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C O P Y

UNITED STATES
ATOMIC ENERGY COMMISSION
Washington 25, D. C.

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8 January 1953

Major General H. B. Loper, Chief
Armed Forces Special Weapons Project
P. O. Box 2610
Washington 25, D. C.

Dear General Loper

Reference is made to letter from Chief, Armed Forces Special Weapons Project, to Director of Military Application, file SWPWT 400.112 dated October 15, 1952, on the subject of troop participation in Operation UPSHOT-KNOTHOLE.

Your letter of October 15 requests Atomic Energy Commission concurrence in three general proposals regarding this participation. The first two proposals are a plan for maximum troop participation which will apply to all shots, but with the degree of implementation for each specific shot to be agreed in the field between the Test Director, Exercise Director, and a representative of Armed Forces Special Weapons Project. The Atomic Energy Commission concurs in the general concept of these proposals but desires to make several amendments to the specific arrangements. These amendments are desired because of our belief that diagnostic experiments must govern at UPSHOT in the same degree that military effects must govern at KNOTHOLE. Thus, though maximum possible freedom of operation will be granted the Exercise Director, the Operations Plan for Operation Desert Rock Five must be coordinated with the Test Manager's over-all Operations Plan for UPSHOT-KNOTHOLE. This will necessitate:

a. Joint planning between the Test Manager, Exercise Director, and the representative of Armed Forces Special Weapons Project of phases of the Exercise which involve activities within the Nevada Proving Grounds but outside the assigned maneuver area, and incorporation of these activities in the Test Manager's Operations Plan.

b. Transmittal of the Exercise Director's plan for maneuvers within the assigned area to the Test Manager.

Where further detailed amendments are desired, they appear in Enclosure I to this letter and refer to corresponding sections of Enclosure I to your letter. As thus amended your first two proposals are acceptable to the Atomic Energy Commission.

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW
1ST REVIEW-DATE: 10/29/94 DETERMINATION [CIRCLE NUMBER(S)] 1. CLASSIFICATION RETAINED
AUTHORITY: DADC DADC 2. CLASSIFICATION CHANGED TO:
NAME: 3. CONTAINS NO DOE CLASSIFIED INFO
2ND REVIEW-DATE: 4. COORDINATE WITH:
AUTHORITY: 5. CLASSIFICATION CANCELLED
NAME: 6. CLASSIFIED INFO BRACKETED
7. OTHER (SPECIFY):

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Encl 12

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Regarding your last proposal, that the Department of Defense assume full responsibility for physical and radiological safety of troops and troop observers within the Nevada Proving Grounds, including establishment of safety criteria for them, the Atomic Energy Commission concurs in part. Establishing general safety practices and criteria at the Nevada Proving Grounds is, and must continue to be, the responsibility of the Manager, Santa Fe Operations Office (Test Manager). We do, however, accept the proposal that the Department of Defense assume full responsibility for physical and radiological safety of troops and all observers accompanying troops within the maneuver areas assigned to Exercise Desert Rock Five, including establishment of suitable safety criteria. The Atomic Energy Commission adopts this position in recognition that doctrine on the tactical use of atomic weapons, as well as the hazards which military personnel are required to undergo during their training, must be evaluated and determined by the Department of Defense.

The Atomic Energy Commission has, however, established safety limits (outlined in paragraph 2e, Enclosure I) for personnel who are to be exposed to the effects of atomic detonations at Atomic Energy Commission Proving Grounds. We consider these limits to be realistic, and further, are of the opinion that when they are exceeded in any Operation, that Operation may become a hazardous one. So that we may know in which particulars and by how much these safety standards are being exceeded, we desire that the Exercise Director transmit to the Test Manager a copy of his Safety Plan for the Exercise.

We note your undertaking to issue, in case of injury or criticism resulting from the Exercise, a public statement regarding the Department of Defense's responsibility for the exercise. This question has been discussed with the Office of Public Information, Office of Secretary of Defense, and the text of a statement covering responsibility for safety standards at the Exercise has been agreed upon. It was further agreed that the most propitious time to issue this statement, from the point of view of both agencies, is during the pre-Exercise press briefing. Accordingly we propose that the statement be released at that time by the Exercise Director through the joint Atomic Energy Commission- Department of Defense Information Office. The text of this statement is attached hereto as Enclosure II.

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It is requested that you inform us of your acceptance, or desire for further discussion, of these amendments to your proposals so that the field offices may be given mutually agreed instructions to govern their subsequent actions.

Sincerely yours,

M. W. Boyer
General Manager

Enclosures:
1. Enclosure I. (Cys 1&2A)
2. Draft Statement on Safety Responsibility for Troops (2 cys.)

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ENCLOSURE I

1. GENERAL

d. Coordination

The Atomic Energy Commission recognizes the desirability of including the Director Weapons Effects Tests in planning for the exercise. We desire, however, that direct communication between the Test Manager and the Exercise Director be authorized if necessary.

e. Plan

Although the movement of troops within the assigned exercise area is to be determined by the Exercise Director, specific provision must be made in the exercise plan to assure non-interference with scientific experiments, and equipment for collection of data within that area. It is desired that the Exercise Director furnish a copy of the exercise plan in advance to the Test Manager for information. On the other hand, all movements of military personnel and vehicles outside that area of the Nevada Proving Grounds assigned to the Exercise will be incorporated in the Test Director's Operation Plan. All aircraft over the area whatsoever, including helicopters, drones, and TAC and SAC aircraft, will be under the control of the Test Director prior to, and immediately after, H-hour. Their participation must be included in the over-all air plan prepared by Hdqs., Special Weapons Center.

This document contains information affecting the national defense of the United States within the meaning of the Espionage Laws, Title 18, U.S.C. Sections 793 and 794. The transmission or the revelation of its contents in any manner to an unauthorized person is prohibited by law.

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2. PROPOSED WORKING AGREEMENTS

b. Change in Plan

Any change in the original plan which involves AEC support may, although otherwise acceptable under these provisions, become unacceptable to the Test Manager if submitted so late as to require excessive effort to effect its inclusion.

c. Maneuver Area

The area assigned the exercise on any one shot is a matter for solution between the field representatives. It can be determined only after consideration of the final requirements of all agencies for area at that particular shot and cannot reasonably be decided away from the site. The Commission will not place any restrictions before the fact on the decision of the Test Manager in this regard. It is anticipated, however, that a suitable and acceptable sector will ordinarily be available for troop maneuvers.

e. Safety

AEC maximum limits for exposure of personnel to the effects of atomic detonations are:

1. Ionising Radiation: A total exposure to not over 3.9 Roentgens of gamma radiation per 13 weeks.

2. Thermal Radiation: Exposure to not over 1 calorie per square

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centimeter for a fully clothed individual. In addition, the eyes of a person so exposed must be protected either by approved goggles or by assuring that they are facing away from the blast and not facing any nearby highly reflecting surfaces.

3. BLAST: Exposure to not over a static overpressure of 2 pounds per square inch, including direct, reflected, and reinforced effects. This does not take into account possible injury from a. displacement, or b. flying debris. It is known that flying debris can be a real hazard at a position where the overpressure in free air is 2 psi.

f. Admittance of Military Personnel to the Nevada Proving Grounds.

Access of personnel to the Nevada Proving Grounds is, and must continue to be, solely the responsibility of the Test Manager. Only in this way can he execute his responsibility for safeguarding Atomic Energy Commission classified matter therein. He will, however, make satisfactory arrangements with the Director Weapons Effects Tests and the Exercise Director to admit participating troops and troop observers.

4. ADDITIONAL DETAILS ARE AS FOLLOWS:

c. Indoctrination

It is the opinion of the Commission that very few, if any, troops

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or troop observers will have a need to know the purpose or the details of construction of Atomic Energy Commission experimental devices being detonated in this series.

6. PUBLIC INFORMATION

Paragraph 6 should read:

"All public information, including releases, statements, interviews and backgrounding relating to the Exercise will be issued through or approved by the Joint AEC-DOD Public Information Office."

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ENCLOSURE II

DRAFT STATEMENT OF SAFETY RESPONSIBILITY FOR TROOPS

(To be issued by Exercise Director through Joint Information Office at Las Vegas or at press briefing prior to first test)

"The Department of Defense has assumed responsibility for the safety of troops participating in military exercises at the U. S. Atomic Energy Commission's Nevada Proving Grounds.

"Military monitoring teams trained by AEC radiation safety monitors at previous tests will govern the movement of troops in test areas to prevent exposure to harmful radiation. The maximum permissible level of radiation for troops who will participate will be slightly higher than the AEC's standard industrial level. Individual troop units, however, will take part in only one test whereas the AEC standards were established for workers who are faced with possible exposure every day in laboratories and production facilities. [*The maximum permissible level for troops under Department of Defense standards is far below that at which any detectable radiation effects have been found in the human body.]

"Other hazards, such as heat and blast, will be controlled by the positions in which troops are placed and by the use of specially designed combat-type shelters."

*This sentence will be included in the announcement only if the DOD permissible level established for troops actually is "far below that at which any detectable radiation effects have been found in the human body." Determination that the statement is factual will be made by Biology and Medicine and Military Application from the Exercise Director's Safety Plan with Information Services acting as coordinator.

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