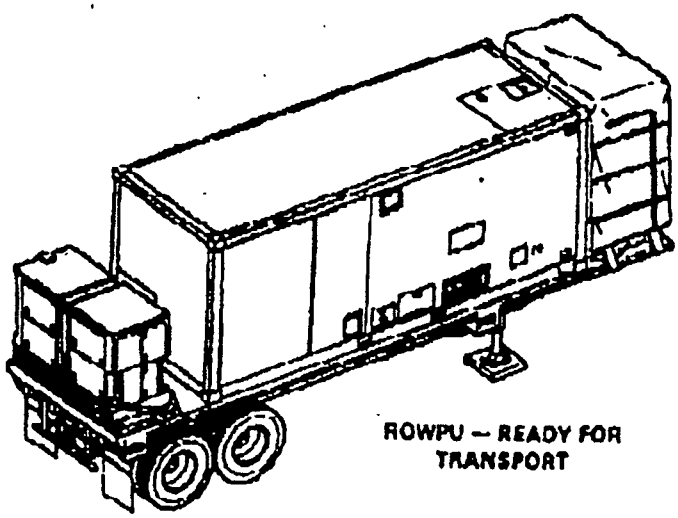
ACTIVE COMPONENT WATER ASSETS

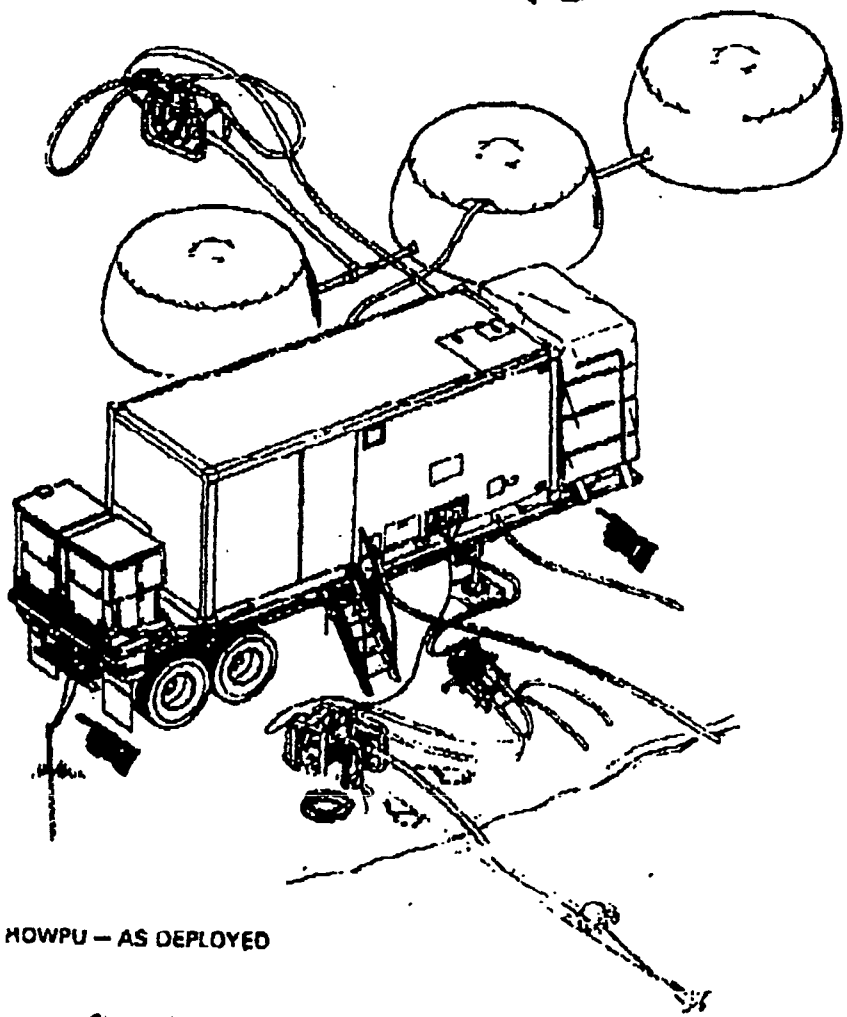
	Location	Production Capacity	Storage	Personnel	Impact
554th MHD	Hunter AAF	—	—	45	* 12 pax - MACON
202nd WP Det	Hunter AAF	480 K	240K	47	* 8 pax - MACON
205th WP TM	Hunter AAF	243 K	120 K	15	* 15 pax - MACON
196th WP Det	Fort Campbell	480 K	240K	47	
186th WP Det	Fort Bragg	480k	240k	47	
204th WP TM	Fort Bragg	240K	120k	15	
82nd WP TM	Fort Story	240K	120 k	15	Operates Saltwater Training Site
512th Supply Co (storage/distribution)	Hunter AAF	—	1.6 M	149	* 77 pax - MACON

* Macon involvement until 27 July

FROM PLANS & OPS DIV



ROWPU — READY FOR TRANSPORT



ROWPU — AS DEPLOYED

Figure 1-1. 3000 Gallons Per Hour Reverse Osmosis Water Purification Unit

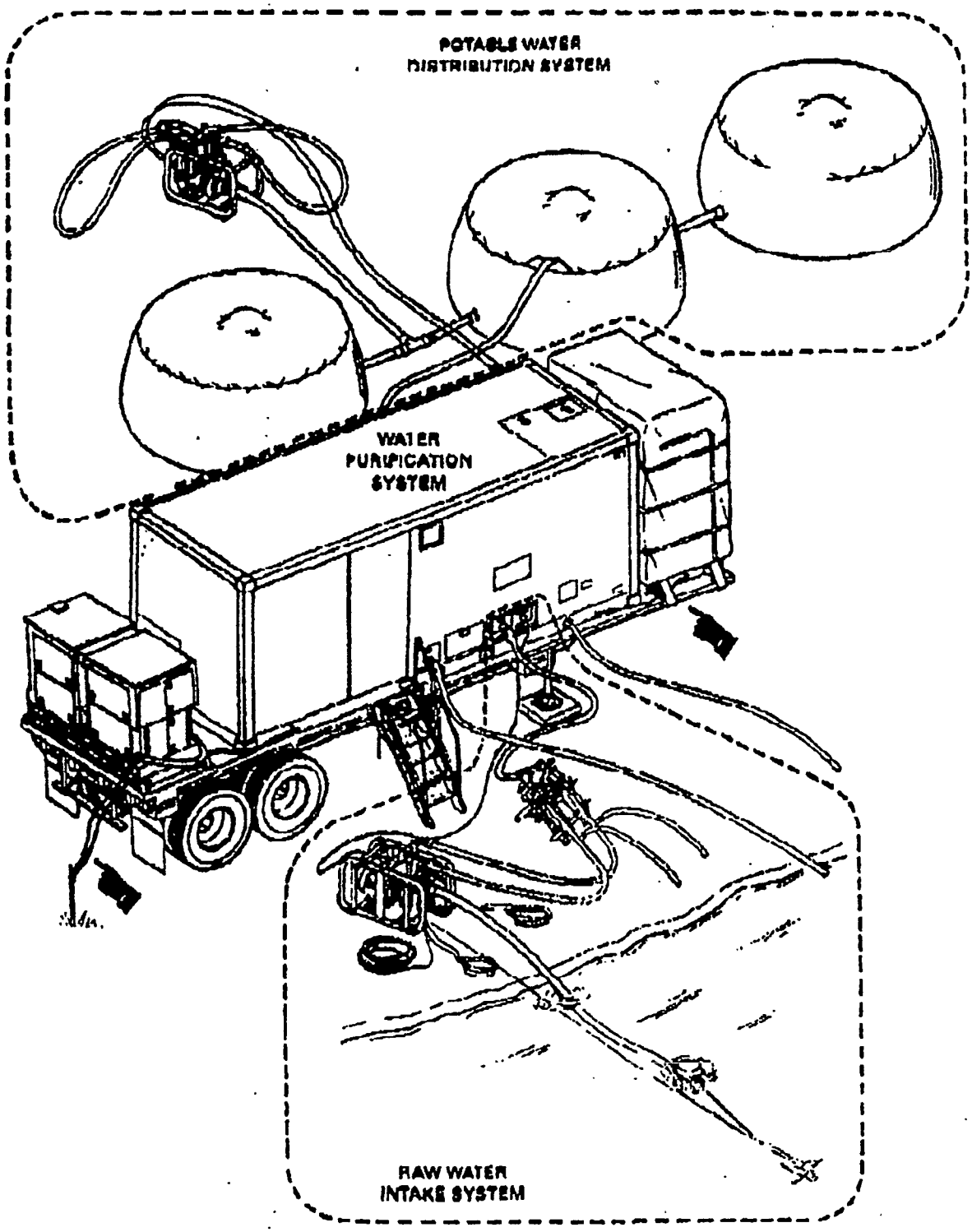


Figure 1-2. Major Systems of the ROWPU

SECTION II. EQUIPMENT DESCRIPTION.

1-9. EQUIPMENT CHARACTERISTICS, CAPABILITIES AND FEATURES.

a. *Characteristics.*

(1) Contained in a special 8 x 8 x 20 ft (2.4 x 2.4 x 6.1 m) ISO (International Standards Organization) container with skid mounted external components.

(2) The ROWPU can be shipped by military aircraft.

(3) The ROWPU is mounted on a standard 30 ft (9.5 m) M871 military trailer so it can be moved to where it is needed.

(4) The ROWPU is powered by a 60 Kw utility diesel generator.

b. *Capabilities and Features.*

(1) The ROWPU can supply 60,000 gallons daily from fresh waters or brackish waters 75°F (24°C) and over. Less water is produced from colder water sources.

(2) The ROWPU can supply 40,000 gallons daily from sea water 75°F (24°C) and over.

(3) The ROWPU can supply 60,000 gallons daily from NBC contaminated fresh waters 75°F (24°C) and over.

(4) The ROWPU produces potable water to long term consumption standards of purity.

(5) It can handle raw water turbidity to 150 NTU.

(6) On an NBC decontamination mission, raw water containing up to 10 ppm CW agent or one million micro-organism colonies per 100 ml, or 100,000 pC/l (picoCuries per liter) radioactivity can all be made potable.

(7) Raw water can be taken from wells, lakes, seas, lagoons, rivers, or through an ice hole. The raw water pump can lift water about 15 feet (4.5 m) and discharge up to a height of 30 feet (9 m) at 110 gpm (416 lpm).

(8) The winter kit allows the unit to be operated at a water point where air temperatures are between -25 and 32°F (-32 and 0°C) and water temperatures are above 32°F (0°C).

(9) The ROWPU is set up and operated by a 3 person crew (one of whom is an NCO). Operation is semi-automatic.

1-10. LOCATION AND DESCRIPTION OF MAJOR COMPONENTS. The ROWPU is made up of three main systems as shown in Figure 1-2. The major components of each system are described in the following paragraphs.

NOTE

The electrical power source for operation of the ROWPU is provided by a 60 Kw utility Diesel Generator. See TM 5-6115 545-12 for information about the generator.

a. *Raw Water Intake System (Figure 1-3).* The Raw Water Intake System supplies feed water to the ROWPU and consists of the following major components.

(1) *Intake Strainer.* A floating intake strainer holds the raw water intake hose off the bottom of the water source and screens out leaves, sticks, fish, and other large objects. It is connected by sections of rigid suction hose to the raw water pump. A non-floating strainer (part of winterization kit) is used for ice hole operation.

(2) *Anchor.* Used to deploy the intake strainer and hold it in place.

(3) *Raw Water Pump.* Draws water through the intake strainer and discharges the water to the cyclone separators. A hand priming pump is used to assist initial prime to the water pump.

(4) *Cyclone Separators.* Remove sand and heavy dirt by centrifugal water flow action. Raw water discharge hose sections deliver the water from separators to the water purification system at the feed water booster pump inlet.

(5) *Priming Assist Pump.* This hand operated pump is used to help draw water up to the raw water pump. It is disconnected from raw water pump after priming is completed.

CHAPTER 1. INTRODUCTION

SECTION I. GENERAL INFORMATION.

1-1. SCOPE.

a. *Type of Manual.* Operator and Unit Maintenance Manual.

b. *Model/Number and Equipment Name.* Reverse Osmosis Water Purification Unit WTA-060, referred to from now on in this manual as the ROWPU.

c. *Purpose of the Equipment.* Purifies water from many different sources to make potable (drinkable) water. Can purify:

(1) Dirty fresh water.
(2) Brackish water (dirty and a little salty).
(3) Sea water (very salty).
(4) Fresh water containing nuclear, biological, or chemical (NBC) agents.

d. *Special Limitations on Equipment*

(1) Operates in temperatures between -25°F and 110°F (-32°C and 43°C).
(2) Winterization kit must be used if operating temperature is below 32°F (0°C).
(3) RO elements may be ruined if they are allowed to freeze.
(4) Temperatures of the source water cannot be greater than 110°F (43°C).
(5) The amount of water produced depends on the temperature of water being purified.
(6) Must be hauled by M61 8 or M932 tractors.
(7) Side-to-side slope of the ROWPU cannot be more than 2 degrees, end-to-end slope cannot be greater than 5 degrees. Greater slopes could cause unit to tip over.

1-2. MAINTENANCE FORMS AND RECORDS. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management System (TAMMS).

1-3. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR'S). If your ROWPU needs improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design or performance. Put it on an SF368 (Quality Deficiency Report). Mail it to us at Commander, Headquarters, U.S. Army Troop Support Command, Attention: AMSTR-MOF, 4300 Goodfellow Boulevard, St. Louis, Missouri 63120. We'll send a reply.

1-4. WARRANTY INFORMATION. The ROWPU is warranted by Aqua Chem, Inc. for 36 months or 2,000 hours of operation. The warranty starts on the date, found in block 23, DA form 2408-9, in the logbook. Refer to TB 10-4610-232-24 for warranty program. Report all defects in material or workmanship to your supervisor, who will take appropriate action through your organizational maintenance shop.

1-5. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE. Command decisions, according to tactical decision, will decide when destruction of the ROWPU will take place. A destruction plan will be prepared by the using organization, unless one has been prepared by higher authority. For general destruction procedures for this equipment, refer to TM 750-244-3, Procedures for Destruction of Equipment to Prevent Enemy Use.

1-6. PREPARATION FOR STORAGE OR SHIPMENT. Refer to Chapter 4, Section VI of this manual for preparation for storage or shipment instructions.

1-7. QUALITY ASSURANCE/QUALITY CONTROL. Refer to quality assurance/quality control specification MIL-Q-9858A for quality assurance/quality control information.

1-8. SAFETY, CARE AND HANDLING. Always keep in mind the general CAUTIONS and WARNINGS, listed on the warning page at the front of this manual and the specific CAUTIONS and WARNINGS given with procedures throughout this manual and as data plates and decals on the ROWPU.