; it may dissolve the litter fabric.

### **B-8. Verify Completeness of Decontamination**

*a. Residual Hazards.* Despite the best efforts to completely decontaminate equipment, there is still a chance that a residual hazard may exist. This hazard may be due to deeply absorbed chemical agents in porous materials. These absorbed agents can emerge as chemical vapors, posing a risk to both patients and medical personnel.

*b. Monitor Decontaminated Equipment.* Use the Chemical Agent Monitor (CAM) to check each item prior to its being placed into the general supply area. If time allows, complete the following:

(1) Place individual items of equipment in separate clean plastic bags and seal them. Place the bags in the sun or in a heated unoccupied structure. Allow the bags to warm for 30 minutes. At the end of the 30 minutes, slightly unseal the bag, immediately place the nozzle of the CAM into the opening and observe for any indication of residual vapor hazard.

(2) If residual contamination is found, bury the item unless it is an essential item of equipment. If it is an essential item of equipment, repeat the decontamination process, then recheck as in (1) above.