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THE JOINT CHIEFS OF STAFF By Authority of *Adm. Section 9-11-5*

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Washington 25, D. C.

Name *R. S. Taylor* Title *Admin. Section 9-11-5* Date
Per memo to Riley from Taylor 10/18/47

409466

SM-9078
18 October 1947

Name _____ Title _____ Date _____

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MEMORANDUM FOR THE CHAIRMAN, ATOMIC ENERGY COMMISSION:

Via: Chairman, Military Liaison Committee

Subject: Armed Forces Participation in Proof-Testing Operations for Atomic Weapons.

The Joint Chiefs of Staff approved the recommendations of the Joint Proof-Test Committee as set forth in this study.

It is requested that the views or concurrence of the Atomic Energy Commission on these matters be furnished the Joint Chiefs of Staff at an early date in order that planning for this project may proceed on a firm basis.

For the Joint Chiefs of Staff:

/s/ W. G. LALOR,
Captain, U. S. Navy,
Secretary

10-18-47

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REPORT BY THE JOINT PROOF-TEST COMMITTEE

to the

JOINT CHIEFS OF STAFF

on

ARMED FORCES PARTICIPATION IN PROOF-TESTING
OPERATIONS FOR ATOMIC WEAPONS

THE PROBLEM

1. To recommend for approval the policies and outline plan for the organization and operation of the Joint Task Force to conduct proof-tests of atomic weapons.

DISCUSSION

2. The over-all cost of the project over normal operating expenditures of the services concerned is estimated not to exceed 20 million dollars. It will require 8,790 service personnel, 24 naval ships and craft, and 50 land-based military aircraft. In addition, approximately 25 technicians will be furnished by Armed Forces Special Weapons Project (AFSWP) to the Joint Task Group for firing the weapon.

3. The schedule of tests to be conducted and observations to be made, set forth in Enclosure "A", represent the combined minimum requirements of the Atomic Energy Commission (AEC), Army, Navy and Air Force as determined by each. No tests or observations will be made which interfere seriously with the primary scientific purpose of the test, or for which a definite use cannot be foreseen, or which do not require direct observation of an atomic blast.

[REDACTED]

[REDACTED]

[REDACTED]

4. The proposed policy with reference to allocation of costs and the estimate of charges to be borne by the AEC is set forth in Enclosure "B". Generally, it is proposed that the AEC bear all the costs beyond the normal operating costs of the services concerned.

5. The following time schedule is anticipated:

- 1 - 15 November: Complete plans and move initial construction units to test area.
- 1 December: Complete movement of construction personnel, equipment and material to embarkation point, and embark follow-up force.
- 1 January: Complete rehabilitation construction, initiate major construction projects.
- 15 March: Arrival of main body of AEC scientists by ship, completion of construction projects to point where the AEC can take over in accordance with previous agreements, and completion of movement of ground echelon of Air Force.
- 1 April: Complete movement air echelon.

6. A joint force will be organized to maintain physical security of all phases of the operation to include the guarding of weapons. It is anticipated transporting fissionable parts of the weapons by naval vessels as was done in operation CROSSROADS. The downgrading of any atomic energy "restricted data" will be accomplished only by the AEC, but initial restrictive military security classifications may be relaxed by the Joint Task Force commander as military requirements dictate. Detailed security plan and plan for release of public information is attached as Enclosure "C".

7. In selecting the site, the Joint Proof-Test Committee has compared the relative merits of both the suggested locations (Eniwetok and Kwajalein), and considers the Eniwetok location to be the only completely satisfactory site. These considerations reference Eniwetok are discussed in detail in Enclosure "D". For technical reasons the Atomic Energy Commission strongly recommends selection of this site over Kwajalein.

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8. The United States Air Force will be responsible for furnishing photographic service, both for ground and air photos. The scope will include all historical and technical photography.

9. The Radiological safety unit will assist the Task Force commander in carrying out his responsibility for the radiological safety of all personnel. Detailed delineation of the duties of this unit may be found in Enclosure "E".

10. Communications are outlined in Enclosure "F", and provide facilities for both the Task Group and the Atomic Energy Commission. Communication facilities will be provided jointly by the Army, Navy and Air Force.

11. Meteorological service will be provided primarily by the Air Force as outlined in Enclosure "G".

12. a. A total of 140 natives now residing in the Eniwetok Atoll must be evacuated by, and to points selected by, the High Commissioner, Trust Territory, Pacific Islands. The problem of evacuating natives from the Roi Namur area of Kwajalein Atoll would be somewhat greater.

b. On Eniwetok there are approximately 3000 tons, on Parry Island approximately 4000 tons and possibly 200 tons on Engebi Island (all in the same Atoll) of surplus property which has been sold to the Chinese but which they have not as yet removed. It is proposed to work out a plan with the Foreign Liquidation Commission either to return this property to American control, expedite its removal by the Chinese, or if this cannot be accomplished, to move it to another locale.

13. The outline plan for participation of each service concerned is set forth in Enclosure "H". Appendix "F" to Enclosure "H" proposes that a directive to the services be issued by the Departments of the Army, Navy, and Air Force to implement this plan.

[REDACTED]

14. The proposed organization and responsibilities of the Joint Task Force are set forth in Enclosure "I", with a chart for ready reference. To facilitate operational control, it is believed that one of the Joint Chiefs of Staff should be designated as the Executive Agent for the Joint Chiefs of Staff.

CONCLUSIONS

15. That a joint directive should be issued immediately for the formation of the Joint Task Force to conduct proof-test operation for not to exceed three firings of atomic weapons; that Eniwetok should be approved as the site for the proving ground; that proof-testing should begin on or about 15 April 1948, and operations continue for approximately six weeks; and that the principles governing cooperation between the AEC and the Joint Task Force, together with the outline plan, should be referred to the AEC for its concurrence.

RECOMMENDATIONS

16. It is recommended that the Joint Chiefs of Staff:

a. Approve the target date of 15 April 1948, the exact dates and times of firings to be the decision of the Task Force Commander, and the selection of Eniwetok as the proving ground.

b. Approve the statement of policies in Enclosures "B" and "C" and the proposed organization and responsibilities in Enclosure "I".

c. Dispatch the memorandum in Enclosure "J" requesting the concurrence of the AEC to the recommendations set forth in this paper.

d. Upon concurrence of the AEC to the recommendations of this paper, dispatch the memorandum in Appendix "F" to Enclosure "H" to the Secretary of Defense.

e. Designate one of the Joint Chiefs of Staff as the Executive Agent for the Joint Chiefs of Staff for the Task Force.

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This document contains restricted data within the meaning of the Atomic Energy Act of 1946 and/or information affecting the national defense of the United States within the meaning of the Espionage Act, 50 U.S.C. 1831 and 32, as amended. Its transmission or the revelation of its contents in any manner to an unauthorized person is prohibited and may result in severe criminal penalty.

ENCLOSURE "A"

EXPERIMENTAL OBSERVATIONS TO BE MADE

1. The Atomic Energy Commission has requirements for experimental observations of phenomena attending the detonation of certain atomic weapons in order to secure data from which may be determined the best choice of weapons for stock piling, the most efficient use of available fissionable material, and basic scientific information to use in weapon research and development. The observations are given in the order of priority as follows:

a. Essential observations - those to determine:

(1) The nuclear efficiency of the explosions by radio chemical analysis of air and ground samples of the products of the nuclear reaction.

(2) The amount of total energy released by means of high speed motion pictures of the ball of fire and of the shock front.

(3) The blast effects by observing peak pressure as a function of distance, and instantaneous pressures as a function of time and distance.

(4) The rate of increase in the generation of energy in the early stages of the nuclear reaction in order to substantiate and improve theory to be applied in weapon development.

b. Highly desirable observations are:

(1) The measurement of transit time, the period between firing and the emission of gamma rays, as a

[REDACTED]

means, supplementary to that of subparagraph 1 a (4) above, of determining whether a particular bomb detonated in a normal or abnormal manner.

(2) The determination of the spectrum of fast neutrons as an aid to future bomb design.

(3) The determination of the spectrum of high energy gamma rays.

2. The Armed Forces have indicated requirements for experimental observations to determine the following:

a. The character of the blast both at ground level and at various elevations.

b. The effect of blast upon structures composed of materials such as reinforced concrete, and upon airplanes in flight.

c. The detailed characteristics of the radioactive cloud over an extended period of time, including fall-out and surface contamination.

d. Meteorological data to forecast the movement and behavior of the radioactive cloud.

e. Radiation dosages at various distances, and as a function of time.

f. Radiation shielding efficiencies of various materials, particularly reinforced concrete.

g. The degree and duration of contamination and the effectiveness of decontamination procedures.

h. Incendiary effects based on the intensity of heat and on induced surface winds.

i. Methods for the long range detection of nuclear explosions.

3. To conduct operations on the minimum practicable scale to meet the tentative requirements outlined above and others which may be proposed, it is planned:

[REDACTED]

a. That there be a continuous rigid screening jointly by the Test Director and the Test Force Commander to insure that observations are limited to those which will not seriously interfere with the primary purpose of the test, and for which a scientific or military need exists which can be secured only by direct observation of an atomic explosion.

b. That all observational requirements be "frozen" as of 1 November 1947.

ENCLOSURE "B"

ALLOCATION OF COSTS BY THE AEC AND THE ARMED SERVICES

1. Subject to final approval by the Joint Chiefs of Staff, it is recommended that the following principles govern the allocation of costs for this project:

a. The AEC will be charged with the following expenditures:

(1) All construction costs, including laying of cable at the site. All contracts for construction to be carried out by other than military personnel will be subject to approval by AEC. It is further understood that prior AEC approval will be required for construction projects by military personnel in those instances where charges will be made to the AEC.

(2) All travel including mileage and/or per diem or additional overseas pay for military personnel where travel involved is on temporary and/or additional duty directly concerned with this project.

(3) Administrative expenses including salaries and overtime for additional civilian personnel which may be required for the accomplishment of this project.

(4) All civilian expenses incurred in forward areas except for those civil service personnel who are regularly employed by the armed services and who may participate in this project. Overtime or other extra pay for these civil service personnel will be charged to the AEC.

(5) All maintenance and operation costs of bases in the forward area which are directly attributable to the project, including gas and oil for operation of motor vehicles.

(6) Purchases of all supplies and equipment required for tests, including transportation costs other than by military, air or surface vessels.

[REDACTED]

(7) All supplies issued from stock for base operation and maintenance for the purposes of the test.

(8) Packing and handling charges for above supplies together with transportation charges except where transportation is by military air or surface vessels.

(a) Passenger and cargo space on regularly scheduled Army vessels and passenger and cargo ships which can be made available by the Army without the acquisition of additional substitute vessels or resort to commercial shipments to handle normal Army movements, will be made available without reimbursement from AEC in accordance with priorities agreed upon. Army vessels which must be replaced with substitute vessels or through utilization of commercial facilities will require reimbursement from AEC at the following rates which cover minimum operating expenses:

C-4 passenger	\$2600/day
ZC-2 passenger	1900/day
VC-2 cargo	1100/day
C1-MA-V1	700/day

(9) Special clothing or personal equipment if purchase is required for the purposes of the test.

(10) All charges for decommissioning or continued operation of forward test bases, or for placing such bases in a caretaker status after completion of tests. These charges will include custody, care, and preservation of equipment.

(11) All expenses which may be incurred in the event it is determined to establish a permanent proving ground in the forward bases, will be the subject of future agreement between the armed services and the AEC.

(12) All costs of conversion and reconversion of ships and aircraft or other material which may be specifically required for this project.

[REDACTED]

b. The armed services will be responsible for the following expenditures:

(1) All pay and allowances of military personnel (except additional overseas pay resulting from this project).

(2) All subsistence and clothing for military personnel.

(3) All transportation costs of military and civilian personnel on government-owned ships or aircraft.

(4) All costs for tests which may be conducted by the armed services which are not planned or requested by the AEC.

(5) Motor vehicles required for transportation of military personnel in forward areas.

(6) Costs of all recreational facilities and equipment in forward areas.

(7) All costs for fuel oil, lubricating oil, gasoline, and other operational expenditures of ships and aircraft required in this project.

2. The decision for the interpretation of allocation of specific costs in accordance with the above agreement will be the responsibility of the Task Force Commander or authorized members of his staff. In the event that additional major expenditures should develop in the implementation of this project, the allocation of costs will be the subject of further agreements between the AEC and the armed services.

*John
AEC
Approved*

3. The financial procedures with respect to fiscal and property accounting and disbursement of funds will be in conformity with established procedures of the services involved. Detailed instructions covering special procedures will be jointly agreed to by the services involved and the AEC and such instructions will be disseminated by the fiscal branch of each service.

Estimate of Costs to be Charged to the AEC
in Accordance with Foregoing Policies

<u>Requirement</u>	<u>: Roi Namur</u>	<u>: Eniwetok</u>
Construction - Engineer (A, AF, N)	: \$ 3,850,000	: \$ 3,855,000
- Signal (A, AF, N)	: 3,965,000	: 4,000,000
General Services and Supplies	: 260,000	: 260,000
Quartermaster, Photo, etc.	:	:
Transportation - Supplies - personnel	: 5,415,000	: 5,445,000
equipment - units	:	:
Conversion and Modification - vessels,	: 840,000	: 840,000
planes, vehicles, materiel	:	:
Overseas Pay - individuals	: 600,000	: 600,000
Navy 1/6, Army and Air 5/6	:	:
of personnel involved	:	:
Total	: 14,930,000	: 15,000,000
Contingencies	: 5,000,000	: 5,000,000
TOTAL ESTIMATE	: 19,930,000	: 20,000,000

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ENCLOSURE "C"

SECURITY ASPECTS OF OPERATION AND PROCEDURE
FOR THE RELEASE OF PUBLIC INFORMATION

1. The basic security regulations for the guidance of, and strict compliance by, all personnel assigned or attached to the Joint Task Force are Public Law 585, 79th Congress (Atomic Energy Act); Joint Chiefs of Staff security regulations; Army regulations 330-5; Article 76, U.S. Navy regulations; such directives relative to security which have been or may be issued by the Joint Task Force Commander or higher authority; and current agreements in effect between the AEC and the armed forces.

2. Intelligence staff personnel, security investigative personnel (Counter Intelligence Corps) (CIC) and guard personnel for physical security control purposes (Marines or MP's), totalling approximately 259, will be furnished on a proportionate basis by the armed forces to care for all security aspects of the operation beginning with the delivery of any material to any unit of the task force. The bulk of this personnel will be allotted to the Joint Task Force and staged from the Zone of the Interior, and the remainder from units of the armed forces stationed in the Pacific Area.

3. The Task Force will implement a detailed program to insure appropriate security clearance of personnel assigned or attached to the Joint Task Force, as well as for any organization whose contemplated connection with the operation necessitates access to classified information. In addition, it will supervise the implementation of a comprehensive security indoctrination and security training program for all personnel participating in the operation, to include instruction relative to the security classification of all aspects of the operation, general security lectures, security posters, and execution of security pledges.

[REDACTED]

4. Only a very limited number of official observers, after clearance by the AEC will witness the operation. No representatives of the press or foreign personnel will be attached to the Joint Task Force. Photographic equipment, other than for official photographic purposes, is forbidden. Censorship of personal mail or communications is not contemplated.

5. The Joint Chiefs of Staff have established military security classifications for certain phases of operations as follows:

Secret - the location of the test site and the general time of conducting tests as well as any information which will relate studies and preparation to a particular test.

Top Secret - the target date for a particular test.

It is believed that military requirements will dictate the periodic downgrading of the above categories of information. Such downgrading will be accomplished directly by the Joint Task Force Commander as military requirements dictate. The downgrading of any atomic energy "restricted data" will be accomplished only by the AEC.

6. The release to the public of any information on the scientific and technical aspects of the operation will be the responsibility of the AEC.

7. It may be advisable from time to time to release information on the military participation in the test. Such release of information will be made only with the approval of the Secretary of Defense in each case. Accordingly, no releases concerning the operation will emanate directly or indirectly from the Army, the Navy or the Air Force.

*Army
AEC*

ENCLOSURE "D"

ANALYSIS OF SITES

1. Preliminary study narrowed the site to consideration of two localities, the first in the vicinity of Roi Namur in the Kwajalein Atoll, the second at Eniwetok. Originally it appeared that, if the operation could be satisfactorily performed from a scientific point of view in the Roi Namur area, a substantial saving in effort might be made. Detailed analysis, however, indicates there would be approximately the same construction requirements with little or no saving in money, manpower, or ships.

2. Further development of the problem with the AEC led to its statement "An attempt has been made to minimize the operational and logistical requirements for the operation; however, it has been concluded that only Site 1 (Eniwetok, firing three shots on three different islands) will permit full realization of the objectives of the tests."

3. Study of Eniwetok Atoll reveals that this area possesses all desirable characteristics:

a. It provides an excellent location which should be available for an indefinite period for use by the United States as an atomic proving ground, and one in a secure area located well off normal shipping and air lanes.

b. It has convenient logistical support being within 300 miles of our air and naval base at Kwajalein and within 2500 miles of our major installations at Guam and Oahu.

c. Within the Atoll itself is a suitable anchorage area for larger vessels.

d. The area is not exposed to violent storms and the prevailing northeastern winds do not subject inhabited land masses to deposits of radioactive particles.

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c. Only a minor evacuation of the population is necessary (totalling approximately 140 and substantially less than for the Roi Namur area of the Kwajalein Atoll) and the prevailing eastern ocean currents would permit the flow of contaminated waters several hundred miles without striking inhabited land masses.

ENCLOSURE "E"

ORGANIZATION AND RESPONSIBILITIES OF RADIOLOGICAL SAFETY SECTION

1. Radiological Safety of all personnel is a responsibility of the Task Force Commander. The Radiological Safety Section assists the Task Force Commander in this matter by performing the following functions:

- a. Inform the Task Force commander as to hazards involved which may cause injury or sickness to members of his command.
- b. Prepare instructions outlining the precautions necessary for protection of personnel against such hazards.
- c. Detection and determination of intensity and types of radioactivity which may be encountered and evaluate hazards to personnel.
- d. Advise Task Force surgeon as to diagnosis and treatment of illness or injury resulting from exposure to radioactivity.
- e. Organize and supervise decontamination of personnel and material.
- f. Assemble and operate necessary equipment for accomplishment of functions listed above.
- g. Assemble, equip and instruct necessary special personnel for accomplishment of functions listed above.
- h. Provide requirements as to space and special facilities.
- i. Specify preliminary physical examinations required of personnel who will come in contact with radioactivity. (Complete physical examination including X-ray of chest, complete blood count and urinalysis.)
- j. Draw up regulations governing employment of personnel in radioactive areas for the approval of Task Force commander.

2. The Radiological Safety Section also assists the technical director by performing the following functions:

- a. Detection and determination of intensity and types of radioactivity which may be encountered and evaluate hazards to personnel.

[REDACTED]

b. Provide information as to special equipment required by Radiological Safety Section.

c. Collect and collate data and prepare necessary reports.

d. Advise scientific director as to employment of personnel in radioactive areas.

[REDACTED]

Enclosure "E"

ENCLOSURE "F"

COMMUNICATIONS

1. The mission of the Joint Communications and Electronics Division of the Task Force Commander's staff is to provide, operate and maintain such communication facilities as may be required by the task force and the Atomic Energy Commission, and to furnish such technical assistance as the Test Director, the Radiological Safety Officer, and others shall require, within the limits of the resources made available to the Task Force Commander.

2. Communications and electronics operating and technical personnel and materials will be furnished jointly by the Army, Navy, and Air Force.

3. The above includes command and administrative radio and telephone facilities, air control towers and associated facilities, local wire and radio nets, installation of submarine control cables, establishment of necessary electronics supply dumps and an electronics and instrument repair and maintenance shop.

4. The communication plan will be based upon the assumption that there will be no requirements for communication facilities necessary for the transmission of press, news broadcasts or pictures.

ENCLOSURE "G"

METEOROLOGY

1. PROBLEM. The meteorological section will be required to provide two important operational services. First, accurate winds aloft information to heights of 60,000 feet must be observed and forecast for radiological safety purposes. Second, suitable weather conditions, mainly with respect to cloud cover must be forecast to meet the requirements of all air and photographic operations.

2. METEOROLOGICAL FACILITIES REQUIREMENTS. The existing meteorological network will need to be augmented.

3. SCIENTIFIC METEOROLOGICAL PROGRAM. A scientific meteorological program will be inaugurated with the personnel and facilities as outlined in 2, above. Tentatively, this program will include:

- a. Documentation of all meteorological reports.
- b. Rate of rise and height of cloud.
- c. Volume of cloud.
- d. Time for dissipation of cloud.
- e. Condensation cloud effect.
 - (1) Pressure wave calculations.
 - (2) Microbarograph and temperature observations.
- f. Energy estimates of bomb from condensation, cloud and thermodynamic considerations.
- g. Atmospheric turbulence diffusion program.
- h. Trajectory cloud calculations for 30 days.
- i. Filter samples from cloud for several days after burst.
- j. Long-range detection:
 - (1) Seismic techniques.
 - (2) Pressure wave techniques.
 - (a) Sonic frequencies.
 - (b) Non-sonic frequencies.
 - (3) Sampling techniques.

Enclosure "G"

OUTLINE OF SERVICE PARTICIPATION

Participation to be expected from the services will include furnishing of:

1. PERSONNEL:

The total number of service personnel to participate will be approximately 8790 including 1924 Army, 4326 Navy, and 2540 Air Force. General breakdown of personnel is shown in Appendix "A".

2. SUPPLIES AND EQUIPMENT:

Units will be mounted with complete individual and organizational equipment, less all weapons except those required for guard purposes. In addition, all shore based units will be mounted with 30 days maintenance supply of rations, clothing, equipment, medical supply, motor maintenance and other general supplies. Personnel or units which will operate aboard ship will be mounted with 90 days supply. The Atomic Energy Commission will furnish all technical supplies, material and equipment not an article of issue in any service required for the conduct of the test. Service supply responsibility will be as shown in Appendix "B".

3. CONSTRUCTION:

Construction requirements will include the rehabilitation of existing facilities at Eniwetok or Roi Namur, the construction of additional camp facilities, and the preparation of 3 test sites and related recording stations. Additional construction required is shown in Appendix "C".

4. SHIPPING:

Naval shipping will be used, augmented by available Army Transportation Corps shipping. Detailed breakdown of shipping available is shown in Appendix "D".

5. AIR TRANSPORTATION:

In addition to aircraft participating in the test, the following air transportation will be utilized: Air Transport Command, Naval Air Transport Service, and 10 C-54 aircraft to be included in the task force if available.

6. BASE FACILITIES:

Base facilities to be furnished are shown in Appendix "E".

APPENDIX "A" TO ENCLOSURE "H"

PERSONNEL TO BE FURNISHED
(for either Roi Namur or Eniwetok)

a. Shore Based Personnel

<u>Type Personnel</u>	<u>Strength</u>	<u>Source</u>	
		<u>U.S.</u>	<u>Hawaii</u>
Hq/Hq Co Joint Task Force	121	100	21
Air Force Composite Wing	2,517	2,517	
Engr and stevedores (Army)	711	461	250
*Sig Constr & opns (Army)	669	553	116
Medical (Army)	8		8
Housekeeping and supply (Army)	260		260
*Security personnel (Army)	155	155	
*Security personnel (Navy)	31	81	
*Security personnel (Air)	23	23	
*Navy garrison & boat pool (Navy)	<u>203</u>		<u>203</u>
<u>Total Services</u>	<u>4,748</u>	<u>3,890</u>	<u>858</u>
Special personnel furnished by AFSWP for firing of weapon	<u>25</u>	25	
Civilian contractor personnel	<u>100</u>	100	
Scientific personnel	<u>300</u>	300	
<u>Total shore based</u>	<u>5,173</u>		

* These figures represent an arbitrary split between Army, Air and Navy and must be modified as plans progress to secure the necessary available technical specialists.

b. Navy Forces afloat (Ships and craft or equivalent to be furnished with ships complement for either Roi Namur or Eniwetok)

<u>Type craft</u>	<u>Number</u>	<u>Aggregate</u>
AK (for lifts only)	2	486
AV (4 and 5)	2	696
CVE (less air group (plus unit of 8 helicopters).	1	572

(cont'd on next page)



<u>Type craft</u>	<u>Number</u>	<u>Aggregate</u>
LST	3	156
LCI	4	92
LSM	1	52
APA	1	296
*AVP	1	150
DE	2	326
YO	1	10
YW	1	10
AO	1	135
LSD	1	260
DD	<u>2</u>	<u>801</u>
<u>Total Afloat</u>	18 ships 6 craft	4,042

* Patrol plane unit as required during firing period under operational control of the Joint Task Force Commander.

c. Air Force Planes Tentatively Involved

Initial planning figures indicate that a total of 50 land-based aircraft will perform tasks during the period of operation and that the Air Force Task Group will be comprised of approximately 2500 total personnel. In general, B-17 drones will collect air samples of the cloud and will measure the blast effect on aircraft structures. F-13 and C-54 will obtain photographs of the detonation and subsequent phenomena. B-29's will perform certain reconnaissance and track the atomic cloud. C-54's will provide air transport for the test and will be augmented by ATC during peak load periods. C-47's and helicopters will be used for local inter-island transportation and B-17's for search and rescue. Tentative list of planes required is as follows:

B-17	22
C-54	13
B-29	6
F-13	2
C-47	3
B-17 (Dumbo)	4

 
The U. S. Air Force (USAF) units and necessary equipment will be based at "Kwajalein" air base. It will be necessary to coordinate details with the proper authorities later. A small servicing detachment (USAF) will be required at Eniwetok air base.

APPENDIX "B" TO ENCLOSURE "H"

SERVICE SUPPLY RESPONSIBILITY

30 Days maintenance supplies to accompany units	Mounting service
Rations	Navy
Fuel & lubricants	Navy
Ships stores for personnel ashore & afloat	Navy
Construction material for rehabilitation maintenance and housekeeping	Using service
Construction material & equipment for construction of test site	Army
General maintenance supplies	Using service

APPENDIX "C" TO ENCLOSURE "H"

ADDITIONAL CONSTRUCTION REQUIRED

1. Rehabilitation

General rehabilitation of existing sites and facilities will be required. In general this will be accomplished by the Requiring Service.

2. Detached tent camps at either Roi-Namur or Eniwetok:

	<u>Roi-Namur</u>	<u>Eniwetok</u>
200-Man camp	5	5
100-Man camp	4	4

3. Test construction at either Roi-Namur or Eniwetok

	<u>Roi-Namur</u>	<u>Eniwetok</u>
Photo towers	4	6
Zero station towers	3	3
Timing stations	3	3
Control station	1	1
Motor generator set building	11	10
Small instrument bombproof	12	12
Concrete slabs (instrument anchorage)	18	18
Cable runs (submarine) by signal section	200 miles	210 miles
Cable trenches	1000 yds.	3000 yds.
Barge mooring	10	0

4. Communications

In addition to facilities presently installed or those to be installed aboard the flagship, instrumentation ships, small craft and augmentation of present installations of Kwajalein,

[REDACTED]

the following new signal construction will be required at
either site:

<u>Installation</u>	<u>Number</u>
Telephone exchange	3
Outside plant cable and distribution system	1
Radio receiving station	1
Radio transmitting station	1
Signal supply dump	1
Electronics maintenance and repair shop	2
Radio control tower (complete)	2
Antenna form	2

[REDACTED] [REDACTED] **CONFIDENTIAL**

APPENDIX "D" TO ENCLOSURE "H"

SHIPPING AVAILABLE

1. Passenger and cargo space on regularly scheduled Army vessels which can be made available without the acquisition of substitute vessels to carry normal Army movements will be made available without reimbursement from AEC. Reimbursement will be required for use of space requiring acquisition of substitute vessels. Present forecast of available Army shipping for which reimbursement will be required is:

1 December 1947

1 C-4 for 45 days (General Haan or General Collins)

1 Victory cargo ship for 90 days

5 February 1948

1 C-4 for 45 days

2. The following craft will be made available by the Navy:

2 AK's

- To be available 1 December 1947 for initial movement of cargo and small number of personnel from Port Hueneme.

2 AV's (4 & 5)

- These ships will be made available to the technical personnel for carrying out whatever operations are essential from afloat.

1 CVE (Rendova)

- This carrier will be made available as flag ship for the project. It is expected that General Hull will operate from this vessel.

3 LST's

- These three LST's will be used for initial deployment of construction personnel from Oahu to the Marshalls. Initial equipment and material for the project will be carried on these

[REDACTED]

craft. It is contemplated that one of these can be released approximately 1 January 1948. It is considered highly desirable that the other two remain until the completion of the operation and that they be used to assist in the deactivation of facilities at that time.

4 LCI's

- At the present time two LCI's are located at Kwajalein and the remaining two will have to be procured from some other source - either the Marianas or the Philippine area.

1 LSM

- This craft to be furnished by the Navy Amphibious Force, to be used in the initial movement of personnel from the West Coast, and will become part of the regular craft assigned to the operation during its duration.

2 DE's

- These vessels will be supplied from Escort division I. Division is now located at Pearl, and they are to be used at the end of the landing strips as air-sea rescue vessels.

1 YO)
1 YW)

- It is expected that these craft can be furnished from Kwajalein or by Comservpac. It is expected that these craft will be used to furnish water and petroleum products as required at Eniwetok or other points in its Atoll.

[REDACTED]

1 AO

- It is expected that a clean tanker will have to be provided to furnish water over and above that which can be supplied from Kwajalein.

1 LSD(Whetstone)

- It is expected that this vessel will be made available from the Navy amphibious force for transporting and repairing the small boats in the boat pool.

3 DD's

- These vessels are to be used for patrol and special duty and it is expected that they will be made available by Commander in Chief, Pacific Fleet.

3. In addition to the above, space may be used on regularly scheduled Army, Navy vessels for cargo and troop lift.

[REDACTED]

[REDACTED]

APPENDIX "E" TO ENCLOSURE "H"

BASE FACILITIES

<u>Type</u>	<u>Location</u>	<u>Service</u>
Laundry	Kwajalein	Navy & Army Ground Forces, Pacific, supplemented by Army mobile units
	Eniwetok or Roi Namur	Navy afloat, Army ashore by mobile detachments
Water supply	Kwajalein Eniwetok or Roi Namur	Navy
Power & Light	Kwajalein Eniwetok or Roi Namur	Navy
Bakery	Kwajalein Eniwetok or Roi Namur	Navy Army
Ships stores	Kwajalein Eniwetok or Roi Namur	Navy
Messing for AEC	Kwajalein Eniwetok or Roi Namur	Navy Army
Hospitalization (Station)	Kwajalein	Navy
Billeting for AEC	Kwajalein Eniwetok or Roi Namur	Navy Army
Motor pool	Kwajalein Eniwetok or Roi Namur	Air Force & Navy Army
Recreational facilities	Kwajalein Eniwetok or Roi Namur	Air Forces & Navy Navy

APPENDIX "F" TO ENCLOSURE "H"

D R A F T

MEMORANDUM FOR THE SECRETARY OF DEFENSE*

1. The Joint Chiefs of Staff approved the attached plan for conduct of tests concerning atomic weapons. The Atomic Energy Commission, by memorandum dated _____** has concurred in the proposed plan.

2. It is requested that necessary directives be issued by the Departments of the Army, the Navy, and the Air Force to insure implementation of this plan and its continued operation until conclusion of the project insofar as requirements of the Task Force are concerned.

* To be dispatched after concurrence of the AEC is obtained.
** AEC action on Enclosure "J".

[REDACTED]

[REDACTED]

ENCLOSURE "I"

OUTLINE OF ORGANIZATION AND RESPONSIBILITIES

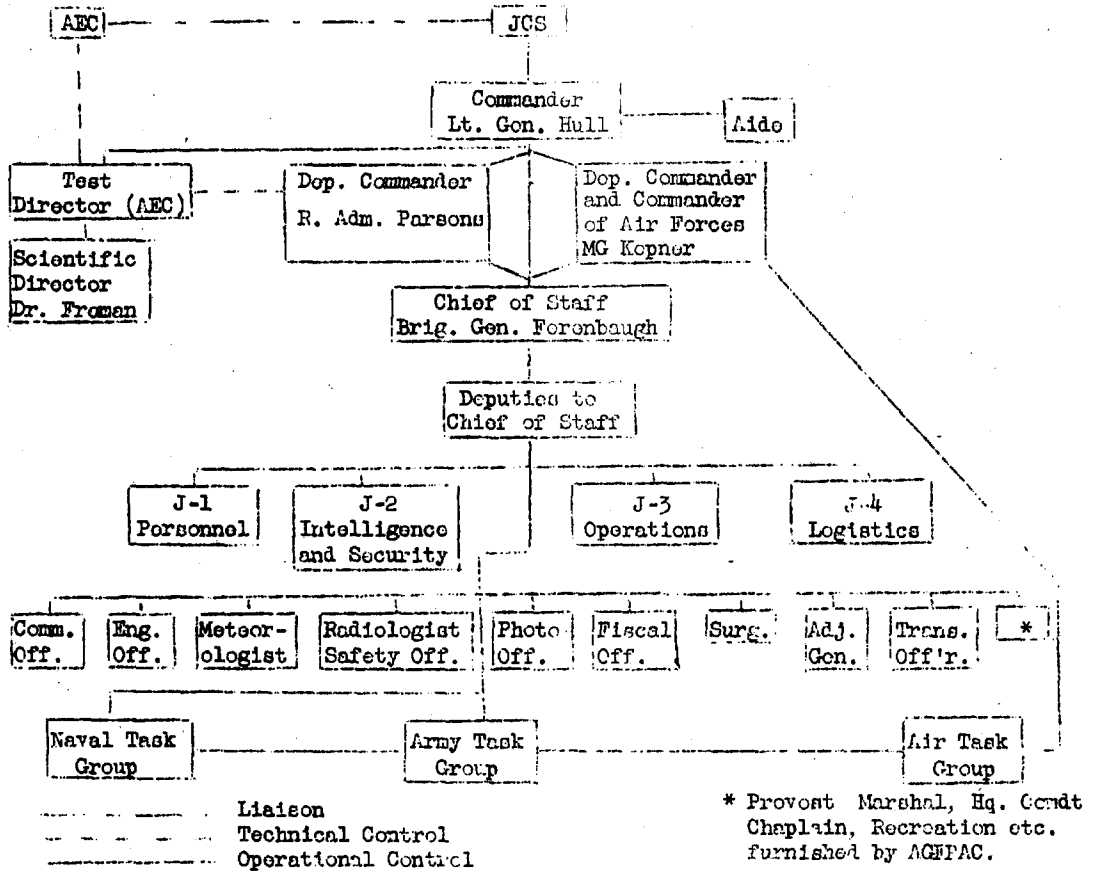
1. The planned organization of the Joint Task Group together with its related scientific personnel is outlined in the chart in the Appendix hereto. There shall be on the staff of the Joint Task Force Commander a senior representative of the Atomic Energy Commission who will be designated as Test Director and responsible directly to the Atomic Energy Commission for the direction of technical test activities and technical policies. However, the Commission's Director, and through him, the scientific staff, are placed under the Joint Task Force Commander for those aspects of command and control necessary for the integration of the operation as a whole. The channel between military commander and Test Director will be direct, the military staff having no responsibility for coordinating the technical activities of the Test Director's organization. The vast majority of work between scientific and military staffs can be successfully accomplished only through mutual agreement and coordinate staff action. Such collaboration is essential.

2. In the execution of these responsibilities it is contemplated that the Atomic Energy Commission will furnish to the Joint Task Force the scientific personnel and scientific equipment necessary to complete the firing and observations. Military services will furnish such personnel, military type equipment and services as are necessary to insure proper operations and logistical support.

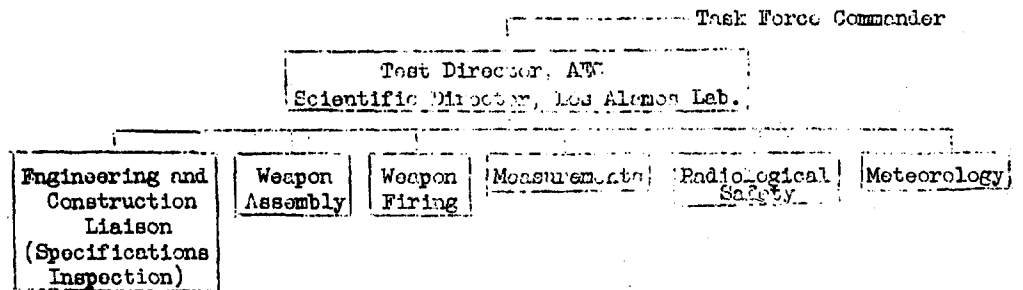
3. Details on the agreement of responsibility must be developed and modified as plans progress. Subject to the general policies outlined above, the Joint Task Force Commander and Test Director should be authorized to develop by mutual agreement the detailed understandings on responsibilities to cover the various aspects of the test.

APPENDIX TO ENCLOSURE "I"

JOINT TASK FORCE ORGANIZATION



PROPOSED TECHNICAL STAFF ORGANIZATION



[REDACTED]

[REDACTED]

ENCLOSURE "I"

OUTLINE OF ORGANIZATION AND RESPONSIBILITIES

1. The planned organization of the Joint Task Group together with its related scientific personnel is outlined in the chart in the Appendix hereto. There shall be on the staff of the Joint Task Force Commander a senior representative of the Atomic Energy Commission who will be designated as Test Director and responsible directly to the Atomic Energy Commission for the direction of technical test activities and technical policies. However, the Commission's Director, and through him, the scientific staff, are placed under the Joint Task Force Commander for those aspects of command and control necessary for the integration of the operation as a whole. The channel between military commander and Test Director will be direct, the military staff having no responsibility for coordinating the technical activities of the Test Director's organization. The vast majority of work between scientific and military staffs can be successfully accomplished only through mutual agreement and coordinate staff action. Such collaboration is essential.

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3. Details on the agreement of responsibility must be developed and modified as plans progress. Subject to the general policies outlined above, the Joint Task Force Commander and Test Director should be authorized to develop by mutual agreement the detailed understandings on responsibilities to cover the various aspects of the test.

ENCLOSURE "J"

D R A F T

MEMORANDUM FOR THE ATOMIC ENERGY COMMISSION:

THRU: THE MILITARY LIAISON COMMITTEE:

1. The Joint Chiefs of Staff approved the recommendations of the Joint Proof Test Committee as set forth in this study.
2. It is requested that the views or concurrence of the Atomic Energy Commission on these matters be furnished the Joint Chiefs of Staff at an early date in order that planning for this project may proceed on a firm basis.

4. The proposed policy with reference to allocation of costs and the estimate of charges to be borne by the AEC is set forth in Enclosure "B". Generally, it is proposed that the AEC bear all the costs beyond the normal operating costs of the services concerned.

5. The following time schedule is anticipated:

- 1 - 15 November: Complete plans and move initial construction units to test area.
- 1 December: Complete movement of construction personnel, equipment and material to embarkation point, and embark follow-up force.
- 1 January: Complete rehabilitation construction, initiate major construction projects.
- 15 March: Arrival of main body of AEC scientists by ship, completion of construction projects to point where the AEC can take over in accordance with previous agreements, and completion of movement of ground echelon of Air Force.
- 1 April: Complete movement air echelon.

6. A joint force will be organized to maintain physical security of all phases of the operation to include the guarding of weapons. It is anticipated transporting fissionable parts of the weapons by naval vessels as was done in operation CROSSROADS. The downgrading of any atomic energy "restricted data" will be accomplished only by the AEC, but initial restrictive military security classifications may be relaxed by the Joint Task Force commander as military requirements dictate. Detailed security plan and plan for release of public information is attached as Enclosure "G".

7. In selecting the site, the Joint Proof-Test Committee has compared the relative merits of both the suggested locations (Eniwetok and Kwajalein), and considers the Eniwetok location to be the only completely satisfactory site. These considerations reference Eniwetok are discussed in detail in Enclosure "D". For technical reasons the Atomic Energy Commission strongly recommends selection of this site over Kwajalein.