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FM HQDA WASH DC//SGPS-PSP//
TO AIG 11696
RUERMMA/CDRUSACHPPM APG MD//MCHB-ME-WR//
BT

UNCLAS

PASS TO PREVENTIVE MEDICINE / ENVIRONMENTAL SCIENCE / WATER
SUPPLY PERSONNEL

SUBJECT: CLARIFICATION OF DISINFECTION STANDARD FOR ROWPU
PRODUCED FIELD DRINKING WATER

A. TB MED 577, SANITARY CONTROL AND SURVEILLANCE OF FIELD WATER
SUPPLIES, MARCH 196.

B. FM 10-52, WATER SUPPLY IN THEATERS OF OPERATION.

C. NAVMED P-5010-9, MAWUAL OF PREVENTIVE MEDICINE, CHAPTER 9,
PREVENTIVE MEDICINE FOR GROUND FORCES.

1. THIS MESSAGE APPLIES TO REVERSE OSMOSIS WATER PURIFICATION
UNIT (ROWPU) PRODUCED POTABLE FIELD WATER SUPPLIES ONLY.
CURRENT DISINFECTION STANDARDS DETAILED IN REFERENCES A, B, AND
C DO NOT DIFFERENTIATE BETWEEN ROWPU PRODUCED WATER AND
OTHER TYPES OF WATER CONSUMED IN FIELD ENVIRONMENTS.

REFERENCES INSTRUCT WATER PURIFICATION PERSONNEL TO ADD
SUFFICIENT CHLORINE TO TREATED WATER TO PRODUCE A FREE
AVAILABLE CHLORINE (FAC) RESIDUAL OF AT LEAST 5.0 PARTS PER
MILLION (PPM) AFTER A 30 MINUTE CONTACT TIME. THE SHORTFALL WITH
THE CURRENT POLICY IS THAT MANY SERVICE MEMBERS FIND WATER
WITH SUCH HIGH CHLORINE LEVELS UNACCEPTABLE DUE TO BAD TASTE
AND ODOR. THESE SERVICE MEMBERS ARE POTENTIALLY AT RISK OF
BECOMING MISSION INCAPABLE DUE TO DEHYDRATION, OR FROM
CONSUMING WATER FROM UNAPPROVED SOURCES. THE RATIONALE FOR
THIS CLARIFICATION IS TO PROVIDE WATER TO THE INDIVIDUAL SERVICE
MEMBER THAT IS AESTHETICALLY ACCEPTABLE AND FREE
MICROBIOLOGICAL CONTAMINATION.

2. THIS MESSAGE APPLIES ONLY WHEN WATER IS TREATED BY ROWPU' S.
WATER PURIFICATION PERSONNEL ARE TO ADD SUFFICIENT CHLORINE TO
REVERSE OSMOSIS (RO) MEMBRANE TREATED WATER AT THE
PRODUCTION SITE TO ACHIEVE A 2.0 PPM FAC RESIDUAL AFTER A 30
MINUTE CONTACT TIME. IN MOST CASES, CHLORINATING ABOVE 2.0 PPM
FAC IS NOT NECESSARY BECAUSE NO ADDITIONAL DISINFECTION
OCCURS.

3. PURIFICATION PERSONNEL ARE TO ADJUST THE CHLORINE LEVEL AT
POTABLE WATER ISSUE POINTS ALONG THE TACTICAL WATER
DISTRIBUTION SYSTEM (TWDS), STORAGE SYSTEMS (800K, 300K, AND 40K
SYSTEMS), AND DURING BULK TRANSPORT (3K AND 5K SEMITRAILER
MOUNTED FABRIC TANKS) SO THAT FAC RESIDUALS REMAIN AT 2.0 PPM
FAC. THIS MAY REQUIRE CHLORINE LEVELS AT THE PRODUCTION SITE

GREATER THAN 2.0 PPM AFTER A 30 MINUTE CONTACT TIME. IF CHLORINE RESIDUALS AT THE END OF THE TWDS OR UPON COMPLETION OF BULK WATER TRANSPORT ARE GREATER THAN 0 PPM FAC BUT LESS THAN 2.0 PPM FAC, THE WATER MUST BE RECHLORINATED TO 2.0 PPM FAC. IT MAY THEN BE ISSUED IMMEDIATELY. IF CHLORINE RESIDUALS FALL TO 0 PPM FAC, THE WATER MUST BE RECHLORINATED TO 2.0 PPM AND HELD FOR 30 MINUTES PRIOR TO ISSUE.

4. REGARDLESS OF THE TREATMENT METHODOLOGY, A 1.0 PPM FAC RESIDUAL MUST BE MAINTAINED IN UNIT LEVEL DISTRIBUTION CONTAINERS (400 GALLON WATER TRAILERS, Lyster BAGS, AND LIGHTWEIGHT COLLAPSIBLE PILLOW TANKS). THE INTENT OF THIS REQUIREMENT IS TO PROVIDE WATER THAT IS BOTH POTABLE AND PALATABLE TO THE SERVICE MEMBER.

5. NOTHING IN THIS MESSAGE SHOULD BE CONSTRUED TO RELIEVE THE THEATER COMMAND MEDICAL AUTHORITY OF THE RESPONSIBILITY TO REQUIRE HIGHER FAC LEVELS IN THE FIELD WATER DISTRIBUTION SYSTEM OR AT THE POINT OF CONSUMPTION BASED ON THE POTENTIAL FOR ENDEMIC WATERBORNE DISEASE AND THE MEDICAL THREAT.

6. THIS MESSAGE APPLIES ONLY TO WATER PRODUCED BY RO MEMBRANE TREATMENT. WATER TREATED BY OTHER TYPES OF PURIFICATION EQUIPMENT SUCH AS DIATOMACEOUS EARTH FILTRATION OR ROWPU'S BYPASSING MEMBRANE TREATMENT WILL USE THE REFERENCED STANDARDS. THIS MESSAGE WAS DEVELOPED TO STANDARDIZE POTABLE WATER CHLORINE RESIDUALS AMONG THE ARMY, NAVY, MARINES, AND AIR FORCE, AND HAS BEEN COORDINATED BETWEEN THE ARMY, NAVY, AND AIR FORCE SURGEON GENERAL STAFF'S AND THE ARMY QUARTERMASTER GENERAL.

7. TECHNICAL POC IS MAJ DON ARCHIBALD AT THE USACHPPM, DSN 584-5242 AND OTSG POC IS COL STONE, DSN 289-0130.

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