EXTRACTED VERSION

OPERATION CASTLE

THE OPERATION PLAN NO. 1-53

TASK GROUP 7.1

8 December 1953

NOTICE

This is an extract of OPERATION CASTLE, THE OPERATION PLAN NO. 1-53, TASK GROUP 7.1, which remains classified SECRET/ RESTRICTED DATA as of this date.

Extract version prepared for:

Director

DEFENSE NUCLEAR AGENCY

Washington, D. C. 20305

31 August 1984

Approved for public release; distribution unlimited.

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER: EXTRACTED VERSION	2. GOVT ACCESSION NO.
3. RECIPIENT'S CATALOG NUMBER	
4. TITLE (and Subtitle): OPERATION CASTLE THE OPERATION PLAN NO. 1-53, TASK GROUP 7.1	5. TYPE OF REPORT & PERIOD COVERED
6. PERFORMING ORG. REPORT NUMBER: EXTRACTED VERSION	
7. AUTHOR(s): W. E. Ogle	8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS	10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS	12. REPORT DATE: 8 December 1953
	13. NUMBER OF PAGES
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)	15. SECURITY CLASS (of this report): UNCLASSIFIED
	15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; unlimited distribution.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

This report has had the classified information removed and has been republished in unclassified form for public release. This work was performed by Kaman Tempo under contract DNA001-83-C-0286 with the close cooperation of the Classification Management Division of the Defense Nuclear Agency.

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Operation CASTLE

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Overseas experimentation depends upon progress of construction, reliability of instrumentation and the overcoming of obstacles presented by local conditions. This Operation Plan is intended to be used as a guide for TG 7.1 personnel since it represents a record of agreements arrived at prior to its compilation.

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

FOREWORD

This report has had classified material removed in order to make the information available on an unclassified, open publication basis, to any interested parties. This effort to declassify this report has been accomplished specifically to support the Department of Defense Nuclear Test Personnel Review (NTPR) Program. The objective is to facilitate studies of the low levels of radiation received by some individuals during the atmospheric nuclear test program by making as much information as possible available to all interested parties.

The material which has been deleted is all currently classified as Restricted Data or Formerly Restricted Data under the provision of the Atomic Energy Act of 1954, (as amended) or is National Security Information.

This report has been reproduced directly from available copies of the original material. The locations from which material has been deleted is generally obvious by the spacings and "holes" in the text. Thus the context of the material deleted is identified to assist the reader in the determination of whether the deleted information is germane to his study.

It is the belief of the individuals who have participated in preparing this report by deleting the classified material and of the Defense Nuclear Agency that the report accurately portrays the contents of the original and that the deleted material is of little or no significance to studies into the amounts or types of radiation received by any individuals during the atmospheric nuclear test program.

Commander Task Group 7.1
Operation Plan No. 1-53

Forward

1. Overseas experimentation depends upon progress of construction, reliability of instrumentation and the overcoming of obstacles presented by local conditions. This Operation Plan is intended to be used as a guide for TG 7.1 personnel since it represents a record of agreements arrived at prior to its compilation. It is expected that this Operation Plan, augmented by decisions reached in official TG 7.1 conferences to be conducted in the Forward Area, will furnish the medium by which objectives of TG 7.1 can be achieved. The Forward Area conferences will serve as the on-site means of coordinating the necessary changes in the Scientific Task Group operation and will reduce the load of formal correspondence.

2. When required, specific plans covering Task Group activities at rehearsal and shot times will be issued prior to each event - to include hour by hour schedules.

3. Subsequent plans will govern post-shot dispositions of Task Group elements - to include "roll-up" operations.

W. E. Ogle

W. E. OGLE
COMMANDER

INDEX

F. RADIOLOGICAL SAFETY

Appendix:

I. Radiological Safety Regulations

G. TECHNICAL PHOTOGRAPHY

Appendix:

I. Sample Caption Sheet

H. NON-TECHNICAL PHOTOGRAPHY

I. INTER-ATOLL TRANSPORTATION PLAN

J. INTER-ISLAND TRANSPORTATION

Appendices:

I. Boat Plan:

Tab A: Distances and Marine Craft Travel Time Between Sites - Bikini

Tab B: Distances and Marine Craft Travel Time Between Sites - Eniwetok

Tab C: Bikini Atoll Navigational Information

Tab D: Eniwetok Atoll Navigational Information

II. Vehicle Plan

III. Airlift Plan

IV. Trailer Movement Plan

K. EVACUATION AND RE-ENTRY PLAN

Appendices:

I. Evacuation of Personnel

II. Evacuation of Materiel

III. Re-Entry and Recovery

IV. Predictions of Effects for CASTLE

L. TYPHOON AND TIDAL WAVE PLAN

M. HOSTILE ACTION ALERT PLAN

N. SHOT PLANS

O. SAMPLE RETURN

P. SUMMARY OF MAJOR MILITARY SUPPORT ITEMS

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Operation Plan CTG 7.1 No. 1-53

Chart References:

a. US Navy Hydrographic Chart No. 5203, North Pacific Ocean, MARSHALL ISLANDS.

b. US Navy Hydrographic Chart No. 6032, North Pacific Ocean, MARSHALL ISLANDS, Northern Part, BIKINI ATOLL.

c. US Navy Hydrographic Chart No. 6033, North Pacific Ocean, MARSHALL ISLANDS, ENIWETOK ATOLL.

Task Organization (Annex B applies)

Definitions:

FORWARD AREA	- That area encompassing the MARSHALL ISLANDS.
ENIWETOK/BIKINI DANGER AREA	- That area encompassing ENIWETOK AND BIKINI ATOLLS and bounded by the meridians 160° 35' - 166° 16' east longitude and by the parallels 10° 15' - 12° 45' north latitude; an area 150 miles by 350 miles.
CLOSED AREA	- The land areas of ENIWETOK and BIKINI ATOLLS; the water areas of the respective lagoons and the water areas within three miles to the seaward side of the respective land areas.
H-HOUR	- Time of detonation for each shot.
B-DAY (BRAVO)	- Day on which (1st Shot) will be detonated.
U-DAY (UNION)	- Day on which (2d Shot) will be detonated.
Y-DAY (YANKEE)	- Day on which (3rd Shot) will be detonated.
E-DAY (ECHO)	- Day on which 4th Shot) will be detonated.
N-DAY (NECTAR)	- Day on which (5th Shot) will be detonated.
R-DAY (ROMEO)	- Day on which (6th Shot) will be detonated.

K-DAY (KOON) - Day on which (7th Shot) will be detonated.

X-DAY (X-RAY) - Rehearsal day for any shot; hence BX-DAY is rehearsal day for BRAVO.

D-DAY (DOG) - Any shot day.

For further code designations on the shot schedule, Annex A applies.

1. General Situation:

a. This plan is based on CJTF SEVEN, Operation Order No. 1-53, dated 20 June 1953, and Operation Plan No. 3-53, undated.

b. In accordance with directives from the Joint Chiefs of Staff (JCS) and the Atomic Energy Commission (AEC), CJTF SEVEN will conduct tests of seven weapons and devices in the Eniwetok-Bikini Area commencing in the Spring of 1954, and will make experimental measurements proposed by the AEC and the Department of Defense (DOD), as approved by their respective agencies. All weapons and devices will be statically detonated.

c. The Joint Task Force is commanded by Maj Gen P. W. Clarkson, U.S. Army. The Chief of Staff, U. S. Army, is executive agent for the Joint Chiefs of Staff for all matters pertaining to Operation CASTLE. By authority of the Chairman, AEC, CJTF SEVEN is designated as the overall representative of the AEC during the on-site operational phase.

d. JTF SEVEN is organized into five basic task groups as follows:

TG 7.1 (Scientific) . . . . . William E. Ogle, LASL

TG 7.2 (Army) . . . . . Col Edward H. Lahti, USA

TG 7.3 (Navy) . . . . . RADM Henry C. Bruton, USN

TG 7.4 (Air Force) . . . . . Brig Gen Howell M. Estes, USAF

TG 7.5 (AEC Base Facilities) . . . James E. Reeves, AEC

e. Security: Administrative Plan TG 7.1, dated 15 October 1953, applies.

2. Mission - TG 7.1:

a. Positions, arms and detonates the weapons and devices (Annex D).

b. Conducts technical and measurement programs (Annex C).

c. Keeps CJTF SEVEN informed on test and technical development affecting the operational plan and military support requirements therefor.

d. Provides technical assistance during loading, inter-atoll and inter-island movement and placing of the experimental devices.

e. Completes the installation and calibration of the weapons and devices and all instruments and test apparatus.

f. Is responsible for the removal of all TG 7.1 personnel and necessary equipment from the shot site danger area (Annex K).

g. When directed by CJTF SEVEN, evacuates TG 7.1 personnel from Bikini Atoll (Annex K).

h. Must be prepared, upon directive from CJTF SEVEN, to conduct emergency post-shot evacuation of TG 7.1 personnel from Eniwetok Atoll.

i. Provides CJTF SEVEN with a statement of preliminary test results.

j. Provides non-technical film coverage (Annex H).

k. Conducts the radiological safety program (Annex F).

l. Recommends safe positioning for aircraft participating in the scientific programs.

m. Initiates voice-time broadcasts for all elements of the Task Force.

n. Prepares appropriate technical reports at the conclusion of each shot and the whole operation.

3. Mission of Subordinate Units:

a. TU-1:

(1) Designs and carries out experiments required for LASL weapons development.

(2) Reviews and approves the construction requirements of the scientific programs under the supervision of TU-1.

(3) Administers the technical phases of the contracts of LASL and certain AEC scientific contractors.

(4) Reviews the technical reports of the scientific programs and projects of TU-1.

b. TU-2:

(1) Is responsible for the operation and maintenance of all plants in the Forward Area.

(2) Procures and ships to the Forward Area necessary supplies for the operation of the plants.

(3) Obtains and installs a storage dewar in the Forward Area.

(4) Modifies the Parry Island plant in accordance with LASL contract.

(5) Installs an additional column, together with freon refrigeration unit and aluminum driers.

(6) Samples and analyzes all cylinder banks.

(7) Modifies and installs converters.

(8) Procures spare Joule-Thompson Heat Exchanger for emergency use.

(9) Coordinates with TU-3 in filling the Cambridge Corporation dewars.

(10) Coordinates with J-4 and J-6 as required in establishing necessary buildings and facilities.

(11) Coordinates for approval all designs and layouts through LASL.

c. TU-3:

(1) Operates and maintains five refrigerated transport dewars at the Forward Area during 1953-4. This includes moving dewars and refrigerators throughout the Forward Area as required by the operation schedule as coordinated with TG 7.1.

(2) In consultation with J-Division, LASL, establishes the facilities required by Cambridge Corporation for the operation at the Forward Area.

(3) Makes arrangements with J-4 for transportation of the dewars, refrigerators, trailers, special devices and associated equipment to the Forward Area from the coast, and return.

(4) Transports equipment to and from the West Coast, ZI.

(5) Collaborates with TU-2 in dewar filling; develops transfer tubing, couplings, and techniques required in dewar testing and operational filling in the Forward Area; and furnishes said testing equipment to accompany filled dewars in transit.

(6) Delivers filled dewars to designated locations in conformance with schedules set up by TU-4 and TU-14.

(7) Services, maintains, fills, operates and delivers certain special devices to designated locations in the Forward Area in conjunction with other designated units of TG 7.1 and in conformance with a schedule set up by TU-4.

d. TU-4:

(1) Arranges with J-4 for shipment to the Forward Area of LASL test device(s), appropriate spare parts, and the equipment necessary for the assembly and check out of such device(s). This does not include equipment furnished by J-Division as part of facilities.

(2) Assembles, checks out and installs in position at the Forward Area, the LASL device(s) to be tested. Final check-outs will be made in coordination with TU-6.

(3) Arranges with J-4 for return to the ZI, or storage on Parry Island, whatever material and equipment noted under (1) and (2) above which remains after the operation is completed.

e. TU-6:

(1) Arms and detonates (or disarms, if necessary) weapons and devices when directed by CTG 7.1. Arming includes making all final connections, tests, adjustments and calibrations necessary to ensure a successful detonation.

(2) Operates the Firing Control Room.

(3) Disseminates appropriate information to other agencies on a "Need-to-Know" basis as required for their support of Firing Party operations.

(4) Keeps CTG 7.1 informed of progress during arming and firing operations.

f. TU-7:

(1) Supervises monitoring services for TG 7.1 operations in the Forward Area.

(2) Provides laboratory services ashore and afloat for processing film badges and issuing and recording photo dosimetry data for designated personnel of all Task Groups; for the repair, maintenance, and calibration of TG 7.1 RADIAC equipment (and for the calibration of the RADIAC equipment of other Task Groups as required).

(3) Provides suitable documentation of fall-out, and situation map data including dissemination of RADEX forecasts and actual RADEX data.

(4) Furnishes technical services and advice as requested to all units of the Task Force.

(5) Trains designated personnel in all phases of Rad-Safe surveying, operations, and decontamination.

(6) Publishes suitable tables of allowable residual radiation levels for equipment, personnel, vehicles, boats, etc.

(7) Provides personnel and materiel decontamination facilities in the Forward Area as required.

(8) Provides suitable protective clothing for TG 7.1 recovery personnel.

(9) Conducts water sampling operations on Eniwetok, Bikini and other inhabited atolls as dictated by fall-out estimates.

(10) Supports TG 7.3, TG 7.4 and TG 7.5 by providing certain radiological safety services during test operations.

(11) Monitors movement of sources and other radioactive materials in the Forward Area from the standpoint of possible interference with project activities as well as from the safety standpoint.

g. TU-8:

(1) Makes all negatives requested by other task units to provide full report coverage for TG 7.1 scientific programs, units, and staff sections in black and white and color, still and motion picture.

(2) Provides accident and general record coverage.

(3) Makes technical documentary records in still and appropriate motion pictures of each operation as requested.

(4) Provides facilities and aid to project officers in their processing of scientific photographic records.

(5) Stores, issues, processes, and accounts for film in accordance with security and classification instructions.

h. TU-9:

(1) Prepares scripts for such non-technical motion picture photography as may be authorized by CJTF SEVEN.

(2) Accomplishes photography in accordance with the approved scripts in coordination with the test activities to be photographed. This coordination is in order to minimize interference with test programs and duplication of photography being accomplished by the Technical Photography Group.

(3) Stores, issues, processes and accounts for film in accordance with security and classification instructions.

(4) Conducts necessary mapping photography and prepares mosaics and aerial maps as authorized and required by CTG 7.1.

(5) Processes certain motion picture film for [redacted] as required.

(6) Provides photographic support of specified scientific projects.

i. TU-12:

(1) Designs and carries out experiments required for UCRL weapons development.

(2) Reviews and approves the construction requirements of the UCRL scientific program.

(3) Administers the technical phases of the contracts of UCRL and certain AEC scientific contractors.

(4) Reviews the technical reports of the UCRL scientific programs and projects.

j. TU-13:

(1) Designs and carries out experiments to determine the military effects of atomic detonations as required by DOD.

(2) Reviews and approves construction and support requirements of the military effects program.

(3) Reviews the reports prepared by the military effects programs.

k. TU-14:

(1) Arranges with J-4 for shipment to the Forward Area, the UCRL test device(s), appropriate spare parts and the equipment necessary for the assembly and check-out of such device(s).

(2) Assembles, checks-out, and installs in position at the Forward Area the UCRL device(s) to be tested.

(3) Arranges with J-4 for return to the ZI, whatever UCRL material and equipment noted under (1) and (2) above which remains after the operation is completed.

l. TU-15:

(1) Supplies timing signals to meet the principle requirements of the experimental programs.

(2) Supplies the firing pulse to the device(s) to be tested.

(3) Provides and maintains an HF radio and RTTY link between Bikini and Eniwetok.

(4) Provides and maintains short range commercial radio communication on the Bikini and Eniwetok Atolls.

x. Further missions of Task Unit Commanders:

(1) By Forward Area conferences assist J-3 in the formulation of a detailed Schedule of Events covering the period from 1200 on shot minus three days through recovery. Critical operations from shot day minus five to four inclusive,

requiring Task Group support, will also be included. Recovery requirements will be specified in detail.

(2) Insure that personnel and priority cargo are returned to the ZI expeditiously, commensurate with progress of the construction, instrumentation, recovery and roll-up operations. J-1 and J-4, this headquarters, will be utilized to arrange return transportation.

(3) Supply J-1, this headquarters, upon request, with current lists of personnel requiring access to exclusion areas.

(4) Exercise maximum economy, commensurate with "Getting the Job Done" in the conduct of all operations.

(5) Keep CTG 7.1 informed as to the status of their task units, providing specific details of obstacles to the successful and timely accomplishment of their missions.

(6) Insure that personnel under their command comply with current health, safety, Rad-Safe, etc., directives issued by this and other headquarters.

(7) Conduct liaison with all other Task Unit Commanders to the extent necessary to insure adequate intra-Task Unit support and the proper fulfillment of the overall TG 7.1 mission.

(8) Insure that all personnel under their command have been adequately briefed for emergency operations (Annex L, Typhoon and Tidal Wave Plan and Annex M, Hostile Action Alert Plan apply).

4. Administration: See TG 7.1 Administrative Plan, dated 15 October 1953.

5. Command and Signal Matters:

a. Command Relationships: (Annex B applies) The relation of TG 7.1 to higher headquarters is depicted by Appendix I to Annex B. The AEC policy line between the Santa Fe Operations Office (SFOO) and TG 7.1 represents the position of the Los Alamos Scientific Laboratory (LASL) within the Atomic Weapons program. J-Division of LASL is devoted to testing and includes an overseas test section. The latter constitutes the Los Alamos contingent of TG 7.1.

b. Command Posts:

Unit	During Bikini Shots	At Other Times
CJTF SEVEN	AGC	Parry Island
CTG 7.1	AGC	Parry Island
CTG 7.2	Eniwetok Island	Eniwetok Island
CTG 7.3	USS BAIROKO	Parry Island
CTG 7.4	AGC	Eniwetok Island
CTG 7.5	AGC	Parry Island

c. Communication: (Annex E applies) All times are MIKE (GCT minus 12). ALL POST-SHOT MESSAGES WHICH RELEASE DATA, REGARDLESS OF THEIR DESTINATION, WILL BE RELEASED PERSONALLY BY CTG 7.1.

Distribution List

Annexes A to P (See index on pages 2, 3 and 4)

DISTRIBUTION LIST

ORGANIZATION	NAME	NO. OF COPY	COPY NUMBERS
Commander JTF SEVEN	Maj Gen P. W. Clarkson	6	1-6
Deputy for Scientific Matters, JTF SEVEN	Alvin C. Graves (LASL) Herbert York (UCRL)	1 1	7 8
Commander TG 7.1	W. E. Ogle (LASL)	1	9
Commander TG 7.2	Col Edward Lahti	1	10
Commander TG 7.3	RADM Henry C. Bruton	3	11-13
Commander TG 7.4	Brig Gen Howell M. Estes, Jr.	3	14-16
Commander TG 7.5	James E. Reeves (SFOO)	6	17-22
Manager SFOO	Carroll L. Tyler	1	23
Directors Office LASL	Norris E. Bradbury	1	24
	Darol K. Froman	1	25
	Henry R. Hoyt	1	26
	Leslie G. Hawkins	1	27
Manager LAFO	Frank DiLuzio	1	28
Director Office of Security SFOO	James L. McCraw	1	29
DMA of AEC	Brig Gen K. E. Fields	2	30-31
Classification TG 7.1	Ralph Carlisle Smith (LASL)	2	32-33
Technical Reports TG 7.1	David M. Stearns (LASL)	1	34
Deputy for Administration	Duncan Curry, Jr. (LASL)	1	35
J-1	Armand W. Kelly (LASL)	3	36-38
J-3	Phil L. Hooper (LASL)	6	39-44

J-4	Robert J. Van Gemert (LASL)	3	45-47
J-6	Robert H. Campbell (LASL)	1	48
TU-1	Rodney L. Aamodt (LASL)	1	49
	Roderick W. Spence (LASL)	1	50
	Harold F. Plank (LASL)	1	51
	C. E. Browne (LASL)	1	52
	Bob E. Watt (LASL)	1	53
	Gaelen L. Felt (LASL)	1	54
	Clyde L. Cowan, Jr.	1	55
	W. Biggers	1	56
	Newell H. Smith	1	57
	John S. Malik	1	58
	Francis B. Porzel	1	59
	Herman Hoerlin	1	60
	Harold S. Stewart	1	61
TU-2	Herrick L. Johnston	1	62
TU-3	S. H. Ellison (Camco)	1	63
	B. G. McNabb	1	64
TU-4	Marshall G. Holloway (LASL)	5	65-69
	Roger Westcott (LASL)	1	70
TU-6	J. C. Clark	1	71
TU-7	John D. Servis (LASL)	1	72
TU-8	Loris M. Gardner (LASL)	1	73
TU-9	Lt Col James L. Gaylord (IML)	1	74

TU-12 & TU-14	L-Division, UCRL	15	75-89
TU-13	Col H. K. Gilbert (AFSWP)	33	90-122
TU-15	Herbert E. Grier (EG&G)	2	123-124
J-7	Theodore J. Blechar	1	125
CMR (LASL)	J. Calvin Potts	1	126
Advisory Group	Thomas L. Shipman (LASL)	1	127
	Roy Reider (LASL)	1	128
	Capt R. H. Maynard (AFSWP)	1	129
	Carson Mark (LASL)	1	130
	Earl A. Long (Directors Off LASL)	1	131
AEC Biology & Medicine	John C. Bugher	1	132
AEC Communications SFOO	James A. Sugden	1	133
CG AFSWP Field Command	Attn: Col Paul Preuss	1	134
Report Library LASL		1	135
J-Div Files LASL		10	136-145
Mail & Records LASL		1	146

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex A to CTG 7.1 Operation Plan No. 1-53

CONCEPT OF OPERATIONS

1. General:

a. Scope: This concept covers the salient features of TG 7.1 Forward Area operations, beginning with the movement of major contingents of the Task Group to the Forward Area and ending with the completion of the tests.

b. Tests: Operation CASTLE will be a series of atomic tests to be conducted early in 1954 at Eniwetok and Bikini Atolls, Marshall Islands. The operation will consist of seven thermonuclear shots, six of which will have yields in the megaton range.

2. Shot Schedule:

Shot	Code	Date	Model	Megaton Yield (Presumed Range)	Site
#1	BRAVO	B Day 1 March	(LASL) Fired from bunker on Enyu.	6 (4 - 8)	Bikini. On reef 2950 ft bearing 250° true from SW tip of Namu.
#2	UNION	U Day 11 March	(LASL) Fired from bunker on Enyu.	3 - 4 (1 - 6)	Bikini - Intersection of arcs with radii of 6900 ft from Yurochi and 3 nautical miles from Aomoen (barge).
#3	YANKEE	Y Day 22 March	(LASL) Fired from bunker on Enyu.	8 (6 - 10)	crater (barge).
#4	ECHO	E Day 29 March	(UCRL) Fired from station on Parry.	125 KT (65 - 275 KT)	Eniwetok-Eberiru

#5	NECTAR	N Day 5 April	LASL) Fired from bunker on Enyu.	1.8 (1 - 2.5)	crater (barge).
#6	ROMEO	R Day 15 April	(LASL) Fired from bunker on Enyu.	4 (1½ - 7)	crater (barge).
#7	KOON	K Day 22 April	(UCRL) Fired from bunker on Enyu.	1 (1/3 - 2½)	Bikini-Eninman

The most probable yields and limits are given but the limits are not absolute. Experimenters must instrument to accept a rather wide range yield-wise. Probable times of LASL shots will be between one hour and one-half hour before sunrise depending upon results of experiments to be conducted in the Forward Area. The time of UCRL shots will be one-half hour before sunrise.

3. Basic Principles:

a. Eniwetok Atoll will be the base of operations, irrespective of the scope of activities on Bikini Atoll.

b. Major work will be done at Eniwetok Atoll.

c. All major RTD (refrigerated transport dewar) repair and maintenance work will be done on Parry.

d. Five of the seven devices and weapons will be assembled on Parry, one on Eberiru and one on Eninman Island.

e. Machine shop, laboratory, photographic warehouse and stockroom facilities will remain on Parry and Eniwetok Islands except for limited field facilities at Bikini.

f. The USS CURTISS will be the principal shipboard facility for project laboratory, assembly team base and office space.

g. Preliminary assembly, testing of experimental equipment and rehearsals will be done on Parry Island for all LASL shots.

h. Temporary working camps will be located on Rojoa (Eniwetok Atoll) and on Eninman, Namu, and Romurikku (Bikini Atoll). Enyu will have a small temporary camp to support projects personnel necessary at that site.

i. The camp site facilities on Eniwetok, Parry and Bikini Islands will be severely taxed due to population congestion. Shipboard accommodations,

especially aboard the CVE and AGC, will also be limited. Therefore, it is mandatory that:

(1) Only those personnel necessary to accomplish the mission should be in the Forward Area.

(2) Personnel should leave the Forward Area as soon as their jobs are completed.

(3) Personnel should be at Bikini only as long as their operations require it.

j. The port of entry for aircraft and most shipping will be Eniwetok. All cargo ships will stop at Bikini to receive or discharge cargo.

k. TG 7.4 will be based on Eniwetok Island.

l. CTG 7.1 and major elements of the TG 7.1 task units and staff sections will be located on Parry.

m. Radio links with Los Alamos and Oahu will be maintained on Eniwetok.

n. The capability to complete operations aboard ship, if Bikini Atoll is contaminated, will be maintained.

o. Except for the Firing Party and its attached elements no personnel will be permitted within dangerous range of an armed weapon or device.

4. Pre-Shot Phase:

a. A number of projects will begin on-site preparations during November and December 1953. With minor exceptions all projects are planning to initiate on-site preparations by the first week of January 1954.

b. As much construction equipment and material as possible will be evacuated to Eniwetok during the pre-shot phase. Some construction equipment and material for post-shot re-entry will be relocated to islands out of danger area.

5. Timing and Firing: The AGC Command Ship will be positioned within VHF communications range of Enyu during each Bikini shot. The Bikini shots will be detonated from the Timing and Firing Station on Enyu by a Firing Party of six or less. This station will also serve as a photo station and for an on-shore communications base. The radio time signals, in addition to the wired signals, will be furnished at Eniwetok and Bikini; certain time signals will be relayed from Bikini to Parry to allow correlation of operations with the Bikini shots. The Eniwetok Shot will be fired from the Control Station on Parry.

6. Firing Party:

a. The Firing Party will include those individuals, specifically designated by CTG 7.1, required to perform particular tasks in connection with the final monitoring, timing, and firing.

b. CJTF SEVEN will insure that a security and safety sweep of all islands to be evacuated is made during the afternoon of shot minus one day. All security personnel, except those in the Firing Party and at the Control Point, will be evacuated according to the schedules for each individual shot. No further security of the shot island group is deemed feasible, except that provided by JTF SEVEN in the denial of access to the Atoll.

c. The number of personnel on the shot island group will vary throughout shot minus one, being contingent on the state of readiness of the weapon (or device) and experimental projects, and on the time required to accomplish evacuations. By 1500 hours of shot minus one, only members of the Firing Party will remain.

d. The basic Firing Party plan is as follows:

(1) Shot Minus One Day: At a time to be determined, but which will be approximately 1200, the Firing Party Commander will inspect the Control Point. This will be the structure containing the firing control panels located on Enyu for the six Bikini shots and on Parry for the Eniwetok Shot. It will be the responsibility of the Firing Party Commander to insure that the arming and firing circuiting is operational. After inspecting and securing the Control Point, the Firing Party Commander will proceed to the shot site, making stops enroute as necessary. Prior to the arrival of the Firing Party Commander on shot minus one, the shot site has been under the operational control of J-6 while the device has been under the operational control of the proper Assembly Task Unit Commander (TU-4 or TU-14). During this time, CTU-4 (or CTU-14) requests permission from CTG 7.1 to make the nuclear insertion; upon obtaining permission, CTU-4 (or CTU-14) notifies the Firing Party Commander and proceeds with the insertion. Upon arrival of the Arming Team at the shot site, evacuation of all other personnel will begin. After sufficient time has elapsed to allow complete evacuation, except for the Arming Team, the Firing Party Commander or his representative will contact CJTF SEVEN through CTG 7.1 to obtain permission to proceed with the arming operations. Permission to proceed with arming will be basically contingent upon the satisfactory completion of the evacuation plan. Arming will be accomplished utilizing final check

lists. After the Arming Team has completed the arming and testing operation they will evacuate the shot site. Detailed instructions as to the method of evacuation will be published in the Forward Area. For the six Bikini shots, evacuation will be to the Control Point on Enyu for those personnel common to the Arming and Firing Team; the remainder of the Arming Team will proceed to a ship to be designated. For the Eniwetok Shot all personnel will be evacuated to Parry Island. The Firing Team will maintain communication with CJTF SEVEN through CTG 7.1 from the time of their final arrival at the Control Point.

(2) Shot Day: The Firing Party will start the firing mechanism (motor-driven sequence timers) at the scheduled time unless directed otherwise by CTG 7.1 or CJTF SEVEN. The Firing Party Commander has the added responsibility of insuring that all time signals, to include voice time, properly originate at the Control Point.

7. Firing: The basic firing mechanism will be motor-driven sequence timers located at the Control Point (Enyu, Parry), the timers being started manually at the appropriate time. "Hard wire" control will be utilized between the device and the control panels on Enyu (and Parry). For the Eniwetok Shot a TV circuit will be utilized at Parry to monitor the panel on Eberiru. The control panels on Enyu (and Parry) will contain "Go-No-Go" circuits as well as having provision for a manual stop at any time prior to zero. The "Go-No-Go" circuits provide for an automatic stop, the action of the circuit being determined by the condition of a particularly critical experiment or equipment assembly. The purpose of the "Go-No-Go" circuits is to cause a shot stoppage without having to depend upon the human element for detection and judgment of the more critical items of the shot.

8. Postponements:

a. A shot postponement is essentially a selection of a new shot day. All decisions as to the establishment and prescribed length of postponements will be made and announced by CJTF SEVEN.

b. As mentioned above, the shot may be stopped either manually or automatically after evacuation has been completed. If a "stop" occurs, Zero time must be delayed at least 24 hours for reactivation of instrumentation for the experimental projects and the timing and firing circuits as well as for re-evacuation of personnel. For ECHO shot only, re-entry must be made prior to E plus 12 hours with the two RTD's which were evacuated at E minus 11 hours for the purpose of topping the reflux dewar.

d. Due to the number of shots scheduled during the operation and the relatively short time between shots, there becomes a limitation in the amount of postponement possible without affecting all subsequent shots. For postponements of excessive time two alternatives appear feasible: One, all subsequent shots may be rescheduled; or two, only the delayed shot may be rescheduled after the completion of all other shots. There are several factors which will dictate the alternative to be chosen; these considerations will involve continuity of experiments, radiological safety, logistics, etc. A complete study and appropriate recommendations will be made to CJTF SEVEN by CTG 7.1 at the time.

9. Evacuation:

a. General:

(1) All personnel not essential to the accomplishment of the Bikiri and Eniwetok shots will be returned to the ZI prior During the shot periods, personnel who are no longer required for subsequent shots will be returned to the ZI. All Commanders are responsible for screening personnel lists and designating those individuals who will be returned.

(2) The location of all TG 7.1 personnel during the evacuation periods for each shot will be dictated by the preparations necessary for each shot.

(3) In general, materiel not required for the Bikini operations will be evacuated to Eniwetok Atoll prior to the first Bikini shot. After the initiation of Bikini operations only that equipment and materiel required at Eniwetok for operational purposes will be evacuated from Bikini to Eniwetok. All other materiel at Bikini will be relocated to safe islands (probably Enyu) during the shots. rolled-up and shipped from Enyu to the ZI after Excess TG 7.1 materiel at Eniwetok will be evacuated to Parry prior to for roll-up and shipment to the ZI.

(4) In the event of unacceptable contamination of the Bikini camps, a capability for continued operation from afloat will exist for numbers of personnel necessary to complete the operation.

(5) An emergency capability for post-shot personnel evacuation from Eniwetok Atoll will exist. This will be executed only if the radiological conditions indicate it is necessary and will be capable of accomplishment on four hour's notice. Such evacuation will not involve movement of materiel.

b. Bikini Operations:

(1) Bikini Atoll will be evacuated of all personnel except for the Firing Party on Enyu (and possibly a small maintenance party on Eninman). The number of personnel on Enyu (and Eninman) will be within the capability of helicopter lift.

(2) Bikini Atoll will be evacuated of all personnel except for the Firing Party on Enyu. Equipment not previously redeployed to Eniwetok Atoll will be relocated on Enyu (and/or Bikini) Island prior to shot time.

c. Eniwetok Operations:

(1) There will be no pre-shot evacuation of personnel or materiel from Eniwetok Atoll. Only the relocation of personnel, equipment and small craft from the northern islands to Eniwetok and Parry Islands will be necessary.

10. Recovery: The feasibility of conducting re-entry and recovery operations is dependent upon radiological conditions. The success of several experiments is dependent upon the early recovery of records or samples. It is expected that every effort will be made to make early recoveries after each shot. Recovery priorities will be established by CTG 7.1 as necessary. Recovery operations can be separated into two categories:

a. Priority: Those for which early recovery of samples or records is necessary in order to effect the fullest accomplishment of the mission of the project.

b. Routine: Those for which recovery can be accomplished as radiological conditions permit.

11. Re-entry: Until such time as Eninman and/or Enyu Islands are safe for 24-hour occupancy, only those personnel who cannot accomplish work from afloat will be permitted to work ashore. These persons will be based afloat for living and regular messing and their working time ashore will be limited by Rad-Safe consideration. When Eninman and/or Enyu are considered safe for 24-hour occupancy, personnel who are not operating from afloat will move ashore for messing, billeting and preparations for succeeding shots, within the capabilities of the camps.

12. Sample Return:

a. With the exception of aircraft samples, helicopter will be the primary means of recovering radioactive samples. They will be flown by C-47 or PBM to Eniwetok. There they will be ferried by aircraft or boat to Parry for immediate analysis and/or return by courier aircraft to their destinations in the ZI. CTG 7.1 has certain prerogatives in sample return, but CJTF SEVEN has the overall responsibility of coordinating and effecting the courier flights to their ZI destinations.

b. All samples of radioactive material which are couriered in aircraft will be packaged and loaded so as to reduce radiation to a minimum. The Rad-Safe Officer appointed by CJTF SEVEN will have a survey made of the package to determine if adequate precautions have been taken. The following criteria will determine space and packaging requirements:

(1) Prior exposure of aircraft and courier personnel.

(2) Anticipated future exposure on trip.

(3) Length of time of exposure on trip.

(4) In all cases, crew members will be limited to exposure rates of less than 20 mr/hr.

c. Annex O applies.

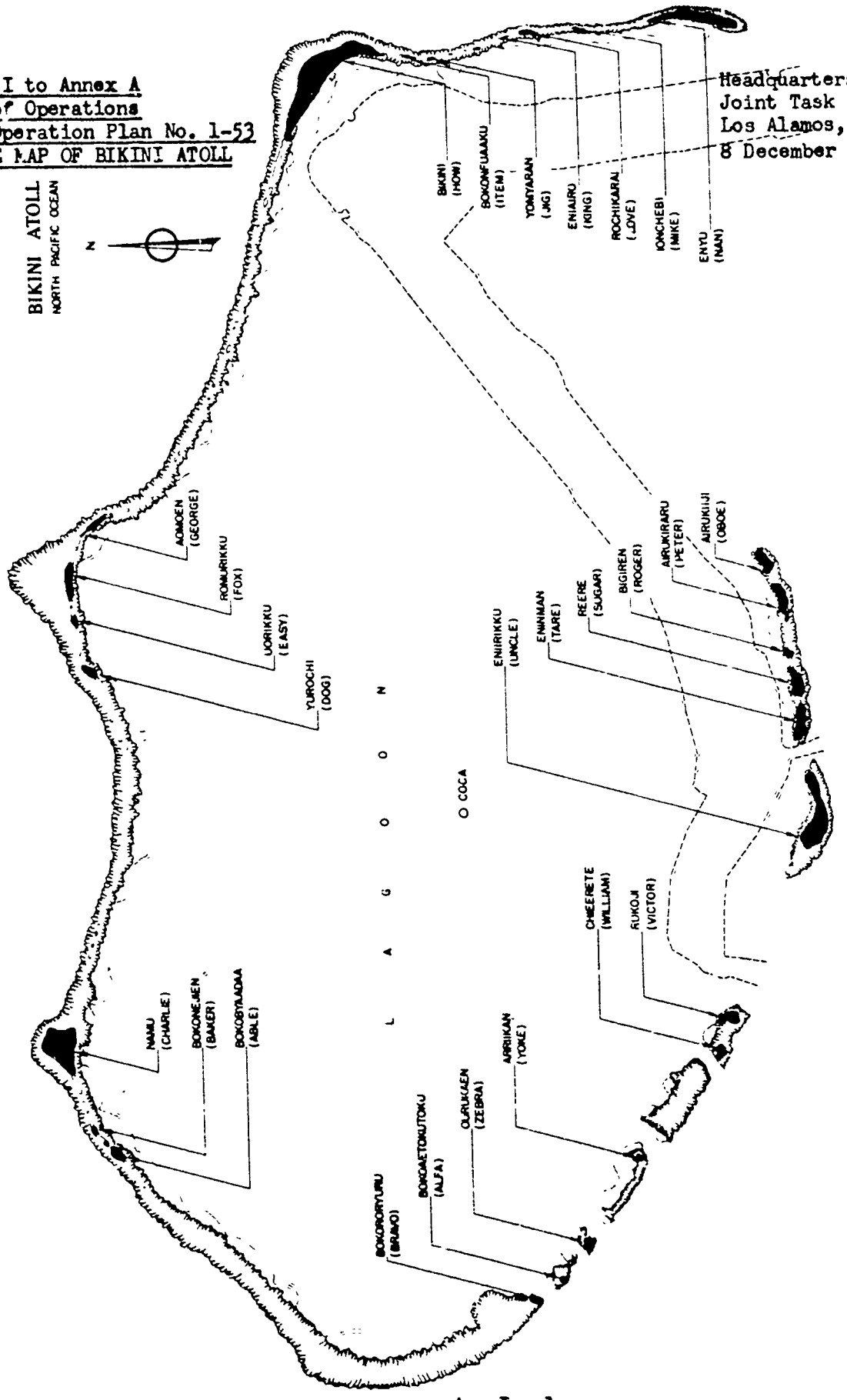
Appendices:

I. Site Code Map of Bikini Atoll

II. Site Code Map of Eniwetok Atoll

Appendix I to Annex A
Concept of Operations
CTG 7.1 Operation Plan No. 1-53
SITE CODE MAP OF BIKINI ATOLL

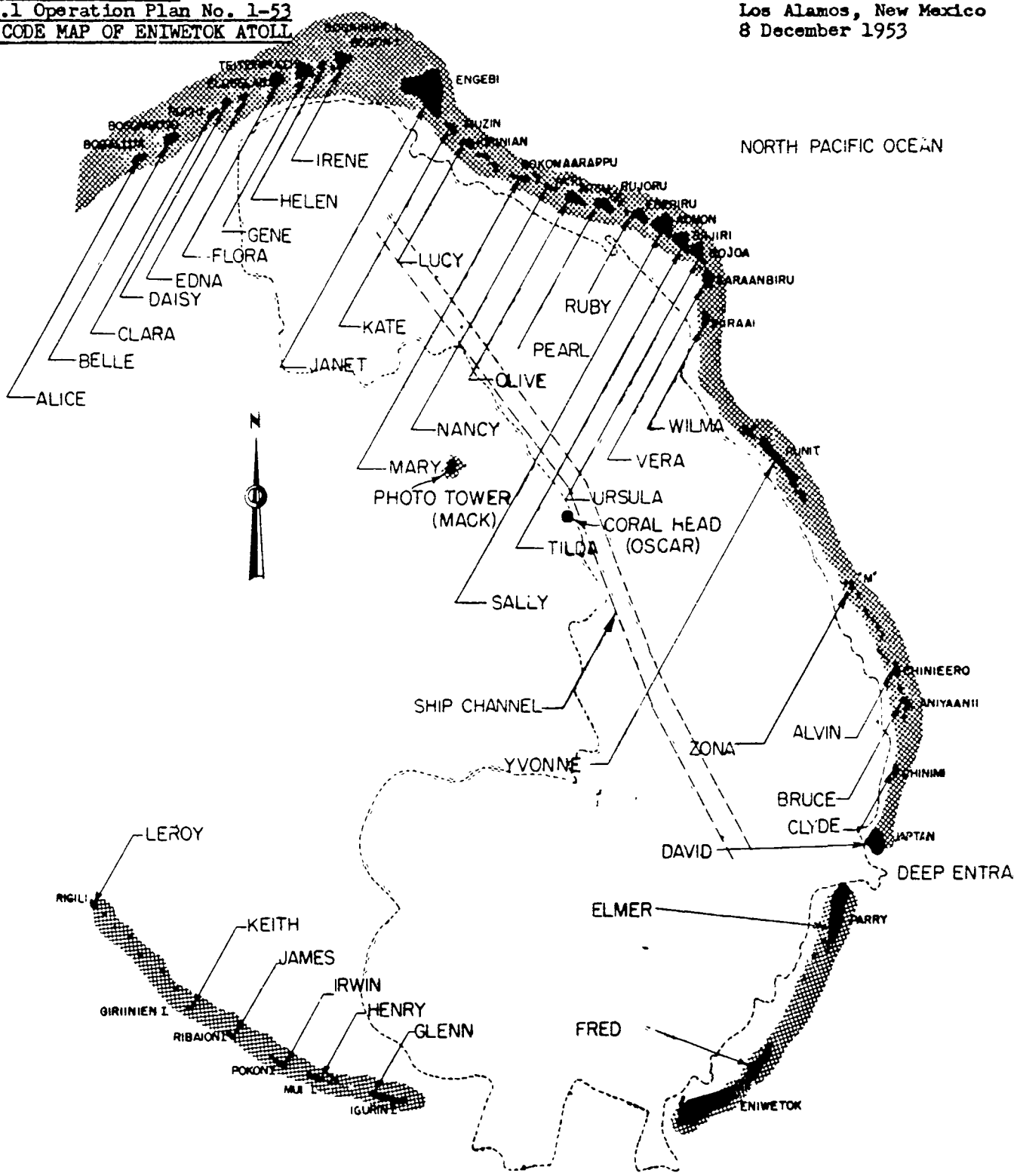
Headquarters Task Group
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953



Appendix II to Annex A
Concept of Operations
CTG 7.1 Operation Plan No. 1-53

Headquarters Task Group 7
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

SITE CODE MAP OF ENIWETOK ATOLL



Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex B to CTG 7.1 Operation Plan No. 1-53

ORGANIZATION AND COMMAND RELATIONSHIPS

The organization and command relationships of this Task Group are depicted on the charts attached as appendices hereto.

Appendices:

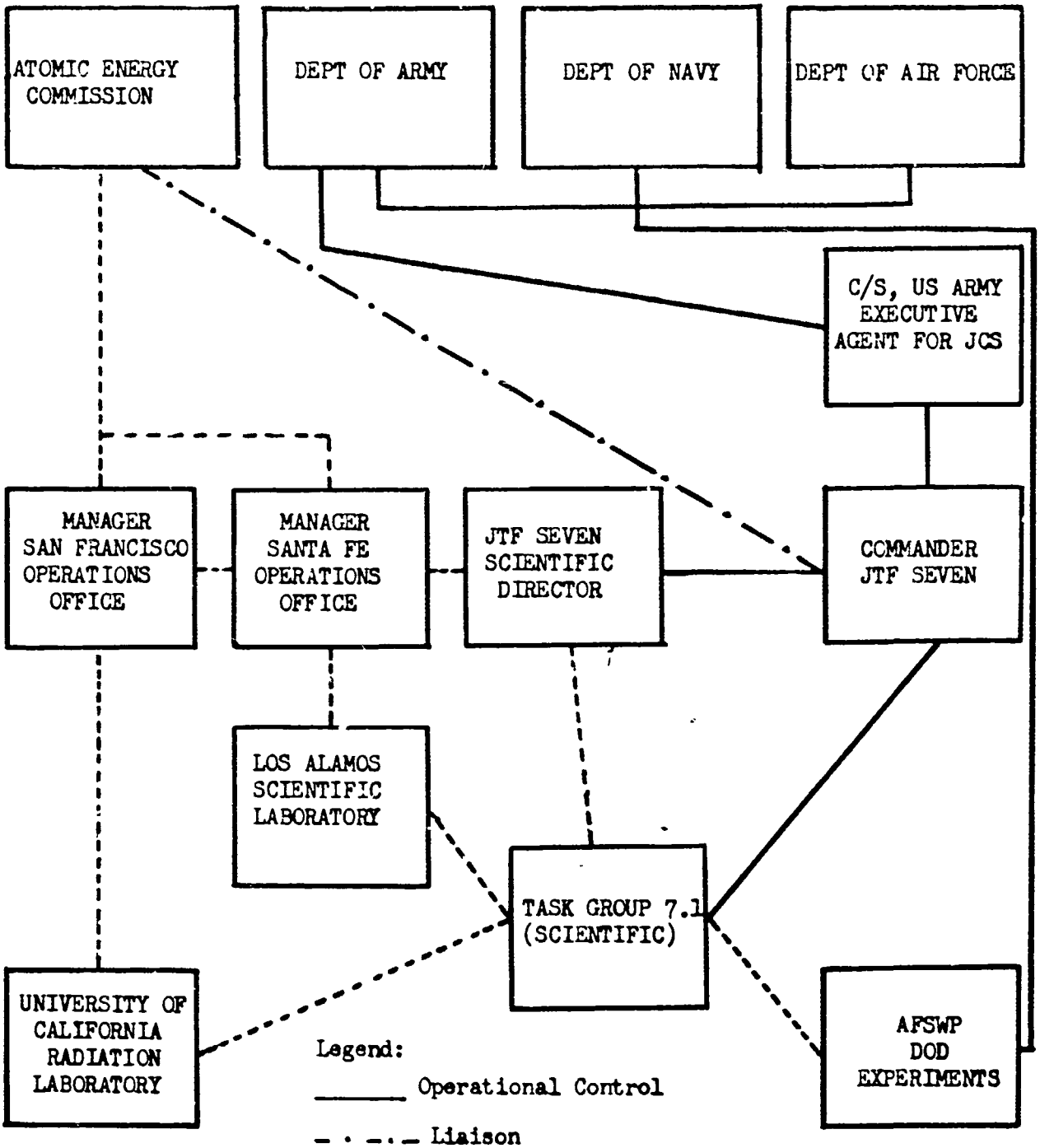
I. Relation of TG 7.1 to Higher Headquarters

II. Organization Chart, TG 7.1

Appendix I to Annex B
Organization and Command Relationships
CTG 7.1 Operation Plan No. 1-53

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

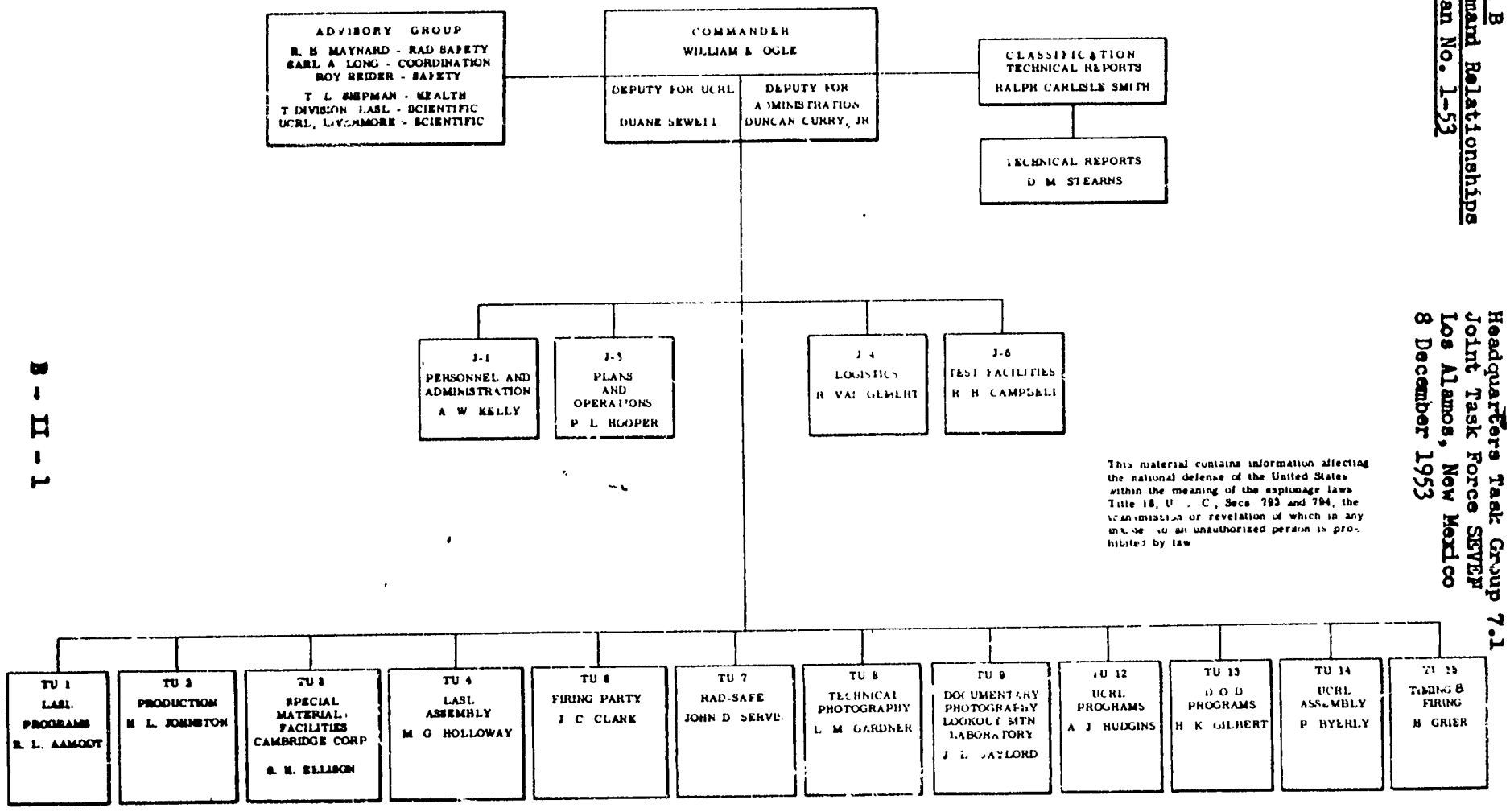
RELATION OF TG 7.1 TO HIGHER HEADQUARTERS



Appendix II to Annex B
Organization and Command Relationships
CTG 7.1 Operation Plan No. 1-53

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

ORGANIZATION CHART - TASK GROUP 7.1



This material contains information affecting the national defense of the United States within the meaning of the espionage laws Title 18, U. S. C., Secs 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex C to CTG 7.1 Operation Plan No. 1-53

EXPERIMENTAL PROJECTS

1. CTG 7.1 will be responsible for the preparation and conduct of the AEC experimental projects. With the assistance of pertinent Armed Forces agencies, he will prepare for and conduct experimental tests sponsored by the DOD, as approved by the Research and Development Board and CJTF SEVEN. He will be responsible for the preparation, classification, publication and distribution (as required by the AEC and coordinated with AFSWP) of appropriate technical and/or scientific reports.

2. DOD personnel and equipment involved in experimental projects will be under the operational control of CTG 7.1, except that all ships and aircraft directly assigned to test projects in the Forward Area will come within the operational and logistical control of the owning agency.

3. Any changes to the test programs which affect the scope of the test operation will be forwarded to CJTF SEVEN for prior approval.

4. The experimental program for CASTLE is described in the ONO Book, published in separate form as Appendix I to this Annex, with a limited distribution list. Appendices II and III show the shot participation and instrumentation by island location.

Appendices:

I. Experimental Projects (ONO Book)

II. Project Participation

III. Project Location By Island -
Bikini and Eniwetok Atolls

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix I to Annex C
Experimental Projects, CTG 7.1 Operation Plan No. 1-53

THE ONO BOOK

The ONO BOOK was published separately and distributed as indicated below.

DISTRIBUTION LIST

Organization	Name	Copy No.
Commander JTF SEVEN	Maj Gen P. W. Clarkson	1 - 4
JTF SEVEN Scientific Director	Dr. Alvin C. Graves	5
Commander TG 7.1	Dr. W. E. Ogle	6
Commander TG 7.2	Col Edward Lahti	7
Commander TG 7.3	RADM Henry C. Bruton	8
Commander TG 7.4	Brig Gen Howell M. Estes	9
Commander TG 7.5	Mr. James E. Reeves (AEC-SFOO)	10
Classification TG 7.1	Dr. Ralph Carlisle Smith (LASL)	11
Deputy for Administration TG 7.1	Mr. Duncan Curry, Jr. (LASL)	12
J-3	Col P. L. Hooper (LASL)	13-14
J-4	Mr. Harry S. Allen (LASL)	15
J-6	Mr. Robert H. Campbell (LASL)	16
TU-1	Dr. Rodney L. Aamodt (LASL)	17-18
TU-4	Dr. Marshall G. Holloway (LASL)	19
TU-7	Maj John D. Servis (LASL)	20
TU-8	Mr. Loris M. Gardner (LASL)	21
TU-9	Lt Col James S. Gaylord (LML)	22

TU-12	Dr. Arthur J. Hudgins (UCRL)	23-24
TU-13	Col Huntington K. Gilbert (DOD)	25-26
TU-14	Dr. Paul Byerly (UCRL)	27
TU-15	Dr. Herbert E. Grier (EG&G)	28
LASL	Dr. Gaelen L. Felt (LASL)	29
Manager SFOO	Mr. Carroll L. Tyler	30
Director LASL	Dr. Norris E. Bradbury	31
	Dr. Darol K. Froman	32
Director UCRL	Dr. Herbert York (UCRL)	33
H Division	Mr. Roy Reider (LASL)	34
J-Division LASL	Dr. J. C. Clark (LASL)	35
Operations UCRL	Mr. Vern Denton (UCRL)	36
DMA of AEC	Brig Gen Kenneth E. Fields	37-38
Field Command AFSWP		39-40
Report Library LASL		41-49
J-Division Files		50

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix II to Annex C
Experimental Projects, CTG 7.1 Operation Plan No. 1-53

PROJECT PARTICIPATION

No.	Project Title	1	2	3	4	5	6	7
1.1a	Free Air Pressures	x	x	x	x	x	x	x
1.1b	Precursor Phenomena	x	x	x	x	x	x	x
1.1c	Base Surge Phenomena				x			x
1.1d	Peak Pressure by Aerial Photo	x	x	x	x	x	x	x
1.2a	Pressures Less Than 40 psi	x	x	x	x	x	x	x
1.2b	Pressures Greater Than 40 psi	x	x	x	x	x	x	x
1.3	Shock Winds		x	x	x	x	x	x
1.4	Underwater Pressures vs Time	x	x	x		x	x	
1.5	Acoustic Pressure Signals in Water	x	x	x	x	x	x	x
1.6	Water Wave Studies	x	x	x	x	x	x	x
1.7	Close-in Ground Accelerations				x			x
1.8	Dynamic Pressure Investigations		x	x	x			x
2.1	Gamma Film Dosage	x	x	x	x	x	x	x
2.2	Gamma Dose Rate vs Time	x	x	x		x	x	x
2.3	Neutron Flux and Spectrum	x	x	x		x	x	
2.5a	Fall-out Distribution	x	x	x	x	x	x	x
2.5b	Fall-out Distribution	x	x	x		x	x	
2.6a	RC Analysis of Ground Contamination	x	x	x	x	x	x	x
2.6b	RC Analysis of Ground Contamination	x	x	x		x	x	
3.1	Loading of Structures						x	x
3.2	Crater Survey & Evaluation	x	x				x	x
3.3	Tree Stand Studies							x
6.2a	Effects of Blast, Gust & Thermal on AC in Flight (B-36)	x		x		x	x	x
6.2b	Effects of Blast, Gust & Thermal on AC in Flight (B-47)	x		x		x		x
6.4	Proof Testing of AW Countermeasures	x		x		x		x
6.5	Decontamination & Protection	x		x		x		x
6.6	Ionospheric Studies	x	x	x	x	x	x	x
7.1	Electromagnetic Radiation Calibration	x	x	x	x	x	x	x
7.2	Detection of Airborne LF Sound	x	x	x	x	x	x	x
7.4	Calibration Analysis of A-Bomb Debris	x	x	x	x	x	x	x
9.1	Cloud Photography	x	x	x	x	x	x	x

PROJECT PARTICIPATION

No.	Project Title	1	2	3	4	5	6	7
11.1	Analysis for Fission & Fusion Energy Yields	x	x	x	x	x	x	x
11.2	Sample Collection	x	x	x	x	x	x	x
11.3	Heavy Element Investigation	x	x	x	x	x	x	x
12.1	Reaction History	x						
12.3	Reaction History		x					
13.1	Ball of Fire Photography	x	x	x		x	x	
13.2	Cloud Photography	x	x	x	x	x	x	x
13.3	Bhangmeters	x	x	x	x	x	x	x
13.4	High Speed Photography	x	x	x		x	x	
13.5	Time Interval Measurements with Bowens	x	x	x		x	x	
14.1	Threshold Detectors	x	x	x		x	x	
15.1	Teller & Scintillation Alpha	x	x	x		x	x	
15.2	Electromagnetic Alpha	x	x	x		x	x	
16.1	Gamma Intensities at Late Times	x	x					
17.1	Microbarography	x	x	x	x	x	x	x
18.1	Time Interval Between Reactions	x	x	x		x	x	
18.2	Power vs Time	x	x	x		x	x	x
18.3	Spectroscopy	x	x	x		x	x	
18.4	Air Transmission	x	x	x	x	x	x	x
18.5	Total Thermal Radiation	x	x	x		x	x	x
19.1	Marine Survey				x			
21.1	Analysis for Fission & Fusion Energy Yields	x	x	x	x	x	x	x
21.2	Cloud Sampling	x	x	x	x	x	x	x
21.3	Heavy Element Investigation	x	x	x	x	x	x	x
21.4	Gas Analysis	x	x	x	x	x	x	x
22.1	Ganex				x			x
22.2	Tenex				x			x
22.3	Alpha				x			x
23.1	Hot Spot Photography				x			x
23.2	Ball of Fire Photography				x			x
24.1	Phonex				x			x

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix III to Annex C
Experimental Projects, CTG 7.1 Operation Plan No. 1-53

PROJECT LOCATION BY ISLAND

BIKINI ATOLL

Islands	Projects
BOKOBYAADAA (Able)	2.1, 2.2, 2.5a & b, 13.5, 14.1, 16.1, EG&G
Off Able	2.1, 2.3, 14.1
*DELTA	13.4, 13.5, 14.1, 18
NAMU (Charlie)	EG&G, 1.1a, 1.2b, 2.1, 2.2, 2.5a & b, 12.1, 13.5, 15.1, 16.1, 18
Reef east of Charlie	1.2b, 2.1
Reef west of Dog	2.3
YUROCHI (Dog)	EG&G, 1.1a, 1.2b, 2.1, 2.2, 2.5a & b, 12.3, 14.1, 16.1
Reef: Dog-Easy	1.2b, 2.1, 14.1
UORIKKU (Easy)	1.2b, 2.1, 2.2, 14.1, 16.1
Reef: Fox-Easy	2.1
ROMURIKKU (Fox)	1.2a, 1.2b, 2.1, 2.2, 2.3, 2.5a & b
AOMOEN (George)	EG&G, 1.2a, 1.3, 1.4, 1.7, 2.1, 2.2, 2.3, 2.5a & b, 13.4, 13.5, 15.1, 18
BIKINI (How)	EG&G, 2.5a & b, 18
ROCHIKARAI (Love)	2.5a & b
ENYU (Nan)	EG&G, 1.6, 2.5a & b, 7.1, 15.2, 18
AIRUKIIJI (Oboe)	EG&G, 1.2a, 1.3, 1.7, 2.1, 2.2, 2.5a & b
Causeway: Peter-Oboe	2.1
AIRUKIRARU (Peter)	1.2a, 1.3, 2.1, 2.2, 23.1
Causeway: Peter-Roger	1.2a, 2.1
BIGIhEN (Roger)	1.2a, 1.3, 1.7, 2.1, 2.2
Causeway: Roger-Sugar	1.2a
REERE (Sugar)	1.2a, 1.7, 22, 24

* Artificial island south of BOKOBYAADAA, connected by causeway.

ENINMAN (Tare)	1.6, 1.2b, 18, 22, 23.1, EG&G
ENIIRIKKU (Uncle)	1.1a, 1.2b, 2.1, 2.2, 2.5a & b, 3.1
RUKOJI (Victor)	2.5a & b
CHIBERETE (William)	2.1, 2.2, 2.5a & b
ARRIIKAN (Yoke)	2.1, 2.2, 2.5a & b
OURUKAEN (Zebra)	2.1, 2.2, 2.5a & b, 11.2
BOKUAETOKUTOKU (Alfa)	2.1, 2.2
BOKORORYURU (Bravo)	2.1, 2.2, 2.5a & b

ENIWETOK ATOLL

Islands	Projects
BOGALLUA (Alice)	13.4, 13.5, 18
ELUGELAB (Flora)	18
ENGEBI (Janet)	18, EG&G
Reef: Lucy-Mary	2.1
BOKONAARAPPU (Mary)	2.1
Reef: Mary-Nancy	2.1
YAIRI (Nancy)	2.1
AITSU (Olive)	1.2a, 1.3, 1.7, 2.1
RUJORU (Pearl)	1.1a, 1.2a, 1.2b, 1.3, 1.7
EBERIRU (Ruby)	18, 22, 23.1, EG&G
AOMON (Sally)	22, 24
BIIJIRI (Tilda)	2.1, 18, 23.1, EG&G
ROJOA (Ursula)	2.1, EG&G
AARRANBIRU (Vera)	2.1
Reef: Vera-Wilma	2.1
PIIRAAI (Wilma)	?
RUNIT (Yvonne)	EG&G
PARRY (Elmer)	6.6, 7.1, 18, EG&G, 15.2
IGURIN (Glenn)	17.1

OFF-ATOLL EXPERIMENTAL REQUIREMENTS

1. Project 1.6 will operate portable tsunami recorders and microbarographs on Wake, Guam and Midway with support provided by CAA (Wake) and Naval Commanders on Guam and Midway.

2. Project 2.5a, by arrangement with the Air Weather Service Station, will locate fall-out collectors on Rongerik, Ponape, Kusaie, and Majuro.

3. Project 6.6 will operate Ionosphere Recorders on Rogerik Atoll with support provided by the Air Weather Service Station.

4. Project 17.1 will operate microbarograph stations on Kwajalein Atoll, with support provided by Commander, U. S. Naval Station, Kwajalein.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex D to CTG 7.1 Operation Plan No. 1-53

FIRING PARTY PLAN

1. Organization:

a. The arming and firing of the CASTLE weapons and devices will be the responsibility of the Firing Party, consisting of two teams - the Arming Team and the Firing Team. Although certain individuals will be assigned to both teams, the Arming Team and Firing Team are functionally separate organizations with different missions.

b. The Arming Team for the "dry weapons" will consist of the Firing Party Commander or other TU-6 representative, H. E. Grier or E. J. O'Keefe of TU-15, (plus possibly a TU-4 or TU-14 representative). For the "wet weapons" in which cryogenic systems are utilized, the Arming Team will be as for the "dry shots" except that 8 - 10 cryogenic engineers will be included as members of the Arming Team.

c. The Firing Team for all shots will consist of the Firing Party Commander or other TU-6 representatives, two members of TU-15, and one or two communications men. No additional personnel will be present in the Firing Control Room without specific authorization of the Firing Party Commander from the time he secures the room prior to the arming operation until the device is detonated.

2. Missions:

a. Firing Party: The mission of the Firing Party is to arm and detonate the CASTLE weapons and devices when directed by CJTF SEVEN.

b. Arming Team: The Arming Team has the mission of arming the CASTLE weapons and devices, to include making all final connections, test, adjustments and calibration to insure successful detonation at H-Hour.

c. Firing Team: The mission of the Firing Team is to operate the Firing Control Room at the Control Point and detonate the device at H-Hour. The Firing Team will disseminate appropriate information to other agencies on a "Need-to-Know" basis as required for their support of the Firing Team operation.

3. General Information:

a. All times indicated below are subject to change as directed by CJTF SEVEN.

b. The CASTLE weapons and devices will be installed and/or positioned according to the following schedule:

(1) (BRAVO Shot) B minus 5 days.

(2) (UNION Shot) U minus 4 days.

(3) (YANKEE Shot) Y minus 4 days.

(4) (ECHO Shot) E minus 1 day.

(5) (NECTAR Shot) N minus 4 days.

(6) (ROMEO Shot) R minus 4 days.

(7) (KOON Shot) K minus 1 day.

c. The internal security of the shot site passes to CTU-6 from CTG 7.2 with the arrival of the Firing Party Commander at shot site on minus 1 day. Operational control of the MP security detail, if present, is assumed by the Firing Party Commander at this time.

d. All personnel, except the Arming Team and others specifically authorized by the Firing Party Commander, will be evacuated from the shot island/or site about 1200, shot day minus 1.

e. Communications between the Firing Party Commander and CTG 7.1 aboard the USS ESTES or on Parry will be maintained by wire and/or radio for receiving command decisions pertaining to arming and firing.

f. In order that a wire communication line between the shot site and the command ship be utilized in the Bikini shots, the USS ESTES will be moored to one of the Eninman telephone buoys until such time that evacuation, except for the Arming Team, is complete.

g. The shot site exclusion area will be secured upon the arrival of the Firing Party Commander on shot day minus 1; after that time, only the Arming Team will be permitted to enter without specific permission of the Firing Party Commander. J-6 and the appropriate assembly task unit will have at least one representative each in the exclusion area at all times from the completion of assembly until the arrival of the Firing Party Commander, shot day minus 1. These representatives will be responsible for the cab and/or

barge (J-6) and the device (TU-4 or TU-14) until the arrival of the Firing Party Commander.

4. Specific Operations: The detailed responsibilities of the Firing Party Commander will be published, at a later date, in the form of an operatinal directive including chronological check lists (limited distribution).

5. Emergencies:

a. Misfire:

(1) The Disarming Group will consist of A. C. Graves, W. E. Ogle, J. C. Clark, H. E. Grier, B. J. O'Keefe, one representative from J-3, one or more representatives from TU-4 or TU-14, and others to be designated by the Firing Party Commander.

(2) No attempt will be made in this Annex to itemize potential causes of a misfire. If the weapon or device fails to detonate at Zero time, the Disarming Group will assemble at the Firing Control Point to analyze the situation and to select a disarming plan.

(3) While the Disarming Group is assembling at the Firing Control Point, the Firing Team will record all significant data from the control panels prior to power shut down.

(4) Only those personnel designated by the Firing Party Commander will be allowed at the Firing Control Point during disarming operations.

b. HE Only or Low Order Nuclear Detonation: This is essentially a Rad-Safe problem, hence CTU-7 will be responsible for supplying CTG 7.1 with sufficient information that the latter may make recommendations to CJTF SEVEN regarding precautionary measures and/or other actions to be taken.

6. Delay, "Stop", and/or Postponement Procedures:

a. The mechanism by which a shot may be delayed or stopped, and the limitations attendant thereto, are discussed in Annex-A, Concept of Operations.

b. Such action would be taken only by command of CJTF SEVEN, his decision being based upon information and recommendations made to him by the Scientific Director, CTG 7.1 and CTG 7.5.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex E to CTG 7.1 Operation Plan No. 1-53

COMMUNICATION PLAN

1. General:

a. Purpose: The purpose of this plan is to set forth communication operational facilities and instructions for TG 7.1 personnel for Operation CASTLE.

b. Basis for Plan: This plan is based upon requirements submitted by the various task units and projects of TG 7.1, CJTF SEVEN Operation Order No. 1-53 and Operation Plan No. 3-53, CJTF SEVEN Communication Operation Instruction 20-1, and various JANAP publications.

c. Effective Period: This plan is effective now for planning purposes and for TG 7.1 personnel in the Forward Area during Operation CASTLE.

d. Times of Origin: 24-hour clock time followed by MIKE (Local Eniwetok 180th meridian time) designator eliminating the use of a.m. and p.m. should be used on all local communication circuits in the Forward Area where message time-date-group is used. When originating messages to be sent outside the area, GCT (World or Zebra) time will be used.

2. Mission: The communication mission of CTG 7.1, is to:

a. Procure, install, operate, and maintain special electronic and communications equipment required by the Scientific Task Group.

b. Initiate voice-time broadcast for all elements of the Task Force.

c. Coordinate with responsible agencies the processing of TG 7.1 messages.

3. Installation, Issue, and Maintenance of Ashore Radio Sets, Telephones and Landlines:

a. General: CTG 7.5 (Holmes and Narver) is responsible for installation, issue, and maintenance of military type radio equipment, for the telephone and buoy cable systems on Eniwetok Atoll (less Eniwetok Island) for the telephone and buoy cable systems on Bikini Atoll. CTG 7.1 (Edgerton, Germeshausen and Grier, Inc.) is responsible for installation, issue and maintenance

of commercial type radio equipment. CTG 7.2 furnishes on custody to CTG 7.5 (Holmes and Narver) military radio sets and components, as authorized by CJTF SEVEN, necessary to meet military radio requirements of TG 7.1.

b. Issue of Radio Sets: Holmes and Narver Radio Shop, Parry, is authorized to issue on custody to designated TG 7.1 personnel military radio sets and EG&G is authorized to issue on custody to designated TG 7.1 personnel commercial radio sets.

c. Return of Radio Sets: TG 7.1 personnel signing for radio sets are responsible for return of all components in good condition. The TG 7.1 using agency will investigate and prepare a letter of explanation in the event of loss or serious damage to equipment which will necessitate formal survey proceedings. Subject letters will be addressed to CTG 7.1; copies to Holmes and Narver or EG&G as appropriate. Equipment shall be expeditiously returned when no longer required in connection with Operation CASTLE.

d. Operation and Care of Radio Sets: Instructions for the operation and care of sets will be issued concurrently with the sets. Holmes and Narver and EG&G radio technicians will brief personnel on operation of equipment at the time of issue.

e. Maintenance of Radio Sets: Reports of trouble on installed military radio sets should be directed by the using agency to the Holmes and Narver Radio Shop - Parry or Eninman, and reports of trouble on installed commercial radio sets should be directed by the using agency to the EG&G Radio Shop - Parry or Eninman. Defective portable radio equipment should be exchanged at the respective radio shops. In an emergency, or in cases where circuit trouble is not corrected satisfactorily, notify the Communications Officer, TG 7.1.

f. Telephone and Landlines: CTG 7.5 has been requested to install telephones and landlines to meet atoll requirements which have been submitted by TG 7.1 personnel and approved by CTG 7.1. Task Unit Commanders will notify TG 7.1 (J-6 Office) if submitted requirements have not been installed as requested. In event of telephone trouble, using agency will notify the nearest switchboard operator, and if corrective action has not been taken within 24 hours, the agency will notify TG 7.1 (J-6 Office).

g. Installation of New Communication Facilities: Requests for new communication facilities should be submitted directly to the TG 7.1 Communications Officer, who will process requirements and submit to the appropriate agency for implementation.

4. Task Group 7.1 Communications Facilities Afloat: CTG 7.3, as directed by CJTF SEVEN, is responsible for installation, maintenance, and operation of communication facilities afloat with the exception of commercial radio equipment which will be the responsibility of TG 7.1.

5. Outline of Communication Facilities Available and Security Classification of Facilities:

a. One permanent relay-crypto center at Eniwetok is to be installed, operated, and maintained by TG 7.2. Tributary stations serviced by this relay will include: Hq JTF SEVEN, TG 7.2, TG 7.3, USS ESTES, and other ships as required (i.e., CURTISS, CVE, LSD), and TG 7.4. Hq JTF SEVEN Communications Center, Parry Island, will provide these facilities for TG 7.1, TG 7.5, and TG 7.3 (ashore).

b. Crypto Center, Eniwetok, will be crypto guard for all above mentioned tributary stations except TG 7.3 (afloat). For handling of teletype traffic, up to and including SECRET, between forward and rear echelon Task Force elements, the following radio teletype circuits will be operated "ON-LINE" using SIGTOT with SAMSON (Synchronous mixer):

Circuit	Type
Eniwetok - Oahu	Full Duplex (1)
Eniwetok - Kwajalein	Full Duplex (1)
Eniwetok - Los Alamos	Full Duplex (1)
Eniwetok - AGC (USS ESTES)	Full Duplex (1)
Eniwetok - Bikini	Full Duplex (1)

Traffic not capable of being handled by means of "ON-LINE" facilities will be enciphered "OFF-LINE" prior to transmission. All TOP SECRET and RESTRICTED DATA traffic will be enciphered "OFF-LINE". This is necessary to meet AEC requirements, and in addition, terminal communications personnel are not, in all instances, TOP SECRET or "Q" cleared.

c. TG 7.1 (HF) Net Eniwetok - Bikini: The transmitting and receiving stations for this net will be located at the following points: Parry Island (Mail and Records Office) and Enyu Island (Building #70) with facilities for handling teletype messages and radio conversations at these locations and Eninman Island (Teletype Room, Building #502), and will be in operation seven days a week from 0730 to 2340 hours. EG&G will operate and maintain the TG 7.1 (HF) Voice and Teletype Net with the exception of the CRYPTO-SAMSON (Synchronous mixers) processing which will be the responsibility of CJTF-SEVEN with facilities located at Hq JTF SEVEN (Parry Island) and JTF SEVEN Communications Room (Building #70, Enyu Island).

(1) Teletype traffic, up to and including SECRET SECURITY INFORMATION will be sent and received at the above stations "ON-LINE" using SIGTOT with SAMSON (Synchronous mixers).

(2) TOP SECRET and RESTRICTED DATA traffic will be accepted for transmission over this net, but must be enciphered "OFF-LINE" prior to transmission. Information on sending and receiving this type traffic will be available at any of the three transmitting and receiving stations.

(3) Voice radio facilities will be available for emergency use on a closely controlled basis for unclassified traffic between the three transmitting and receiving stations.

(4) CONFERENCE FACILITIES: Radio Teletype Conferences can be held from two or three of the transmitting stations at any time. These conferences must be arranged in time to allow personnel required for the conference to be on station.

Example: Unclassified messages and classified messages up to and including SECRET SECURITY INFORMATION being sent from Parry to Eninman. Message from Parry to Eninman - Message will be typed out on the teletype machine in the Mail and Records Office on Parry - this message comes out on a tape at Hq JTF SEVEN Communications Room (Parry Island) - this tape is then fed into a teletype machine altered with special SAMSON equipment and transmitted at 65 words per minute over the TG 7.1 Net to a similar teletype machine in JTF SEVEN Communications Room, (Building #70 on Enyu Island) coming off as a tape - this tape is fed into a teletype machine with a tie-line to the Teletype Room (Building #502 on Eninman Island) at which point the message comes out in the clear (Total time for a 20-word message approximately 90 seconds).

(5) Message Delivery: Messages received on tape in the JTF SEVEN Communications Room (Building #70, Enyu) will be sent by tie-line to TG 7.1, Enyu or Eninman, coming out in the clear at those stations. The messages will be delivered to the addressee from these points by hand, radio or telephone in accordance with the security classification of the message.

(6) Use and Security Classification of the (HF) Net:

(a) Any TG 7.1 personnel can send message over this net by presenting the message verbally or in writing at one of the transmitting and receiving stations.

(b) This net will be in operation solely for TG 7.1 personnel for rapid and secure communications; however, security

classification will be a responsibility of the originator. The originator will consult the TG 7.1 Classification Officer if there exists doubt as to the proper classification.

(7) Back-Up: JTF SEVEN (HF) voice and teletype facilities located on Parry, Enyu and Eninman will be available as a back-up for the TG 7.1 Net on a 24-hour basis.

(8) Message Filing Procedure: Copies of messages will be filed at the transmitting and receiving station for reference purposes in numerical sequence. 24-hour clock time followed by MIKE (Local Eniwetok 180th Meridian time) designator, eliminating the use of a.m. and p.m., will be used on all local communication circuits in the Forward Area. It will be the responsibility of the operators at the three transmitting and receiving stations to place the proper designator on each message for filing purposes. Example of designator:

STATION	DESIGNATOR
Parry	061022M-E-1
Eninman	061022M-T-1
Enyu	061022M-N-1

d. Teletypewriter conference facilities will be available at Hq JTF SEVEN (Parry Island).

e. Wire telephone facilities cleared for conversations up to and including SECRET will be available at:

(1) Eniwetok Island (400 line dial exchange) with connecting service to other islands.

(2) Bikini Atoll (connecting service between necessary islands).

(3) Parry Island (270 line manual with connection service to other islands).

(4) Ship-shore buoy cable at Eniwetok, Parry, and Bikini.

(5) AN/TRC radio, limited to unclassified traffic, will be used to back-up for the foregoing facilities.

f. Voice radio facilities will be available on a closely controlled basis between the following points:

(1) Eniwetok - Bikini (HF) (JTF SEVEN) unclassified traffic.

(2) Eniwetok - Kwajalein (HF) (TG 7.4 controlled) unclassified traffic.

(3) Enyu (Firing Party) USS ESTES (VHF) (TOP SECRET SECURITY INFORMATION).

(4) Between ships (USH, VHF, AN/TRC and HF) unclassified.

(5) Ship-shore (VHF, AN/TRC and HF) (unclassified AN/TRC ties into local telephone system).

(6) TG 7.1 Commercial Radio Nets on Eniwetok, Bikini, and on selected ships and aircraft to provide for scientific and operation needs.

g. Circuit Monitoring: CJTF SEVEN Security Monitor Unit will monitor communication circuits to detect the use of improper procedures and violations of security measures.

h. Transmitter Power: For purposes of message security, transmitters with rated output of 20 or more watts will be operated at minimum consistent with reliable communications.

6. Message Preparation:

a. Drafting Text: The provisions of JANAP 121 will be followed in the preparation of all messages. Only authorized abbreviations as listed in JANAP 132 will be used. These publications are available in J-3 Operations Office, Parry and Eninman. Messages should be sent only where other means of communications will not suffice. The text should contain minimum wordage consistent with clear and concise delivery of information.

b. Classification: The originator will be responsible for classifying the respective messages. The originator will consult the TG 7.1 Classification Officer if there exists any doubt as to the proper classification.

c. Message Precedence: The assignment of precedence to a message is the responsibility of the originator and is determined by the subject matter of the text and the time factor involved. The precedence assigned a message by the originator does not indicate the action to be taken by the addressee or the precedence designation of a reply. Such instructions, if necessary, will be included in the text or in other special orders. In general, a deferred message will be delivered within 24 hours, a routine message within 12 or less hours, and a priority or above, within several hours. Messages, priority and above, received after normal working hours generally necessitate special provisions for decryption and delivery to action addressee. Refer to table

in paragraph nine when originating messages to Continental Unites States addressees.

7. Message Release (TG 7.1 Personnel):

a. Between Operations:

(1) All messages leaving the Forward Area between Operations until such time as the specially designated personnel of TG 7.1 for classification and content review have arrived in the Forward Area, will be submitted to the AEC Resident Engineer on Parry Island for approval and release. If it is found that this procedure creates a backlog of messages during the build-up phase, CTG 7.1 will designate sufficient TG 7.1 personnel by name to alleviate this condition.

(2) Robert H. Campbell has been designated Deputy CTG 7.1 (Forward Area) for the period on or about 28 October 1953 until such time as relieved by CTG 7.1. For this period all messages leaving the Forward Area must be examined for classification, content and involvement of other task units or agencies and released by R. H. Campbell.

b. During Operations:

(1) All messages leaving the Forward Area during Operations will be processed through Hq TG 7.1 on Parry Island. These messages must be examined for classification, content and involvement of other task units or agencies and released by one of the following designated persons:

Duncan Curry, Jr.	Walter Gibbins
Armand Kelly	H. K. Gilbert
Duane Sewell	Neil Kingsley

(2) If there is any doubt as to proper classification, the TG 7.1 Classification Officer should be consulted.

(3) In order that Task Unit Commanders and heads of staff sections may properly control all outgoing TWXs of their units and to assure the reviewers listed above that dispatches have been cleared by responsible personnel in the originating group, each organization will be required to submit to CTG 7.1, Attention J-1, lists of one or more of their individuals who will be authorized to clear messages originating in their units.

c. Eniwetok-Bikini Messages Between and During Operations: For messages between Eniwetok and Bikini anyone in TG 7.1 may act as releasing authority as long as the message does not leave the Forward Area. The senior J-1 or J-3 representative will be authorized to establish message precedence if required by heavy traffic. For requirements on other Task Groups (for planes, boats, etc.) they should be submitted to the appropriate staff section representative rather than sent directly to the Task Group concerned.

d. POST-SHOT MESSAGES WHICH RELEASE DATA: ALL POST-SHOT MESSAGES WHICH RELEASE DATA, REGARDLESS OF THEIR DESTINATION, WILL BE RELEASED PERSONALLY BY CTG 7.1.

8. Message Filing and Delivery: The Mail and Records Office, located in the TG 7.1 Administration Building, Parry and Eninman, will receive outgoing messages for delivery and be responsible for delivery of incoming messages. Messages should be released by appropriate releasing authority prior to filing with Mail and Records Office. A station file of all messages sent and received through the Mail and Records Office shall be maintained by that office.

9. Comparison Time Chart for Eniwetok and Los Alamos:

Eniwetok (Zone "M" minus 12)		Greenwich (Zone "Z")		Los Alamos (Mountain Standard) (Zone "T" plus 7)	
Day	Time	Day	Time	Day	Time
5th	1300 M	5th	0100 Z	4th	1800 T

Add or subtract from above times to compute times required.

10. Physical Security: Holders of classified messages and other materials of a classified nature are responsible for proper handling, safe-keeping, and destruction, when necessary or desirable, of such material.

11. Voice Calls: Where only one voice call is assigned to a radio net, the station controlling the net should assign station numbers to each station on the net, with the controlling station being assigned the number one. The voice call could then consist of the net call with the station number following.

12. Special Voice Codes: Special voice codes to transmit classified information over TG 7.1 voice circuits will not be used unless such codes are approved by CTG 7.1 and CJTF SEVEN.

13. Voice Procedure: Standard radio telephone procedure, as prescribed in JANAP 125, should be used. The Communications Officer, TG 7.1, will issue copies of JANAP 125 upon request.

14. Phonetic Alphabet: When necessary to identify any letter over the telephone or radio net, the following standard phonetic alphabet may be used:

Letter	Spoken	Letter	Spoken	Letter	Spoken
A	Able	J	Jig	S	Sugar
B	Baker	K	King	T	Tare
C	Charlie	L	Love	U	Uncle
D	Dog	M	Mike	V	Victor
E	Easy	N	Nan	W	William
F	Fox	O	Oboe	X	Xray
G	George	P	Peter	Y	Yoke
H	How	Q	Queen	Z	Zebra
I	Item	R	Roger		

15. Radio Interference:

a. TG 7.1 personnel operating circuits with serious interference notify Communications Officer, TG 7.1.

b. Responsible personnel must insure radio sets are operating on or very close to assigned frequencies.

c. Normal sources of radio interference are other transmitters, ignition systems in motor vehicles, power units, air compressors, refrigeration plants, motor boats, aircraft, other spark generating devices and atmospherics. Shielding, bondings, suppressors and capacitors must be properly installed on spark generating devices.

16. Boats: All TG 7.5 boats and DUKWs, and TG 7.3 boats required to operate in remote areas of Eniwetok or Bikini Lagoons should be provided with a means of emergency communications. Boats in this category which are not radio equipped will be provided with Very Pistols or Signal Rockets.

17. Personal Radios: Personal radio receivers will be repaired providing facilities are available and no expense to the Government is involved.

18. Telephone Procedure:

a. The telephone operators will give prompt attention to urgent calls

as defined in the Atoll Telephone Directories using "break-in" procedure on calls in progress, if necessary, to complete the desired connection.

b. When a voice radio circuit is used as a part of the telephone system, the operator will, in each instance, advise the subscriber: "This is a radio circuit--classified information will not be discussed".

c. CTG 7.5 will consolidate and issue Atoll Telephone Directories, which have been prepared by the Task Groups. A copy will be distributed to all TG 7.1 telephone users and spare copies maintained in the Operations Office TG 7.1, on Parry.

19. Personal Message Service:

a. Personal Emergency (Class "E") and (Expeditionary Force) Messages (CANNED) which meet requirements will be accepted for delivery by the Communications Division (J-5) of JTF SEVEN on Parry and Eninman. These messages will be filed prepaid and transmitted over military circuit to Honolulu for commercial refile.

b. Afloat, Personal Emergency type messages must be released by the Commanding Officer of the ship or his authorized representative. Consult Communication Watch Officer of vessel in which embarked.

c. The only acceptable subjects for transmission under Personal Emergency (Class "E") privilege are:

(1) Matter of life and death, and serious illness.

(2) Matters of personal arrangements not of a current nature.

(3) Occasional greetings on important personal anniversaries.

20. Guard Mail or Armed Messenger Mail: The Task Force Guard Mail Center will be located in the Hq JTF SEVEN Building (Parry), and a branch Task Force Guard Mail Center in the J-1 Office(Building #502) on Eninman. Each Task Group located on Eniwetok and Bikini Atolls will maintain a subordinate Guard Mail Center and make regularly scheduled trips to the Task Force Guard Mail Centers to deliver and pick up guard mail. TG 7.1 Guard Mail Center will be located in the Mail and Records Office on Parry and J-1 Office (Building #502, Eninman). This office will effect delivery of incoming guard mail through the appropriate Parry and Eninman offices of the addressees and receive outgoing guard mail from these offices. TG 7.1 personnel embarked in ships may use the ship's Unit, or Office, and name of addressee. Where appropriate the island locations should be indicated. Offices having special guard mail problems consult with the TG 7.1 J-1 Office (Parry) which will issue detailed guard mail instructions as necessary.

21. Ship based Communications:

a. All messages originated by TG 7.1 personnel for release to addressees outside the immediate Eniwetok-Bikini Area must be processed in accordance with paragraph 7 of this plan.

b. CTG 7.1 will designate a communications representative for each vessel on which TG 7.1 personnel will be embarked. These representatives will perform the following functions:

(1) Liaison with the ship's Communications Officer on communication matters affecting TG 7.1.

(2) Processing and releasing into the ship's communication channel official outgoing TG 7.1 messages originated by TG 7.1 personnel embarked.

(3) Delivering incoming TG 7.1 messages to action and information addressees.

(4) Insuring that all official TG 7.1 messages are processed through the TG 7.1 Administrative Office on the ship and a file copy maintained, and that this file is delivered to TG 7.1 Mail and Records Office after debarkation.

(5) Insuring that a proper watch is maintained on all TG 7.1 voice circuits terminating in the ship and that traffic is expeditiously and accurately handled and recorded.

22. Communications During Shot Times: All circuits and radio frequencies to be used during shot times will be active during rehearsal times in order that interference sources can be located and corrective action taken. Particular attention will be directed to monitoring vital frequencies such as firing detent, telemetering and certain voice circuit frequencies. Personnel operating circuits or controlling devices employing frequencies will submit immediate report to CTG 7.1 on detecting a harmful level of interference.

23. Timing Signals:

a. Local Voice Time Broadcast: Voice broadcast notification of shot times will be initiated from the Firing Control Point on Enyu (all shots except No. 4) and Parry (all shots). This broadcast will be transmitted on frequencies of 154.57 and 126.18 MCS. Ships in the area will retransmit to airborne elements. Present plans are to broadcast time signals at times; minus 3 hours, minus 2 hours, minus 1 hour, minus 45 minutes, minus 30 minutes, minus 20 minutes, minus 15 minutes, minus 10 minutes, minus 5 minutes, minus 1 minute, minus 45 seconds, minus 30 seconds, minus 15 seconds, minus 10 seconds, and each second thereafter to shot time.

b. Long Range Time Signals: CTG 7.1 will handle all Long Range Time Signals. These signals will be handled by using world time. Sequence timers located on Bikini and Eniwetok Atolls will be started simultaneously and provide for projects located on those atolls. All off-site projects desiring time signals will use world time. A system of code words to announce shot delays and new firing times will be distributed to interested projects.

24. Message Delivery Within Continental United States: Activities within the Continental United States participating in CASTLE, anticipating high precedence messages originating in the Forward Area for delivery after close of normal office hours, should furnish the TG 7.1 Communications Officer with the working hours of the communication facility serving the activity and the names and telephone numbers of several persons who may be contacted to activate the facility for receipt of after-hour traffic.

25. Guiding Principles:

a. No radio circuit or telephone circuit having a radio link is approved for transmittion of classified information in the clear.

b. All TOP SECRET and RESTRICTED DATA traffic will be enciphered "OFF-LINE" prior to transmission.

c. Code names will not be assigned to individuals. The use of personal names on voice radio circuits is authorized.

d. All Task Force operational type traffic will be routed through Task Force communications facilities; except that contact and amplifying reports may be transmitted over Navy circuits.

e. Personal message service will be available to all personnel in the Eniwetok-Bikini area.

f. Radio Teletype facilities will be used in lieu of voice radio whenever practicable for communication security reasons.

g. The old phonetic alphabet (Able, Baker, Charlie, etc.) will be used during CASTLE.

h. COI's issued by JTF SEVEN and this Hq will supplement instructions contained herein.

i. No cover or deception plan is to be employed except for deception offered by the rehearsals and for such traffic security as is provided by the use of SIGTOT-SAMSON equipment or RATT circuits.

j. No requirements for radio silence are imposed on JTF SEVEN radio circuits. Commanders of Task Groups may impose radio silence as required for accomplishment of their mission.

Appendices:

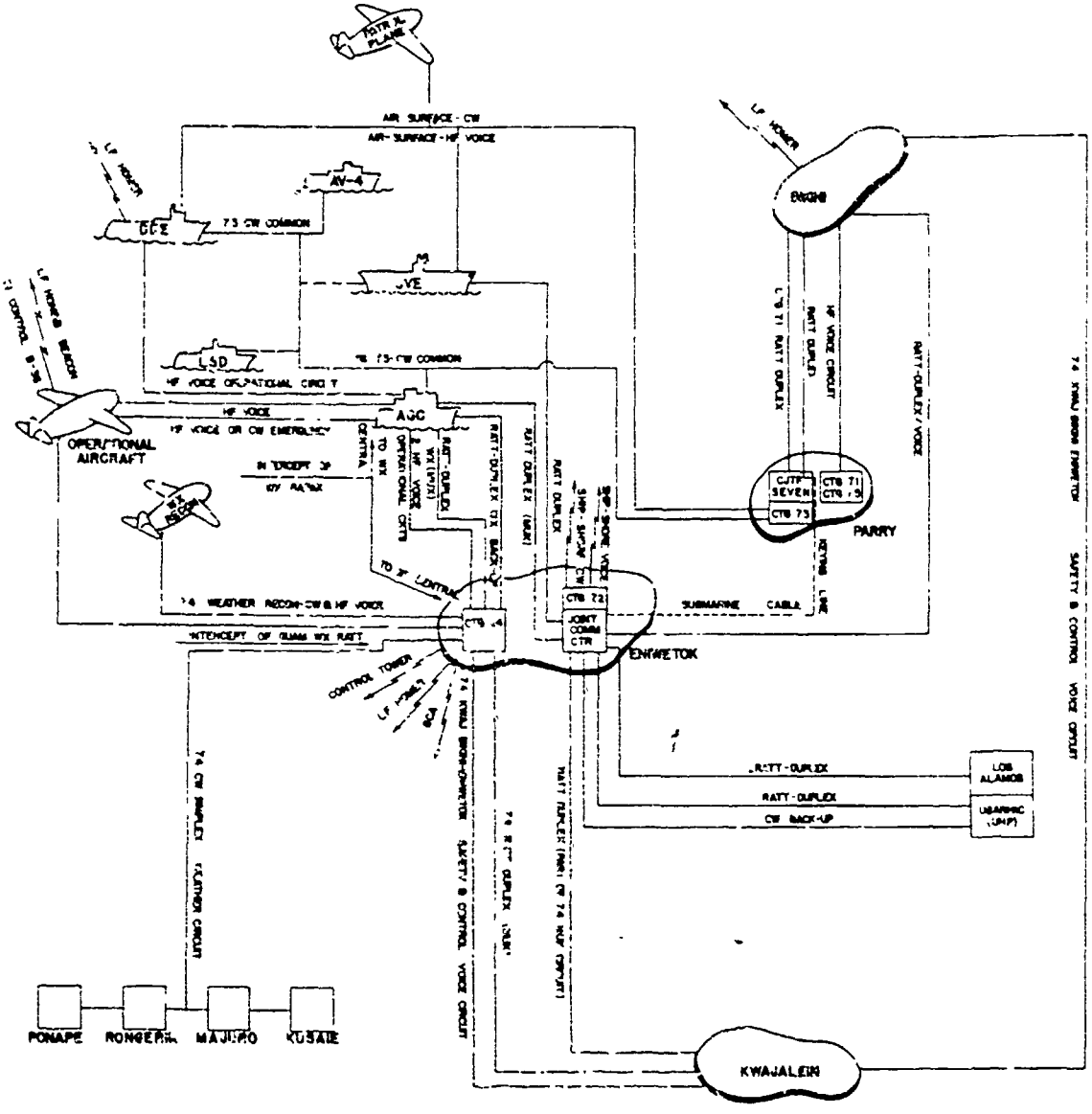
I. Principal Task Force HF Radio Circuits

II. JTF SEVEN Teletype Network.

Appendix I to Annex E
Communication Plan, CTG 7.1 Operation Plan No. 1-53

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

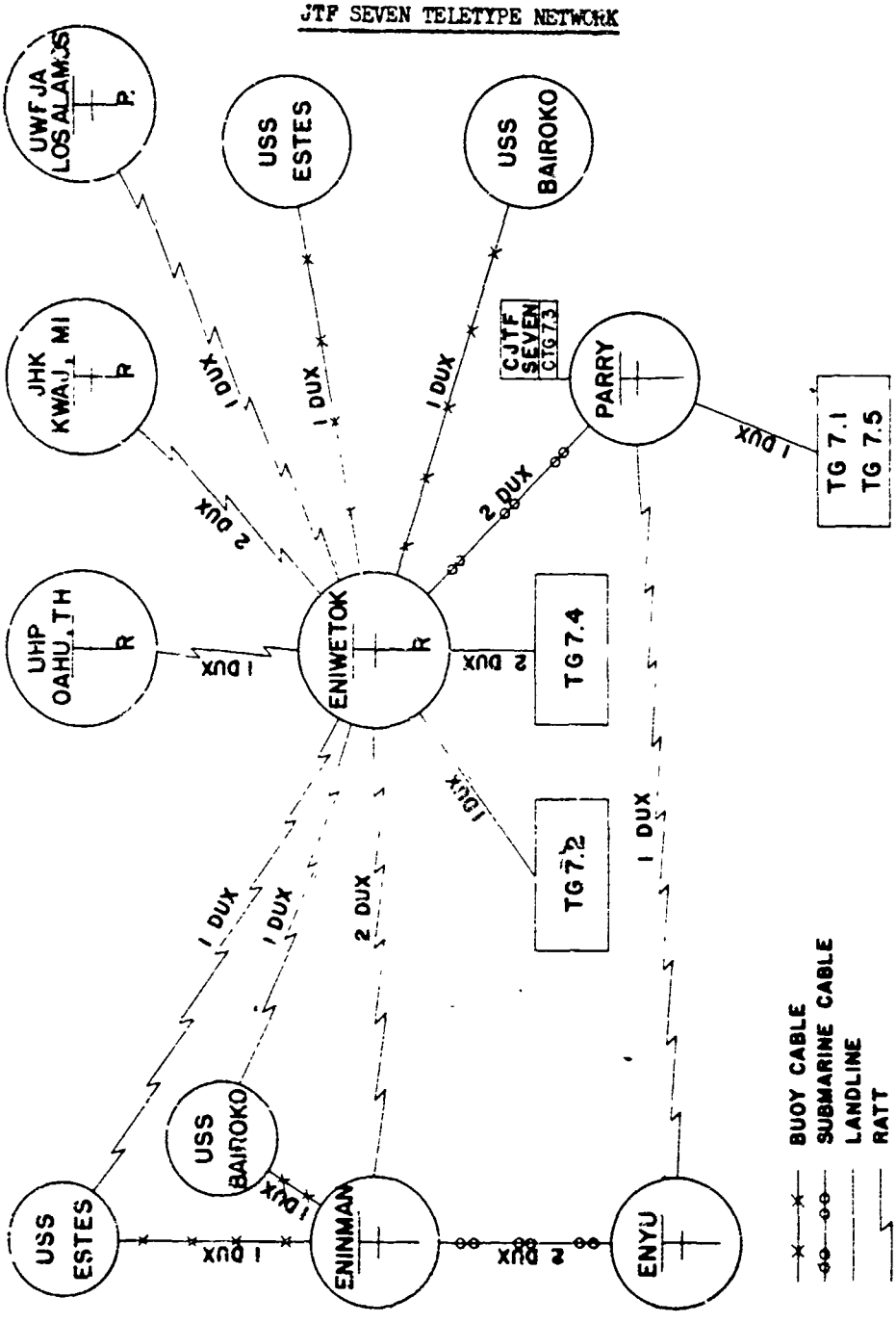
PRINCIPAL TASK FORCE HF RADIO CIRCUITS



Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix II to Annex E
Communication Plan, CTG 7.1 Operation Plan No. 1-53

JTF SEVEN TELETYPE NETWORK



Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex F to CTG 7.1 Operation Plan No. 1-53

RADIOLOGICAL SAFETY

1. Command Responsibilities:

a. Radiological safety is a command responsibility of all Project Leaders, Program Directors, and Task Unit Commanders.

b. CTG 7.1:

(1) Specifies measures necessary to insure the radiological safety of Task Group personnel.

(2) Establishes a radiological safety unit (TU-7) within TG 7.1 to accomplish the services of radiological safety specified in Annex N to CJTF SEVEN Operation Plan No. 3-53.

(3) Provides radiological safety facilities at Eniwetok and Bikini Atolls during the on-site operational phases.

c. TU-7 provides for:

(1) Radiological protection of TG 7.1 and TG 7.5 personnel.

(2) Maintenance of Task Group operational efficiency in the presence of radiological hazards.

(3) Technical assistance to Task Force and Task Group Commanders, Program Directors, and Project Leaders on matters pertaining to radiation.

2. Task Unit Functions: TU-7, the major technical radiological safety unit, performs the following radiological safety services at Eniwetok and Bikini Atolls:

a. Supervision of all ground monitoring services associated with scientific missions.

b. Laboratory services and technical assistance to all Task Groups to include:

(1) Procurement and distribution of film badges and specified supplementary items of personnel radiological safety equipment.

(2) Development of film and interpretation of film readings.

(3) Maintenance and distribution of radiation exposure records.

(4) Establishment of instrument repair storage facilities. (Calibration sources and limited supplies of RADIAC replacement parts will be maintained at Eniwetok Atoll.)

(5) Monitoring of food, water, and soil samples.

(6) Laboratory analysis of fall-out particulates as a means of evaluating internal health hazards in the living areas.

(7) Provision of appropriate instructions for the removal, packaging, and shipment of radioactive sources and samples.

(8) Provision of qualified personnel to inspect radiologically contaminated items and certify destruction, disposal, and unserviceability of such items as required.

c. Provision of personnel and equipment and protective clothing for TG's 7.1, 7.5 and Hq JTF SEVEN.

d. Procurement of radiological safety equipment and protective clothing for TG's 7.1, 7.5 and Hq JTF SEVEN.

e. Procurement and distribution of 4.027 density goggles to specified personnel of the Task Force.

f. Provision of radiological safety surface situation maps to CJTF SEVEN, Scientific Director, and Task Group Commanders.

g. Integration of the TG 7.5 Rad-Safe Organization during the overseas phase of operation. Personnel will assist CTU-7 in operations commensurate with functions of the TG 7.5 Rad-Safe Organization during the interim periods.

h. Assist CTG 7.3 to the extent of providing equipment, personnel, and supervision for rough operational decontamination of aircraft ashore at Bikini Atoll.

Appendix:

I. Radiological Safety Regulations

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix I to Annex F
Radiological Safety, CTG 7.1 Operation Plan No. 1-53

RADIOLOGICAL SAFETY REGULATIONS

1. The Maximum Permissible Exposure (MPE) for personnel involved in this operation is 3.9 roentgens, gamma only, unless reduced because of previous or anticipated future exposure. All exposure to external gamma radiation will be regarded as total body irradiation.

2. Laboratory work involving the handling of radioactive materials will be guided by current directives of the Atomic Energy Commission.

3. All atoll land and lagoon areas in the vicinity of the detonations will be considered contaminated after the blast until cleared for operations by CJTF SEVEN. Entry to and from contaminated areas will be via Rad-Safe check points.

4. Rad-Safe monitors assigned to individuals or groups working in contaminated areas or with contaminated equipment during recovery operations will act in an advisory capacity to keep the recovery party leader informed of radiation intensities at all times. The recovery leader is expected to accept this advice and act accordingly. It is the responsibility of both the leader and the members of the recovery party to adhere to the limits established in these regulations.

5. Proposed use and time of arrival of radioactive sources at Pacific Proving Ground will be reported to the Control Officer of the Rad-Safe Unit.

6. No radioactive material will be removed from the test site except as authorized in experimental program plans. Unauthorized entry into radioactive areas is prohibited.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex G to CTG 7.1 Operation Plan No. 1-53

TECHNICAL PHOTOGRAPHY

1. General:

a. Technical photography, as accomplished by TU-8, will include both ground and low aerial photography. It will utilize still and motion picture equipment, and both color and black and white film. It will be distinct from the timed and/or scientific photography accomplished by TU-15 in conjunction with selected scientific projects, in that TU-8 will utilize no timing signals. More generally, none of the TU-8 photography will be referenced, time-wise, to a shot Zero time.

b. The TU-8 photographic crews will be stationed on Parry Island (Building #210). A small TU-8 staff will be maintained on Enirman during the Bikini Operations.

c. The provisions of JTF SEVEN Security Memo, Photographic Material, apply for all control and accountability of TG 7.1 photographic material effected by TU-8.

2. Sensitized Material Control Procedures:

a. CTU-8 is responsible for control and storage of all sensitized material (film and paper) used by TG 7.1, except for control of TU-15 and that utilized for Non-Technical Photography by TU-9.

b. The following control procedure will be in effect:

(1) Upon its arrival at Eniwetok Atoll, sensitized material will be delivered to Building #210, Parry Island, where it will be:

(a) Logged in by container units.

(b) Numbered by container units.

(c) Placed in refrigerated storage, in numbered bins.

(2) Complete container units of sensitized material may be signed out by authorized personnel (see paragraph 3a(1)

below) at any time. A log will be kept in order to maintain a running inventory of all material by container unit.

(3) As part of the "roll-up" operation, a complete inventory by container unit, listing all deliveries and film stock remaining in storage, will be maintained for survey purposes.

c. All film will be catalogued and marked in accordance with a standard identification code established by CTU-8. Information as to the details of this code can be obtained from the TU-8 Office (Building #210, Parry Island).

3. Operational Procedures:

a. Authority:

(1) CTU-8 will maintain a list of personnel authorized to approve Technical Photography Service requests, receive finished prints, and sign out sensitized material. This list will include:

(a) CTG 7.1.

(b) All Task Unit Commanders of TG 7.1.

(c) All Scientific Program Directors and Project Officers of TU-1, TU-12 and TU-13.

(d) Others specifically designated by CTG 7.1, in written memoranda to CTU-8.

b. Negatives:

(1) Agencies requiring Technical Photography service will submit requests directly to the TU-8 Office. Such requests will include the following information:

(a) Agency, and Scientific Project Number if applicable, submitting request.

(b) Name of person authorizing request.

(c) Location and time at which photography must be accomplished.

(d) Type of photography to be accomplished.

(e) Other pertinent information as applicable.

(2) A TU-8 Photography Job Order will be written upon the receipt of each properly authorized request; a duplicate copy being prepared for the requesting agency. A copy of the job order will accompany the TU-8 photographic team to the job site, to serve as an instruction sheet.

(3) If practicable, the requestor (or an authorized representative) will either accompany the photographic team to, or meet it at, the job site. Such a procedure will insure that detailed and specific instructions are carried out properly.

(a) In the event that the job site is within a contaminated area, it is mandatory that the requestor (or an authorized representative) accompany the photographic team at all times.

(4) While accomplishing required photography, the TU-8 Photographic Team will prepare a caption (Photographic Data) sheet for each negative, the yellow copy of which will be furnished the requestor for his use in subsequent identification and ordering of prints.

(a) A sample of the standard caption sheet form is included as Appendix I to this Annex.

c. Prints:

(1) After completion of film processing, two contact prints of each negative will be made as "proofs". Subsequent to their proper classification (see paragraph 4, below), these prints will be available in the TU-8 files.

(a) A complete file of both negatives and prints will be maintained, in order that both a positive and a negative of each photograph will be available for inspection at all times, and one copy to the original requestor.

(2) Agencies requiring copies and/or enlargements of prints will submit a request for same to the TU-8 Office directly. Such requests will include the following information:

(a) Agency, and Scientific Project Number if applicable, submitting request.

(b) Name of person authorizing request.

(c) Identification number of negatives, prints of which are being requested. This number appears at top left hand corner of caption sheet - see Appendix I.

(d) Quantity and sizes of prints requested.

(e) Other pertinent information as applicable.

(3) A TU-8 Photography Job Order will be written upon the receipt of each properly authorized request; a duplicate copy being prepared for the requesting agency.

4. Classification:

a. All exposed film will be handled as SECRET RESTRICTED DATA until classified by the Classification Officer, TG 7.1.

b. One print of each negative will be submitted to the Classification Officer for proper classification grading. After classification, all such prints will be returned to TU-8. No print of a given negative will be distributed until subsequent to the classification marking of the negative and all existent prints of same.

5. Dissemination of Finished Prints: CTU-8 will disseminate finished prints as requested, contingent upon the provisions of paragraph 3a(1), above.

6. Additional Services:

a. Processing of Film Exposed by Other Agencies:

(1) TU-8 will, upon properly authorized request, process film that has been exposed by other agencies. This service is designed specifically to satisfy scientific project requirements, and it precludes the necessity of maintaining a large number of individual small photographic laboratories.

(2) Agencies desiring to avail themselves of this service will deliver the exposed film, in its original container(s) if practicable, to CTU-8. The film will be accompanied by a request for processing, to include the following information:

(a) Agency, and Scientific Project Number if applicable, submitting request.

(b) Name of person authorizing request.

(c) Film identification code number. No film will be accepted unless control numbers have been applied. (See paragraph 2, above).

(d) Special instructions for processing, if applicable.

(e) Time at which requestor desires delivery of processed film.

(3) A TU-8 Job Order will be written utilizing the above information, a duplicate copy of which is retained by the requestor. Upon completion of the work outlined in the Job Order, the requestor will be so notified. Subsequent to such notification, the requestor may sign the processed film out at any time (as SECRET RESTRICTED DATA; see paragraph 4a, above).

(4) If a heavy post-shot work load makes it necessary, CTU-8 will utilize a priority system to assure fast processing service to those for which such service is essential. CTG 7.1 will be requested to establish the required priorities.

b. Destruction of Unsuitable Material:

(1) CTU-8 will maintain an unsuitable material destruction service for all agencies. This applies to exposed and unprocessed film, processed film, and finished prints as required.

(2) Agencies wishing to avail themselves of this service will deliver such unsuitable material to the TU-8 Office, in its original container(s) if applicable. CTU-8 will release such agencies from responsibility for the material by signature, and subsequently take appropriate action to destroy the material in accordance with existent security regulations.

(3) Unsuitable raw stock will be delivered to J-4, TG 7.1.

c. Exchange of Photography between AFSWP and AEC: The exchange of photography between these agencies will be governed by "Agreement Between Armed Forces Special Weapons Project and Atomic Energy Commission Regarding Exchange of Photography From Atomic Weapons Tests". This agreement delineates the responsibilities of AFSWP and AEC with regard to the mutual exchange of photography accomplished at Atomic Weapons Tests and outlines methods for

implementing this agreement particularly as regards the selection, distribution, storage, classification, reproduction and funding thereof.

7. Post-CASTLE Service: Agencies requiring prints, after the deactivation of TU-8, as such, will submit requests for same to the J-Division Office, LASL. Such requests will include the information outlined in paragraph 3c(2), above. Upon authorization by the J-Division Leader, or his duly authorized representative, these requests will be transmitted to the Graphic Arts Group, LASL.

8. Disposition of Negatives: Procedures for final disposition of negatives will be outlined in an Operational Directive to be issued by CTG 7.1 at a later date.

Appendix:

I. Sample Caption Sheet

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix I to Annex G
Technical Photography, CTG 7.1 Operation Plan No. 1-53

SAMPLE CAPTION SHEET

PHOTOGRAPHIC
DATA SHEET

NEG. NO.	DATE:
CLASSIFICATION:	PROJECT NO:
FIELD REPRESENTATIVE:	PHOTOGRAPHER:

TITLE AND REMARKS

INSERT PROPER
CLASSIFICATION

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex H to CTG 7.1 Operation Plan No. 1-53

NON-TECHNICAL PHOTOGRAPHY

1. General:

a. Operation CASTLE will be recorded on film, still and motion picture as a basis for:

(1) A Task Force Commander's visual report to the AEC and the JCS of Operation CASTLE.

(2) A short film (so-called "quickies") to be available as soon after each shot as possible.

(3) Additional footage required in the production of a film depicting the entire history of the development of thermonuclear weapons.

(4) A SECRET RESTRICTED DATA film (approximately 45 minutes) depicting Armed Forces participation in CASTLE.

(5) A photographic record for historical purposes.

(6) An unclassified version of (1) above (approximately 15 minutes).

b. The JCS have established a military requirement for the USAF Lookout Mountain Laboratory (LML) to support CASTLE, and Hq USAF has approved its employment to support a non-technical photography unit in TG 7.1.

2. Photographic Requirements: Sufficient motion picture and still coverage of events will be accomplished to produce the following:

a. CJTF SEVEN visual report to the AEC and JCS. This film, approximately 45-minutes duration, will contain only a limited amount of technical details concerning thermonuclear development and will be classified not higher than SECRET. The extent of technical coverage will be governed by the classification conditions at the time the film is produced. It will be tailored for wide distribution to persons concerned with supporting the AEC but who do not require extensive technical information (Congressmen, Bureau of the Budget officials, etc.).

b. A short film produced after each shot to provide quick visual information to Commissioners and other AEC personnel. These will be tailored to provide more detailed information than the customary post-shot statement of yield and degree of success normally provides. Speed of production will be the keynote. No classification limitation will be placed on these films.

c. Additional footage required in the later production by AEC of a film depicting the entire history of the development of thermonuclear weapons. No classification limitations will be placed on this footage.

d. A SECRET RESTRICTED DATA film of approximately 45-minute duration, depicting Armed Forces participation in CASTLE.

e. Complete still coverage of the operation, including photographs for reproduction in the history of the operation, as required.

f. An unclassified version of (a) above (approximately 15 minutes).

3. Mission - TU-9 through the facilities of LML:

a. Plans the non-technical photography program for CASTLE to meet the aforesaid requirements.

b. Prepares script for the motion picture requirements.

c. Procures and stores photographic supplies and equipment required to conduct the non-technical photography program.

d. Executes the non-technical photography program in accordance with approved plans and scripts and produces required motion picture and still photography.

e. In coordination with the Classification Officer, TG 7.1, assigns proper security classification to all operations, equipment, supplies and pictures of the non-technical photography program.

f. Safeguards all exposed film in accordance with proper security classification. Original negatives and library prints of all non-technical films will be stored at LML.

g. Coordinates non-technical photography operations with technical photography operations as practicable, particularly in the common use of support services.

h. Through J-3, coordinates photographic operations with operations of the various Task Units and Projects.

i. Provides photographic support of specified scientific projects.

j. Performs any other tasks assigned by CTG 7.1.

4. Classification and Security of Film: All exposed film will be handled as SECRET RESTRICTED DATA until classified by the Classification Officer, TG 7.1. The provisions of JTF SEVEN Security Memo, Photographic Material, apply for all control and accountability of TG 7.1 photographic material effected by TU-9.

5. Distribution and Control:

a. The exchange of photography between AFSWP and AEC will be governed by "Agreement Between Armed Forces Special Weapons Project and Atomic Energy Commission Regarding Exchange of Photography From Atomic Weapons Tests".

(1) Film produced in accordance with AEC requirements will be distributed and controlled by the Division of Military Application (DMA), USAEC, in conformity with existing AEC policies and procedures at the time the film is edited.

(2) Film produced in accordance with DOD requirements will be distributed and controlled by AFSWP in conformity with existing DOD policies and procedures at the time the film is edited.

b. Complete cataloging and indexing of all film exposed in the operation, both still photographs and motion picture footage, will be accomplished. Cataloging will be accomplished by the microfilm process, with one copy of the final catalog distributed to the AEC, Los Alamos and one copy to AFSWP. The DMA and AFSWP will be the coordinating authority for additional prints required by the AEC and DOD agencies, respectively, for any stock footage shown in the catalog.

6. Operational Procedures:

a. Script: A preliminary first draft technical motion picture script of requested motion pictures will be prepared and coordinated with all appropriate agencies such as the CJTF SEVEN, AEC, TG7.1, DWET and other agencies as directed by CJTF SEVEN to insure technical accuracy and completeness of the approved script prior to photography in the Forward Area.

b. Zone of Interior Photography: Photographic crews will be dispatched from LML utilizing TU-9 personnel for the purpose of securing photographic coverage as called for in approved scripts prior to and during operational phases of JTF SEVEN.

c. Overseas Photography: Overseas photography will be accomplished beginning on or about 15 November and will continue throughout the entire period of Operation CASTLE. Camera crews (aerial, ground and still) will be dispatched as directed by CTU-9.

d. Shooting Orders: Shooting orders will be prepared for each scene of the approved script by TU-9 and will be entered on a master-control board for up-to-date daily progress. Caption sheets on all film exposed will be prepared and forwarded to the processing laboratories as directed by CTU-9 to aid in review, identification and cataloging.

e. Film Processing: Color motion picture film exposed will be couriered to LML for processing, printing, review and editing. 16mm black and white film, black and white film packs, 4 x 5 color film and all aerial roll film will be couriered to Honolulu where it will be processed by LML TU-9 personnel at the Wheeler Field Processing Laboratory.

f. Security Control: Unexposed film will be marked for accountability prior to transportation overseas as directed by JTF SEVEN. Inasmuch as the security of all exposed film is the responsibility of CTU-9 all film exposed in the ZI and Forward Area will be handled with proper security classification until reviewed and classified by Classification Officer TG 7.1.

g. Aircraft: To accomplish aerial photographic requirements, both still and motion picture, as requested by CJTF SEVEN, proficiency flights to establish the degree of training of aerial photographic crews will be scheduled at the discretion of CTU-9 consistent with the number of aircraft in commission. Every effort will be made to schedule training flights in conjunction with aerial missions to be flown prior to shot day.

h. Radiation Monitors: Radiation monitors for photographic aircraft will be designated or supplied by the CTG 7.4. Monitors for TU-9 remote installation film retrieving will be supplied by CTG 7.1.

i. Equipment: All necessary photographic equipment required by the unit, aerial motion picture and still, will be procured, stored and utilized by TU-9 (except the RB-36 flyaway kit which is to be supplied by Strategic Air Command, but operated under the direction of TU-9 personnel). Special projects requiring modification of motion picture and still equipment will be accomplished by TU-9 prior to movement to Forward Area.

j. Communications: As approved by the Communications Officer of JTF SEVEN, radio equipment will be installed in camera vehicles and utilized by TU-9, enabling island to island communication between the Operations Section of TU-9 and photographic crews on location. Base stations will be established at the TU-9 Operations Section at Parry and Bikini Islands.

k. Transportation: Transportation, consisting of modified weapons carriers and one DUKW for island to island photographic assignments, in the Forward Area for photographic crews will be supplied by TU-9. In addition to the above transportation, three vehicles (one carryall, one pick-up truck and one sedan) will be provided by the CJTF SEVEN for the Wheeler Field Processing Laboratory.

l. Courier Service: A special courier will be dispatched from the Forward Area to Honolulu on each "D" Day about plus eight hours. This courier will remain at Wheeler Field Processing Laboratory until the film has been developed and printed and will return same to the Forward Area. All color motion picture film exposed in the Forward Area will be couriered to IML, Hollywood, California, for processing and printing.

m. Technical Advisors: Technical advisors required in the production of all photography (including aerial mapping) requested by CJTF SEVEN will be supplied by CJTF SEVEN or his designated representatives.

7. Logistics and Administration:

a. Every precaution will be exercised to safeguard photographic equipment and supplies to protect them from damage, deterioration and waste.

b. Strict economy will be practiced in the use of film and other photographic materials and critical supplies, as well as in utilization of personnel and means of transportation.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex I to CTG 7.1 Operation Plan No. 1-53

INTER-ATOLL TRANSPORTATION

1. General:

a. Air: CTG 7.4 will provide airlift between Eniwetok and Bikini Atolls. Four C-47 aircraft and two PBM-5A amphibious aircraft will furnish regularly scheduled personnel and cargo lift between Eniwetok Island and Eninman Island until _____ (KOON) minus one day, Rad-Safe conditions permitting, when the C-47 aircraft will be withdrawn from inter-atoll service. Following _____ or in the event Eninman Airstrip is non-operable due to contamination, inter-atoll service will be provided by PBM-5A aircraft, taking off from Eniwetok Island Airstrip and landing in Bikini Lagoon. The schedules of aircraft will be published in the Forward Area. For planning purposes, prior to _____ three round trip flights daily by C-47's and one or two round trip flights by PBM-5A appear feasible.

b. Surface: CTG 7.3 will provide surface lift between Eniwetok and Bikini Atolls. Two LST's will furnish regularly scheduled cargo and passenger lifts between Parry Island Beach alongside the Freight Pier and Eninman Island Landing Ramp. For planning purposes, two round trips every week appear possible, commencing about 15 January 1954.

2. Mission - CTG 7.1 or His Designated Representative on Site:

a. Determines Task Group logistical requirements for inter-atoll air and surface transportation and places these requirements with the supporting Task Group.

b. Determines and obtains personnel and cargo space allocations on regularly scheduled lifts and special lifts when they occur.

c. Determines Task Group priorities for personnel and cargo lifts when lift requirements are in excess of space allocations, and when necessary, arbitrates priorities with CJTF SEVEN or his designated representative on site.

d. Determines and advises CTG 7.3 and CTG 7.4 of evacuation lift requirements and controls the movement of personnel and cargo during Bikini evacuation periods. See Annex K, Evacuation and Re-Entry Plan.

3. Summary of Tasks:

a. J-3:

(1) In coordination with the J-4 Movement Control Officer, has the responsibility and authority for scheduling; controlling and establishing priorities when necessary; for the movement of Task Group personnel by available inter-atoll airlift and surface lift.

(2) Determines space requirements on scheduled aircraft within the allocated space.

(3) Submits airlift requirements to TG 7.4, 4930th Test Support Unit the day before the required lift.

(4) When conflicts with priorities arise, which cannot be satisfactorily resolved, submits jointly with the J-4 Movement Control Officer the total requirements to CTG 7.1 or his designated representative for arbitration.

(5) Obtains, as required to meet inter-atoll airlift schedules and as requested by J-4 Movement Control Officer and J-1 Hq Commandant, helicopter, liaison aircraft, and boat transportation.

(6) By means of Evacuation and Re-Entry Schedules of Events, prepared in coordination with J-1 and J-4, controls inter-atoll transportation schedules during evacuation and re-entry periods.

(7) Recommends schedules to CJTF SEVEN Scheduling Panel for regular and special lifts.

(8) Controls, in coordination with J-1, emergency evacuation of personnel, if such should be necessary.

(9) In coordination with J-4 Movement Control Officer, arranges with TG 7.3 or TG 7.5 Boat Dispatcher, suitable boat schedules between Parry and Eniwetok in coordination with aircraft schedules.

(10) Arranges in coordination with J-3 of TG 7.5 and TG 7.2, for bus transportation between the Personnel Pier and Airstrip on Eniwetok and from the Personnel Control Point and Boat Ramp on Parry, to coincide with the scheduled boat service between islands.

b. TG 7.1 J-4 Movement Control Officer:

(1) In coordination with J-3, has the responsibility and authority for scheduling; controlling and establishing priorities when necessary; for the movement of Task Group cargo by available inter-atoll airlift and surface lift, except that during evacuation periods this responsibility and authority will be exercised in coordination with J-1 and J-3 in compliance with the Evacuation Schedule of Events.

(2) Determines space requirements on scheduled surface lift within the allocated space.

(3) Submits surface lift requirements to TG 7.3, the day before the required lift.

(4) When conflicts with priorities arise which cannot be satisfactorily resolved, submits jointly with J-3 the total requirements to CTG 7.1, or his designated representative, for arbitration.

(5) Arranges for the movement of all unaccompanied cargo to and from the shipping points. Prepares the cargo manifests and delivers them to TG 7.4 Test Support Unit or TG 7.5 Shipping Office at least one hour prior to the scheduled departure time.

c. J-1 Headquarters Commandant:

(1) Receives passenger lists from J-3 prior to the scheduled flight or scheduled surface lift.

(2) Receives passenger lists from MATS of arriving passengers from Hickam AFB and notifies J-3 of names of passengers requiring further lift to Bikini.

(3) Furnishes passenger pickup service between the airports and control points and arranges with J-3 for inter-island boat and aircraft service.

(4) Maintains personnel accountability lists from the aircraft and vessel on-board passenger lists.

(5) Keeps passengers informed of flight schedules.

4. Description of Facilities:

a. The TG 7.4 Airlift Between Eniwetok and Bikini will consist of:

Number	Type	(No Cargo) Passenger Capacity*	(No Passengers) Cargo Capacity	Emergency Passenger Capability	Normal Flight Time
4	C-47	25	6,500 lbs	36	1 hr 30 min
2	PBM-5A	20	?	20	2 hrs

* These numbers may be adjusted downward to allow handling of priority cargo.

b. The TG 7.3 Surface Lift Between Atolls will consist of:

Number	Type	Cargo Capacity	Passenger Capacity	Normal Loading or Unloading Time	Normal Passage
2	LST	1900 tons on tank deck, 400 tons on main deck	?	1½ days	18 hrs

5. Submission of Space Requirements:

a. Air Passenger and Cargo:

(1) All Task Units and Projects requiring space on the scheduled airlift will submit their requirements to J-3 (personnel) or to the J-4 Movement Control Officer (cargo) the day before transportation is required.

(2) Requests for space submitted on short notice will be handled according to the availability of space and/or the priority of the request.

(3) Passenger substitutions may be made on a particular aircraft but "No Shows" which do not give notification, will seriously inconvenience those persons who desired space on that aircraft but could not obtain it because of prior commitment to the "No Show" passenger.

b. Surface Passenger and Cargo:

(1) All Task Units and Projects requiring regularly scheduled surface transportation will submit their cargo requirements to the J-4 Movement Control Officer not later than one day before the lift is required. Requests for passenger space will be required two days before the scheduled lift.

(2) Requests for space submitted on short notice will be handled according to the availability of space and/or the priority of the request.

c. Requests for air cargo space in lieu of surface shipment must be dictated by urgent requirements, which demand rapid transportation.

6. Special movements such as those involving weapons, trailers, sample returns and for evacuation and re-entry are covered under corresponding Annexes.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex J to CTG 7.1 Operation Plan No. 1-53

INTER-ISLAND TRANSPORTATION

1. Command Responsibility: CTG 7.1, has the responsibility for obtaining transportation within Eniwetok Atoll and Bikini Atoll in support of TG 7.1 activities. The sources of this transportation are as follows:

a. Bikini Atoll:

(1) Boats - Provided and operated by TG 7.3 and TG 7.5 Boat Pools, combined under the JTF SEVEN Boat Scheduling Panel.

(2) Vehicles - Provided and operated by TG 7.1.

(3) Helicopters - Provided and operated by TG 7.3, augmented as necessary by TG 7.4.

(4) DUKWs - Provided and operated by TG 7.5, augmented as necessary by TG 7.2.

b. Eniwetok Atoll:

(1) Boats - Provided and operated by TG 7.5 Boat Pool, augmented as necessary by TG 7.3 Boat Pool, under the JTF SEVEN Boat Scheduling Panel if required.

(2) Vehicles - Provided and operated by TG 7.1.

(3) Liaison Aircraft and Helicopters - Provided and operated by TG 7.4, augmented as necessary by TG 7.3.

(4) DUKWs - Provided and operated by TG 7.5, augmented as necessary by TG 7.2.

2. Priority System: A priority system will be established by each Task Group to govern all modes of transportation in the Forward Area. The "split - scene" of operations between Bikini Atoll and Eniwetok Atoll will necessitate considerable advance planning by all users to insure effective utilization.

3. Plans concerning the use of subject transportation are contained in Appendices to this Annex.

4. J-3 of this headquarters is designated as the Commander's staff representative to resolve conflicts arising in the priority system and the scheduling of transportation required in the support of TG 7.1.

Appendices:

I. Boat Plan:

Tab A: Distances and Marine Craft Travel Time Between Sites - Bikini

Tab B: Distances and Marine Craft Travel Time Between Sites - Eniwetok

Tab C: Bikini Atoll Navigational Information

Tab D: Eniwetok Atoll Navigational Information

II. Vehicle Plan

III. Airlift Plan

IV. Trailer Movement Plan

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix I to Annex J
Inter-Island Transportation, CTG 7.1 Operation Plan No. 1-53

BOAT PLAN

1. General: TG 7.1 will be provided water transportation through the combined services of TG 7.3 and TG 7.5. A Boat Scheduling Panel, consisting of representatives from CJTF SEVEN, CTG 7.3 and CTG 7.5 will be activated to establish priorities and resolve boating difficulties. Regularly scheduled and special boat trips will be provided for both personnel and materiel.

2. Summary of Tasks - J-3:

a. Recommends to the JTF Boat Scheduling Panel, boat schedules that will permit maximum utilization by TG 7.1.

b. Determines TG 7.1 boat requirements, submits these requirements to the Boat Scheduling Panel, and insures that necessary support is obtained.

c. Insures that prompt and safe transportation is provided for the loading and movement of devices, weapons and cryogenics equipment.

d. In coordination with J-1 and J-4, assists JTF SEVEN in establishing assembly points and boat dispatching lanes at Bikini and Eniwetok for the evacuation of personnel and materiel.

e. Obtains from TG 7.3 and/or TG 7.5 through the JTF Boat Scheduling Panel the necessary support for the movement of personnel and materiel during evacuation for each shot. Prepares a detailed Schedule of Events in the accomplishment of evacuation for each shot covering the period shot minus four days until the evacuation is completed.

f. Obtains support for the re-entry of specific personnel in the recovery of samples and films.

g. Obtains support required for the movement of personnel and materiel to accomplish preparations for succeeding shots from afloat bases, in the event re-entry to camps is prohibitive due to radiological conditions, or from habitable camps.

h. Obtains support for roll-up operations at Bikini and Eniwetok.

3. Composition of Boat Pools:

TASK GROUP 7.3 BOAT POOL

Type	Number	Capacity	Characteristics
LSD	1	2600 tons	Boat Pool Base; Repair
YFN	1	- - - - -	Personnel Barge Boat Crews
LST	2	1900 tons	Inter-Atoll and Inter-Island Lift
LCU	5	150 tons	"T" Boat - Box Ramp
LCM	19	15 tons	"M" Boat - Box Ramp
LCP(L)	3	23 persons	Wood - No Beach Landings
AVR	2	15 persons	Air-Sea Rescue and Hi-Speed Personnel Carrier
YCV	1	- - - - -	Helicopter Platform

TASK GROUP 7.5 BOAT POOL

AFDL	1	2 Tugs	Floating Dry Dock
YTL	2	- - - - -	Tugs; 1 Wood, 1 Steel
LCU	9	3 oversize trailers	"T" Boat - Box Ramp
LCM	24	1 - 2 1/2 ton truck	"M" Boat - Box Ramp
DUKW	18	2.5 tons cargo	Land or Water Craft
WATER TAXI	3	63 persons	Wood - No Beach Landings

4. Boat Requirements: Transportation requirements will be met in the following manner:

a. Regularly Scheduled Boat Trips: Will be provided from Parry Island, Eniwetok Atoll and Enirman Island, Bikini Atoll, to camp sites of the respective atolls. All Task Unit Commanders should make every effort to utilize the regularly scheduled boats. These boats, with the exception of the water taxi (for personnel and hand carried light freight), will be for personnel, rolling stock, and freight. Boat requests are not required for water taxi service or for utilization of regularly scheduled LCU and LCM service for personnel transport.

b. Special Boat Trips: Will be used for personnel and accompanied freight which cannot be moved by the regular scheduled boat. These trips will involve the temporary assignment of a boat for the use of a specific Task Unit or Project.

c. Unaccompanied Property and Freight: Will be handled in accordance with the procedure established by J-4.

5. Boat Request Procedure:

a. The submission of requests for transportation of accompanied freight by regularly scheduled boats, and for special boat trips will be necessary. The Boat Request Form (Example shown below) will be filled out and submitted to J-3 by 1600 hours the day before transportation is required. Since use of TG 7.5 boats for trips involving overtime (before 0800 or after 1700 hours) and Sunday trips requires work orders, arrangements should be made for submission of a H & N Work Order when overtime use of boats may be necessary.

BOAT REQUEST FORM

PROJECT	Proj. 31.8	DATE BOAT NEEDED	Tues. 6 Jan.
PHONE NO. OF PROJ. OR TU	95	TYPE BOAT REQUESTED	LCM
DEPARTURE: TIME/PLACE	Elmer 0800	DESTINATION/RETURN TIME	Alice 1600
VEHICLE AND/OR TONNAGE	2 1/2 T	PERSON IN CHARGE	Jones
REMARKS: 2 1/2 ton truck has protruding "A" Frame			
[X] SPECIAL [ ] SCHEDULED (CHECK ONE)			

b. All Task Units and Projects requiring unaccompanied property and freight service will submit their requests by telephone or message, to J-4 Movement Control Officer, in accordance with procedures established by J-4. J-4 will arrange for movement of unaccompanied property and freight with the H & N Shipping Office.

c. Transportation requests for special freight or personnel submitted on short notice will be scheduled accordingly to the availability of boats.

d. All users will notify J-3, as soon as possible, of any changes to, or cancellation of, boat requirements.

6. Communications: (Annex E applies)

7. Evacuation and Re-entry:

a. The boat pools will be required to support TG 7.1 evacuation and re-entry as outlined in Annex K, Evacuation and Re-Entry Plan.

b. For re-entry and recovery at Bikini, boat dispatching will be accomplished from afloat until it can be re-established on Eninman. Requests for boats during these periods will be made directly to CTG 7.1 Operations Center aboard the USS ESTES (AGC-12).

8. Typhoon Plan: In the event of a typhoon warning, the emergency evacuation of designated personnel and specified critical items from Bikini Atoll to Task Force vessels will be accomplished using the boat support made available by CTG 7.3 and CTG 7.5 (Annex L applies).

9. Hostile Action: In the event of hostile action, CTG 7.3 will assume control of all boats and landing craft (Annex M applies).

10. Safety: The operation of marine craft is the sole responsibility of the operator. The safe transportation of personnel and materiel by boat is the primary responsibility of the boat pool personnel. Safety precautions, as prescribed by the boat operators, will be compiled with by all users.

11. Complaints: All complaints involving boat operations will be made to J-3 directly; not to individual boat operators.

12. Boating Conditions:

a. Bikini Atoll: A slightly protected lagoon with rough water makes boating difficult. The waves, under average wind conditions (ENE, 14-20 knots), are 2.5 to 3.0 high in areas unprotected by islands and reefs. Boating is rough and wet so that protection of equipment from pounding, rolling and salt spray are important considerations. Boats will be run at reduced speeds much of the time. Tide tables for Bikini and Eniwetok, and daily weather forecasts will be posted in the J-3 offices and at other conspicuous places.

b. Eniwetok Atoll: A semi-protected lagoon affords good boating conditions, with hard-surfaced ramps at major loading areas.

Tab A - Distances and Marine Craft Travel Time Between Sites - Bikini

B - Distances and Marine Craft Travel Time Between Sites - Eniwetok

C - Bikini Atoll Navigational Information

D - Eniwetok Atoll Navigational Information

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Tab A to Appendix I, Annex J
Inter-Island Transportation, CTG 7.1 Operation Plan No. 1-53

DISTANCES AND MARINE CRAFT TRAVEL TIME BETWEEN SITES - BIKINI

	CHARLIE	GEORGE	HOW	NAN	TARE	YOKE
CHARLIE		Dist 8.9 LCM 0h59m LSU 1h11m Tug 1h03m W.T. 0h45m	Dist 15.7 LCM 1h45m LSU 2h06m Tug 1h51m W.T. 1h19m	Dist 19.3 LCM 2h09m LSU 2h34m Tug 2h16m W.T. 1h37m	Dist 12.7 LCM 1h25m LSU 1h42m Tug 1h30m W.T. 1h04m	Dist 9.4 LCM 1h03m LSU 1h15m Tug 1h06m W.T. 0h47m
GEORGE	Dist 8.9 LCM 0h59m LSU 1h11m Tug 1h03m W.T. 0h45m		Dist 8.85 LCM 0h59m LSU 1h11m Tug 1h03m W.T. 0h45m	Dist 13 LCM 1h27m LSU 1h44m Tug 1h32m W.T. 1h05m	Dist 11.75 LCM 1h19m LSU 1h34m Tug 1h23m W.T. 0h59m	Dist 13.3 LCM 1h29m LSU 1h46m Tug 1h34m W.T. 1h07m
HOW	Dist 15.7 LCM 1h45m LSU 2h06m Tug 1h51m W.T. 1h19m	Dist 8.85 LCM 0h59m LSU 1h11m Tug 1h03m W.T. 0h45m		Dist 6.6 LCM 0h44m LSU 0h53m Tug 0h47m W.T. 0h33m	Dist 12.5 LCM 1h23m LSU 1h40m Tug 1h28m W.T. 1h03m	Dist 17.45 LCM 1h57m LSU 2h20m Tug 2h04m W.T. 1h28m
NAN	Dist 19.3 LCM 2h09m LSU 2h34m Tug 2h16m W.T. 1h37m	Dist 13 LCM 1h27m LSU 1h44m Tug 1h32m W.T. 1h05m	Dist 6.6 LCM 0h44m LSU 0h53m Tug 0h47m W.T. 0h33m		Dist 11.7 LCM 1h18m LSU 1h34m Tug 1h23m W.T. 0h59m	Dist 18.3 LCM 2h02m LSU 2h26m Tug 2h09m W.T. 1h32m
TARE	Dist 12.7 LCM 1h25m LSU 1h42m Tug 1h30m W.T. 1h04m	Dist 11.75 LCM 1h19m LSU 1h34m Tug 1h23m W.T. 0h59m	Dist 12.5 LCM 1h23m LSU 1h40m Tug 1h28m W.T. 1h03m	Dist 11.7 LCM 1h18m LSU 1h34m Tug 1h23m W.T. 0h59m		Dist 7.75 LCM 0h52m LSU 1h02m Tug 0h55m W.T. 0h39m
YOKE	Dist 9.4 LCM 1h03m LSU 1h15m Tug 1h06m W.T. 0h47m	Dist 13.3 LCM 1h29m LSU 1h46m Tug 1h34m W.T. 1h07m	Dist 17.45 LCM 1h57m LSU 2h20m Tug 2h04m W.T. 1h28m	Dist 18.3 LCM 2h02m LSU 2h26m Tug 2h09m W.T. 1h32m	Dist 7.75 LCM 0h52m LSU 1h02m Tug 0h55m W.T. 0h39m	

Due to winter weather at Bikini, these times between sites are subject to 15% increase between November 1, and March 31.

SPEED OF CRAFT

LCM.....	9 Knots
LSU.....	7.5 Knots
Tug.....	8.5 Knots
Tug with Tow.....	5.5 Knots
Water Taxi.....	12 Knots

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Tab B to Appendix I, Annex J
Inter-Island Transportation, CTG 7.1 Operation Plan No. 1-53

DISTANCE AND MARINE CRAFT TRAVEL TIME BETWEEN SITES - ENIWETOK

TRAVEL TIME

LEAVING PARRY	Arrive ENIWETOK (Personnel Pier)	Arrive ENIWETOK (Freight Pier)	Arrive JAPTAN	Arrive RUNIT	Arrive ROJOA	Arrive ENGEBI	Arrive TEITEIRI-PUCCHI
WATER TAXI	19m	27m	8m	50m	1h20m	1h40m	2h
"M" BOAT	25m	35m	10m	1h	1h30m	2h	2h30m
"T" BOAT	30m	42m	15m	1h20m	2h	3h	3h20m

DISTANCES - NAUTICAL MILES

FROM	To Personnel Pier ENIWETOK	To Freight Pier ENIWETOK	To JAPTAN	To RUNIT	To ROJOA	To ENGEBI	To TEITEIRIPU-CCHI	To ENGEBI Main Channel	To TEITEIRI-PUCCHI Main Channel
PARRY	3.8	5.3	1.5	9.0	12.0	18.0	20.2	19.0	19.8
JAPTAN				7.7	11.5	17.2	19.8		
RUNIT					4.8	10.9	13.5		
ROJOA						7.8	10.3		
ENGEBI							2.5		

AVERAGE CRUISING SPEED OF CRAFT IN KNOTS

SEA CRAFT (TAXI).....	12.0
LCM ("M" BOAT).....	9.0
LCU ("T" BOAT).....	7.5
YTL (TUG - No Tow).....	8.7
YTL (TUG - Heavy Tow)...	5.0

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Tab C to Appendix I, Annex J
Inter-Island Transportation, CTG 7.1 Operation Plan No. 1-53

BIKINI ATOLL NAVIGATIONAL INFORMATION

Island Name	Site Code Designation	Remarks
BOKOBYAADAA	Able (A)	Connected by causeway. LCU and LCM - All tide channel. Facilities: Hard surface coral ramp. Natural pier effect from blasted coral.
BOKONEJIEN	Baker (B)	DUKW only. Can be worked by LCM in very calm weather.
NAMU	Charlie (C)	LCU and LCM - All tide channel. Facilities: Hard surface coral ramp.
YUROCHI UORIKKU ROMURIKKU AOMOEN	Dog (D) Easy (E) Fox (F) George (G)	Connected by causeway. Landing is at George. LCU and LCM - All tide channel.
BIKINI	How (H)	LST, LCU and LCM - Any tide. Facilities: Sandy beach landing. Note: LST landing is at N.W. portion of island.
BOKONFUAAKU YOMYARAN ENIAIRO ROCHIKARAI IONCHEBI	Item (I) Jig (J) King (K) Love (L) Mike (M)	DUKW only. With blasting, channels could be made for LCU and LCM.
ENYU	Nan (N)	LCU and LCM - All tide channel. Facilities: Hard surface coral ramp. Note: LST can be beached at high tide with some channel blasting.

AIRUKIIJI AIRUKIRARU BIGIREN REERE ENINMAN	Oboe (O) Peter (P) Roger (R) Sugar (S) Tare (T)	Connected by causeway. Landing at Tare. LST, LCU and LCM - Any tide.
ENIIRIKKU	Uncle (U)	LCU - 4.8 tide or better. LCM - 1.0 tide or better. Facilities: Sandy beach landing.
RUKOJI	Victor (V)	LCU and LCM - Low tide only. (Plus 1.4 or less). DUKW - Any tide. Beaching on reef.
CHIEERETE	William (W)	LCU - 6.0 tide or better. LCM - 3.0 tide or better. DUKW - Any tide. Sandy beach.
ARRIIKAN	Yoke (Y)	LCU - Plus 1.4 tide or less. Beaching on reef (ocean side). LCM - 3.0 tide or better. Sandy beach (lagoon side).
OURUKAEN	Zebra (Z)	LCU - 2.0 tide or better. LCM, DUKW - Any tide. Sandy beach.
BOKOAETOKUTOKU BOKOROYUJRU	Alfa (AA) Bravo (BB)	DUKW only.

Note: Plus X Tide indicates a tide for which the high water level is X feet above mean low water (based on spring tides).

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Tab D to Appendix I, Annex J
Inter-Island Transportation, CTG 7.1 Operation Plan No. 1-53

ENIWETOK ATOLL NAVIGATIONAL INFORMATION

Island Name	Site Code Designation	Remarks
BOGALLUA BOGOMBOGO	Alice (A) Belle (B)	LCM's and LCU's beach on sand bar through break in reef. Require plus 1.5 tide or under. Tracked equipment and vehicles only. No channel markings at present.
RUCHI	Clara (C)	LCM's beach on sand bar through break in reef. Require plus 1.5 tide or under. Tracked equipment and vehicles only. No channel markings at present.
ELUGELAB TEITEIRIPUCCHI BOGAIRIKK BOGON	Flora (F) Gene (G) Helen (H) Irene (I)	Causeway broken through in several places. Entrance channel at Gene. LCM's and LCU's can enter at any tides.
ENGEBI	Janet (J)	LCM's and LCU's can enter at any tides. Facilities: A hard sand ramp. Channel markings: One lighted entrance buoy (FL-W) and four channel buoys (oil drums; 2 red and 2 black).
MUZINBAARIKKU	Kate (K)	LCM's require a plus 1.5 tide and LCU's require a plus 3.0 tide. Facilities: Sandy beach landing. Channel markings: Six channel buoys (oil drums; 3 red and 3 black).
KIRINIAN	Lucy (L)	LCM's require a plus 1.5 tide and LCU's require a plus 3.0 tide. Facilities: Sandy beach landing.

		Channel markings: Four channel buoys (oil drums; 2 red and 2 black).
BOKONAARAPPU	Mary (M)	LCM's can enter at any tide. LCU's require a plus 2.0 tide. Facilities: Sandy beach landing. Channel markings: Eight channel buoys (oil drums; 4 red and 4 black).
YEIRI AITSU ROJORU EBERIRU AOMON BIIJIRI ROJOA	Nancy (N) Olive (O) Pearl (P) Ruby (R) Sally (S) Tilda (T) Ursula (U)	Connected by causeway. Entrance channel at Ursula. LCM's, LCU's and Water Taxis can enter at any tide. Facilities: Personnel pier and concrete ramp. Channel markings: One lighted entrance buoy (FL-W) and eleven channel buoys (oil drums; 6 red and 5 black). Note: The channel to the causeway landing between Tilda and Ursula and the channel to the damaged pier at Sally have sanded in and are not being used. (Some old channel marking buoys are still in place).
AARAANBIRU	Vera (V)	LCM's (only) require a plus 3.0 tide. Facilities: Sand and coral beach. No channel markings.
PIIRAAI	Wilma (W)	LCM's can enter at any tide. LCU's require a plus 2.0 tide. Facilities: Sandy beach landing. No channel markings.
RUNIT	Yvonne (Y)	LCM's, LCU's and YTL's (Tugs) can enter at any tide. Facilities: Freight pier and a hard coral ramp. Channel markings: One lighted entrance buoy (FL-W) and four channel buoys (oil drums; 2 red and 2 black).
REEF, "M" SOUTH OF RUNIT	Zona (Z)	DUKW's only.
CHINIEERO ANIYAANII CHINIMI	Alvin (AA) Bruce (BB) Clyde (CC)	LCM's can enter at any tide. LCU's require a plus 2.0 tide. Facilities: Sandy beach landing. No channel markings.

JAPTAN	David (DD)	LCM's, LCU's, Water Taxis and YTL's (Tugs) can enter at any tide. Facilities: Freight pier and a sandy beach landing. No channel markings.
PARRY	Elmer (EE)	LCM's, LCU's, Water Taxis and YTL's (Tugs) can enter at any tide. Facilities: Freight pier, personnel pier, and one sand and loose coral ramp for tracked equipment. Channel markings: One clearance buoy (oil drum) just off the personnel pier.
IGURIN MUI POKON RIBAION GIRIINIEN	Glenn (GG) Henry (HH) Irwin (II) James (JJ) Keith (KK)	LCM's (only) require a plus 2.5 tide. Facilities: Hard coral beach landing (sandy in spots). No channel markings. Note: Not used very much.
RIGILI	Leroy (LL)	LCM's require a plus 2.0 tide and LCU's require a plus 4.0 tide. Facilities: Sandy beach landing. Channel markings: One large nun buoy (red #2) and four other channel buoys (oil drums; 3 red and 1 black). Note: Red nun buoy #2 serves also as a mooring buoy for LCM's. Keep all red buoys close to starboard when entering channel. Beaching area is between the last red buoy (#8) and only black buoy (#7).
CORAL HEAD	Oscar (OO)	LCM's (only) at any tide. Facilities: Ladder at south-east side of tower. No channel markings.
PHOTO TOWER	Mack (MM)	LCM's and LCU's at any tide. Facilities: Landing platform at north side of tower base. No channel markings.

Notes: (1) Plus X Tide indicated a tide for which the high water level is X feet above mean low water (based on spring tides).

(2) The notation (FL-W) applied to lighted buoys indicates a flashing white light.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix II to Annex J
Inter-Island Transportation, CTG 7.1 Operation Plan No. 1-53

VEHICLE PLAN

1. General: CTG 7.1 provides motor vehicle transportation in support of TG 7.1 activities on Eniwetok and Bikini Atolls.

2. Mission - CTG 7.1:

a. Operates motor pools on Parry and Eninman Islands, using TG 7.5 (H&N) facilities.

b. Determines maintenance and repair schedules and coordinates these schedules with H&N vehicle facilities.

c. Provides for pre-shot evacuation of all vehicles from danger areas.

d. Provides vehicles for re-entry phases and post-shot activities.

e. Services and protects vehicles in the event of typhoon warning.

3. Composition of Motor Pools: The motor pools will consist of general purpose type vehicles: 1/4-ton trucks (Jeeps), 3/4-ton trucks (cargo carriers), 1-1/2-ton trucks and 2-1/2-ton trucks, plus a limited number of special type vehicles.

4. Heavy Equipment: All heavy equipment, caterpillar tractors, cranes, etc., will be furnished by H&N. Requirements for such equipment will be submitted directly to J-6, this headquarters.

5. Bus Transportation: Bus service on Parry Island and on the Rojoa and Eninman complexes will be operated by H&N. Bus routings and schedules will be established so as to provide convenient transportation for the greatest number of people. Maximum utilization of this bus transportation will lighten the burden of the motor pool and permit assignment of vehicles to those individuals and projects whose mission cannot be accomplished by the scheduled bus system.

6. Vehicle Requirements:

a. Insofar as possible vehicles will be dispatched to projects on a semi-permanent basis where such utilization is essential to the accomplishment

of the project. Short time vehicle needs will be submitted by telephone or messenger to the J-3 Task Group Motor Vehicle Officer, who will arrange for the transportation as soon as possible.

(1) Vehicle requests made on short notice will be filled according to the availability of vehicles with due consideration being given to the priority of the mission for which the vehicle(s) is(are) requested.

(2) All users will notify the Motor Vehicle Officer as soon as possible of any changes to, or cancellation of, vehicle requests.

b. Requests for vehicles for periods longer than one day will be submitted through the appropriate Task Unit Commander to the Motor Vehicle Officer, this headquarters.

c. The Motor Vehicle Officer or Non-commissioned Officer will maintain the following information:

(1) Name of person who approved request.

(2) Name of person to whom vehicle is to be assigned.

(3) Type of vehicle.

(4) Use for which vehicle is intended.

(5) Date and hour vehicle is required.

(6) Date and hour vehicle will be returned.

(7) Other applicable remarks.

7. Dispatching: All vehicles will be dispatched and controlled by the TG 7.1 Motor Vehicle Officer or his representative(s).

8. Evacuation Phases: Prior to each shot, all vehicles will be moved to safe locations where necessary protective action will be taken.

9. Re-Entry Phases: When radiological conditions permit, motor vehicle pools will be reactivated on Eniman and Enyu for support of post-shot activities and preparations for succeeding shots.

10. Hostile Action: In the event of hostile action, vehicles will be used to evacuate key scientific personnel and critical materials as directed by TG 7.1.

11. Safety:

a. All vehicles will be recalled to the motor pool periodically for maintenance and repair. Maintenance schedules will be promulgated by operational directives.

b. All vehicle operators will be required to possess a current Government Drivers Permit before operating a TG 7.1 vehicle. Such permits may be obtained from the Motor Vehicle Officer.

c. All vehicle operators will observe the local traffic regulations.

d. Accident reports will be submitted to the TG 7.1 Motor Vehicle Officer as soon as practicable following the accident.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix III to Annex J
Inter-Island Transportation, CTG 7.1 Operation Plan No. 1-53

AIRLIFT PLAN

1. General:

a. The responsibility for inter-island air transportation is that of CTG 7.3 and CTG 7.4 for Bikini Atoll and Eniwetok Atoll respectively. The CTG 7.1 is responsible for the scheduling of TG 7.1 personnel through the appropriate Air Task Group Commander.

b. During the period of the Bikini detonations, the airlift at Eniwetok Atoll will be primarily by L-13 type aircraft with limited helicopter support. All of the Bikini Atoll inter-island airlift will be by helicopters. During the period of the Eniwetok detonation, L-13 and sufficient helicopter airlift will be available.

c. The aircraft available for inter-island airlift will be:

Type	Capacity
9 L-13 Liaison	3 persons
10 HRS Helicopters	6 persons (1000 lbs)
7 H-19A Helicopters	6 persons (1000 lbs)
3 H-13 Helicopters	2 persons

d. The limited availability of aircraft to support inter-island airlift operations will necessitate maximum utilization of equipment. It will be necessary for each using agency to plan movement activities sufficiently in advance to effect efficient scheduling.

e. Agencies of TG 7.1 requiring inter-island airlift at Bikini or Eniwetok Atolls will contact J-3, TG 7.1, normally the day prior to the time the lift is required. Requirements will include complete inter-island itinerary, passengers and lift load.

f. When the combined Task Group airlift exceeds the available airlift, a representative of CJTF SEVEN will act as arbiter and determine priority in light of the overall Joint Task Force mission. A priority system for airlift

will be set up within TG 7.1. When the combined TG 7.1 airlift exceeds that allocated TG 7.1, a representative of CTG 7.1 will act as arbiter.

2. Bikini Atoll Airlift:

a. The CTG 7.3 will control and dispatch all helicopter activity in the Bikini Area, to include both land-based (from Eninman Island) and ship-based (from CVE) operations. CTG 7.4 will place additional helicopters and personnel under operational control of CTG 7.3 to augment the TG 7.3 helicopter lift system.

b. Normally, requirements for inter-island airlift will be submitted by J-3, TG 7.1, to CTG 7.3 the day prior to the time the lift is required. Requirements will include complete inter-island itinerary, passengers and lift load.

c. During Bikini detonations, CTG 7.3 will provide helicopters (with the support of TG 7.4 helicopters and personnel) for post-shot surveys and sample recovery as directed by CJTF SEVEN. A representative of CTG 7.1 will accompany these flights and provide full mission instructions and Rad-Safe monitor services. Immediate re-entry activities will be conducted from the CVE.

3. Eniwetok Atoll Airlift:

a. CTG 7.4 will control and dispatch, by means of the 4930th Test Support Unit, all helicopter and liaison aircraft activity in the Eniwetok Area. CTG 7.3 will, prior to RAMROD, place additional helicopters under operational control of CTG 7.4, if required by CJTF SEVEN, to augment the helicopter lift system.

b. Normally, requirements for inter-island airlift will be submitted by J-3, TG 7.1, to the 4930th Test Support Unit the day prior to the time the lift is required. Requirements will include complete inter-island itinerary, passengers and lift load.

c. During Eniwetok detonations, CTG 7.4 will provide helicopters (with the support of TG 7.3 helicopters if required) for post-shot surveys and sample recovery as directed by CJTF SEVEN. A representative of CTG 7.1 will accompany these flights and provide full mission instructions and Rad-Safe monitor service.

Headquarters Task Froup 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix IV to Annex J
Inter-Island Transportation, CTG 7.1 Operation Plan No. 1-53

TRAILER MOVEMENT PLAN

1. General: This Task Group will have about 100 trailers which will be used to house delicate scientific equipment, spare parts, and work-shop space in the Forward Area. Prior to Shot No. 1 about 50 of the trailers will be located on Bikini Atoll with the remaining 50 on Eniwetok Atoll.

2. Movement from Bikini to Eniwetok: Of the 50 trailers on Bikini, approximately 21 will be moved to Eniwetok between Shots No. 1 and 4 in order that they will be available for participation in the Eniwetok Shot. These trailers will be moved as follows:

a. Standard trailers (11'4" and under in height) - Shuttled to Eniwetok on regularly scheduled LST runs.

b. Overheight trailers (over 11'4" in height) - Require special handling since their height prevents loading in the tank deck of an LST. These trailers will be moved by LSD, LCU, AV (deck load), LST (deck load) or a combination thereof.

The movement of these trailers from Bikini to Eniwetok will be coordinated by J-3 and J-4. Project officers will submit shipping papers and a movement request to J-4 when their trailers can be released for shipment.

3. Inter-Island Movement:

a. Since the inter-island movement of trailers will be accomplished by LCU, their height is unimportant. The normal movement of trailers will be effected by submitting a shipping request to J-4, whereby trailers will become freight and will be placed in collection points and moved by the TG 7.5 shipping department.

b. In addition to the normal procedure stated above, all trailer movements, which must be accomplished during the period shot minus four to shot day, will be submitted to J-3 eight days prior to shot day for entry into the Schedule of Events for evacuation from danger areas.

4. Trailer Locations at Shot Time: All trailer locations will be based on calculations that trailers will withstand pressures from 1.5 to 2.0 p.s.i.

Orientation, if possible, should be such that the rounded forward end of all trailers face toward Ground Zero. An additional precaution should be taken to chock all wheels and thus prevent any tendency to roll. In weighing possible alleviated blast effects on trailers by allowing trailer doors to remain open versus effects of both blast and tropical weather conditions on delicate equipment inside it is concluded that both the rear cargo doors and the smaller side personnel door should be closed. Project personnel having commercial type trailers with large ventilation openings in the forward end should provide means of sealing such openings.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex K to CTG 7.1 Operation Plan No. 1-53

EVACUATION AND RE-ENTRY PLAN

1. General:

a. Detailed evacuation and re-entry plans for each shot, delegating explicit responsibilities for all subordinate commanders, cannot be issued at this time. Subsequent to the arrival of CTG 7.1 in the Forward Area, and his continuing on-site inspection of the overall situation, such plans will be issued in the form of Operational Plans (Schedule of Events) to be included in Annex N of this Operation Plan.

b. This Annex and its Appendices, combined with appropriate portions of Annex A, Concept of Operations and Annex F, Rad-Safety, will serve as a guide and source of general information. This information may be subject to change in the Forward Area, for the purpose of preparing the detailed evacuation and re-entry plans.

2. Mission: CTG 7.1, in coordination with other Task Group Commanders, arranges for:

a. Evacuation of TG 7.1 personnel from Bikini Atoll as required.

b. Relocation of TG 7.1 personnel from the northern islands of Eniwetok Atoll to Eniwetok and Parry Islands as required.

c. Protection or evacuation of equipment under his jurisdiction as required at shot time.

d. Evacuation on an emergency basis of all TG 7.1 personnel from Eniwetok Atoll if post-shot radiological contamination conditions so dictate.

3. Missions of Major Staff Sections and Subordinate Units:

a. J-1:

(1) Maintains a master locator file of all TG 7.1 personnel and will muster all personnel at both Atolls during the evacuation for each shot and report the final muster to CTG 7.1.

(2) Assigns a troop quartermaster to each evacuation vessel.

(3) Assigns command, administration and berthing spaces aboard TG 7.3 vessels for evacuation for each Bikini shot, and assigns personnel to vessels for emergency evacuation of Parry and Eniwetok Islands, in the event of post-shot radiological contamination.

(4) Coordinates the evacuation of classified documents, assisted by J-4.

b. J-3:

(1) Prepares, in coordination with Task Unit Commanders and Staff Sections, detailed evacuation and re-entry plans (Schedule of Events) for each shot and supervises the execution of these plans. A J-3 representative will be assigned duties as Task Group Troop Quartermaster to coordinate evacuation and re-entry plans with J-4, Hq JTF SEVEN.

(2) Is responsible, in coordination with all Task Units concerned, for supporting the recovery of data and re-entry of personnel and materiel.

(3) In coordination with J-1, is responsible for planning and executing an emergency evacuation of TG 7.1 personnel from Eniwetok Atoll in the event of post-shot radiological contamination.

c. J-4: In coordination with J-3, and all Task Units concerned, is responsible for the movement of materiel to safe locations on Bikini Atoll for each shot, or to TG 7.3 vessels for temporary evacuation; for permanent evacuation to Eniwetok; and for the relocation of materiel required for re-entry.

d. CTU-7: Control the re-entry of personnel for recovery of data and materiel for continued operations, as the radiological situation permits.

e. Further Missions of Task Unit Commanders:

(1) Submit to J-3, during the evacuation periods, operational requirements for accomplishing final preparations for the shots, and the phasing out of personnel and materiel.

(2) As directed by J-1, in the Forward Area, muster their personnel during the evacuation for each shot.

(3) Arrange with J-4 for the movement of materiel to safe locations and for evacuation as scheduled by the J-3 Schedule of Events.

(4) Be responsible for the safe storage of instruments in trailers and any other measures considered necessary for protection of trailers left on Bikini Atoll during evacuation, in view of expected shot effects and weather. J-4 will assist in the preparation, positioning, and protection of trailers, as necessary.

(5) Be responsible for the proper marking and documentation of materiel permanently evacuated, in accordance with J-4 directives.

(6) Conduct recovery operations using the Red-Safe advice of CTU-7.

Appendices:

I. Evacuation of Personnel

II. Evacuation of Materiel

III. Re-Entry and Recovery

IV. Predicitions of Effects for CASTLE

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix I to Annex K
Evacuation and Re-Entry Plan, CTG 7.1 Operation Plan No. 1-53

EVACUATION OF PERSONNEL

1. General:

a. All personnel not essential to the accomplishment of the Bikini and Eniwetok Shots will be returned to Eniwetok prior to During the shot periods, personnel who are nc longer required for subsequent shots will be returned to the ZI.

b. All Commanders are responsible for screening their personnel and designating those individuals who will be returned.

2. Bikini Operations:

a. Personnel will be evacuated as follows:

(1) _____ _____ atoll will be evacuated of all personnel, except for the Firing Party on Enyu (and possibly a small maintenance party on Eninman). The number of personnel on Enyu (and Eninman) will be within the capacity of helicopter lift.

(2) _____ Bikini Atoll will be evacuated of all personnel, except for the Firing Party on Enyu.

b. The general location of TG 7.1 personnel at Bikini Atoll during evacuation periods, with the exceptions stated above will be:

Ship	General Space Assignments
USS ESTES (AGC-12).	CTG 7.1 and Command Echelon
USS CURTISS (AV-4).	TU-4, TU-14, Projects 1.2a, 1.3, 1.7, 17.1
USS BAIROKO (CVE-115)	TU-1, TU-12, TU-13 and TU-7 Recovery Personnel
USS BELLE GROVE (LSD-2) . . .	J-3, J-4 representatives

Ship	General Space Assignments
USS GYPSY (ARSD-1).	Projects 1.1, 1.4
2 LST's	Not known. Details to be worked out in coordination with CJTF SEVEN.
1 AP (To be assigned). . . . (Evacuation Transport)	To include personnel not specifically assigned to other vessels.
2 Liberty Ships.	Project 6.4 (Vessels to be drone at shot time, personnel evacuated to ATF prior to shot).
5 ATF's	Not known. Details to be worked out in coordination with CJTF SEVEN.

c. Preliminary Evacuation. Measures will include:

(1) Evacuation to Eniwetok of Task Group personnel whose services are not required in connection with actual test operations. Such evacuation will be accomplished by available inter-atoll air and surface lift.

(2) Embarkation of personnel whose remaining tasks can be accomplished without difficulty from quarters afloat. This measure will be exploited to the maximum extent practicable in order to taper off the load on shore-based facilities and to minimize evacuation requirements immediately prior to each shot.

(3) Embarkation of increments of this Task Group for rehearsals, to test shipboard communication circuits, establish command post facilities, and make final preparations for shots.

d. Operational Evacuation:

(1) Evacuation, except for the Firing Party and those specifically authorized by CTG 7.1 to perform final instrumentation checks and to provide support, will be completed by 1400 hours, each shot minus one day.

(2) Evacuation, except for the Firing Party will be completed by 1500 hours, each shot minus one day.

3. Eniwetok Operations:

a. There will be no pre-shot evacuation of personnel from Eniwetok Atoll. Only the relocation of personnel from the northern islands to Eniwetok and Parry Islands will be necessary.

b. Operational Evacuation:

(1) Evacuation, except for the Firing Party and those specifically authorized by CTG 7.1 to perform final instrumentation checks and to provide support, will be evacuated by 1200 hours, minus one day.

(2) Evacuation, except for the Firing Party will be completed sundown. minus one day.

c. Post-shot Evacuation:

(1) An emergency post-shot evacuation capability for all personnel will be maintained and will be executed on order of CJTF SEVEN in the event radiological contamination conditions so dictate. This evacuation will be for personnel safety only and will not involve materiel or personnel belongings other than toilet articles. Such an evacuation will be capable of accomplishment on four hours notice.

(2) Emergency evacuation will be conducted using available aircraft and specified naval vessels.

(3) There is a remote possibility that Eniwetok Atoll may be subjected to radioactive fall-out during Bikini Operations. If radioactive fall-out is detected at Eniwetok Atoll, a predesignated signal will be given at which time all TG 7.1 personnel will proceed to covered areas and remain under cover until an "All Clear" signal is sounded. Should over-contamination become apparent, CJTF SEVEN will order an emergency evacuation.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix II to Annex K
Evacuation and Re-Entry Plan, CTG 7.1 Operation Plan No. 1-53

EVACUATION OF MATERIEL

1. The following policies will govern planning for the evacuation of materiel from Bikini Atoll prior to the shots and the protection of materiel left on Bikini and Eniwetok Atolls during test periods.

a. No materiel will be considered for permanent evacuation from Bikini to Eniwetok unless there is a foreseen requirement for its continued used at Eniwetok. Time and labor limitations make it imperative that materiel to be evacuated to Eniwetok be released for shipment as early as possible.

b. Materiel no longer required for shot phases or post-shot operations will be moved to islands out of the danger area and permanently evacuated from the Forward Area at the earliest date consistent with the operational commitments and available shipping.

c. Materiel required for re-entry capability and in preparation for succeeding shots will be moved to islands out of the danger area and/or temporarily evacuated aboard ship.

d. Materiel left on Bikini Atoll, except for that in use, will be located on islands out of the danger area and will be protected from shot effects and weather, to the fullest extent practicable. Appendix IV will serve as a guide for planning such protection.

e. The evacuation of classified correspondence and materiel will be coordinated by J-1 and J-4 respectively.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix III to Annex K
Evacuation and Re-Entry Plan, CTG 7.1 Operation Plan No. 1-53

RE-ENTRY AND RECOVERY

1. General:

a. The following information applies to all shots. Detailed plans will be published for each shot as Appendices to Annex N.

b. The feasibility of conducting re-entry and recovery operations is dependent upon radiological conditions.

c. The success of several experiments is dependent upon the early recovery of records or samples. It is expected that every effort will be made to make early recoveries after each shot. Recovery priorities will be established by CTG 7.1 as necessary.

d. As the radiological situation permits, Eninman, Romurikku and Enyu Islands may be reactivated to a limited degree after each Bikini shot (except . TG 7.1 personnel may move ashore for messing, billeting and preparations for succeeding shots. It is reasonable to assume that, favorable weather conditions permitting, debarkation from ships to Eninman and Enyu Islands can be initiated for each shot (except on or about plus one day.

2. Recovery:

a. Recovery operations can be separated into two categories:

(1) Priority: Those for which early recovery of samples or records is necessary in order to effect the fullest accomplishment of the mission of the particular project.

(2) Routine: Those for which recovery can be accomplished as radiological conditions permit.

b. Priority recovery operations will utilize helicopters only with the operations based on the USS BAIROKO at Bikini and on Parry Island at Eniwetok.

c. Routine recovery operations will utilize helicopters and/or boats as necessary from a Rad-Safe Control Point on Eninman or Enyu Island at Bikini,

and from the Rad-Safe Control Point on Parry Island at Eniwetok.

d. No recovery will be attempted during hours of darkness.

e. Annex F, Radiological Safety applies.

f. Annex C, Sample Returns applies.

3. Re-Entry:

a. Until such time as Eninman and/or Enyu Islands are safe for 24-hour occupancy, only those TG 7.1 personnel who cannot accomplish work from afloat will be permitted to work ashore for safe periods of time. These persons will be based afloat for living and regular messing.

b. When Eninman and/or Enyu are considered safe for 24-hour occupancy TG 7.1 personnel who are not operating from afloat will move ashore for messing, billeting and preparations for succeeding shots, within the capabilities of the camps.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Appendix IV to Annex K
Evacuation and Re-Entry Plan, CTG 7.1 Operation Plan No. 1-53

PREDICTION OF EFFECTS FOR CASTLE

1. The results expected from the CASTLE Shots are as follows:

a. Yields (MT):

Model	Expected	Presumed Range
	6	4 - 8
	3 - 4	1 - 6
	8	6 - 10
	125KT	65 - 275KT
	1.8	1 - 2.5
	4	1.5 - 7
	1	0.3 - 2.5

b. Blast: The peak overpressures, duration of the positive phase, and estimated wind velocities based on the upper yield of the Presumed Range are as follows:

SHOT	PEAK PSI			POSTIVE PHASE DURATION SECONDS			WINDS M.P.H.		
	Enin-man	Airuk-iiji	Enyu	Enin-man	Airuk-iiji	Enyu	Enin-man	Airuk-iiji	Enyu
	1.4	1.2	0.8	8.0	8.1	9.0	50	44	30
	1.6	1.75	1.2	6.9	6.8	7.4	58	63	44
	2.1	2.2	1.5	7.8	7.6	8.4	76	78	55
	1.1	1.2	0.9	5.5	5.4	5.7	40	44	33
	1.9	2.0	1.9	7.0	7.2	7.8	68	72	47
	Ground Zero	9.0	1.0	Ground Zero	3.5	5.5	Ground Zero	254	37

	Engebi	Parry	Engebi	Parry	Engebi	Parry
	1.4	0.3	2.6	3.2	51	12

(1) For nominal bombs (20 KT) light damage can be expected to wood frame buildings at 2.0 psi peak overpressures; to vehicles and light steel buildings at 3.0 psi. However, these damages are associated with positive pressure phase duration in order of magnitude of one second. The longer duration of the positive pressure phase which results from the large bombs (six-eight seconds) will produce the same damage with significantly lower peak overpressures.

(2) It may be concluded that light damage will be suffered by vehicles, quonset or butler type structures and wooden shacks on Eninman and Enyu for most of the Bikini Shots. No damage is expected to any type installation or vehicle on Parry or Eniwetok Islands as a result of

c. Thermal: The effective thermal effects are given below. The figures in the table were extracted from curves prepared by H. Hoerlin, J-14, LASL, and are based on a transmission of 95% per mile for a 90° Visual Field, assuming no cloud cover. This transmission was the same as experienced for MIKE Shot in Operation IVY between MIKE and Parry Island, except that roughly 40% cloud cover was experienced for MIKE which had the effect of reducing the thermal energy delivered.

Model	Thermal Energy Delivered (Cal/cm^2)		
	Eninman	Airukiiji	Enyu
	7.4	6.0	2.4
	12.	14.	6.2
	19.	22.	9.5
	4.8	5.4	2.3
	14.	15.	6.7
	Ground Zero	130.	3.6
	Engebi	Parry	
	6.4	0.45	

(1) Both the "Effect of Atomic Weapons" and "Capabilities of Atomic Weapons" contain tables which give the critical energies in calories/cm^2 for a number of common materials such as wood, cloth, etc. The long duration of thermal radiation of the large weapons has the effect of increasing these critical energies; that is, the thermal radiation occurs over longer periods of time permitting longer periods for heat to be conducted from the surface to the interior of the irradiated object. The actual amount of increase in the critical energy depends upon the substance; that is, there will be relatively little increase for poor conductors as fabric and plastics; a moderate increase for thin metal sheets and the human skin; the largest increase for heavy metal objects.

(2) It must be concluded then, that protective measures for heat sensitive material must be taken on Eninman for the Shot. Charring of wood, burning of fabrics, and possibly buckling of the thin metal skins of trailers, etc., is expected unless these items are shaded by barriers of concrete or sand bags. The thermal effects at Eninman for the other Bikini shots and at Enyu for the three larger shots do not appear quite so serious but do call for protection of the more critical materials (wood and fabric). No thermal effects of any consequence are expected at Parry or Eniwetok as a result of

d. Water Wave Effects: Based upon the experience obtained from IVY-MIKE Shot by Project 6.4a, the maximum wave heights which will be obtained for CASTLE will occur in the Bikini Area for as follows:

	Wave Height (Feet)	
Eninman	Airukiiji	Enyu
7	8	6

For the indicated islands, wave heights will be less for other shots with the exception of a 20-foot wave expected at Airukiiji for The maximum wave height at Parry from will be two feet.

(1) It is believed that six-eight feet waves result in surges of water for a considerable distance inshore. Proof of this was not conclusive from the IVY-MIKE Shot because blast effects obscured such evidence as might have existed.

(2) There will be no danger for small boats in the Eniwetok-Parry Area. In the Bikini Area, small boats anchored in 20-30 feet of water should not be particularly endangered by wave effects but would suffer from blast and thermal effects (see above), particularly in the Eninman-Airukiiji Area. Beaching of boats in the Bikini Area cannot be advised because of the uncertainty of the extent of water surges inshore.

e. Fall-Out: No predictions can be made which will be of value for fall-out due to the large number of meteorological variables which cannot be foreseen at this date. Valid predicitions can be made only when a reasonably accurate weather forecast is available, 24-48 hours in advance of a shot.

(1) The governing philosphy will be to consider the entire Bikini Atoll as contaminated after each shot until cleared by monitors. The same will apply for islands north of Parry for the Shot.

(2) The Maximum Permissable Exposure (MPE) for personnel involved in this operation is 3.9 roentgens, gamma only, unless reduced because of previous or anticipated future exposure. All exposure to external gamma radiation will be regarded as total body irradiation.

f. General: With regard to blast, thermal, water wave and fall-out hazards, considerable effort will have to be expended to protect equipment left at Eninman and Airukiiji for the first five Bikini shots with complete evacuation for as planned. No great amount of preparation is

indicated for Enyu although such measures, labor, time and expense wise, should be taken as is economical for the protection of fragile materiel such as tents, electronics gear, etc. No special protection is indicated for Parry or Eniwetok Islands for the shot.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex L to CTG 7.1 Operation Plan No. 1-53

TYPHOON AND TIDAL WAVE PLAN

1. General:

a. The purpose of this plan is to provide an emergency organization and set forth instructions for Staff Sections and all Task Units of this Task Group, providing for the preservation of life and property during typhoon and/or tidal wave conditions and the early restoration of essential services.

b. All elements of TG 7.1 stationed in areas other than on Eniwetok and Bikini Atolls will be guided by local procedures in the event of a tropical storm.

(1) TG 7.1 detachments located on weather station islands will report to, and carry out the instructions of local TG 7.4 weather station commanders for this purpose.

(2) TG 7.1 elements on Kwajalein will report to CO, Naval Station, Kwajalein, for this purpose.

c. The probability of a destructive tidal wave occuring at Eniwetok or Bikini is extremely remote. The distance to the normal point of origin of such a wave makes it highly probable that it would be very small in amplitude upon arrival. The presence of mature palm trees on Eniwetok, Bikini and the neighboring atolls indicates that a severe wave has not struck the area in recent times. Due to the almost certain short advance warning of a tidal wave arrival, no definite rules or procedures can be established for an emergency plan. In the event of a tidal wave, all personnel will take such personal protection measures as are dictated by common sense; and after the water has receded, all Commanders will report to CTG 7.1 for instructions.

d. The following conditions of typhoon readiness have been established:

(1) Condition III: Typhoon winds, or winds of 50 knots or more, are anticipated within 48 hours.

(2) Condition II: Typhoon winds, or winds of 50 knots or more, are anticipated within 24 hours.

(3) Condition I: Typhoon winds, or winds of 50 knots or more, are anticipated within 12 hours.

e. Pre-typhoon preparations will be based on the premise that:

(1) Evacuation of all personnel on Eniwetok Atoll by vessel and/or aircraft is not operationally practicable and that some elements of the Task Force will be required to remain on the atoll during the full course of the typhoon.

(2) Evacuation of personnel from Bikini Atoll will be accomplished to the extent practicable using available Task Force vessels. The same conditions as listed under (3) below, will govern the extent of the evacuation at Bikini.

(3) Designated key scientific personnel and specified critical items at Eniwetok and Bikini Atolls will be evacuated in accordance with the following conditions at the time it is determined that a typhoon will pass through the areas of Eniwetok or Bikini Atolls.

(a) Vessels and/or aircraft are immediately available for evacuation purposes.

(b) There is sufficient time to conduct evacuation without jeopardizing the safety of the evacuation vessels or aircraft.

2. Mission: CTG 7.1, upon establishment by CJTF SEVEN of a condition of typhoon readiness arranges to:

a. Put into effect the provisions of the Typhoon Conditions and Precautions as directed by Appendix I to Annex V, CJTF SEVEN Operation Plan No. 3-53.

b. Designate key scientific personnel and items of material to be evacuated.

c. On order of CJTF SEVEN, supervise the evacuation of designated personnel and items of equipment.

d. Prepare to secure and protect all personnel, equipment, classified material and utilities for which CTG 7.1 is responsible. Particular attention will be given to the security of information and material classified as RESTRICTED DATA or TOP SECRET.

e. Periodically report conditions within the scope of this command to CJTF SEVEN.

3. Missions of Subordinate Units and Staff Sections:

a. The TG 7.1 Hq Commandant:

(1) In coordination with the Adjutant General, takes precautions for the safekeeping of all TG 7.1 classified documents with special attention to RESTRICTED DATA and TOP SECRET.

(2) Supports J-4 and J-6 in the execution of their missions as outlined below.

(3) In coordination with CTG 7.3 and CTG 7.4, prepares to evacuate, on order of CTG 7.1, selected key scientific personnel. J-1, this headquarters, maintains a current list of such personnel and disseminates it on a "Need-to-Know" basis.

b. The TG 7.1 Boat Officer: In coordination with CTG 7.3 and CTG 7.5, will assist in the evacuation of TG 7.1 personnel from Bikini Atoll and from islands north of Parry Island to Parry and Eniwetok Islands.

c. CTU-1, CTU-12 and CTU-13: Formulate plans for the protection or relocation, as feasible, of scientific instrumentation and equipment. In mutual coordination with J-3, these plans will be made available 15 February 1954.

d. Further missions of the Commanders of all Task Units and the Hq Commandant are to:

(1) Be prepared to execute, on order of CTG 7.1, musters of all personnel.

(2) Report by phone, radio, or in person to the TG 7.1 Duty Officer every four hours after the establishment of the Typhoon Readiness Condition. This report is for purpose of determining state of readiness and providing for dissemination of official weather forecasts.

(3) Secure and protect all equipment, classified material, and files for which the unit is responsible.

(4) Assist in the preparation for storm conditioning of such structures and material in which TG 7.1 has an interest.

(5) Upon establishment of Condition III, execute readiness tasks as set forth above.

(6) Upon establishment of Condition II, suspend all routine activity and divert maximum activity toward typhoon preparations to include manning command posts, establishing emergency communications, striking all tents and securing all structures.

(7) Upon establishment of Condition I, and in coordination with TG 7.5 personnel, secure electrical power to all buildings except those requiring lights during the emergency. Put out all unnecessary fires.

(8) Assign station damage control, rescue, and first aid personnel as directed. Keep all personnel except those on authorized duties inside typhoon shelters.

(9) When the storm abates:

(a) Man emergency communications until normal channels are restored.

(b) Provide assistance to the injured.

(c) Report damage to CTG 7.1.

(d) Protect area from looting and outbreaks of fire.

(e) Begin rehabilitation work on a priority basis to resume normal operations as soon as possible.

(f) Muster all personnel and report to CTG 7.1.

4. Administrative:

a. Pre-typhoon preparations are to be taken by the following major staff sections:

(1) J-4, this headquarters is to insure that:

(a) Emergency supplies of rations, water and medical items are provided.

(b) Emergency lighting facilities are to include stores of candles, kerosene, "hurricane lamps" and/or lanterns are provided.

(2) Hq Commandant, this headquarters is to:

(a) Organize and instruct damage control, rescue, and first-aid parties made up of TG 7.1 personnel.

(b) Issue typhoon instructions in coordination with the Hq Commandants of CJTF SEVEN to all personnel, listing location of shelters, advance preparations, precautions to be observed, disposition of classified material, and the location of emergency supplies and facilities.

(3) J-6, this headquarters is to insure that:

(a) All buildings under control of TG 7.1 have been inspected and "TYPHOON SHELTER" signs have been posted on all structures considered safe under typhoon conditions (capable of withstanding winds of 120 knots). Such structures are commonly referred to as "Pacific" type.

(b) All TG 7.1 buildings are secured and those structures which are likely to disintegrate during high winds are strengthened or prepared for dismantling.

(c) Reefer space has been earmarked to augment the Pacific type structures for storage and shelter.

(d) Emergency generators (gasoline or diesel engine driven) are provided for essential power.

b. Other instructions will be issued verbally as the situation develops.

5. Command Posts: No change from basic plan.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex M to CTG 7.1 Operation Plan No. 1-53

HOSTILE ACTION ALERT PLAN

1. General Concept:

a. Definitions:

(1) WHITE Alert, as employed in this plan, indicates that hostile action or attack on Forward Area installations is imminent, and will occur within a specified period of time (time to be specified).

(2) RED Alert, indicates that any one or all of the Forward Area positions are being subjected to hostile reconnaissance or attack.

b. In the event of an outbreak of general war during the on-site operational phase, the Task Force will continue toward the execution of its mission within the capability of the forces remaining available, unless instructions to the contrary are received from the AEC and DOD.

c. The purpose of the Task Force hostile action alert plan is to insure that Operation CASTLE will be conducted with a minimum threat from direct hostile interference, or threat of capture by the enemy of its critical supplies, materiel and key scientific personnel. This plan establishes those measures best suited to the defense of the Eniwetok/Bikini Area.

d. The premise upon which the plan is based is that any actual attack by an enemy would, in all probability, occur when the entire Task Force has been established in the Forward Area. The objective would then more appropriately warrant and reward the risk involved. Short of such an actual attack, hostile activity would in all likelihood be limited to missions of reconnaissance nature. CJTF SEVEN, as ATCOM, Eniwetok, will command, and through his staff, coordinate the defense when major elements of the Task Force are involved.

e. Prior to the concentration of the Task Force in the Forward Area and in the absence of CJTF SEVEN, CTG 7.2, as ATCOM, Eniwetok, will command all defense forces of the Task Force present at Eniwetok and Bikini Atolls.

f. The ground defense of the atolls is at all times a function of CTG 7.2. The existence of his trained, organized and equipped combat security force gives him a small but highly mobile striking force capable of rapid

movement by vessel and/or aircraft to any threatened island in either of the atoll areas.

(1) CTG 7.3 will provide the vessels necessary to transport the combat security force to threatened areas and will assume control of all boats and landing craft operated by CTG 7.5 during such an emergency.

(2) CTG 7.4 will, through the employment of his liaison aircraft section, provide additional transportation, reconnaissance, maintenance of emergency communications, and supply, as appropriate.

(3) Naval aircraft, by reconnaissance over the ocean areas of the danger area will provide timely detection and warning of hostile forces, deny entry to the danger area of all hostile aircraft and vessels and during the combat phase provide close air support to the ground combat security force.

(4) CTG 7.2 will augment and reinforce his combat security force with the available military personnel from TG 7.1, TG 7.3 and TG 7.4.

g. Consideration is given to the plan of evacuation of certain key scientific personnel and designated critical material in the event of timely and accurate warning under the provisions of a WHITE Alert; and the actua. evacuation, on order of CJTF SEVEN, under the provisions of a RED Alert. This evacuation will be conducted by boat and/or aircraft as the situation requires.

h. Total or partial evacuation of the Task Force from either or both atolls will be on order of CJTF SEVEN only, and the methods of evacuation will be commensurate with the situation at the contemplated time of evacuation.

i. Preparation for the destruction of scientific and military equipment, to include critical material to preclude capture, will be made on the initial warning of hostile action. Actual destruction will be carried out by order of CJTF SEVEN only.

j. Friendly Forces:

(1) CTG 7.2:

(a) Provides the maximum physical defense of the Eniwetok/ Bikini Atolls against overt acts and landing parties, particularly Eniwetok, Parry and the Shot Islands.

(b) Assists CTG 7.1 in the immediate removal or destruction of atomic weapons components and critical test equipment

in threatened area.

(2) CTG 7.3:

(a) Defends Eniwetok and Bikini Atolls from attack by enemy vessels and protects sea lines of communication in the danger area.

(b) Assists CTG 7.1 in the disposition of critical materials and equipment when required.

(c) In coordination with other Task Groups, assist in the evacuation of key personnel when such evacuation is ordered by CJTF SEVEN.

(3) CTG 7.4: Provides airlift for evacuation of previously designated personnel, critical weapons components and critical test equipment as designated by CTG 7.1.

(4) CTG 7.5:

(a) Assists CTG 7.1 in maintaining weapons, device components, and critical test equipment in a state of readiness for immediate evacuation and assist in the evacuation or disposal as directed.

(b) Assists other Task Groups in emergency loading of vessels.

2. Mission - CTG 7.1:

WHITE Alert	RED Alert
a. Designates those key personnel to be evacuated as appropriate in the best interests of the scientific efforts of the United States.	a. On order of CJTF SEVEN, assists in the immediate evacuation of those designated personnel whose evacuation is in the best interest of the scientific efforts of the United States.
b. Maintains key personnel, weapons and device components and critical test equipment in a state of readiness for immediate evacuation to the extent permitted by the situation at the time.	b. Assists CTG 7.2 in the emergency loading of vessels and defense of threatened areas.

c. Prepares to advise CJTF SEVEN as to how the Task Force can continue toward the execution of its mission within the reduced capability of the Scientific Task Group.

d. Within means available, assists CTG 7.2 in the preparation for defense of threatened areas.

e. Designates military personnel for release to CTG 7.2 Combat Security Force.

f. Prepares for RED Alert conditions to the maximum extent possible, in view of the primary tasks and missions.

c. Releases previously designated TG 7.1 military personnel to th CTG 7.2 Combat Security Force.

3. Missions of Subordinate Units:

x. All Task Unit Commanders:

(1) Insure that all personnel assigned to their respective Task Units are aware of the existence of, and familiar with the pertinent details of, The Hostile Action Alert Plan.

(2) Prepare, and submit to J-4, this headquarters, a list of material, test equipment, etc., to be considered for selection as critical material of that Task Unit for the purpose of an emergency. As used herein, the term critical material refers to all material, selected by Task Unit Commanders and approved by CTG 7.1, the evacuation of which, is appropriate to the best interest of the scientific effort of the United States. J-4, this headquarters, will maintain a current list of such material, to include locations, approximate weight, size, priority, and identification.

(3) Task Unit detachment commanders located on islands exterior to Eniwetok and Bikini Atolls will report to local base or installation commander for appropriate WHITE Alert and/or RED Alert instructions. Task Unit detachment commanders located at Kwajalein will report to CTG 7.4 for the same purpose. Such commanders located aboard ship will report to the ship's captain.

WHITE Alert

a. The Hq Commandant, TG 7.1:

(1) In coordination with CTG 7.4 and CTG 7.3 prepares to evacuate on order of CTG 7.1, selected key scientific personnel. J-1, this headquarters, will maintain a current list of such personnel as approved by CTG 7.1 and disseminate it on a "Need-to-Know" basis.

(2) Familiarizes himself with CTG 7.2 defense plans.

(3) In coordination with CTG 7.2 prepares for the evacuation of, or destruction of, classified material as specified in Security Memorandum No. 6, Hq JTF SEVEN, dated 13 September 1953.

b. The TG 7.1 Boat Officer assists in the coordination of boat plans formulated by CTG 7.3 which pertain to the evacuation of CTG 7.1 key personnel and critical materials.

x. As directed by CTG 7.1, all Task Unit Commanders and Hq Commandant are to:

(1) Be prepared to assist CTG 7.2 in the construction of field fortifications.

(2) Be prepared to assist in the preparation of designated critical material for evacuation.

(3) Be prepared to assist CTG 7.2 in his defense plans with the means available, provided such assistance does not interfere with support to be rendered CTG 7.1.

(4) Be prepared to assist CTG 7.2 in the emergency loading of vessels.

(5) Report to CTG 7.1 at Hq TG 7.1 (Parry Island) by the most expeditious means available.

(6) Disseminate as much official information regarding the situation as possible to all personnel.

(7) Screen the military personnel under their command and select those which can be recommended to CTG 7.1 for release to the CTG 7.2 Combat Security Force. CTG 7.1 will take appropriate release action provided it does not interfere with the mission of his command.

RED Alert

x. All Task Unit Commanders and Hq Commandant are to:

(1) On order of CTG 7.1, execute the tasks for which preparations have been made under WHITE Alert conditions.

(2) Report to CTG 7.1 each hour, if possible, using the most expeditious means available.

4. Administration and Logistics:

a. Administration orders will be issued by CTG 7.1 as the situation dictates.

5. Command:

a. The basic organization of TG 7.1 remains unchanged under WHITE and RED Alerts.

(1) Military personnel, except those released to CTG 7.2, throughout TG 7.1 will continue to report to their respective commanders, whether civilian or military.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex N to CTG 7.1 Operation Plan No. 1-53

SHOT PLANS

1. The detailed plan for each shot will consist of several operational plans which will be issued in the Forward Area. These plans will be identified by the code name of the shot and will be numbered consecutively according to their date of issue.

2. The plans will cover the Schedule of Events from shot minus three days to shot plus one day to include airlift and boat schedules, safety instructions, Rad-Safe considerations, etc.

3. This Annex will be composed of one copy of each such plan in order that the CTG 7.1 Operation Plan No. 1-53 will reflect the complete plans for each shot in all of its detail.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex O to CTG 7.1 Operation Plan No. 1-53

RETURN OF SAMPLES

1. Responsibilities:

a. The responsibility for overall sample return is that of CJTF SEVEN.

b. The responsibility for transportation of samples from landing airfields in the ZI to the appropiate laboratory remains with recipient.

c. CTG 7.1 has the following responsibilities and prerogatives:

(1) The itinerary, including stops and scheduled departure time from Eniwetok of each sample courier aircraft, consistent with flying safety.

(2) The amount and type of samples to be placed aboard each aircraft.

(3) The designation of and the number of project monitors to accompany each flight.

(4) The dispatching of certain messages to continental scientific installations.

(5) The checking, prior to take-off, of all scientific cargo, equipment and personnel necessary to the completion of the respective scientific mission.

(6) Recommendations to CJTF SEVEN on any procedure concerning sample return considered necessary to the effective return of scientific radioactive samples.

2. Operational Procedures:

a. Sample return courier aircraft will depart Eniwetok at H-hour plus six to ten hours, H-hour plus 24 to 36 hours, and H-hour plus four to five days. The exact departure time of these aircraft will be dependent upon recovery problems. Radioactive samples recovered at Bikini Atoll will be flown by C-47 to Eniwetok until is detonated; then PBM service will be utilized.

b. The responsibilities outlined for CTG 7.1 in this Annex will be coordinated by J-4 of this headquarters. J-3 will be available for assistance as necessary.

c. Scientific project monitors will accompany samples to their destinations when practicable; otherwise, project monitors will meet the sample aircraft at its destination nearest the laboratory of interest.

d. A member of JTF SEVEN will be designated as the Officer-in-Charge of sample return. In coordination with J-3 and J-4 of this headquarters, a representative of CTG 7.4, and any necessary representatives of other organizations, he will:

(1) Establish detailed procedures to effectively conduct the sample return program.

(2) Procure necessary equipment to fulfill the sample return requirement.

(3) Insure that top priority be given to the earliest departure time and most expeditious return possible of the sample return aircraft after it is loaded, consistent with flying safety.

3. For sample return to function efficiently, it will be necessary for the designated representatives of JTF SEVEN, TG 7.1 and TG 7.4 to work together on planning and effecting sample return.

Headquarters Task Group 7.1
Joint Task Force SEVEN
Los Alamos, New Mexico
8 December 1953

Annex P to CTG 7.1 Operation Plan No. 1-53

SUMMARY OF MAJOR MILITARY SUPPORT ITEMS

1. The major military support items for CASTLE will be:

a. Surface Components:

Type	Departure	Arrival	Mission
USS ESTES (AGC-12)(with Helicopter Platform)	25 Jan - San Diego	10 Feb - Eniwetok	JTF Command facilities during Bikini shots. Prior to each Bikini shot the USS ESTES will embark the JTF Command at Eniwetok, take station off Bikini for the shot and return to Eniwetok. For the Eniwetok shot the USS ESTES will moor in Eniwetok Lagoon off Parry.
USS CURTISS (AV-4)	4 Jan - San Diego 10 Jan - Oakland	6 Jan - Oakland 24 Jan - Eniwetok	Transportation of weapons and devices to Parry and Eninman. Located close to shot barges off Aomoen for weapons assembly and certain project support. Moor off Eninman prior to
USS BAIROKO (CVE-115)	2 Jan - San Diego	18 Jan - Bikini	Rapid post-shot re-entry at Bikini for TU-7 surveys. Base and control point for project personnel requiring priority recovery operations by helicopter. Rad-Safe laboratory services.
USS BELLE GROVE (LSD-2)	2 Jan - San Diego	20 Jan - Bikini	Transportation of shot barges from Parry to Bikini. Evacuation of oversize trailers and equipment from Bikini to Eniwetok. Mother ship to TG 7.3 Boat Pool.

1 LST		In Forward Area	Regular inter-atoll lift. Special lifts of dummy and weapon from Parry to Eninman.
1 LST (Weather)	13 Dec - Pearl Harbor	15 Jan - Eniwetok	Logistic support of weather islands. (Rongerik, Majuro, Ponape, Kusaie). Arrive Eniwetok 3 Jan. Depart Eniwetok 7 Jan to establish weather and project stations on Rongerik. Return to Eniwetok on 15 Jan for regular inter-atoll lift.
5 ATF (Sea-going Tugs)			Scientific projects and towing: Primary uses - Two ATF's to accompany Project 6.4 drone vessels (YAG-39, YAG-40) from West Coast, and tow drone vessels between Eniwetok and Bikini. One ATF to assist Project 1.4 instrumenting for Bikini shots. One ATF has back-up for positioning each shot barge and to standby in case of bad weather.
1 ATF (with YCV and YFN in tow)	27 Jan - Pearl Harbor	16 Jan - Bikini	
1 ATF (May accompany ARSD)	3 Jan - Pearl Harbor	15 Jan - Bikini	
1 ATF	2 Jan - San Francisco	11 Jan - Pearl Harbor	
	20 Jan - Pearl Harbor	6 Feb - Bikini	
2 ATF (Accom-panying (YAG-39, YAG-40))	17 Jan - Pearl Harbor	26 Jan - Eniwetok	
USS GYPSY (ARSD-1)	3 Jan - Pearl Harbor	15 Jan - Bikini	For Project 1.4 mooring requirements.
2 AVR	One each now at Eniwetok, Bikini		Air-sea rescue craft. Movement of Firing Party.
Vessels to support Project 2.5a			Lay and recover distant floating fall-out collectors.
2 Liberty Ships (YAG-39, YAG-40)	2 Jan - San Francisco	11 Jan - Pearl Harbor	Drone vessels for Project 6.4.
	20 Jan - Pearl Harbor	6 Feb - Bikini	

1 YCV (barge)	16 Jan - Bikini	Helicopter landing platform for use near shot barges.

Three telephone buoy moorings will be installed off Eninman for major vessels use.

Two mooring buoys (non-telephone) will be installed in Bikini Lagoon for emergency use of the drone vessels and two moorings in Anchorage "A", B-3 and C-3 off Parry for decontamination of these vessels.

b. Aircraft Components :

Type	Capacity	Mission
9 L-13 Liaison	3 persons	Inter-island lift at Eniwetok using landing strips.
10 HRS Helicopters 7 H-19A Helicopters 3 H-13 Helicopters	6 persons (1000 lbs) 6 persons (1000 lbs) 2 persons	Inter-island lift at Bikini and Eniwetok for instrumentation, radiological surveys and recovery.
4 C-47	25 persons each, freight.	Inter-atoll lift between Eniwetok and Eninman.
2 PBM-5A	20 persons each, freight. Arrive FA 15 Jan 54.	Inter-atoll amphibious lift between Eniwetok and Bikini.
2 PBM-5A	20 persons each, freight.	Operate from Kwajalein. Resupply of weather and project stations on weather islands.
15 F-84G		Cloud sampling.
1 RB-36		Cloud sampling control and photographic aircraft.
2 B-36 (Featherweights)		High altitude sampler with possible B-57 augmentation.
1 B-36, 1 B-47		Effects aircraft.
8-9 WB-29		Weather reconnaissance.
2 SA-16		Search and rescue at Eniwetok.

3 C-54	Documentary photography.
1 P2V	Project 6.4 control of drone vessels.
1 P4Y-5	Project 6.4 telemetering.
3 P2V	Security Patrol.
4 F4U	Security.