

Test Planning

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18 December 1952
RG 326 US ATOMIC ENERGY COMMISSION

Location LANL
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MEMO TO: Carroll L. Tyler, Test Manager

FROM : Test Director, J-Division, LASL

SUBJECT: OPERATION PLAN, CONTINENTAL ATOMIC TESTS, SPRING 1953

SYMBOL : J-15202

1. Introduction

Atomic tests currently planned for the Spring of 1953, to be conducted at the Nevada Proving Grounds, are divided into two operations.

- a. The first group of tests, code name UPSEOT, is of primary interest to the Atomic Energy Commission and will consist of six detonations proposed by the Los Alamos Scientific Laboratory, and two detonations proposed by the Radiation Laboratory, Livermore. These tests are concerned primarily with weapon development but will include weapon effects and civil effects tests, and hence have a secondary interest to the Department of Defense and to the Federal Civil Defense Agency. Although no formal request has been received by the Test Director, plans have been discussed for participation by the Department of Defense in several or all of these tests with an operation designated as Desert Rock V.
- b. The second group of tests, code name KNOTHOLE, has been requested by the Department of Defense, and will consist of two detonations, the first being an air burst of a ~~HEAVY~~ ~~HEAVY~~ accompanied by a comprehensive program of experimentation of primary interest to the Department of Defense, and the second being a "proof-firing" (air burst) of the ~~HEAVY~~ also accompanied by considerable experimentation of primary interest to the Department of Defense. Although no formal requests have been received by the Test Director, it is understood the Department of the Army will conduct tactical maneuvers during the ~~HEAVY~~ in addition to the Desert Rock V program. The Los Alamos Scientific Laboratory will make the alpha and yield measurements for Operation KNOTHOLE.

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c. It is the purpose of this document to list the proposed program of operation for those tests, to enumerate the Test Director's organization required to conduct them, to state requirements for military and other agency support, and to list the experimental program participation in the various tests.

2. Program for Operation UPSHOT/KNOTHOLE

Although the weapons to be detonated in Operation KNOTHOLE are considered firm, the number and design of the devices to be tested in Operation UPSHOT have not been firmly specified. Current planning provides for the following firing schedule:

<u>Description</u>	<u>Date</u>	<u>Area</u>	<u>Air/Tower</u>
	17 March '53	3	300' tower
	24 March '53	4	300' tower
	31 March '53	7-5a	300' tower
DELETED	6 April '53	7-7	Air Drop
	11 April '53	2	300' tower
	18 April '53	4a	50' tower
	25 April '53	1	300' tower
	2 May '53	3a	300' tower
Dry Run	4 May '53	F	2420' air (H.E. only)
Effects	7 May '53	F	2420' air drop
Gun	21 May '53	F	500' air burst

In the above schedule the ~~DELETED~~ proposed by UCRL - Livermore, are thermonuclear tests. The Effects and Gun weapons are for the Department of Defense tests, the Effects detonation utilizing ~~DELETED~~ he launched from the Army's 260-mm gun located approximately 13,000 yds. south of the zero point on Frenchman Flat. The remaining devices are proposed by the Los Alamos Scientific Laboratory, ~~DELETED~~

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In addition to the nuclear detonations, it is considered advisable to conduct a complete dress rehearsal prior to the Effects test. The magnitude of (a) the air support and participation operation, (b) radio frequencies, (c) the smoke test problems, (d) the funds invested in structures and instrumentation, and (e) the inexperienced personnel who will participate, all justify the decision for a complete dress rehearsal.

3. Test Director's Organization

Enclosure "A" shows the Test Director's organization considered necessary to accomplish the tests.

4. Military and Other Agency Support

Support from the following agencies is considered necessary for these operations. Formal requests for the services enumerated are covered in separate documents.

a. Air Weather Service (USAF)

- 1) Local atmospheric conditions at shot times. These include temperature, humidity, pressure, density, velocity, and direction from ground surface to 50,000'.
- 2) General U.S. weather information, including daily weather maps.
- 3) Detailed forecasting from approximately two weeks before to the completion of the tests.

b. Aircraft Support (SMC)

- 1) Bomb delivery and disaster aircraft.
- 2) Manned cloud-sampling aircraft.
- 3) Manned cloud-tracking aircraft for airway clearance and off-site radiological safety from the Nevada Proving Grounds to a 500 mile radius.
- 4) General purpose helicopters and liaison-type aircraft primarily for use by the rad-safe unit.

4

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- 5) Logistic support aircraft for cargo transportation between Kirtland Air Force Base and the Nevada Proving Grounds.
- 6) Courier aircraft for carrying radioactive samples from the Nevada Proving Grounds to Berkeley, IASL, and certain eastern laboratories.

c. Military Automotive Equipment

In addition to the military vehicles being supplied by the Directorate, Weapons Effects Tests, AFSWP, for the military effects programs and other military units in the Test Director's organization, there will be requested approximately thirty military vehicles of the jeep and four-wheel drive class. This latter group is for use by the Civil Effects and Weapon Development technical test groups.

d. Military Personnel

Other military personnel will be requested to assist in various duties involved in both the support units and technical projects under the Test Director. These personnel requirements are not as yet firm and detailed lists will be submitted through the Office of Test Operations, SPOO, when the exact requirements are known.

e. Rad-Safe Unit

The Rad-Safe Operations Unit shown as one of the support units in Enclosure "A" will consist mostly of military personnel under Lt. Col. T. D. Collison. Col. C. S. Maupin, a medical officer, has been designated the Rad-Safe Staff Officer. The off-site rad-safe operations involving air-sampling operations will probably be manned with approximately 30 USPHS personnel, 15 for the first five shots and 15 for the second five shots of the series.

f. Civil Aeronautics Administration

As in past operations at the Nevada Proving Grounds, the 6th Region CAA (Los Angeles) has been notified of the proposed Spring 1953 tests, and this office has stated they will assign Mr. Harold Greenleaf of the Salt Lake Office to be their representative at the Control Point during the tests. This is the arrangement which has been very satisfactory in previous operations.

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g. New York Operations Office

Informal arrangements have been made with the New York Operations Office to participate in the long-range fall-out measurements. It is expected formal agreements for this work will be handled by the Division of Military Application. In this connection, it is also expected the Division of Military Application will notify the photographic industries regarding the test schedule.

5. Project Participation

Enclosure "B" outlines the experimental programs and projects involved in Operation UPSHOT/KNOTHOLE by the Military Effects, Weapons Development, and Civil Effects Groups. No formal proposals for Desert Rock participation have been received by the Test Director as of this date.

FOR THE TEST DIRECTOR:

Original Signed by
J. C. CLARK

J. C. Clark
Deputy Test Director

Enc: 1 Org. Chart
1 Participation Chart (J-15203)

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