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Progress Report to the Joint Committee on Atomic Energy

DECEMBER 1952 THROUGH MAY 1953 (U)

Part III - Weapons

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By authority of the U. S. Atomic Energy Commission

Per Doyle Burrows Date June 26, 1953
Patricia J. [unclear]

Document ~~_____~~ provided to secret R/D
AEC letter 5/16/53

UNITED STATES ATOMIC ENERGY COMMISSION
WASHINGTON, D. C.

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AUTHORITY: DOE 20 JUNE 22, 1953
Rev BY R. A. CARPENTER, DATE: 10-20-93

DOG [unclear] 10-21-93

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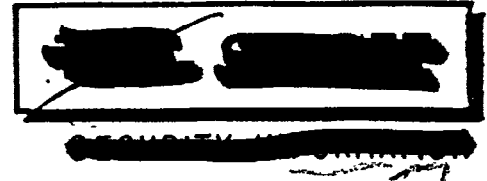
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WEAPONS



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FULL-SCALE WEAPON TESTS

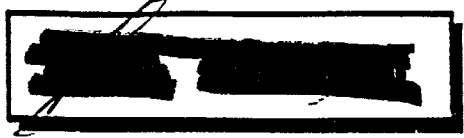
Operations Upshot and Knothole (Nevada, March to June 1953)

This series of full-scale weapon tests included 11 devices, two of which (Operation Knothole) were for the purposes of the DOD and the balance (Operation Upshot) for the Commission. As indicated in Table 1, the first shot of the Knothole series, on May 8, was for weapon-effects purposes; the second, on May 25, was an operational test of the artillery projectile fired from the 280-mm cannon.

The series of nine shots for the Commission was conducted primarily to further thermonuclear development and to provide experimental data on hollow implosion, external initiators, initiation with deuterium, and boosting with deuterium. (See Table 1.)

Future Tests

As an extensive test series, Operation Domino, originally scheduled for the fall of 1953 in Nevada, has been cancelled. This was made possible in large part by the addition of an eleventh shot at the end of the 10-shot series this spring. Full-scale fission- and thermonuclear-weapon tests have been scheduled to begin early in 1954 (Operation Castle) at Eniwetok. The schedule of future tests, as well as the respective participation in each by the Los Alamos Scientific Laboratory and the University of California Radiation Laboratory, is shown in Table 2.



SECURITY INFORMATION

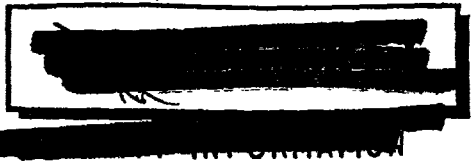
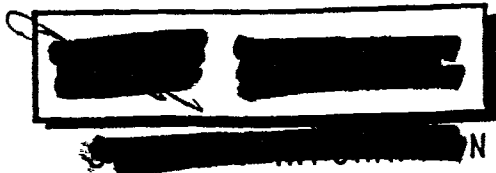
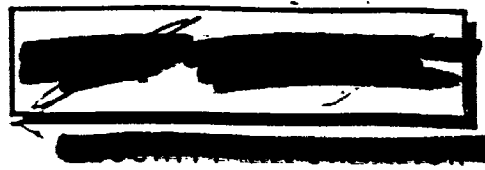


Table 1—Operations Upshot-Knothole, Nevada Proving Grounds, March to June 1953

Shot No.	Date	Delivery	Height of burst, ft	Predicted yield, kt	Observed yield (preliminary), kt	Purpose of test
1	March 17	Tower	300	DELETED	16-18	DELETED
2	March 24	Tower	300	DELETED	24-25	DELETED
3	March 31	Tower	300	DELETED	0.2	DELETED
4	April 6	Airdrop	6150 ± 200	DELETED	About 11	DELETED
5	April 11	Tower	100	DELETED	0.2	DELETED
6	April 18	Tower	300	DELETED	22-28	DELETED
7	April 25	Tower	300	DELETED	42-51	DELETED
8*	May 8	Airdrop	2420 ± 25	DELETED	About 26	DELETED
9	May 19	Tower	300	DELETED	About 32	DELETED
10*	May 25	280-mm cannon	500 ± 100	DELETED	About 15	DELETED
11	June 4	Airdrop	1150 ± 150	DELETED	64 ± 6	DELETED

* Operation Knothole, conducted on Frenchman Flat.





WEAPONS

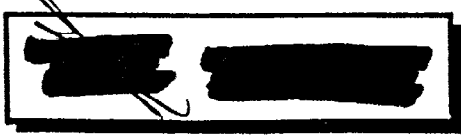
Table 2—Schedule of Full-scale Weapons Tests, 1953 to 1956

Test	Agency	Date	Total No. of shots	Scientific operations participation	
				No. of shots and delivery	
				LASL	UCRL
Continental Teapot	AEC	Fall 1954 or Spring 1955	8	5, Tower; 1, Airdrop	1, Tower; 1, Airdrop
Julep	AEC	Fall 1955 or Spring 1956	8	5, Tower; 1, Airdrop	1, Tower; 1, Airdrop
Overseas					
Castle	AEC/DOD	Early 1954	6 or 7	1, Ground; 3, Barge	2, Ground
Redwing	AEC/DOD	Spring 1955	4	3, Ground	1, Ground
Wigwam	DOD	Spring 1955	1	1, Deep underwater test	
Hardtack	AEC/DOD	Spring 1956	4	3, Ground	1, Ground

WEAPON PRODUCTION AND STOCKPILING

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