

~~TOP SECRET~~

3 December 1945

MEMORANDUM FOR Major General L. R. Groves

Subject: Underwater Tests of Atomic Bombs Against Naval Vessels

1. After a discussion on 30 November 1945 with Colonel Warren, Commodore Parsons, Commander Rivero and others, we came to the preliminary conclusion that an underwater test against naval vessels would contain so many major hazards that it should be ruled out at this time. The people concerned with the plan of carrying out the test against naval vessels ~~should make studies~~ to determine whether or not there will be any practical way to overcome the hazards and permit a test to be made with reasonable safety.

*Including Dr. Bradbury*

2. A large part of the radioactive fission products released by the bomb would get into the water before the ball broke through the surface and the contaminated water might well drift as a warm current toward inhabited islands or across shipping lanes. Vessels in the area would pick up considerable contamination in their pumping of salt water. There would be a spray covering a large surrounding area which would be heavily contaminated. That would make most difficult the observations of the test. The ships themselves would be contaminated through their hulls. *Fish life for a*

*large area would be damaged.*

3. All of the above considerations make the underwater test dangerously hazardous and it should not be listed as being feasible at this time.

4. The above surface test, while more difficult than our dry land Trinity test, appears feasible. Planning should continue for such a test.

5. Commodore Parsons has notified Admiral Blandy of the conclusions. Attached is a copy of Commodore Parsons' memorandum.

*FF*  
F. FARRELL,  
Major General, U S A

NAD:ERC  
Inclosure  
Memo  
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6/3/74

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From: Commodore W. S. Parsons  
 To: Rear Admiral W. H. P. Blandy  
 Subject: Underwater Tests of Atomic Bombs Against Naval Vessels

1. On 30 November Commodore Parsons, Commander Rivero and Commander Ashworth attended a discussion held in the office of Major General Farrell (General Groves' deputy). The occasion for the discussion was the point raised by Colonel Warren, M.C., who is the Manhattan District radiologist. Colonel Warren, having been through the experience of the New Mexico test, presented the case against detonation of an atomic bomb under water.

2. It may be assumed that approximately fifty percent of the radioactive fission products released by an atomic bomb would end up in the ocean in the immediate vicinity of the point of detonation. What percentage would be directly transferred to the water and what percentage would later fall in the form of spray, are difficult to estimate, but it is certain that a terrific contamination would obtain in this "pocket" of water for a considerable time, say three weeks following the detonation. One result would be that until measurements showed otherwise, every ship in the target group would be assumed to be dangerously contaminated. Another requirement would be that the location for the conduct of the test be chosen to avoid currents which might carry the contaminated water toward inhabited islands or across shipping lanes.

3. It is probable that the Manhattan District will take the position that an underwater test against naval vessels should only be conducted if the information which will be obtained therefrom, can be demonstrated to be absolutely vital and obtainable in no other manner. The District will insist also that radioactive hazards be taken fully into account, and that adequate steps be taken to safeguard against these hazards.

DECLASSIFIED

E.O. 11652, Sec. 2(a) and 2(d) or (E)

Authority

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AND "ERC

6/5/74

W. S. Parsons

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