

CRM FILE BC



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~~SECURITY INFORMATION~~

TASK GROUP 7.1

JOINT TASK FORCE SEVEN
LOS ALAMOS SCIENTIFIC LABORATORY
J-Division, P.O. Box 1663
Los Alamos, New Mexico

3-34 NER

63-3187
Castle
R/S 4103
attached

Castle
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1 July 1953

~~RESTRICTED DATA~~
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J-18603
TO: Distribution
FROM: Commander, Task Group 7.1
SUBJECT: OUTLINE OF SCIENTIFIC PROGRAMS - OPERATION CASTLE
(Supersedes J-17930 dated 8 May 1953)

NMB-U

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| <u>Project Number</u> | <u>Title</u> | <u>Organization</u> | <u>Project Officer</u> |
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TASK UNIT 13 - DOD PROGRAMS (Col. H. K. Gilbert, Capt. N. E. Kingsley)

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

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|-----|--|--------------|---|
| 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. D. Shreve, Jr. M. F. Clarke J. J. McE... |
| 1.3 | Shock Winds and Afterwinds | Sandia Corp. | J. M. HARDING D. F. Murphy |
| 1.4 | Underwater P vs. T | ONR-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 B. F. Murphy |

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

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|------|--------------------------------------|------|-------------------------------------|
| 2.1 | Gamma Film Dosage Measurements | ESL | P. Brown Capt. J. Graham |
| 2.2 | Gamma Dose Rate vs. Time | ESL | P. Brown R. C. Bass |
| 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 |
| 2.6a | RC Analysis of Ground Contamination | NRDL | E.R. Tompkins |

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW

DETERMINATION (CIRCLE NUMBER(S))

1. CLASSIFICATION CHANGED TO: UNCLASSIFIED

2. CLASSIFICATION CHANGED TO: CONFIDENTIAL

3. CLASSIFICATION CHANGED TO: SECRET

4. CLASSIFICATION CHANGED TO: TOP SECRET

5. CLASSIFICATION CHANGED TO: OTHER (SPECIFY)

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| <u>Project Number</u> | <u>Title</u> | <u>Organization</u> | <u>Project Officer</u> |
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| 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.M. Swift |
| 3.2 | Crater Survey and Evaluation | ONR-SRI | R.B. Vaile, Jr. |
| 3.3 | Tree Stand Studies (may be cancelled) | ONR-SRI <i>W.L. Fons</i> | L.M. Swift |
| PROGRAM 6 - TESTS OF SERVICE EQUIPMENT AND OPERATION (Lt. Col. D.I. Prickett) | | | |
| 6.2 | Effects of Blast, Gust, and Thermal on AC in Flight | WADC | Maj. A. Boreske, Jr |
| 6.4 | Proof Testing of AW Countermeasures | BuShips | Capt. G.G. Molumphy |
| 6.5 | Decontamination and Protection | CRL | J.C. Maloney |
| 6.6 | Ionospheric 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. Jack G. James) | | | |
| 9.1 | Cloud Photography | AFSWP | Lt. Col. James |
| <u>TASK UNIT 1 - LASL PROGRAMS (L. Aamodt)</u> | | | |
| PROGRAM 11 - RADIOCHEMISTRY (R. Spence) | | | |
| 11.1 | Analysis for Fission and Fusion Energy Yields. <i>OVERSEAS PHASE WILL BE HANDLED BY 11.2.</i> | 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. G. Browne |

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| PROGRAM 12 - REACTION HISTORY (B. Watt) | | | |
| 12.1 | History | UCRL | S. Colgate |
| 12.2 | Telemetered Time Interval | J-16, LASL | B. Watt |
| 12.3 | 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, GR Slit Cameras, 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 (C. Cowan) | | | |
| 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 | E.D. ENGLAND |
| PROGRAM 16 - GAMMAS AND RESIDUAL CONTAMINATION (B. Watt) | | | |
| 16.1 | Gamma Intensity at Late Times | | |
| 17.1 | PROGRAM 17 - MICROBAROGRAPHY (J.M. HARDING) MICROBAROGRAPHY | SANDIA | 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 and Resolution | NRL | H. Stewart |
| 18.5 | Total Thermal Radiation | NRL | H. Stewart |
| PROGRAM 19 - MARINE SURVEY (LAUREN DONALDSON) | | | |
| 19.1 | MARINE SURVEY | UNIV. OF WASH. APPLIED FISHERIES LAB, | L. DONALDSON |

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| TASK UNIT 12 - UCRL - LIVERMORE PROGRAMS (A. J. Hudgins) | | | |
| PROGRAM 21 - RADIOCHEMISTRY (Kenneth Street, UCRL) | | | |
| 21.1 | Analysis for Fission & Fusion Energy Yields | UCRL | K. Street |
| 21.2 | Sample Collection | UCRL P. STEVENSON | K. Street |
| 21.3 | Heavy Element Investigations | UCRL | W. Crane |
| 21.4 | Gas Analysis | UCRL F. Monver | K. Street |
| 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. Ball) | | | |
| 23.1 | Bomb Case Motion Hot Spot Time Interval Measurements | UCRL | W. 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 |
| PROGRAM 25 - DIAGNOSTIC DEVELOPMENTS | | | |
| 25.1 | ELECTROMAGNETIC MEASUREMENTS | UCRL UCRL | W. R. Aiken W. R. Aiken |

Addresses and channels for classified communications may be found in document J-17635, dated 11 May 1953.

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

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Abbreviations Continued:

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| 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 |
| WADC | Wright Air Development Center |

FOR THE COMMANDER:



Duncan Curry, Jr.
Deputy for Administration

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