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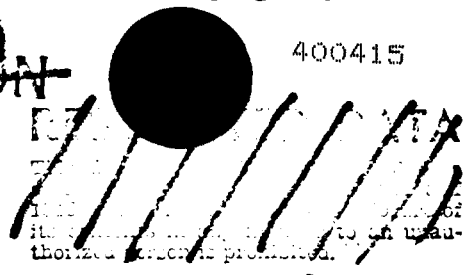
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HEADQUARTERS  
TASK GROUP 7.1  
Joint Task Force SEVEN  
P. O. Box 1663  
Los Alamos, New Mexico



10 November 1953 I/1991

J- 21366 (0)

TO: Distribution

FROM: Commander, Task Group

SUBJECT: OUTLINE OF SCIENTIFIC PROGRAMS OPERATION CASTLE  
(Supersedes J-17930 dated 8 May 1953 and J-18603 dated 1 July 1953)

This document consists of 76 pages  
No. 24 TS1

Project Number	Title	PUBLICLY RELEASABLE	Organization	Project Officer
		OS-6		

TASK UNIT 13 - DOD PROGRAMS (Col. H. K. Gilbert, Capt. N. E. Kingsley)

PROGRAM 1 - BLAST AND SHOCK MEASUREMENTS (LCDR W. L. CARLSON)



- 1.1 Blast Measurements by Photography
  - a. Free Air Pressure (Rocket Trails) NOL C. J. Aronson
  - b. Precursor Phenomena (Rocket Trails) NOL C. J. Aronson
  - c. Base Surge Phenomena NOL C. J. Aronson
  - d. Peak Pressure by Aerial Photography NOL C. J. Aronson
- 1.2 P vs T on the Surface
  - a. Pressures less than 40 psi Sandia Corp. J. M. Harding
  - b. Pressures greater than 40 psi BRL J. J. Meszaros
- 1.3 Shock Winds and Afterwinds Sandia Corp. J. M. Harding
- 1.4 Underwater P vs T ONR-NRL-NOL-DTMB W. J. Thaler
- 1.5 Acoustic Pressure Signals in Water(SOFAR) ONR J. W. Smith
- 1.6 Water Wave Studies ONR-Scripps R. R. Revelle
- 1.7 Close-in Ground Accelerations Sandia Corp. J. M. Harding
- 1.8 Dynamic Pressure Investigations BRL E. J. Bryant

PROGRAM 2 - NUCLEAR EFFECTS (Lt. Col. E. A. Martell)

- 2.1 Gamma Film Dosage Measurements ESL R. H. Dempsey
- 2.2 Gamma Dose Rate vs Time ESL P. Brown
- 2.3 Neutron Flux & Spectrum Measurements NRL T. D. Hanscome
- 2.5a Fall-out Distribution Studies NRDL E. R. Tompkins
- 2.5b Fall-out Distribution Studies CRL E. F. Wilsey

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928

<u>Project Number</u>	<u>Title</u>	<u>Organization</u>	<u>Project Officer</u>
2.6a	RC Analysis of Ground Contamination	NRDL	E.R. Tompkins
2.6b	RC Analysis of Ground Contamination	CRL	R.C. Tompkins
	PROGRAM 3 - STRUCTURES (Capt. N.E. Kingsley)		
3.1	Loading of Structures	ONR-SRI	L.W. Swift
3.2	Crater Survey and Evaluation	ONR-SRI	R.B. Vaile, Jr.
3.3	Tree Stand Studies	USFS	W.L. Fons
3.4	<i>neutralization of a planted sample</i>		
	PROGRAM 6 - TESTS OF SERVICE EQUIPMENT AND OPERATION (Lt. Col. D.I. Prickett)		
6.1	<i>Test of Antismoke Procedure for high-yield weapons.</i>	SAC-NSAF	<i>Lt. Col. Rocky Trent</i>
6.2a	Effects of Blast, Gust, and Thermal on AC in Flight (B-36 Aircraft)	WADC	Col. W.A. Anderson
6.2b	Effects of Blast, Gust, and Thermal on AC in Flight (B-47 Aircraft)	WADC	Col. W.A. Anderson
6.4	Proof Testing of AW Countermeasures	BuShips	Capt. G.G. Molumphy
6.5	Decontamination and Protection	CRL	J.C. Maloney
6.6	Effects on Ionosphere	ESL	Capt. A. Girc
	PROGRAM 7 - LONG RANGE DETECTION (Col. P.R. Wignall)		
7.1	Electromagnetic Radiation Calibration	AFOAT-1	J.A. Crocker
7.2	Detection of Airborne Low Frequency Sound from Atomic Explosions	AFOAT-1	G.B. Olmstead
7.4	Calibration Analysis of A-Bomb Debris	AFOAT-1	W. Singlevic
	PROGRAM 9 - SUPPORTING MEASUREMENTS (Lt. Col. J.G. James)		
9.1	Cloud Photography	AFSWP	Lt. Col. J.G. James
	TASK UNIT 1 - LASL PROGRAMS (L. Aamodt)		
	PROGRAM 11 - RADIOCHEMISTRY (R. Spence)		
11.1	Analysis for Fission and Fusion Energy Yields (Overseas phase will be handled by 11.2)	J-11, LASL	R. Spence
11.2	Sample Collection	J-11, LASL	H. Plank
	Heavy Element Investigations	J-11, LASL	Maj. C.

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929

<u>Project Number</u>	<u>Title</u>	<u>Organization</u>	<u>Project Officer</u>
2.6a	RC Analysis of Ground Contamination	NRDL	E.R. Tompkins
2.6b	RC Analysis of Ground Contamination	CRL	R.C. Tompkins
PROGRAM 3 - STRUCTURES (Capt. N.E. Kingsley)			
3.1	Loading of Structures	ONR-SRI	L.W. Swift
3.2	Crater Survey and Evaluation	ONR-SRI	R.B. Vaile, Jr.
3.3	Tree Stand Studies	USFS	W.L. Fons
3.4	<i>neutralization of a fissioned sample</i>	<i>University of California, Berkeley</i>	<i>Dr. James Murphy, UC</i>
6.1	PROGRAM 6 - TESTS OF SERVICE EQUIPMENT AND OPERATION (Lt. Col. <i>test of battery - RAN. A.</i> )		

ATTACHED AS separate entry

ADDITION

PROGRAM 4 - BIO-MEDICAL STUDIES (CDR E. P. CRONKITE)

PROJECT OFFICER

PROJECT NO.

TITLE

ORGANIZATION

CDR E. P. CRONKITE,  
USN

4.1	Study of Response of Human Beings Exposed to Significant Beta and Gamma Radiation due to Fall-Out from High Yield Weapons.	AFSWP and AEC (DBM)	
6.0	Effects on Ionosphere	ESL	Capt. A. Giroux
PROGRAM 7 - LONG RANGE DETECTION (Col. P.R. Wignall)			
7.1	Electromagnetic Radiation Calibration	AFOAT-1	J.A. Crocker
7.2	Detection of Airborne Low Frequency Sound from Atomic Explosions	AFOAT-1	G.B. Olmstead
7.4	Calibration Analysis of A-Bomb Debris	AFOAT-1	W. Singlevich
PROGRAM 9 - SUPPORTING MEASUREMENTS (Lt. Col. J.G. James)			
9.1	Cloud Photography	AFSWP	Lt. Col. J.G. James

TASK UNIT 1 - LASL PROGRAMS (L. Aamodt)

PROGRAM 11 - RADIOCHEMISTRY (R. Spence)

11.1	Analysis for Fission and Fusion Energy Yields (Overseas phase will be handled by 11.2)	J-11, LASL	R. Spence
11.2	Sample Collection	J-11, LASL	H. Plank
11.3	Heavy Element Investigations	J-11, LASL and UCRL	Maj. C. Browne

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930

<u>Project Number</u>	<u>Title</u>	<u>Organization</u>	<u>Project Officer</u>
PROGRAM 12 - REACTION HISTORY (B. Watt)			
12.1	Reaction History	UCRL	S. Colgate
12.3	Reaction History	J-16, LASL	B. Watt
PROGRAM 13 - PHOTOGRAPHY (G. Felt)			
13.1	Ball of Fire Photography	EG&G	H. Grier
13.2	Cloud Photography	EG&G	H. Grier
13.3	Bhangmeters, etc.	EG&G	H. Grier
13.4	High-Speed Photography	J-15, LASL	G. Felt
13.5	Time Interval Measurement with Bowen Cameras	J-15, LASL	G. Felt
PROGRAM 14 - EXTERNAL NEUTRON MEASUREMENTS (L. Brown)			
14.1	Threshold Detectors	J-12, LASL	W. Biggers
PROGRAM 15 - ALPHA MEASUREMENTS (N. H. Smith)			
15.1	Teller and Scintillation Alpha	J-13, LASL	N. H. Smith
15.2	Electromagnetic Alpha	LASL	R. D. England
PROGRAM 16 - GAMMAS AND RESIDUAL CONTAMINATION ( B. Watt)			
16.1	Gamma Intensity at Late Times	J-16, LASL	G. Ragan
PROGRAM 17 - MICROBAROGRAPHY (J. M. Harding)			
17.1	Microbarography	Sandia Corp.	J. M. Harding
PROGRAM 18 - THERMAL RADIATION (H. Hoerlin)			
18.1	Time Interval Between Reactions	NRL	H. Stewart
18.2	Power vs Time	NRL	H. Stewart
18.3	Spectroscopy	NRL	H. Stewart
18.4	Air Transmission	NRL	H. Stewart
18.5	Total Thermal Radiation	NRL	H. Stewart
PROGRAM 19 - MARINE SURVEY (L. Donaldson)			
19.1	Marine Survey 5004756	U of Wash. Applied Fisheries Laboratory	L. Donaldson

931

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-4-

<u>Project Number</u>	<u>Title</u>	<u>Organization</u>	<u>Project Officer</u>
TASK UNIT 12 - UCRL - LIVERMORE PROGRAMS ( A. J. Hudgin*)			
PROGRAM 21 - RADIOCHEMISTRY (Kenneth Street, UCRL)			
21.1	Analysis for Fission & Fusion Energy Yields	UCRL	K. Street
21.2	Sample Collection	UCRL	P. Stevenson
21.3	Heavy Element Investigations	UCRL	W. Crane
21.4	Gas Analysis	UCRL	F. Momyer
PROGRAM 22 - HISTORY OF THE REACTION (S. Colgate, UCRL)			
22.1	Ganex	UCRL	S. Colgate
22.2	Tenex	UCRL	S. Colgate
22.3	Alpha	UCRL	S. Colgate
PROGRAM 23 - SCIENTIFIC PHOTOGRAPHY ( W. P. Ball )			
23.1	Hot Spot Time Interval Measurements	UCRL	W. P. Ball
23.2	Ball of Fire Photography	EG&G	H. Grier
PROGRAM 24 - EXTERNAL NEUTRON MEASUREMENTS (S. White, UCRL)			
24.1	Phonex	UCRL	S. White

Addresses and channels for classified communications may be found in document J-20656, dated 12 October 1953. The channel for classified communications with DOD programs and projects is through Commander, Task Unit 13.

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932

Key to abbreviations used above:

AFOAT-1 Air Force Office of Atomic Energy  
AFSWP Armed Forces Special Weapons Project  
BRL Ballistics Research Laboratory  
BuShips Bureau of Ships - U. S. Navy  
CRL Chemical and Radiological Laboratory  
DTMB David Taylor Model Basin  
EG&G Edgerton, Germeshausen & Grier, Inc.  
ESL Evans Signal Laboratory  
LASL Los Alamos Scientific Laboratory  
NRDL Naval Radiological Defense Laboratory  
NRL Naval Research Laboratory  
NOL Naval Ordnance Laboratory  
ONR Office of Naval Research  
SCRIPPS Scripps Institution of Oceanography  
SRI Stanford Research Institute  
UCRL University of California Radiation Laboratory  
USFS United States Forest Service  
WADC Wright Air Development Center

FOR THE COMMANDER:

*Duncan Curry, Jr.*

Duncan Curry, Jr.  
Deputy for Administration

AWK:jmc

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Darol K. Froman . . . . .	3	Herbert E. Grier (EG&G-LasVegas) . . . . .	59
Henry R. Hoyt . . . . .	4	Francis B. Porzel . . . . .	60 - 61
Leslie G. Hawkins . . . . .	5	Everett F. Cox . . . . .	62
Frank Diluzio . . . . .	6	Herman Hoerlin . . . . .	63
James E. Reeves . . . . .	7 - 15	Harold S. Stewart . . . . .	64
James L. McCraw . . . . .	16	Lauren Donaldson . . . . .	65
Brig Gen K. E. Fields . . . . .	17 - 18	Herrick L. Johnston . . . . .	66
Maj Gen P. W. Clarkson . . . . .	19 - 23	Roger S. Warner . . . . .	67
Alvin C. Graves . . . . .	24	Stanley H. Ellison . . . . .	68
Herbert F. York . . . . .	25	Marshall G. Holloway . . . . .	69 - 73
W. E. Ogle . . . . .	26	Roger Westcott . . . . .	74
Col. Edward H. Lahti . . . . .	27	Maj. John D. Servis . . . . .	75 - 76
Rear Admiral H. C. Bruton . . . . .	28 - 29	Loris M. Gardner . . . . .	77
Brig Gen Howell M. Estes, Jr. . . . .	30	Lt. Col. James L. Gaylord . . . . .	78
Ralph C. Smith . . . . .	31 - 32	L-Division, UCRL . . . . .	79 - 93
David M. Stearns . . . . .	33	Col. H. K. Gilbert, TU-13 . . . . .	94 - 128
Duncan Curry, Jr. . . . .	34	Theodore J. Blechar . . . . .	129
Armand W. Kelly . . . . .	35 - 37	J. Calvin Potts . . . . .	130
Col. Philip L. Hooper . . . . .	38 - 40	Raemer E. Schreiber . . . . .	131
J-3, Rear . . . . .	41	Thomas L. Shipman . . . . .	132
Harry S. Allen . . . . .	42 - 44	Roy Reider . . . . .	133
Robert H. Campbell . . . . .	45	Capt. R. H. Maynard . . . . .	134
J-6, Forward . . . . .	46	Carson Mark . . . . .	135
Rodney L. Aamodt . . . . .	47	James A. Sugden . . . . .	136
Roderick W. Spence . . . . .	48	Colonel Paul Preuss . . . . .	137
Harold F. Plank . . . . .	49	Report Library, LASL . . . . .	138
Maj. C. I. Browne . . . . .	50	J-Division, Files, LASL . . . . .	139 - 148
Bob E. Watt . . . . .	51	Mail & Records, LASL . . . . .	149
Gaelen L. Felt . . . . .	52	John C. Clark . . . . .	150
Leon J. Brown . . . . .	53	John Bugher . . . . .	151
Newell H. Smith . . . . .	54		

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934