

## Office Memorandum • UNITED STATES GOVERNMENT

TO : Files

FROM : Drs. C. L. Dunham and L. W. Tuttle

SUBJECT: OPERATION GREENHOUSE - TEST RESULTS

SYMBOL: BMM:LWT

DATE: May 9, 1951

403892

Drs. Dunham and Tuttle spent approximately three weeks at Eniwetok Atoll in connection with the Biomedical Test Program. This program was designed to answer a number of specific questions concerning the effects of atomic bomb explosions upon biological systems. The first problem was to determine whether experimental data obtained under laboratory conditions could be directly applied to bomb conditions.

In addition, the program was set up to give accurate information concerning radiation dosages and effective radiation energies at varying distances from the bomb; and a detailed analysis of the thermal spectrum of the bomb explosion. Up to the time of the test there was uncertainty as to the relative effectiveness of the infrared, visible and ultra-violet portions of the spectrum in producing flash burn injury. The tests were also designed to verify the efficacy of certain biological dosimeters in correlating purely physical measurements of radiation dosages and energies with biological damage. While the factual information concerning these problems must await detailed analyses which will be forthcoming in the next few weeks, the preliminary data indicate that the tests were completely successful in providing definitive answers concerning the radiation dosage - energy question and the thermal burn problem.

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<i>AA S. W. G. M. 11/2/94</i>	1. CLASSIFICATION RETAINED
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NAME: <i>ML KOLBAY</i>	3. CONTAINS NO DOE CLASSIFIED INFO
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MILITARY RESEARCH & APPL. 7-1  
Greenhouse

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May 9, 1951

Drs. C. L. Dunham and L. W. Tuttle

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OPERATION GREENHOUSE - TEST RESULTS

SYMBOL: BLM:LAT

Drs. Dunham and Tuttle spent approximately three weeks at Eniwetok Atoll in connection with the Biomedical Test Program. This program was designed to answer a number of specific questions concerning the effects of atomic bomb explosions upon biological systems. The first problem was to determine whether experimental data obtained under laboratory conditions could be directly applied to bomb conditions.

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cc: Mr. Simons  
Mr. Brown

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REVIEWER (ADD): NAME: <i>ML KELLEY</i>	
DATE: <i>11/16/94</i>	

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7-1

*[Handwritten signature]*

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May 2, 1961

Mrs. J. J. Tucker and W. J. Tuttle

Subject: [Redacted]

SEARCH: [Redacted]

Mrs. Tucker and Tuttle spent approximately three weeks at Eniwetok Atoll in connection with the Biomedical Test program. This program was designed to answer a number of specific questions concerning the effects of atomic bomb explosions upon biological systems. The first problem was to determine whether experimental data obtained under laboratory conditions could be directly applied to bomb conditions.

In addition, the program was set up to give accurate information concerning radiation dosages and effective radiation energies at various distances from the bomb; and a detailed analysis of the thermal structure of the bomb explosion. Up to the time of the test there was uncertainty as to the relative effectiveness of the infra-red, visible and ultra-violet portions of the spectrum in producing flash burn injury. The tests were also designed to verify the efficacy of certain biological dosimeters in correlating purely physical measurements of radiation dosages and energies with biological damage. While the actual information concerning these problems must await detailed analyses which will be forthcoming in the next few weeks, the preliminary data indicate that the tests were completely successful in providing definitive answers concerning the radiation dose-energy question and the thermal burn problem.

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cc: r. Simons  
Mr. Brown

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OFFICE ▶	<u>B.M.M</u>				
SURNAME ▶	<u>[Redacted]</u>				
DATE ▶	<u>11/16/94</u>				