

APPENDIX E

DETECTION AND TREATMENT OF CONTAMINATED WATER**E-1. General**

Water supplies in areas with NBC contamination and in surface water supplied by runoff from such areas will most likely be contaminated. The contamination of water, whether intentional or inadvertent, may reach concentrations that will produce casualties. By special methods of analysis, the presence of contamination can be determined. Treatment of contaminated water requires chemicals and equipment that are only available to quartermaster water purification units; individuals or units should not attempt to treat their water. Decontamination of water is only undertaken when uncontaminated sources are not available; then ONLY with the approval of the medical authority (PVNTMED or surgeon).

E-2. Detection of Contamination in Water

- a.* Detection of nuclear contamination in water is accomplished by using the AN PDR/27 or AN VDR/2 radiacmeters.
- b.* Detection of biological agents in water is accomplished by the use of field biological water test kits and specially designed collection and detection kits. The specialty kits will be provided as needed, and will be available to PVNTMED and supporting laboratory personnel.
- c.* The Chemical Agent Water Testing Kit, M272, provides a rapid field test to detect chemical agent contamination in water. The test must be conducted before the water is treated with chlorine; the chlorine will affect the accuracy of the test for chemical agents. An updated version of this kit may also detect toxins.

E-3. Procedures on Discovery of Contamination in Water

When contamination is discovered the following actions are taken:

- a.* Mark the water source, using the standard contamination markers, and ensure that personnel do not consume the water until approved.
- b.* Notify the commander that the water source is contaminated and unfit for drinking, food preparation, and personal hygiene.
- c.* The commander establishes safeguards to prevent personnel from using the contaminated water supply.
- d.* An alternative source of uncontaminated water is sought and used. The primary source for obtaining water is from quartermaster-operated water production and distribution points. Other sources are considered only when quartermaster-operated facilities are not available. Alternative sources that may be considered include—
 - Ground water source which is least likely to be contaminated.
 - Local fixed facility water supplies.
 - Movement to another location to obtain an uncontaminated water source, when the tactical situation permits.

e. Contaminated water must not be used until it has been treated by quartermaster water purification units and approved for use by the medical authority.

E-4. Treatment of Contaminated Water

Contaminated water requires additional equipment and supplies to remove the contamination. Quartermaster water purification and distribution units are equipped to perform these duties. See FM 10-52 for details.