

STATEMENT OF NEED

CLOTHING AND INDIVIDUAL EQUIPMENT (CN-CIE)

PART I

1. Title.

a. Improved Mask Drinking System (IMDS).

b. TRADOC ACN Number: TBD.

2. Need.

a. A need exists for an IMDS. The current method of drinking with the mask on is time consuming and difficult to perform. Results from CANE and Ironman testing have shown that, using the current system, soldiers will voluntarily dehydrate themselves. Soldiers in MOPP require consumption of large quantities of drinking water to prevent heat injury (up to 3.5 gallons/day, DPM FM 10-62).

b. The IMDS should be designed so the soldier may drink water more easily when masked. The system should eliminate difficult time consuming use procedures, enhance soldiers' ability to drink in less than optimum conditions, such as darkness, allow drinking with the use of one hand, and enhance motivation for a soldier to drink water while in MOPP.

c. It is desired that the IMDS be developed by FY88-89.

3. Projected Use/Basis of Issue.

a. The IMDS may be used by all soldiers issued an M17 series/projected XM40 series or XM43 protective mask.

b. The IMDS will be issued as organizational equipment under the provisions of CTA 50-900.

c. The IMDS is intended to be a standard procurement item.

4. Description.

a. The IMDS must be designed in such a manner as to allow the transfer of water from the canteen through the mask drinking tube to the soldier. The soldier must be able to drink water at any time with ease using only one hand to operate the system.

b. The system must be designed to allow water to pass from the canteen through the mask without causing damage to the fielded 1 quart canteen; or possibly being used with the 2 quart collapsible canteen.

c. Due to the weight concerns of the Light Infantry soldier, weight becomes a critical concern. ^{empty} The IMDS should not exceed one pound in weight.

d. The IMDS must be capable of being easily cleaned, sanitized and decontaminated at individual/unit level.

e. The system must be impermeable to known chemical agents for at least 24 hours at the 10 g/m² level (with an eventual goal of 72 hours). All mating points between the canteen and mask must be vapor proof. In the event of accidental separation at the mating points, these points must be designed to prevent contaminated air from entering the mask.

f. The system must be designed to mate with the drinking tube of fielded masks and the M1 canteen cap without modification to either of these items or modification to other systems already fielded or being developed.

g. The system should be designed to minimize interference with soldiers movements or performance of duties.

h. The system should require no maintenance other than cleaning, sanitizing or decontamination. Damaged units will be disposed of and replaced.

i. Testing needs to include health hazard assessment and human factors engineering issues.

5. Operational/Organizational Concept.

a. The IMDS may be issued to all soldiers with M17 series/projected XM40 series or XM43 protective mask IAW CTA 50-900.

b. The IMDS will allow soldiers operating in an contaminated environment to drink water at any time with ease; allows drinking with one hand while performing tasks, such as those of a pilot, with the other hand.

c. The IMDS will be able to be disconnected in a contaminated environment without threat of contamination entering the mask.