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Office Memorandum • UNITED STATES GOVERNMENT

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TO : Dr. J. C. Bugher, Director, Division of Biology and Medicine, AEC, Washington, D. C. DATE: AUG 20 1953 404908

FROM : Carroll L. Tyler, Manager, SFO

SUBJECT: (STUDY - CONTINENTAL ATOMIC TEST SITES

SYMBOL: T-7

In late 1948 the Armed Forces Special Weapons Project undertook for the Atomic Energy Commission a study to determine the physical feasibility of continental atomic tests. This study was designated "Project Nutmeg." In general, the study transposed phenomena concerning atomic clouds and fallout as observed in the tropics to various continental locations. Meteorology and the effects of fallout were the primary factors of consideration.

In connection with the current review of the use of Nevada Proving Grounds, I feel that it is appropriate that the assumptions and various factors considered in the original study be reevaluated in light of experiences gained from continental nuclear detonations, and that another look be taken to ascertain if a more favorable location exists within the continental United States. In this connection report on Project Nutmeg (Page 42) states:

"Conclusions: It must be concluded, therefore, after transposing the results of the Eniwetok tests to a continental environment that:

a. Tests conducted within the continent of the United States at properly engineered test sites, under proper meteorological conditions, will result in no harm to population, economy or industry.

b. The decision to hold future tests within the continent will devolve, not upon the physical feasibility of conducting the tests without harm, but upon the elements of public relations, public opinion, logistics and security.

c. If the absolute certainty of negligible fall-out on inhabited areas can not be accepted, there yet remains sites within the United States where absence of fall-out on populated areas can be assured.

d. If second order effects of fall-out, such as those influencing biological processes of marine organisms in coastal

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waters, cannot be accepted, there yet remain sites within the United States, along the southeastern seaboard where the transport of radioactive material by ocean currents into fishing banks, oyster beds, salt marshes, coastal sounds and embayments may be avoided."

Confirming Mr. Reeves' telephone conversation of August 18th, you are requested to reevaluate the radiological consideration of the Nutmeg study, including an evaluation of the possible effects of fallout on marine life from a test site on the eastern seaboard, especially the locations mentioned in Paragraph 7, Section III (beginning on Page 50) of the Nutmeg report. The fallout experience from Nevada tests, together with the studies you have been conducting on marine life in the Marshall Islands, should be a much better basis for conclusion than the rather limited information available at the time of the Nutmeg study. Although we would appreciate having your comments as soon as possible, this request should be considered secondary to your work as a committee member as covered in the Panel "assignment" memorandum of August 10, 1953.

For your information, I am requesting Dr. Machta and Colonel Holzman to reevaluate the meteorological consideration of the Nutmeg study.

CC: Brig. Gen. K. E. Fields, Director
DMA, AEC, Washington, D. C.
Dr. Lester Machta, Weather Bureau
U. S. Dept. of Commerce
Washington, D. C.
Colonel B. G. Holzman, DCS/Research
& Dev., AFSWC, Albuquerque, N. M.