

United States Government

Department of Energy

memorandum

DATE: November 15, 1984

REPLY TO: PE-241
ATTN OF:

SUBJECT: Declassification of Documents Requested by Representative Ottinger

TO: J. E. Lytle, Director
Office of Classification

Representative Richard L. Ottinger, Chairman of the Sub-Committee on Energy Conservation and Power, has requested a number of AEC archival documents dealing with radiation exposures during the 1945-1962 period (attached). Many of these are classified. I have delivered the file folders containing the classified documents to Mr. Cucchiara along with the completed form DOE F 5635.3.

Please declassify those that meet your criteria so that I may send them to Mr. Ottinger. Identify those which must remain classified and I will transmit them separately according to accepted procedures.

Donald M. Ross
Donald M. Ross, Director
Occupational Safety & Health Division
Office of Operational Safety

Attachment

C 1237

5000854

513

18014

This Pkg Downgrade

- 905 ✓ SAE 7F-252 Validator of Fission Reactor
909 ✓ WTR 1661 ✓
910 ✓ DNT 6038 Hardwick I Series
890 ✓ WTR 744
899 ✓ WTR 1708
848 ✓ WTR 1715 Draft ISAE 2657-TK-1
847 ✓ ITI 1284
✓ RED lines Fort Street
NTPP Fort Street
~~871~~ ~~Summary of current test report~~

- ~~871~~ ~~Summary of current test report~~
874 ✓ OTC 5P-5 Control Test I
✓ 722 ✓ TTFD OTC 7.3 Final Rep
911 ✓ HTR Completion Report
906 ✓ WTR 1662
905 ✓ WTR 1661
904 ✓ WTR 1663
903 ✓ WTR 1629
908 ✓ WTR 1677
900 ✓ WTR 1664
910 ✓ FR 4940 TG (W)
881 ✓ NPL 4417
~~874~~ ~~Summary of current test report~~

WTR 381 ✓
WTR 384. 6.16. } to discuss with Bob
Kraus next 1000

5000855

ANS-78-782-LJ/F

CALCULATION OF FISSION PRODUCT
GAMMA RAY AND BETA SPECTRA
AT SELECTED TIMES AFTER FAST FISSION
OF U₂₃₈ AND U₂₃₅ AND
THERMAL FISSION OF U₂₃₅

DRAFT FINAL

PREPARED BY

S. P. FINN
G. L. SIMMONS
L. V. SPENCER

#905
DMS 262
Van Nuys
Bob 3/1/79

PREPARED FOR

NATIONAL BUREAU OF STANDARDS
PURCHASE ORDER 808946

FEBRUARY 23, 1979

5000856

DRAFT

Subject: Nuclear Test Personnel Review (NTPR)

JL 3/1/83

Background of NTPR Program.

Between 1945 and 1962 the Atomic Energy Commission (AEC) carried out some 235 atmospheric nuclear tests, principally in Nevada and the Pacific Ocean. An estimated 220,000 Department of Defense (DoD) personnel, military and civilian, were involved in this testing and many received low-level ionizing radiation exposures in the performance of various activities. Because the exposures generally were well within established radiation exposure limits, there was no reason to expect any increased health risk.

The first indication that former test participants might be experiencing adverse health effects possibly related to radiation exposure at the tests occurred in 1977. The Center for Disease Control (CDC), as a result of its investigation of a leukemia case involving an individual who had participated in Shot SMOKY at the Nevada Test Site in 1957, became interested in the health status of all personnel who had been present at that shot. By late 1977, a DoD ad hoc committee, working together with CDC, had reconstructed a list of approximately 3200 DoD personnel present on the day of the SMOKY test and determined that some eight leukemia cases had occurred among the group.¹ CDC calculations indicated the expected incidence of leukemia would be three to four cases. CDC under-

FACT SHEET

*Uncle
MK 3/9/82*

REDWING was a 17-detonation nuclear weapon test series (see table) held at the Atomic Energy Commission's (AEC) Pacific Proving Ground (PPG) in spring and summer 1956. The PPG consisted principally of Enewetak* and Bikini atolls in the northwestern Marshall Islands in the Central Pacific Ocean.

REDWING test events, 1956^a

Assigned Name	Location	Date (local time)
LACROSSE	Enewetak; surface on Runit Island	5 May
CHEROKEE	Bikini; airdrop near Nam Island	21 May
ZUNI	Bikini; surface on Enemān Island	28 May
YOMA	Enewetak; tower on Acomon Island	28 May
ERIE	Enewetak; tower on Runit Island	31 May
SEMINOLE	Enewetak; surface on Boken Island	6 June
FLATHEAD	Bikini; barge of Iroij Island	12 June
BLACKFOOT	Enewetak; tower on Runit Island	12 June
KICKAPOO	Enewetak; tower on Aomon Island	14 June
OSAGE	Enewetak; airdrop over Runit Island	16 June
INCA	Enewetak; tower on Lujor Island	22 June
DAKOTA	Bikini; barge off Iroij Island	26 June
MOHAWK	Enewetak; tower on Eleleron Island	3 July
APACHE	Enewetak; barge off Dridrilbwij Island	9 July
NAVAJO	Bikini; barge off Iroij Island	11 July
TEWA	Bikini; barge over Nam Island reef	21 July
HURON	Enewetak; barge off Dridrilbwij Island	22 July

Note:

^aYields not announced except: LACROSSE (40 KT), CHEROKEE ("several MT"), ZUNI (3.5 MT), SEMINOLE (13.7 KT), TEWA (5 MT). One kiloton equals the approximate energy release of the explosion of one thousand tons of TNT; one megaton equals the approximate energy release of the explosion of one million tons of TNT.

* The spelling of Marshall Island place names has changed in recent years in order to more accurately render the sounds of the Marshall Island names using English spelling.

FACT SHEET

J D E
3/18
J.S.

IVY was an atmospheric nuclear weapons test series held in the Atomic Energy Commission's (AEC) Pacific Proving Ground at Enewetak Atoll in the Marshall Islands during autumn 1952. The series consisted of the two detonations listed below.

Assigned Name	Local Date	Location	Yield
MIKE	1 Nov	Eluklab Island; surface	10.4 MT
KING	16 Nov	Airburst (1,480 feet [440 meters]) over reef off Runit Island	500 KT

^aOne kiloton equals the approximate energy release of the explosion of one thousand tons of TNT; one megaton equals the approximate energy release of the explosion of one million tons of TNT.

HISTORICAL BACKGROUND

President Truman made the decision to pursue the development of thermonuclear weapons in 1950, and the IVY series was a key step in this development. MIKE was an experimental device and produced the first thermonuclear detonation, in which a substantial portion of its energy was generated by the fusion, or joining, of hydrogen atoms. KING was a stockpile weapon, modified to produce a large yield. It was dropped from a B-36 bomber. The energy from KING was generated by the fission, or splitting, of plutonium atoms. These were the largest nuclear explosions to that time.

JOINT TASK FORCE 132

Joint Task Force 132 (JTF 132) was the organization that conducted the IVY test series. Elements of the four services, the AEC and other Federal government agencies, and civilians from government laboratory organizations and contractors make up this organization. Commander JTF 132 reported to the Joint Chiefs of Staff, but was also designated the AEC's agent in conducting the

4417

SECRETNR L - Report 4417¹⁰_{6B}RD C 4410
8B

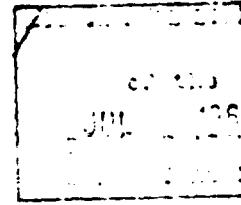
OPERATION CASTLE

ATOMIC EXPLOSION DATA
SIGMA CLOUDS

Project 18.1

PHOTOELECTRIC MEASUREMENTS OF TIME INTERVAL
BETWEEN REACTIONS

Lt. Warren L. Smith, USNR
 T/Sgt. James Yandle, USAF
 T/Sgt. Berry Caldwell, USAF
 Ralph Richardson



Recommend TOTAL
 Dental

H-8

Not sufficient.
 not complete



68005018

NAVAL RESEARCH LABORATORY

Washington, D.C.

EXCLUDED FROM GENERAL DECLASSIFICATION
 SCHEDULE

RESTRICTED DATA**SECRET**

Atomic Energy Act of 1946

Title page Only

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
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3 CONTAINS NO DOD CLASSIFIED INFO	
4 COORDINATE WITH DOD	
5 CLASSIFICATION CANCELLED	
6 CLASSIFIED INFO BRACKETED	
7 OTHER (SPECIFY):	
SINGLE REVIEW AUTHORIZED BY:	DOD HQ LTL 30-1996
MANAGER (SIGN)	Dennis W Murphy
DATE:	7/24/96

5000-8-b0

319

SECRET

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a/10,327

28 Oct 54

JOINT TASK FORCE SEVEN
COMMANDER TASK GROUP 7.3

FINAL REPORT

OPERATION CASTLE



SECRET

STATUS VERIFIED UNCLASSIFIED	
Title Page Only CIC 2/1/818	
<u>Rein</u>	5/13/96
Dennis W Murphy BN, ADC	DATE

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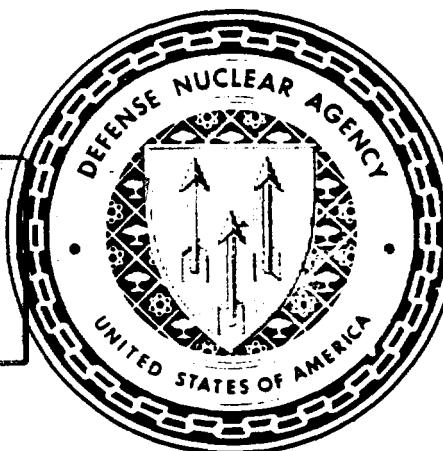
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DNA 6038F

CONFIDENTIAL

OPERATION HARDTACK I

1958



A996
DNA 2 Feb 73
DOB 1K 31

If single contacts
are used for classification
Predicted fallout chart
(2) (see letter 3/14)

STATUS VERIFIED UNCLASSIFIED
CIC 821202

Dennis Wright, D.N. DATE 5/21/96

United States Atmospheric Nuclear Weapons Tests Nuclear Test Personnel Review

DECEMBER
9, 1991

Prepared by the Defense Nuclear Agency as Executive Agency
for the Department of Defense

5000862

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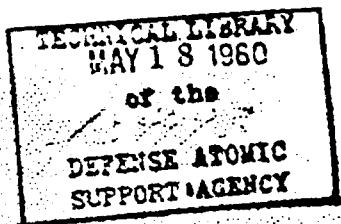
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DIA 2000

WT-1004

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Operations

HARDTACK

April - October 1958

Project 4.3

H700

LNA 4F613
DCL 3/15/62

EFFECT of LIGHT from VERY-LOW-YIELD NUCLEAR
DETONATIONS on VISION (DAZZLE) of COMBAT
PERSONNEL (U)

Issuance Date: April 28, 1960

HEADQUARTERS FIELD COMMAND
DEFENSE ATOMIC SUPPORT AGENCY
SANDIA BASE, ALBUQUERQUE, NEW MEXICO

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5/13/62
DATE

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REPORT

OPERATION ENDLESS WILDERNESS

ACTIVITIES

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CJC 39426	
Do - w - ADC	5/13/96
Dennis W Murphy Jr	
DATE	



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323

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Dec 7 AOC

Dennison, PN

5/13/46

DATE

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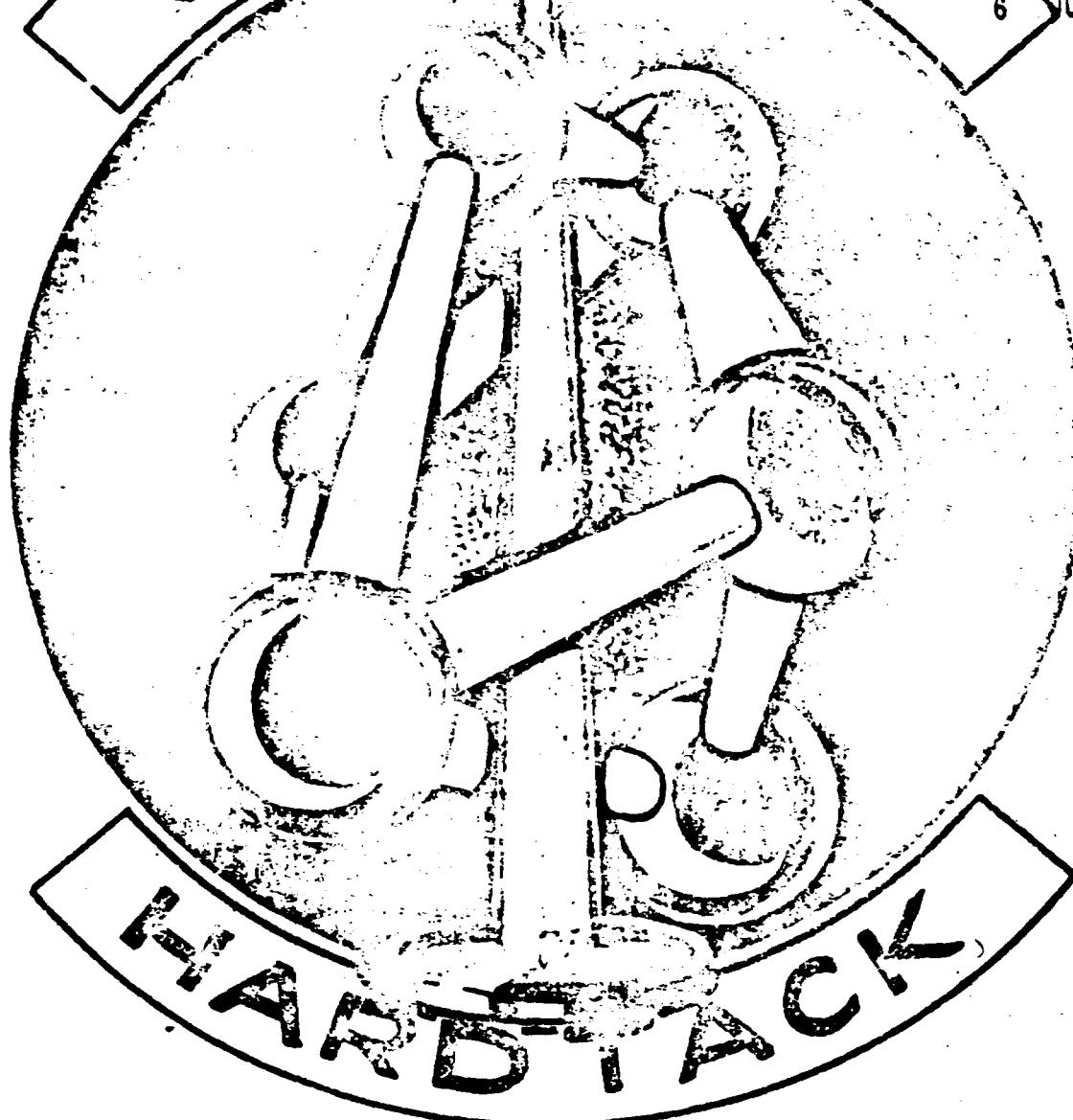
FINAL REPORT

OPERATION

c.i.c.l

TECHNICAL
DESTROY THIS
AGENCY

6 JUL 13



PHASE II (NTS)

4950+ TEST GROUP (N)

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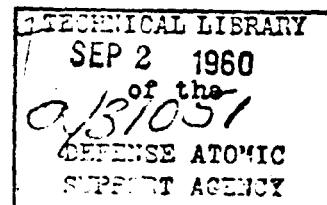
Operation

HARDTACK

April - October 1958

Projects 2.9/2.12b

GAMMA DOSE from VERY-LOW-YIELD BURSTS(U)



14901
DNA 4 F. b. 83
DOE 10/1/68

Issuance date: August 24, 1960

HEADQUARTERS FIELD COMMAND
DEFENSE ATOMIC SUPPORT AGENCY
SANDIA BASE, ALBUQUERQUE, NEW MEXICO

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5/13/96
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OPERATION HARBINGER

PHASE II

DOE-103, 955

ON - SITE RAD - SAFE SUPPORT REPORT

OTO 58 - 5

THE REYNOLDS ELECTRICAL AND ENGINEERING COMPANY
RADIOLOGICAL SAFETY AND TECHNICAL SERVICES DEPARTMENT
RADIOLOGICAL SAFETY DIVISION

NEVADA TEST SITE

5000867

WT-1661

101202G 16

Operation

HARDTACK

April - October 1958

Project 6.14

PROOF TEST OF AN/TVS-1 (XE-3) FLASH-RANGING EQUIPMENT

1E909
WMT 7K3
L6617 213
DDE 8-125

Issuance Date: January 24, 1961

HEADQUARTERS FIELD COMMAND
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5000868

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2/16/78

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March - June 1953

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Project 4.2

DIRECT AIR BLAST EXPOSURE EFFECTS IN ANIMALS

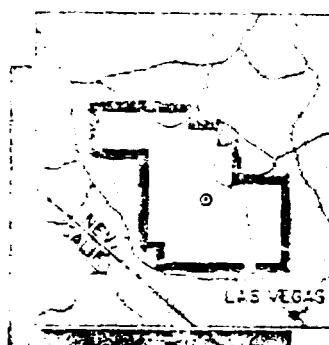
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DATE

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HEADQUARTERS FIELD COMMAND, ARMED FORCES SPECIAL WEAPONS PROJECT
SANDIA BASE, ALBUQUERQUE, NEW MEXICO

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WT-1708

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AGENCY

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Operation

HARDTACK

April - October 1958

Project 26.7

STRUCTURAL RESPONSE AND PERMANENT
DISPLACEMENT MEASUREMENTS

Issuance Date: October 28, 1960

HEADQUARTERS FIELD COMMAND
DEFENSE ATOMIC SUPPORT AGENCY
SANDIA BASE, ALBUQUERQUE, NEW MEXICO

5000810

329

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2657TRI (WT-1715)

26.1

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REF ID: A642423
54-1111-1

POSTSHOT DISTURBANCES AND SURFACE MOTIONS--

OPERATION HARDTACK-II

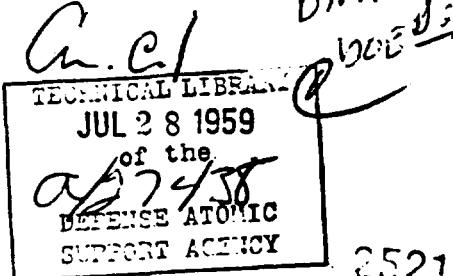
Classification: Unclassified

By Author: TID-1400-52

By A. Kavadas Date 7-21-76

Prepared for:

LAWRENCE RADIATION LABORATORY LIVERMORE, CALIFORNIA



2657-TR-1

Proj 26.1

*SRI

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CFC 34775	
<u>Dennis Murphy BN</u>	<u>5/13/96</u>
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5000871

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ITR-1/04

AEC Category: NUCLEAR EXPLOSIONS-PEACEFUL
APPLICATIONS
Military Category: 14

Operation

HARDTACK

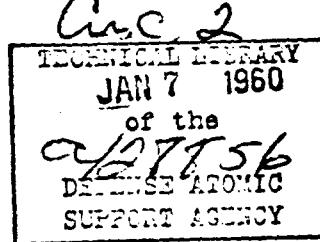
April - October 1958

Project 26.3

GROUND MOTION MEASUREMENTS

Issuance Date: December 22, 1959

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DEFENSE ATOMIC SUPPORT AGENCY
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*H-227
D.A. 1/22/60
DAS 12/27/56*

5000872

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020065

C 108A

Operation

HARDTACK

April - October 1958

Project 6.15

ELECTROMAGNETIC PULSES from
LOW-YIELD BURSTS (U)

Issuance Date: August 31, 1960

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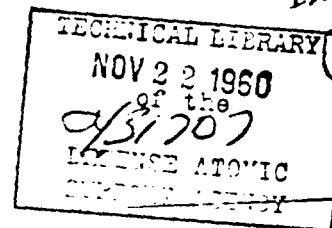
Operation

HARDTACK

April - October 1958

Project 2.13

GAMMA RADIATION and INDUCED ACTIVITY
from VERY-LOW-YIELD BURSTS (U)



Issuance Date: October 28, 1960

HEADQUARTERS FIELD COMMAND
DEFENSE ATOMIC SUPPORT AGENCY
SANDIA BASE, ALBUQUERQUE, NEW MEXICO

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HARDTACK

April - October 1958

Project 4.2

EFFECTS OF VERY-LOW-YIELD BURSTS ON BIOLOGICAL SPECIMENS (SWINE AND MICE) (U)

Issuance Date: September 15, 1961

HEADQUARTERS FIELD COMMAND
DEFENSE ATOMIC SUPPORT AGENCY
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Operation

HARDTACK

April - October 1958

Projects 2.4a/2.11/2.12a

NEUTRON FLUX from VERY-LOW-YIELD BURSTS (U)

Issuance Date: August 31, 1960

HEADQUARTERS FIELD COMMAND
DEFENSE ATOMIC SUPPORT AGENCY
SANDIA BASE, ALBUQUERQUE, NEW MEXICO

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16 June 1912

4K

① H804 didn't come & return ✓ -

①

② DN12 - 3586 sanitized ✓ -

①

③ H801 DN12 - 6039 ✓ Abbas find ✓

④ H801 WT 711

⑤ H807 WT 731

⑥ H801 WT 718 1824 ✓

⑦ H804 WT 710 ✓

⑧ H801 WT 616 ✓

⑨ H802 XPS 612 ✓

⑩ H806 WT 707 Abbas ✓

⑪ H806 WT 741 ✓

⑫

867A WT 602 ✓

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⑬ Exodus of British Legion

5000877

33

(2) ~~HD DRAFT~~
~~FEBRUARY 1982~~

DNA 6039F

Operation

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~~K-Tempo~~
~~816 State Street~~
~~Santa Barbara, California 93101~~

HJG/
1/22
1/22-22 6/21/82

~~CONTRACT NO. DNA 001-79-C-0472~~

Prepared for:

Director
DEFENSE NUCLEAR AGENCY
Washington, D.C. 20305

5 106

5000818

331

(3)

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NEVADA PROVING GROUNDS

AUG 4 1974

March - June 1953

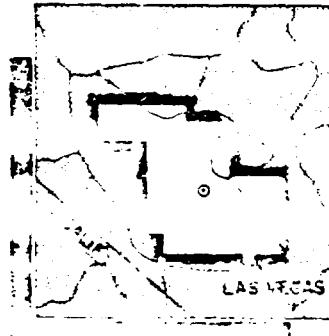
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Project 1.1b

BY.....

AIR PRESSURE AND GROUND
SHOCK MEASUREMENTS



HEADQUARTERS FIELD COMMAND, ARMED FORCES SPECIAL WEAPONS PROJECT
SANDIA BASE, ALBUQUERQUE, NEW MEXICO

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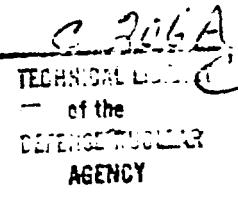
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5000879

WT - 415

copy No. 118A



WT - 415

BUSTER - JANGLE

NEVADA PROVING GROUNDS
OCTOBER - NOVEMBER 1951

Project 10.10

BLAST MEASUREMENTS

By Authority of TFD 1378 6/3/71
By J. Schmitz Date 5 Jan 75

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C. W. Johnson

HEADQUARTERS FIELD COMMAND
ARMED FORCES SPECIAL WEAPONS PROJECT

NEVADA PROVING GROUNDS

March - June 1953

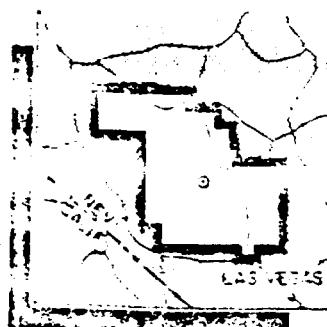
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Projects 1.1a and 1.2

AIR BLAST MEASUREMENTS

DNA # 869

Document No. 100-1054
Date 100-1054



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7/24/96

Aennis W Murphy, ADD. BN

DATE

HEADQUARTERS FIELD COMMAND, ARMED FORCES SPECIAL WEAPONS PROJECT
SANDIA BASE, ALBUQUERQUE, NEW MEXICO

5000881

U.S.
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340

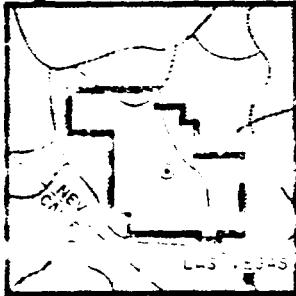
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22
1717 22
1717 22

DEPARTMENT OF DEFENSE
U.S. ATOMIC ENERGY COMMISSION

Project



BAHNEY

NEVADA TEST SITE

5 MARCH 1962

BOY



Final Report

Classification
By Author

CLASSIFIED

15 March 1965
15 March 1965

PERMANENT ANGULAR DISPLACEMENT OF
CYLINDRICAL MODELS BURIED IN BASALT
NEAR AN EXPLOSION CRATER

Roland H. Carlson and Wayne A. Roberts

THE BOEING COMPANY

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SPECIAL WEAPONS PROJECT

Chloroform UPSHOT-KNOTHOLE NEVADA PROVING GROUNDS

March - June 1953

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Project 3.24

EFFECTS OF AN AIR BURST ATOMIC EXPLOSION ON
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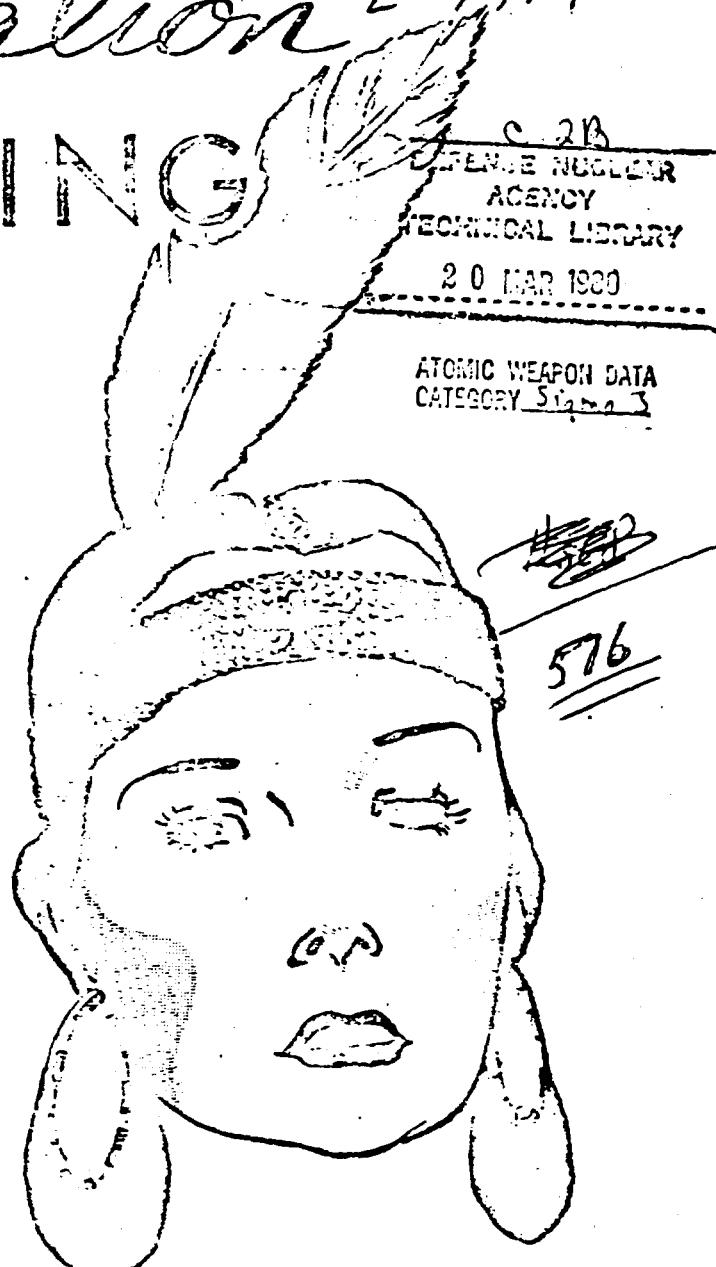
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- 3) Direct the Test Manager to execute the Dept. of Defense sponsored programs and authorize him to deal directly with the Commanding General, Field Command, Armed Forces Special Weapons Project, in matters pertaining to the military portions of the joint operations.
- 4) Authorize the Test Manager, in conjunction with the Commanding General, Field Command, Armed Forces Special Weapons Project, to arrange the details of a mutually satisfactory joint organization for Operation TEAPOT, subject to final approval by the Director, Division of Military Applications, Atomic Energy Commission, and the Chief, Armed Forces Special Weapons Project.

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: 13 Dec 1954

Loper, Assistant to
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Atomic Energy.

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by the Department of Defense.

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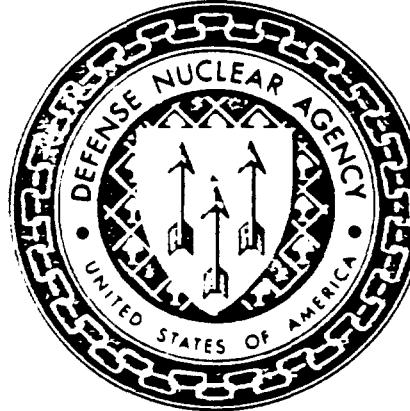
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25 JANUARY-6 FEBRUARY 1951



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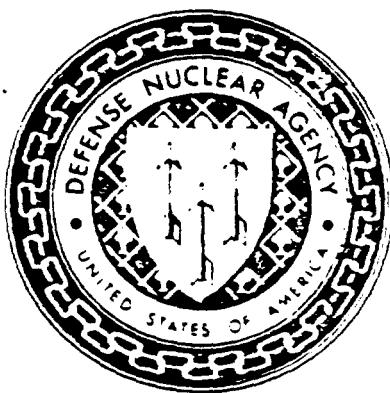
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OPERATION UPSHOT-KNOTHOLE

1953



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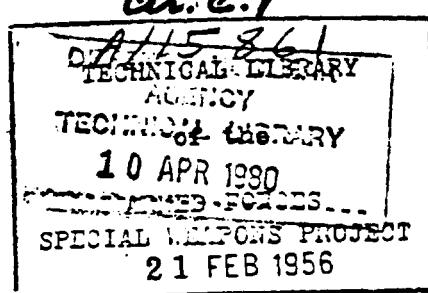
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November 1955

RECOVERY OF RADIOACTIVE IODINE AND STRONTIUM
FROM HUMAN URINE—OPERATION TEAPOT (S)

James B. Hartgering
Ariel G. Schrotte
Edward C. Knoblock
Alvin G. Burstein
Richard D. McIver
James E. Roberts

Department of Biophysics



Project: 6-59-08-014, Biological and Medical Aspects of Ionizing
Radiation
Subtask No. 16: World-wide Contamination (Interim Report) *DAN*

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UPSHOT-KNOTHOLE

NEVADA PROVING GROUNDS

March - June 1953

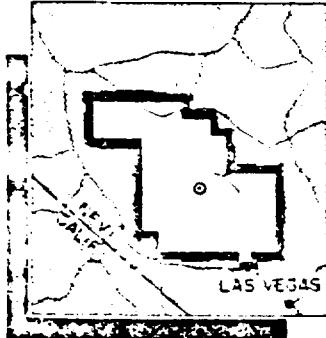
Project 3.27

EFFECTS OF ATOMIC EXPLOSIONS ON FIELD
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HEADQUARTERS FIELD COMMAND

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Operation UPSHOT-KNOTHOLE

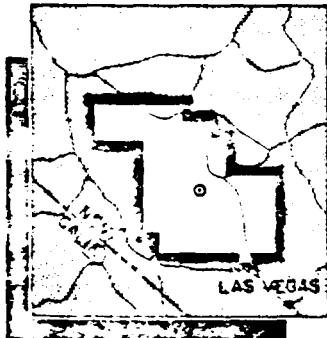
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THE BIOLOGICAL EFFECTS OF NEUTRONS

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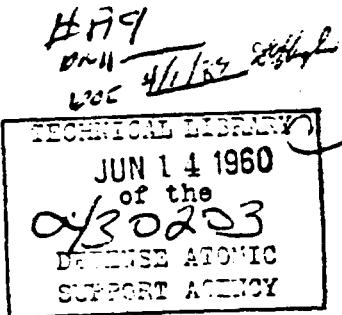
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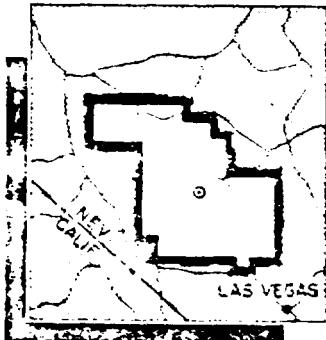
Operations
UPSHOT-KNOTHOLE
NEVADA PROVING GROUNDS

March - June 1953

OPERATION
UPSHOT-KNOTHOLE
1953

ACTIVITIES OF THE ARTILLERY TEST UNIT

*Artillery
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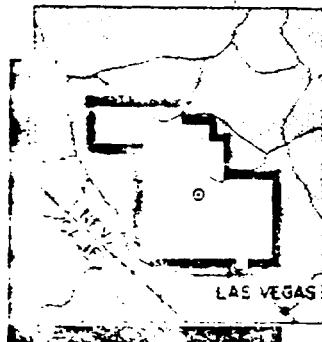
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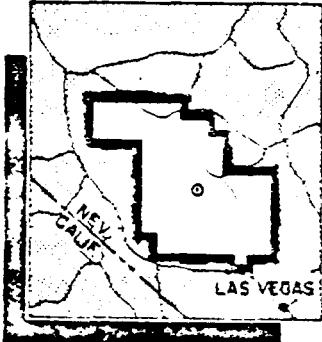
Observations
UPSHOT-KNOTHOLE
NEVADA PROVING GROUNDS

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MEASUREMENTS AND ANALYSIS OF ELECTROMAGNETIC RADIATION FROM NUCLEAR DETONATIONS

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Operation UPSHOT-KNOTHOLE

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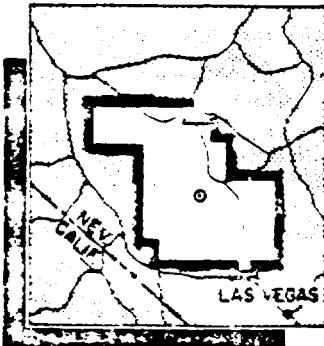
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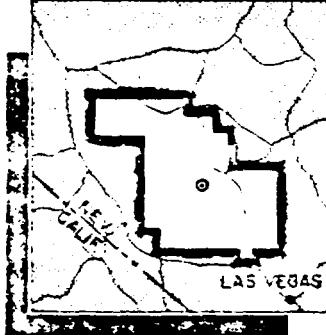
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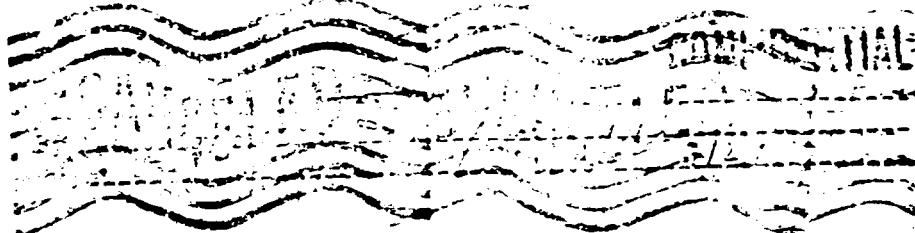
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Operation

UPSHOT-KNOTHOLE

NEVADA PROVING GROUNDS

March - June 1953



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RESIDUAL IONIZING RADIATION DEPTH DOSE MEASUREMENTS
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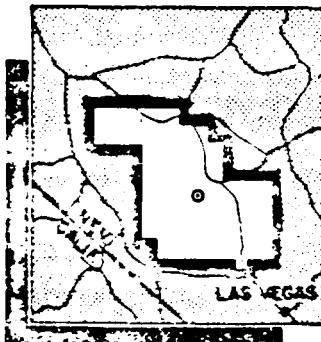
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Operation UPSHOT-KNOTHOLE NEVADA PROVING GROUNDS

March - June 1953

Project 8.2

MEASUREMENT OF THERMAL RADIATION
WITH A VACUUM MICROPHONE

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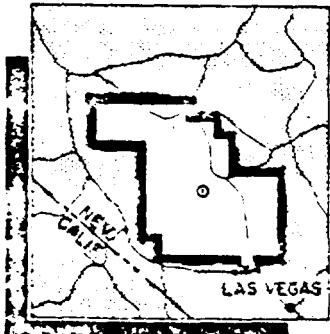
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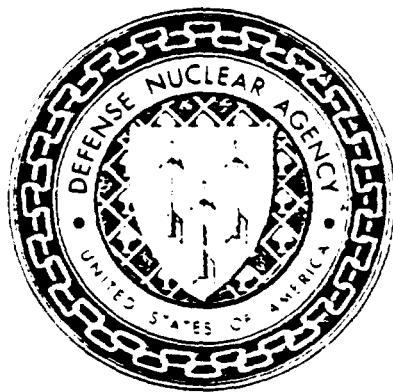
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BUSTER-JANGLE Series
22 October—5 November 1951**



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**United States Atmospheric Nuclear Weapons Tests
Nuclear Test Personnel Review**

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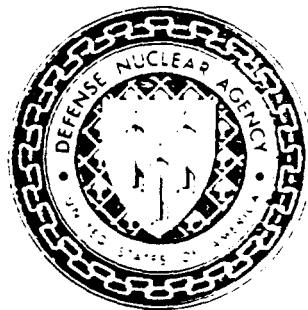


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OPERATION DOMINIC II



United States Atmospheric Nuclear Weapons Tests Nuclear Test Personnel Review

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7. AUTHOR(s) Jean Ponton, Carl Maag, Stephen Rohrer, Robert Shepanek	6. PERFORMING ORG. REPORT NUMBER JRB 2-816-03-423-00	
9. PERFORMING ORGANIZATION NAME AND ADDRESS JRB Associates 8400 Westpark Drive McLean, Virginia 22102	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS D62704H U99QAXM K506 08	
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DOMINIC II LITTLE FELLER II JOHNIE BOY	SMALL BOY LITTLE FELLER I SUNBEAM	Exercise IVY FLATS Atmospheric Nuclear Weapons Tests
20. ABSTRACT (Continue on reverse side if necessary and identify by block number)		
This report describes the activities of an estimated 3,000 DOD personnel, both military and civilian, in Operation DOMINIC II, the eighth peacetime series of nuclear weapons tests, conducted in Nevada from 7 July through 17 July 1962. Activities engaging DOD personnel included the Exercise IVY FLATS troop maneuver, joint DASA and AEC scientific experiments to evaluate the effects of the nuclear devices, and air support.		

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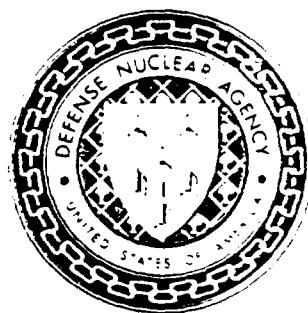
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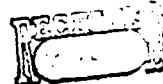
Background Materials for the CONUS Volumes



United States Atmospheric Nuclear Weapons Tests
Nuclear Test Personnel Review

Prepared by the Defense Nuclear Agency as Executive Agency
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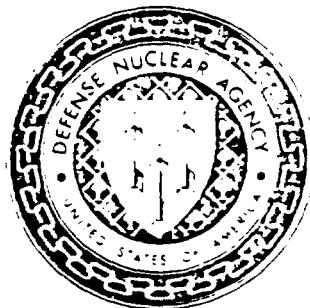
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PROJECT TRINITY 1945-1946



14813
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DNA - 222 rev.
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Contract
D.O. May 14/6

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REPORT DOCUMENTATION PAGE		
1. REPORT NUMBER DNA 6028F	2. GOVT ACCESSION NO.	READ INSTRUCTIONS BEFORE COMPLETING FORM 3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) PROJECT TRINITY 1945-1946		5. TYPE OF REPORT & PERIOD COVERED Technical Report
7. AUTHOR(s) Carl Maag, Steve Rohrer		6. PERFORMING ORG. REPORT NUMBER JRB 2-816-03-423-00 8. CONTRACT OR GRANT NUMBER(s) DNA #001-79-C-0473
9. PERFORMING ORGANIZATION NAME AND ADDRESS JRB Associates 8400 Westpark Drive McLean, Virginia 22102		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS Subtask U99QAXM K506 08
11. CONTROLLING OFFICE NAME AND ADDRESS Director Defense Nuclear Agency Washington, D.C. 20305		12. REPORT DATE
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		13. NUMBER OF PAGES 15. SECURITY CLASS. (of this report) UNCLASSIFIED 16. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report)		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES This work was sponsored by the Defense Nuclear Agency under RDT&E RMSS Code B350079464 U99QAXM K50608 H2590D. For sale by National Technical Information Service, Springfield, VA 22161.		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) TRINITY Personnel Dosimetry Los Alamos Scientific Laboratory Radiation Exposure Alamogordo Bombing Range Nuclear Weapons Testing Manhattan Engineer District Manhattan Project		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report describes the activities of an estimated 1,000 personnel, both military and civilian, in Project TRINITY, which culminated in detonation of the first nuclear device, in New Mexico in 1945. Scientific and diagnostic experiments to evaluate the effects of the nuclear device were the primary activities engaging military personnel.		

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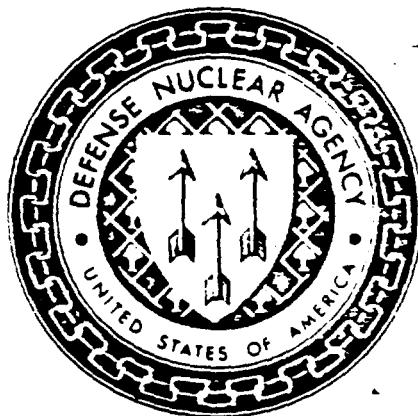
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OPERATION HARDTACK II

1958



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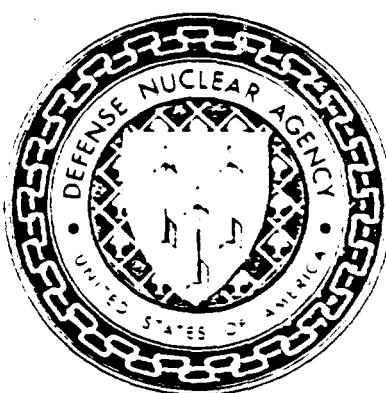
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SHOTS SUGAR AND UNCLE

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The Final Tests of the
BUSTER-JANGLE Series
19 November—29 November
1951



6025
#259

United States Atmospheric Nuclear Weapons Tests
Nuclear Test Personnel Review

5 63

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FR Test Area Report
Vol 1 of 2

1110 - - -

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OPERATION BUSTER-JANGLE 1951

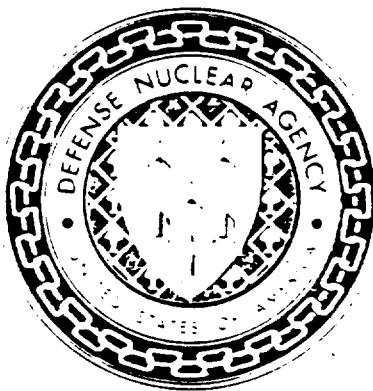
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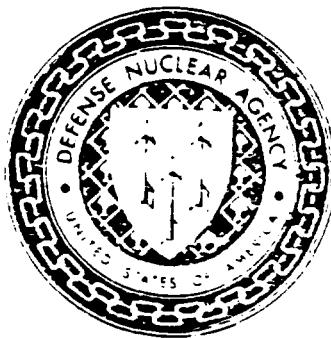
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1961

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SHOTS ANNIE TO RAY

The First Five Tests of the
UPSHOT-KNOTHOLE Series
17 MARCH - 11 APRIL 1953



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DNA - 11 May
1953

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THE RESIDUAL RADIATION PATTERN FOR VARIOUS SURFACE WIND VELOCITIES - UNDERWATER ATOMIC BURST

AFSWP-155

ARMED FORCES
SPECIAL WEAPONS PROJECT
APR 11 1952

Staff Study by Maj. T. A. Gibson, Jr., USA, 14 March 1952

In the event of an underwater atomic explosion in a harbor, it is of interest to have estimates of the extent and magnitude of the residual radiation field as a function of surface wind velocity. It is possible to make such estimates by using the information available from the Bikini-Baker underwater explosion.

Figure 8.101 of "The Effects of Atomic Weapons" (1) will be assumed to be correct. (Assumption No. 1) This gives the dose rate at 1 hour after the explosion as observed on ships. Had the contamination fallen on land, the rates would be increased by about a factor of four due to the absence of run off and the presence of a greater contaminated area. That is, after a short time, a ship is a limited contaminated area surrounded by an essentially uncontaminated area. The final results of this paper should be multiplied by 4 to be made applicable to land adjacent to an underwater burst.

Roger Revelle, in his "Characteristics of the Base Surge," (2) gives the observed movement of the Bikini-Baker surge. He also gives predicted surge movement for other surface winds. These will be assumed to be correct. (Assumption No. 2)

The pattern of the Bikini residual contamination was observed to lie in an area almost identical with the area covered by the base surge. It will be assumed that all of the residual contamination comes from the base surge. (Assumption No. 3)

The fourth and final assumption will be that the time rate of deposition of contaminant can be expressed as:

$$\frac{dD}{dt} = K/t^2 \quad \text{where: } K \text{ is a constant to be determined}$$

Integrating and letting, t_0 = time of explosion

t_1 = time surge reaches an area

t_2 = time surge leaves an area

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Operation

JANGLE

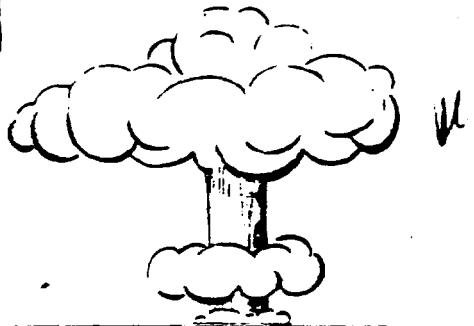
NEVADA PROVING GROUNDS
OCTOBER - NOVEMBER 1951

Project 6.1

EVALUATION OF MILITARY RADIAC EQUIPMENT

#814
DANIEL MURRAY
EATON MC

Classification (Cancelled) (Changed) By Authority of DASH SC-3 memo 15/3/45
By - G. Schrey Date 25/6/75



**ARMED FORCES SPECIAL WEAPONS PROJECT
WASHINGTON, D.C.**

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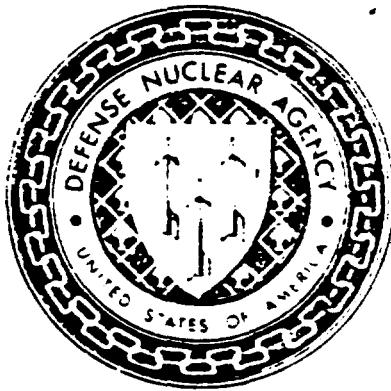
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SHOTS ENCORE TO CLIMAX

The Final Four Tests of the
UPSHOT-KNOTHOLE Series
8 MAY - 4 JUNE 1953



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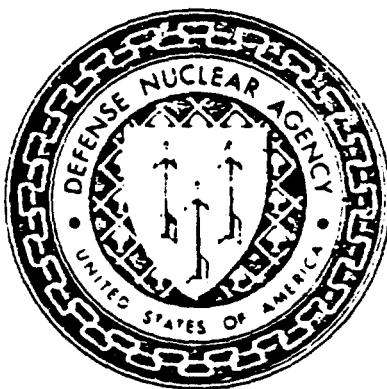
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SHOTS ABLE, BAKER, CHARLIE, AND DOG

The First Tests of the TUMBLER-SNAPPER Series 1 APRIL - 1 MAY 1952



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Nuclear Test Personnel Review

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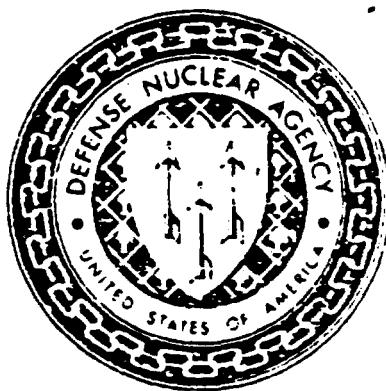
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DNA G015

**SHOT
BADGER**
**A Test of the
UPSHOT-KNOTHOLE Series**
18 APRIL 1953



DNA - 23 May
DOD 8 3/24/92

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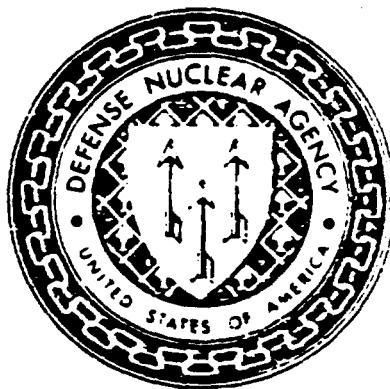
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19 May 1982

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SHOT SIMON

A Test of the UPSHOT-KNOTHOLE Series 25 APRIL 1953



DNA 23 Nov 82
DOC with 3/24/82

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Nuclear Test Personnel Review

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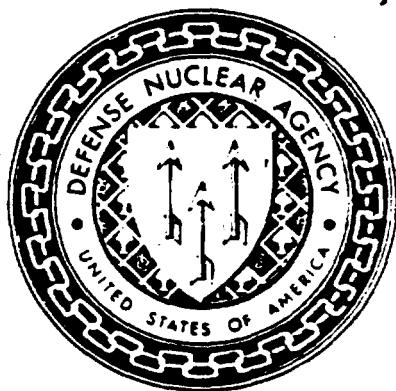
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OPERATION TUMBLER-SNAPPER 1952

Page layouts!!!



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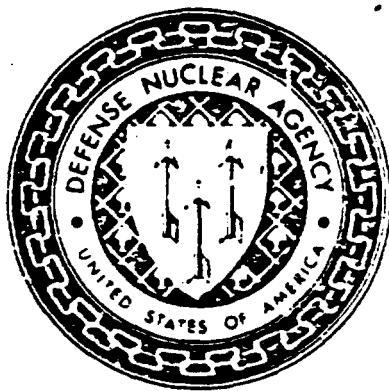
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SHOTS EASY, FOX, GEORGE, AND HOW

The Final Tests of the TUMBLER-SNAPPER Series

7 MAY - 5 JUNE 1952



DOE 844 3/34/52

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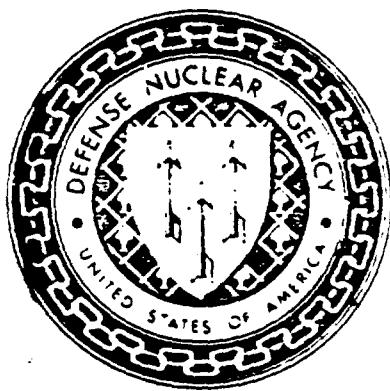
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PROJECTS GNOME AND SEDAN The PLOWSHARE Program



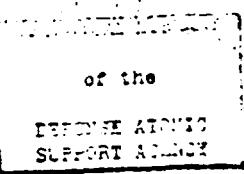
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OPERATION SANDSTONE

NUCLEAR EXPLOSIONS

1948



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Los Alamos National Laboratory

RESTRICTED DATA

ATOMIC ENERGY ACT OF 1946

82-2767

STATUS VERIFIED UNCLASSIFIED	
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Dennis W. Murphy, BN	DATE

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SCIENTIFIC DIRECTOR'S REPORT
OF ATOMIC WEAPON TESTS
AT ENMETOK, 1948

Annex 9

CONTAMINATION STUDIES

Part I

RESIDUAL CONTAMINATION IN THE CRATERS

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~~REF ID: A6512~~

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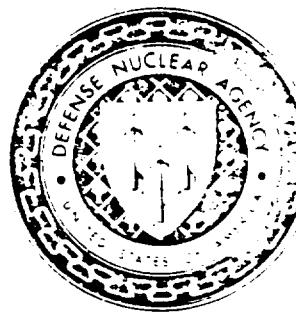
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PROJECTS GNOME AND SEDAN The PLOWSHARE Program



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7. AUTHOR(s) Inara Gravitis, Stephen Rohrer, Carl Maag		6. PERFORMING ORG. REPORT NUMBER JRB 2-816-03-423-00
9. PERFORMING ORGANIZATION NAME AND ADDRESS JRB Associates 8400 Westpark Drive McLean, Virginia 22102		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS Subtask U99QAXMK50608
11. CONTROLLING OFFICE NAME AND ADDRESS Director Defense Nuclear Agency Washington, D.C. 20305		12. REPORT DATE
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18. SUPPLEMENTARY NOTES This work was sponsored by the Defense Nuclear Agency under RDT&E RMSS Code B350079464 U99QAXMK50608 H2590D. For sale by the National Technical Information Service, Springfield, VA 22161.		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) PLOWSHARE Nevada Test Site GNOME Carlsbad Test Site SEDAN Underground nuclear tests VELA UNIFORM Nonmilitary applications		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) This report describes the activities of DOD personnel and other participants in Projects GNOME and SEDAN, the first two nuclear tests of the PLOWSHARE program. The PLOWSHARE nuclear tests were conducted from 1961 to 1973 at the NTS and other locations. Activities engaging DOD personnel at GNOME and SEDAN included scientific experiments to improve U.S. capabilities in detecting underground nuclear explosions and to determine peacetime uses of nuclear explosives.		

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✓	AREUS Fact Sheet		(C)
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19	" ABLE	3-108	"	coll
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✓ ③ TA 0184 A/C Briont 81-06987 - Rec'd

✓ ③ Rod surveys possible ss 81-06985 - Rec'd

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6	H563 REDWING RMSHED relook TENA	✓ -RTD	
7	H766 HARPSIK WT 16D DTL 020 013	✓ -RTD	
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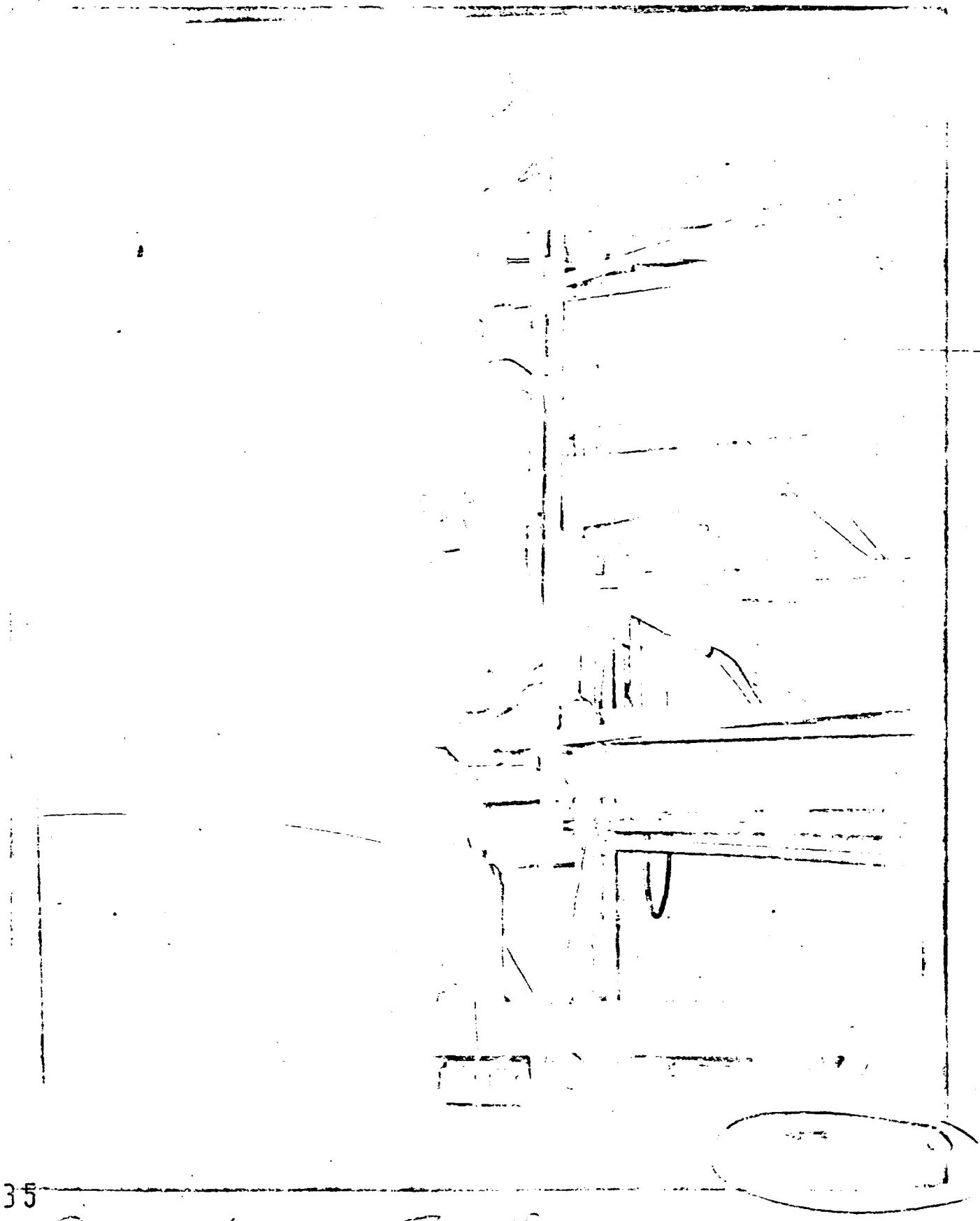
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10-15-1945



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The PLURIBUS UNUM Project

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OPERATION DOMINIC II

Shots LITTLE FELLER I,
JOHIE BOY, SMALL BOY,
LITTLE FELLER I
7 JULY-17 JULY 1962



Pyula A
1962

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OPERATION DOMINICE

Shots LITTLE FELLER II,
JOHNNIE BOY, SMALL BOY,
LITTLE FELLER I
7 JULY-17 JULY 1962

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909 WT 1661 *
" 296 UNI 6038 Hardlock I Series
290 WT 1744
299 WT 1708
298 WT 17X Draft (SAE 2657-TR-1)
297 ITB 1704
RED wine Fork Sheet
NPR Fork Sheet
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271 Dominik 1st mtg 2nd mtg 10 Mar
289 ORG 52-5 Open Hardlock II

272 JTF 7 CTG 7.3 Final Rpt.
911 HIN Compilation Report
906 WT 1662
905 WT 1681
904 WT 1663
903 ZWT 1629
908 WT 1677
902 WT 1664
910 FR 4910 TG (n)
681 NRL 4417
656167 Open RED wine FIR

WT 381
WT 384 4-1-6 } to discuss with CDR
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R. Jacobs
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