



UNITED STATES MARINE CORPS
MARINE CORPS BASE
QUANTICO, VIRGINIA 22134-5001

MCBO 6240.3B
B 04
16 Oct 97

MARINE CORPS BASE ORDER 6240.3B

From: Commanding General
To: Distribution List

Subj: SWIMMING POOL WATER TREATMENT PLANTS

Ref: (a) Operating and Instruction Manual for the Pools

Encl: (1) Sodium Hypochlorite (Bleach - 15 Percent)
(2) Carbon Dioxide, Dry Ice

1. Purpose. To delineate responsibilities for the operation of swimming pools and water treatment plants.
2. Cancellation. MCBO 6240.3A.
3. Summary of Revision. The references have been consolidated into one manual. Requirements to use proper personal protective equipment was added to enclosure (1). Statements causing concern were deleted from enclosure (2).
4. Background. Swimming pools, unless properly maintained and operated, are conducive to the spread of infection. The skin, ears, eyes, nasal passages, and mucous membranes of swimmers are exposed to many infectious or harmful agents in the water. Because some water gets into the mouth of the swimmer, these agents are also taken into the stomach and intestines. Some of the infectious organisms likely to be encountered are those causing boils, impetigo, ringworm, and conjunctivitis. Swimming pools are provided with treatment plants, which use filters and chemicals to remove or destroy these organisms; but unless pool water treatment plants are operated properly, the quality of the water will quickly degenerate. Some of the chemicals used to treat swimming pool water are also dangerous in themselves unless applied in the correct proportions.
5. Responsibility. The Head, Maintenance Branch, Facilities Division retains personnel with in-depth knowledge of swimming pool water treatment plants, but sufficient manpower does not exist for these personnel to perform all the operations necessary for swimming pools; thus the Head, Food and Hospitality Branch, Morale, Welfare and Recreation (MWR) Division is responsible for general plant operations that can be performed by personnel with minimal training. To produce the quality of water necessary for a swimming

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environment, close cooperation between the Head, Maintenance Branch, Facilities Division and those directly responsible for swimming pool operations is vital.

a. The, Head Maintenance Branch, Facilities Division is responsible for updating operation procedures, monitoring general plant operations, and performing technical operations for all pool water treatment plants. The Head, Maintenance Branch, Facilities Division is also responsible for performing the general operation of the Ramer Hall swimming pool treatment plant, except for the cleaning and vacuuming of the pool, which is the responsibility of the CO, The Basic School. All instructions contained herein which are directed to the Director, MWR Division are applicable to the Head, Maintenance Branch, Facilities Division with regard to the operation of the Ramer Hall swimming pool treatment plant.

b. The Director, MWR Division is responsible for the general operation of the officer's pool treatment plant and the 50-meter pool treatment plants.

6. Specific Instructions for the Head, Maintenance Branch, Facilities Division

a. MWR personnel will be trained to operate the treatment plants per the reference and the enclosures. The training will consist of instruction in chlorine residual testing and adjustment, pH testing and balancing, log entries, and the hydraulic systems and controls. Safety instructions will include emergency measures and first aid treatment for chlorine exposure. This training will be completed annually prior to the opening date of the pools.

b. The pools, filters, charts, and log books will be periodically checked by knowledgeable personnel to ensure proper operation of the treatment plants.

c. The chemicals necessary to operate the treatment plants will be provided and delivered to the plants by personnel of the Maintenance Branch, Facilities Division. For all chemicals used, Material Safety Data Sheets will be provided and be readily available to all personnel. MWR is responsible for providing HTH (dry powdered chlorine).

d. The backwashing of the treatment plant filters will be performed by knowledgeable Maintenance Branch, Facilities Division personnel.

e. Assistance will be provided to MWR personnel in areas beyond their expertise.

7. Specific Instructions for the Director, Morale, Welfare and Recreation Division

a. The following treatment plant operation will be performed per the references:

(1) The pH levels will be tested every hour and maintained within proper limits.

(2) The gutters, drains, hair strainers, filter rooms, and pools will be cleaned as required.

(3) When in operation, the water treatment plant equipment will be inspected for unusual noise, overheating, and damage.

(4) Treatment plant operating data will be gathered and recorded daily.

(5) Head, Maintenance Branch, Facilities Division and the Head, Food and Hospitality Branch, MWR Division are responsible for completing and forwarding their respective monthly swimming pool report to the Health Care Advisor, Naval Medical Clinic (Attn: Environmental Health) for each month the pool is in service.

b. All backwashing of the filters will be performed by Maintenance Branch personnel.

G. B. BROWN III
Chief of Staff

DISTRIBUTION: 5 (12), 8 (5), 16 (30), 27 (20), 38, (25)

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SODIUM HYPOCHLORITE (BLEACH - 15 PERCENT)

1. General. Sodium hypochlorite is a clear, pale yellow or greenish liquid with a chlorine odor. Anhydrous material is unstable, but these water solutions can be satisfactorily stable under proper storage conditions. The material should be stored in closed, vented containers in a cool, (below 85F), dry, well-ventilated area away from direct sunlight. Provide general and local exhaust ventilation in the workplace. Protect containers from physical damage. **NOTE:** The proper personal protective equipment should be worn when handling this equipment.

2. Emergency Measures. Notify safety personnel of a major spill. Cleanup personnel need protection against contact with liquid and inhalation of mists and fumes. Keep concentrated hypochlorite solutions out of sewers and waterways.

3. First Aid. For skin contact remove contaminated clothing and flush affected areas with water. For eye contact irrigate eyes with running water for at least 15 minutes. If inhaled, provide oxygen or move victim to outdoor area for fresh air. If ingested, rinse mouth with water, give water or milk to drink, induce vomiting. In all cases contact physician. Eyewash fountains, washing facilities, and safety showers are available in areas of handling and use.

ENCLOSURE (1)

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CARBON DIOXIDE, DRY ICE

1. General. Carbon dioxide is colorless and odorless as gas or liquid. It is stored in containers under its own vapor pressure. If the pressure is suddenly relieved, the liquid cools as it evaporates and sublimates, forming dry ice. Direct contact with liquid can cause frostbite.
2. First Aid. Contact physician.

ENCLOSURE (2)