

ASSISTANT CHIEF OF STAFF, G-4 SECTION  
HEADQUARTERS, MARINE CORPS BASE

17 Oct 67

TO: Base Maint. Officer  
(Attn Lt Col Hayes)

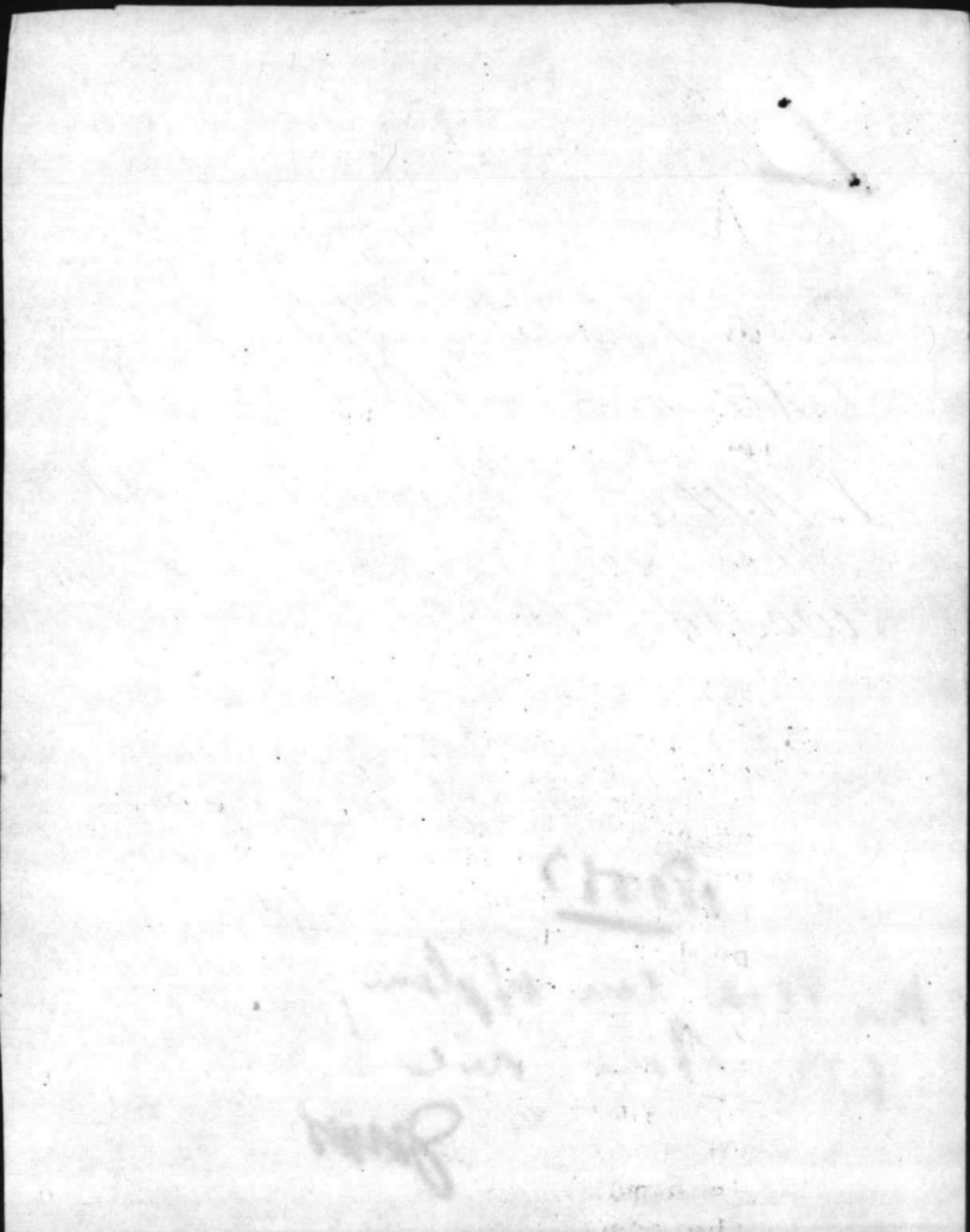
1. After you read this  
would like to discuss.

J O Brown  
Assist

180067

Mr. Tew can explain,  
better than me!

JWB



UNITED STATES GOVERNMENT

# Memorandum

TO : Assistant Chief of Staff, G-4

23-200:MPH:1mm  
DATE: 12 October 1967

FROM : Public Works Officer

SUBJECT: Purification of Swimming Pools

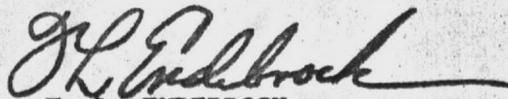
Encl : (1) ACofS, G-4 memo to PWO of 29 Sep 1967  
(2) Wallace & Tiernan, Inc. ltr to PWO of 9 Oct 1967

1. The Public Works Office has run an investigation relative to the use of bromine versus chlorine for purification of the water in swimming pools, as suggested by enclosure (1). One of the major water purification equipment manufacturers was contacted and, as a result of our inquiry, visited East Carolina University to investigate its use of bromine in swimming pools. The results of this visit are reported in enclosure (2).

2. Appropriate personnel in the Atlantic Division of Naval Facilities Engineering Command were also contacted. They reported that they know of no government installation in which bromine has been used in lieu of chlorine for purification of swimming pools. The primary reason for this is a matter of excessive cost, as indicated by enclosure (2), and also the technical difficulties in maintaining correct functioning of the purification equipment which would be employed with the use of bromine. It appears from these two sources of information that the use of bromine should not be considered further.

OK  
★  
Maint  
off.  
3. Chlorine, when used for swimming pool purification, will of course produce a certain amount of eye irritation. However, its effects can be minimized by close attention to the treatment of the water. NAVFACLANT advises that if the pH of the pool water is maintained at a level of 7.2 or 7.3, adequate purification should be obtained with a minimum of irritation. One of the problems of maintaining close control is the effect of sunlight upon the water in the pools because this introduces varying treatment requirements. Unless appropriate adjustments to the treatment are made, it is entirely possible to obtain too high an acidic condition in the pool water which, of course, is the primary cause of eye irritation.

4. It is suggested that the Base Maintenance Officer be requested to investigate the operating conditions of any pools which are creating problems in order to insure that proper treatment is, in fact, being achieved.

  
F. L. ENDEBROCK

ALL CHEMICAL CONTROL OF POOLS ARE MAINTAINED IN ACCORDANCE WITH BO. PG290.4 OF 16 FEB 1967. OPERATING PERSONNEL HAVE BEEN INSTRUCTED TO KEEP THE CHLORINE BETWEEN 0.9 PPM  $\frac{1}{2}$  0.6 PPM, AND TO KEEP THE P.H. AROUND 7.5 TO 7.6. THIS SHOULD HELP THE CONDITIONS.

28-200 (M) (1) (1)  
DATE: 13 October 1957

The following information was obtained from the report of the use of the water in the swimming pools. The water was found to be contaminated with a substance which caused an allergic reaction in the eyes of swimmers.

The Division of Naval Facilities is currently conducting an investigation into the source of the contamination. It is believed that the contamination is due to the use of a certain type of disinfectant in the pools.

The investigation is continuing and it is expected that the source of the contamination will be identified in the near future. In the meantime, the use of the contaminated water in the swimming pools has been discontinued.

The following information was obtained from the report of the use of the water in the swimming pools. The water was found to be contaminated with a substance which caused an allergic reaction in the eyes of swimmers.

The investigation is continuing and it is expected that the source of the contamination will be identified in the near future. In the meantime, the use of the contaminated water in the swimming pools has been discontinued.



# WALLACE & TIERNAN INC.

25 MAIN STREET, BELLHVILLE, NEW JERSEY

CODE 201: TEL. 759-8000 - TWX 759-3985 -- CABLE WALTERNIAN NEWARK -- TELEX 013-813

PLEASE REPLY TO:  
P. O. Box 4055

CHARLOTTE, NORTH CAROLINA 28204

October 9, 1967

Mr. Sam Morris  
Public Works Office - Bldg 1205  
Camp LeJeune, North Carolina

Dear Mr. Morris:

This refers to our telephone conversation last week in regard to application of bromine in swimming pools.

I talked to our factory and they are going to prepare a bibliography of the available literature on this subject. We will forward this to you in a few days.

Last week I was in Greenville, N. C. and talked to Dr. Martinas in the physical education department of East Carolina University. Dr. Martinas showed me the equipment which they are using for feeding bromine into their indoor swimming pool. The material is in the form of white pellets about the size of eggs. These pellets are placed in a rubber-lined pressure tank and water is circulated thru the tank very much like the old pot-type feeders that were used for alum. Dosage is adjusted by varying the quantity of water circulating thru the pot.

Dr. Martinas said that the bromine treatment is considerably more expensive than chlorine and he could only justify it because he lacked experienced, capable personnel to operate the equipment at the pool.

Dr. Martinas owns and operates a summer camp which has a swimming pool. He made the statement that he could not consider the use of bromine in his pool because of the expense of the operation.

The material which they are using at the University is obtained from Bromine Products Division, Drug Research Incorporated, Adrian, Michigan. and Dr. Martinas said that you would probably obtain more information from them.

So far as I know, there has been no satisfactory equipment for controlling and feeding bromine in any form except bromine compound pellets. We will pass on the information from our factory as soon as we receive it.

Assuring you of our interest and complete cooperation at all times, we are

Very truly yours,  
WALLACE & TIERNAN INC.

*Jim*  
J. H. Henderlite

*Encl (2)*



October 9, 1957

Dear Mr. [Name]:

This letter is in response to your letter of October 8, 1957, regarding the [subject]. I am sorry that I cannot provide a more definitive answer at this time.

The information you have provided is being reviewed by the appropriate departments. We will contact you again once a final decision has been reached. Your patience is appreciated.

I am sure you will understand the need for thoroughness in this process. Thank you for your inquiry.

Sincerely,  
[Name]

The enclosed information is for your reference only. It is not intended to be used for any other purpose.

If you have any further questions, please do not hesitate to contact our office. We are always happy to assist you.

Very truly yours,  
WILLIAM S. [Name]

J. W. Henderson