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CIC3.950802.013 29368

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IN REPLY  
REFER TO:

DIR-507

21 July 1950

MEMORANDUM FOR Brigadier General James McCormack, Jr.  
THROUGH Carroll L. Tyler  
FROM N. E. Bradbury  
SUBJECT GREENHOUSE  
Ref: McCormack's memo to Tyler, 20 July 1950

US DOE ARCHIVES  
326 US ATOMIC ENERGY  
COMMISSION  
RC  
Collection DNA Files  
Box 3777  
MRA Nevada Test Site  
C1950-51

Reviewers: Date  
Saul Auer 7/9/50  
William Bradbury 7/10/50

SPECIAL REVIEW  
FINAL  
DETERMINATION:  
UNCLASSIFIED

Prefatory to specific comments pursuant to the request of the reference memorandum, it is desired to point out that the nuclear test program proposed for Operation Greenhouse has not only an immediate bearing on the stock-pile position of the United States but is expected to make a direct contribution to the rapid understanding of the technical and economic feasibility of a thermonuclear weapon program. For both of these reasons, it would be most unwise and unfortunate to permit a situation to arise which would delay this Operation. If a delay is to be avoided, an early decision on a site must be obtained and, if Eniwetok is retained, the Los Alamos Scientific Laboratory strongly recommends that an attempt be made to obtain the support needed to complete the operation on time.

The following comments are numbered in the same order as given in the reference document and are based on technical considerations only.

1. We consider the suggested sites to have the following order of desirability: Tonopah bombing range, Trinity, Texas coast, North Carolina coast, and Dugway. Tonopah is given a preference over Trinity in spite of convenience and prior use of Trinity because of the lower population density and larger possible variations in wind directions which can be tolerated without endangering major population centers. Similarly, Dugway is placed last because of the proximity of the Salt Lake City population center. The Texas and North Carolina coasts are given a low position because the lack of Government-owned land and large distances from Los Alamos would cause considerable delay in initiating construction at those locations, and they are both adjacent to large population centers.

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LEONARD M. SFRANSKI  
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2. If an extremely early decision is reached in determining the location of a site, it is believed that the same time scale as that proposed for Operation Greenhouse can be met.

3. The Los Alamos Scientific Laboratory believes it imperative that the Eniwetok area be retained as a potential proving ground. It is quite possible that nuclear weapon developments may reach such magnitudes that their test in continental areas may involve relaxation of safety precautions to an extent unacceptable in peacetime. Moreover, in times of greatly reduced international tension, the Eniwetok area may prove a generally more practical area for the conduct of nuclear tests from the point of public psychology and practical security than a continental site.

4. A continental test site offers a number of technical advantages over Eniwetok: the logistics problem; the problem of obtaining capable construction firms in sufficient numbers to insure economy, efficiency, and speed in construction; the problem of obtaining competent technical personnel willing to participate in a test; the problem of obtaining sufficient area, appropriate foundations, and suitable soil conditions for many experiments; and the problem of transporting and assembling nuclear devices, technical equipment, and experimental set-ups are obviously much simplified at a continental test site. The Los Alamos Scientific Laboratory can only foresee a continued program of practical nuclear explosion tests as a supplement to its research and developmental program. This has been true from 1945 until the present time and there seems equal reason, and from the point of view of thermonuclear reactions, even more reason, to predict the continuance of this requirement. The requirement becomes even greater in times of tension when less time can be spent in theory and laboratory experiment, and more reliance must be given to early test programs. The occurrence of tension in international relations makes an extra-continental site less available, or even actually unavailable, and an alternative site must be immediately ready for use.

5. The basic structure of the Joint Task Force THREE is required if the Greenhouse tests are to be conducted on the present time scale. Some units of the Joint Task Force could and should be dispensed with but we would prefer to postpone such discussions until our plans for the use of a continental United States test site are more nearly complete.

6. Based upon a preliminary analysis of the factors of accuracy of meteorological prediction, prevalence and stability of specific wind patterns, population densities in potentially affected areas, the radiological results of the Alamogordo test in 1945, and the

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Trig Gen James McCormack

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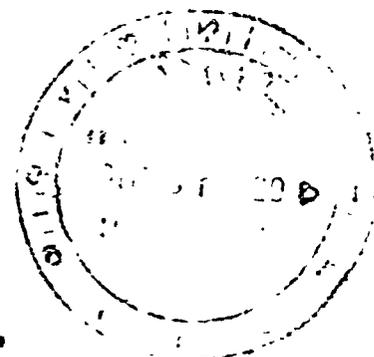
21 July 1950

technical plans for Operation Greenhouse, it is believed that such an operation could be conducted at the continental site recommended in Nevada with a degree of public radiological safety which would considerably exceed that of the Alamogordo operation. While the precise nature of test planning will be affected by meteorological considerations, to which much further attention must be given, we see no reason to anticipate that such a goal cannot be met.

N. E. Bradbury  
Director

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