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CASTLE
T.G. 7.1 HISTORY, INSTALL. 1

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HEADQUARTERS

TASK GROUP 7.1

JOINT TASK FORCE SEVEN

P. O. Box 1663

LOS ALAMOS, NEW MEXICO

IN REPLY REFER TO: J- 21631

20 November 1953

TO: Commander, Joint Task Force SEVEN
Washington 25, D. C.

FROM: Commander, TG 7.1, Los Alamos, N. M.

SUBJECT: History of CASTLE

In accordance with Standing Operating Procedure Number 172-701, "Historical Reports", and with your letter 12 October 53, Subject "Preparation of History of Operation CASTLE", Report RCS: JTF SEVEN-H1 is submitted herewith. This is a brief history of this Group from its inception on 1 February 53 thru 30 September 53.

FOR THE COMMANDER:

Armand W. Kelly
for Duncan Curry, Jr
Deputy for Administration

Encl: RCS: JTF SEVEN - H1

cc: J-Division
J-Sequence
J-1, LCol Morgan
Central Mail & Records

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TASK GROUP 7.1

HISTORICAL INSTALLMENT NO I

1 Feb 53 - 30 Sept 53

RCS: JTF SEVEN - H1

Section I - Assignment of the CASTLE Mission to Task Group 7.1, and Transition from IVY to CASTLE

Section II- Development of the Task Group Organization

Section III-Problems, and their Solutions

A. Administrative, Incl Security
B. Operational, incl Communications
C. Logistical
D. Fiscal

Section IV- Statistics

RFCAL-R-349

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SECTION I

ASSIGNMENT OF THE CASTLE MISSION TO TASK GROUP 7.1, AND TRANSITION FROM IVY TO CASTLE

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SECTION I

Assignment of the CASTLE Mission to Task Group 7.1, and Transition to IVY

A. 1. CASTLE activities at the Los Alamos Scientific Laboratory (LASL) officially began with the activation of Task Group 7.1 (TG 7.1), a part of Joint Task Force SEVEN, on 1 February 1953. Prior to that time a certain amount of general planning had been done as IVY approached completion, and requirements for the next test became evident. These basic requirements were of two kinds, those related to the devices to be tested and those related to the test sites at the Pacific Proving Grounds.

2. During GREENHOUSE, detonations GEORGE and ITEM demonstrated the [redacted] and seemed to justify further development. During IVY, the MIKE detonation substantiated previous convictions, and, since the device used was a completely experimental contrivance, pointed out that the development of an emergency capability weapon along the same principles was now a requirement.

3. During IVY it was determined that a subsequent test program would be called CASTLE, that it would occur on an accelerated schedule during early fall 1953, about ten months from IVY instead of the usual longer interim, that it would feature one thermonuclear device and two fission devices, and that it would be located at Eniwetok Atoll.

4. Later during IVY, especially after MIKE, the need for changes became evident, and the original program was adjusted to occur during early Spring 1954, to include six thermonuclear devices, and to be located at both Eniwetok and Bikini Atolls. Still later, during late summer 1953, a

[redacted]

[redacted] seventh device was included, resulting in this program [redacted]

Sequence	Lab	Device	Code	Location	Date	Yield
1	LASL	[redacted]	Bravo	Bikini	1 Mar	[redacted]
2	LASL		UNION	Bikini	11 Mar	
3	LASL		Yankee	Bikini	22 Mar	
4	UCRL		Echo	Eniwetok	29 Mar	
5	LASL		Nector	Bikini	5 Apr	
6	LASL		Romeo	Bikini	15 Apr	
7	UCRL		Koon	Bikini	22 Apr	

B. 1. Prior to MIKE the need for additional test site locations had been recognized, and preliminary considerations were in progress. In August 1952, Dr. Graves made a study, including an aerial survey, of several probable sites. Taongi was found unsuitable because no channel into the lagoon existed and there was insufficient space for construction of an airstrip. Rongerik was located approximately in the center of the Marshall Islands, and extensive evacuation of leeward islands would probably be required in event of large scale tests there. Other locations were found to be such distances from Eniwetok that duplication of the Eniwetok facilities would be necessary, which was not acceptable and on 11 September 1952 the use of Bikini in the CASTLE program was approved.

2. The use of Bikini was particularly necessary to the AEC for several reasons. MIKE experience proved that test sites of the size required for several detonations such as those planned for CASTLE are physically not available at Eniwetok. The AEC installation at Eniwetok is an important, expensive asset whose usefulness should not be risked by detonation of several high yield thermonuclear devices in the immediate vicinity. Further, MIKE obliterated one small island. With the requirements of thermonuclear testing still largely unknown, it is quite possible that suitable land areas at Eniwetok might soon be actually eliminated by destruction, thus nullifying the value of the installation. With this in mind, the use of barges as test sites was investigated, and Bikini sites were henceforth included in all CASTLE planning, with the basic principles that logistic support thereof would be held to a minimum.

[redacted]

[redacted]

In no sense would Bikini facilities equal those at Eniwetok, and the greater part of all preparatory, maintenance, storage, communication and other work would be done at Eniwetok. To further this, it was determined that several of the devices to be tested would be assembled and checked out on barges at Eniwetok which would then be towed to Bikini for detcnation.

C. Because of the short time interval planned between IVY and CASTLE, it was determined that the Joint Task Force organization should be maintained in the interim period. Strength of Hq TG 132.1 was shifted from IVY into CASTLE as Hq TG 7.1 with few changes in personnel, and little loss of numbers. During early 1953 a number of Task Group personnel were utilized at the Nevada Proving Grounds during the continental UPSHOT/KNOTHOLE test series. This move had the dual virtue of holding the organization together, and providing excellent training for future overseas operations. Even though the date of CASTLE was postponed it appeared better to retain as many military personnel from IVY as possible than to process and clear new personnel just before the operational phase. This has proven to be a justifiable practice, and has added to the relatively smooth planning and build-up of CASTLE, insofar as TG 7.1 is concerned.

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SECTION II

DEVELOPMENT OF THE TASK GROUP ORGANIZATION

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SECTION II, DEVELOPMENT OF THE TASK GROUP ORGANIZATION

A. 1. In the transition from TG 132.1 to TG 7.1 several changes in organization occurred. Effective 1 February 1953, Joint Task Force 132 was redesignated as Joint Task Force SEVEN and all Task Groups were redesignated accordingly.(1) There were no immediate changes in the mission of either Task Force or Task Groups. Concurrent with redesignation of the Task Group a reorganization became effective. On 29 January 1953, Dr. William E. Ogle was appointed as Commander, TG 132.1(2), thereby relieving Mr. Stanley W. Burriss who was terminating his association with the Los Alamos Scientific Laboratory. Dr. Ogle, as former commander of Task Unit I (Scientific Programs) and Scientific Deputy for the IVY operation, was obviously well-qualified to assume command of the new Task Group. The positions of Scientific Deputy, Chief of Staff, and all Assistant Chiefs of Staff, were eliminated. A Deputy Commander for Administration was established(3). The deletion of the Scientific Deputy permitted 12 different Task Units direct access to the Commander, which was agreeable to Dr. Ogle, since he considered that most of the Task Unit Commanders would require little technical assistance. In addition, Dr. Ogle felt that any technical help he required would come from these same unit commanders or his advisory staff(4).

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(1) TWX 178 Hq JTF SEVEN, 29 Jan 53; J-Div Files, 016.1 CASTLE, also Ltr J-15932, 2 Feb 53, Subj: "Redesignation of Joint Task Force 132", RSI, same file.

(2) GO#4, Hq JTF 132, 29 Jan 53.

(3) GO #1, Hq TG 132.1, 29 Jan 53, "Staff Assignments", J-Div files. 016.1 CASTLE

(4) Meeting Notes, J-Div, 16 Jan 53, File J-15921, J-Div file 016.1 CASTLE SSI

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2. The former Test Facilities Task Unit became J-6, since it performed essentially the same level of services as the other staff sections, J-1, J-3 and J-4, and could appropriately have the same staff status.

3. Although final approval for the creation of a new Task Group (7.5) was not given until March 1953(5), the new organization of TG 7.1 was based on the assumption that there would be a fifth Task Group. Accordingly, the AEC Task Unit (TU-11 of TG 132.1) and the J-2 staff section were eliminated. The J-2 functions with respect to personnel security were absorbed by J-1, and it was planned that all aspects of physical security at PPG, such as badges, access lists, fencing, guarding, couriering, etc., would be the responsibility of the new task group(6). A new staff position, Security Liaison Officer, was created to handle general security matters which were formerly the responsibility of J-2(7). On 1 February, the new organization went into effect and staff appointments were announced(8).

4. A listing of key personnel, as finally settled appears thus:(9)

Commander	Dr. Wm. E. Ogle
Deputy Cdr for UCRL	Dr. Duane Sewell

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(5) GO #3, Hq JTF SEVEN, 4 Mar 53.

(6) Incl 2 to Memo, "Proposed Castle Organization", 13 Jan 53, File J-15480, filed in J-1 Files.

(7) Memo 9131-U to Ogle from Smith, 21 July 53, Symbol ADCS-3702, OUO, J-Div files, 016.1 CASTLE. Also Ltr J-19421, 11 Aug 53 to Smith from Ogle, subj: "Your Memo Dated July 21, 1953, Symbol ADCS-3702". J-Div files 016.1 CASTLE.

(8) GO #2, Hq TG 7.1, 2 Feb 53.

(9) Memo 5 Feb 53 to Distr. from Ogle, Subj: "Announcement of Task Group 7.1 Staff". RSI J-Div 016.1 CASTLE

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Deputy Cdr for Administration	Mr. Duncan Curry, Jr.
Task Unit 1	Dr. Lee Aamodt
Task Unit 2	Dr. Herrick L. Johnston
Task Unit 3	Dr. Dewey Sandell
Task Unit 4	Dr. Marshall G. Holloway
Task Unit 6	Dr. Wm. E. Ogle
Task Unit 7	Maj. John D. Servis, USA
Task Unit 8	Mr. Loris M. Gardner
Task Unit 9	LCol James L. Gaylord, USAF
Task Unit 12	Mr. Arthur Hudgins
Task Unit 13	Col. Huntington K. Gilbert, USA
Task Unit 14	Mr. Paul Byerly
Task Unit 15	Mr. Herbert Grier
J-1, Personnel & Administration	Mr. Armand W. Kelly
J-3, Plans & Operations	Col. Philip L. Hooper, USA
J-4, Logistics	Mr. Harry S. Allen
J-6, Test Facilities	Mr. Robert H. Campbell
Medical Advisor	Dr. Thomas L. Shipman
Adjutant General	Capt. Thomas F. McMullan, USAF
Classification Officer	Dr. Ralph C. Smith
Advisory Group	
Radiological Safety	Capt. Russell H. Maynard, USN
Coordination	Dr. Earl Long
Safety	Mr. Roy Reider
Health	Dr. Thomas L. Shipman

Subsequent changes placed Lt. Wesley Hirons, USN as AG; Mr. Robert J. Van Gemert as J-4; Mr. Stanley H. Ellison as CTU-3; and Dr. John C. Clark as CTU-6.

5. It will be noted from the above appointments that the UCRL (Livermore) and Department of Defense (DOD) programs are given the status of Task Unit, 12, 14, and 13, respectively. This was a major departure from the previous organization. For IVY all Scientific programs were grouped together under the one Task Unit. A proposal to combine UCRL and LASL scientific programs was considered, but, because the two programs had different objectives, and in future operations UCRL's work would be even more independent, it was felt advisable to keep them separated.(10) UCRL (TU-12) patterned its organization after that of LASL. When the operational phase began, L-Staff personnel were

(10) Meeting Notes, J-Div, 16 Jan 53, file J-15921, [redacted]

[redacted]

to consolidate with appropriate J Sections under the supervision of the J Section head. A somewhat similar arrangement was planned for the DOD TU-13 program. During the pre-operational phase representatives of Armed Forces Special Weapons Project (AFSWP) were placed on duty for 2-3 days per week with J sections and would work full time during the operational phase.(11)

B. 1. The decision to use Bikini made possible the realization of CASTLE as originally contemplated, but certain problems inherent in a seven shot thermonuclear program still remain. Factors such as the degree of instrumentation to be given each experiment, the estimated shock strengths, and possible radiation contamination, had to be weighed against the need to minimize the duration of the operation, the desire to avoid shipboard housing except for short periods of unavoidable evacuation, and to avoid damage to instrumentation being installed for subsequent experiments.

2. The new 7.1 organization got under way with intensified planning in an effort to bring the basic concept into operational focus. Prior to 1 Feb 53, it was acknowledged that the originally planned test dates of Fall 1953 were not realistic, and a period in Spring 1954 was accepted. From approximately February thru May of 1953 a planning phase prevailed, during which the scope of experimentation was continuously reviewed for the purpose of determining support requirements. This phase changed, during June thru September, into a requirements phase, during which the findings of the previous phase were made known, projects became identified and definitive relations with participating agencies became a major subject. The activities of these two periods follow in greater detail.

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(11) Ltr DWET to CTG 7.1, 20 Aug 53, File 21050 in 600 CASTLE - Re relationships between JTF, TG & AFSWP

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3. As during previous Joint Task Force operations, the Scientific Task Group, 7.1, in this case, "lived" with J-Division at LASL. Dr. Ogle, the Commander, worked closely with Dr. Graves, J-Division Leader and Scientific Deputy of the Joint Task Force. J-1 section combined the AG office of the Task Group and the personnel section of J-Division. J-3 was mainly a Task Group section, but the operational nature of its duties kept it in close contact with all Project people. J-4 combined the Supply functions of the Task Group with the Supply and Property Division of LASL, which normally furnishes those services for J-Division. J-6, the test facilities section, prepared and coordinated designs, plans, and construction requirements, acting as a facilitating unit between the scientific projects and the AEC's contractor at PPG.

4. As an operating principle, "local ground rules" are observed in any case of question or of conflict between regulations of the AEC and DOD. In most cases, AEC and DOD regulations are closely coordinated prior to publication, but understandable differences occasionally appear. In such cases, rules of a military service of JTF are interpreted or adjusted to enable compliance with those of the AEC, and LASL, or other agencies primarily responsible for carrying on the scientific program.

C. Prior to Feb, 1953

1. Definitive planning for CASTLE was considerably curtailed by the lack of a firm feel for the scope and associated experimentation. The operations section was confronted by those limitations which are inherent to scientific experimentation in the field of testing atomic weapons and/or devices. Some of those limiting factors were:

a. Initial designs and engineering could not be pursued until a general agreement was reached on the types and/or systems of thermonuclear

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devices desired, which was in turn partially dependent upon certain diagnostic information from the Nevada UPSHOT/KNOTHOLE series in the Spring of 1953.

b. Having determined the design or model to be followed, production capabilities on certain critical materials appeared to be another limiting factor affecting specific dates.

c. Bomb site locations: with the advent of shots such as GEORGE (GREENHOUSE) and particularly MIKE (IVY) it was realized that careful consideration must be given to the bomb site locations in the Forward Area. The primary concern was the residual radiological effects which might affect post CASTLE Operations. The utilization of barges appeared to be one means of alleviating some of the radiological problems, but until after CASTLE experiments its effectiveness will not really be known.

d. The detonation of the device: Only after the location and probable yields are settled can it be determined whether or not the device should be fired by a radio circuit or a direct circuit, and whether or not television is essential to support the firing system.

e. Diagnostic measurements desired: Theoreticians cannot, except for standard experiments, determine the desired diagnostic experiments until designs become firm. The failure of early agreement on these experiments in turn delays critical construction in the Forward Area. These experiments may well dictate such things as camp locations, [redacted] complex block houses, etc.

D. February-May 1953:

1. The factors enumerated above are those wh[redacted] inhibited by [redacted] firm decisions as to scope and specific schedules. However, in spite of not knowing the

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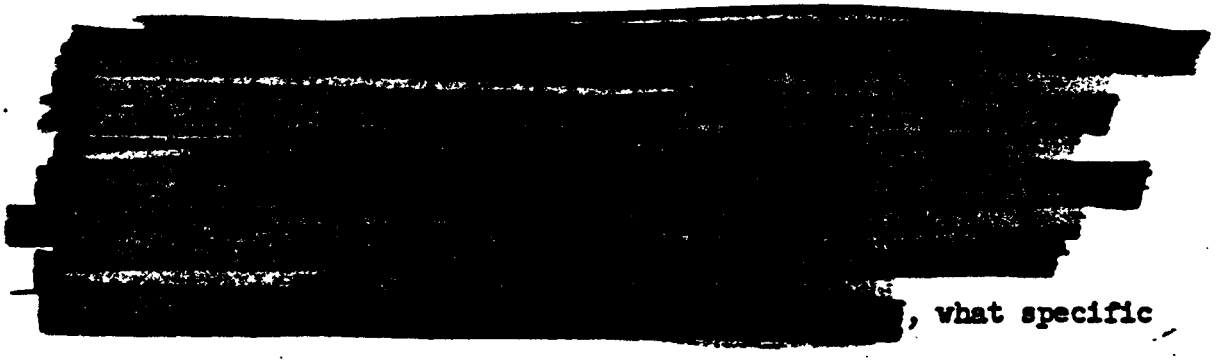
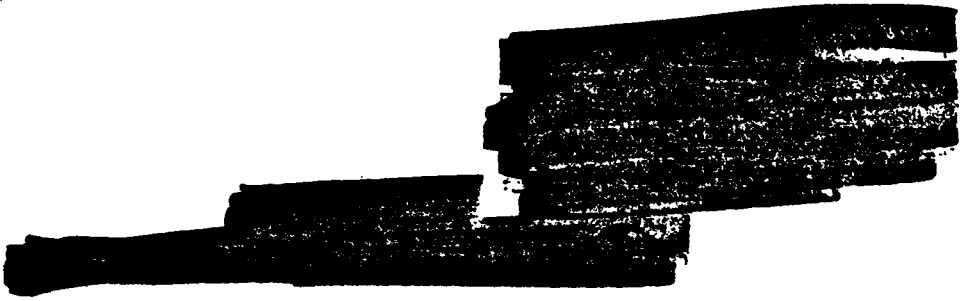
specific problem it was imperative that major military support items be requested in order to insure their participation. Therefore, a meeting was held with the Joint Task Force personnel in February to transmit LASL's "best guess" on the scope of CASTLE and the magnitude of support required.

2. The balance of the period was characterized by a series of conferences with objectives to agree on the nature and scope of the scientific programs and to study the ramifications of the major operational problems. Use of barges, availability and accessibility of real estate, and construction problems, limit the number and type of experiments that can be accomplished. Those conferences included subjects such as:

a. Cryogenics: It was imperative that the sub-contractors be introduced to the initial plan so that not only the Forward Area cryogenics plant would be prepared to fulfill the CASTLE requirements but also the



, what specific support would be needed? These conferences resulted in specific contract negotiations between the AEC and the respective firms. A factor that was closely related to this cryogenic planning was the Emergency Capability Program which would run parallel to CASTLE planning operations. In this instance the question of procuring additional RTD's was pertinent as well as training sufficient operators.



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b. Communications: A preliminary investigation into the CASTLE requirements of the Scientific Task Group was conducted utilizing the experience of Edgerton, Germeshausen and Grier as well as lessons learned on previous operations. An early agreement was reached that this contractor should plan on procuring and eventually operating a Forward Area communication link between Eniwetok and Bikini Atolls and in addition provide radio equipment for inter-island support. This problem received the cooperation and understanding of the J-5 of HQ JTF SEVEN and immediate steps were taken to meet the requirement. Three basic considerations governed all communications planning: rapid and reliable means of communications, security, and avoidance of interference.

c. Sampling Aircraft: A number of conferences were held to determine the scope of sampling activities necessary and the type of bomb debris samples to be procured. These conferences resulted in a compilation of the entire sampling problem with recommendations as to altitudes desired and was placed in the form of a study forwarded to Joint Task Force. The close cooperation of staff officers of the air Task Group was of material assistance in this problem.

d. Department of Defense Participation: Through representatives of Armed Forces Special Weapons Project the Department of Defense presented its plan of participation with a view of conducting a military effects program in connection with CASTLE. Because of the limited information on specific yields and locations this DOD participation was initially presented in a broad form of objectives. Subsequent to this presentation, all discussions at the laboratory which focused towards final determination of specific shot yields and locations took into consideration the planning objectives of the DOD programs.

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e. UCRL Participation: The advent of UCRL's participation in CASTLE placed a requirement on this division to make certain recommendations as to that Laboratory's integration into the Scientific Task Group. This integration had to be accomplished with consideration that UCRL would be in a position Post CASTLE to conduct overseas operations independent of LASL. Prior to final decisions on this subject, several joint orientation periods were held at both UCRL and LASL. UCRL's responsibility for two of the CASTLE shots and certain diagnostic experiments connected with these and other shots remained firm throughout the period.

f. Military Support Conferences: It became known in the early part of the period that the only means of handling shot barges was by the use of LSD's. This Task Group expressed concern to the Joint Task Force over the effect that the barge movements would have on the Navy Boat Pool support normally provided by the LSD. It was recommended by this Task Group that serious consideration be given to the procurement of an additional LSD to support CASTLE. It became apparent that one LSD would have to suffice, therefore, attention was given to providing additional facilities for the support of the boat pool during the absence of the LSD and obtaining the best possible schedules of barge movement so as to give minimum interference to boat support. The estimated boat, vehicle, helicopter and liaison aircraft requirements, were submitted to Joint Task Force based on the then available experimental scope and experience factors obtained on previous overseas tests. (The requirements for support to be rendered by major elements, such as the USS CURTISS and the USS ESTES, were found to be rather straight-forward.)

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E. June - September 1953:

1. Meeting of all project officers:(12) This meeting on 23, 24 June 1953 included the projects officers of the DOD, LASL and UCRL experimental programs. The meeting proved to be the medium by which objectives and methods of the respective projects and their concomitant operational requirements were presented by the project or program officer. (In brief, this was the first time that the operational problem presented by the experimenters became known to the Task Group organization.) Thereafter operational portions of status reports kept these requirements current. The basic research necessary for the publication of a document describing the projects was initiated subsequent to this meeting (ONO Book).

2. Specific support requirements: As a result of studying the specific problems presented by the project officers and the overall detonation plan of weapons/devices it was possible to initiate specific requirements for the support of the (divergent) experimentation and each weapon/device. These included such items as specially modified LCU's, LCM's barges, aircraft, etc. Certain time scales became known which permitted the establishment of phasing charts as applicable to weapons/devices assembly and certain of the more complicated experiments.

3. A "Concept" of CASTLE was issued in June 1952 (13) setting forth general plans pertaining to the carry-over of personnel, relative scope compared with

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(12) LTR J-18148, 27 May 53, From CTG 7.1 to Project Officers, TG 7.1, Subj: "Project Officer's Conference". OUO

(13) Ltr J-12350, 23 June 1952, from CTG 132.1 to Distr. Subject: "General Concept - Operation CASTLE". J-Div files, SSI-RD.

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IVY, and a discussion of additional support required if Bikini were used. This was supplemented [14] by a letter in April 1953 containing the initial Shot schedule. Changes followed in May [15] and in August came a revision in great detail [16]. This contained shot schedules, basic principles, timing and firing, construction, evacuation, description of test devices, radsafe and recovery operation, communications transportation, sample returns, fall-out pattern, support items, beaching conditions, climatology, and tide tables. Changes #1 and #2 [17] followed, altering the shot schedule. Altogether, these documents comprise a record of the test plan, including ways and means for accomplishing the associated activities, and were a source of information additional to the actual Operations Orders.

4. The weapons/devices situation during this period: The types and/or models of weapons/devices to be tested became reasonably firm as did their respective yield predictions and the desired diagnostic studies for each. It was during this period that the decision was made to extend the scope of CASTLE to include a seventh detonation. The period was also characterized by various test assemblies including cryogenics check-out when applicable. The experience gained by these assemblies led to conclusions governing shipping dates, number of personnel required, spare parts necessary, handling tools, etc.

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(14) Ltr J-16757, 7 Apr 53, from CTG 7.1 to Distr, Subj: "General Concept of Operation CASTLE" J-Div Files. SSI-RD

(15) Ltr J-18061, 19 May 53, SSI-RD

(16) Ltr J-19161, 17 Aug 53, from CTG 7.1 to Distr, Subj: "General Concept of Operation CASTLE". (Revision No. 1) J-Div files, SSI-RD

(17) Ltr J-19574, 24 Aug 53, and Ltr J-20173, 17 Sept 53, SSI-RD

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5. Scheduling: During this period the schedules remained [illegible]le for sound reasons:

a. The National Emergency Capability Program which might well dictate the order of priority of shots.

b. The factor of yields and their radiological effect which might endanger the health of a large number of personnel in the Forward Area.

c. A continued study to determine which order of tests would provide the greater amount of diagnostic information with the test facilities already under construction in the Forward Area.

d. Forward Area real-estate limitations which must be considered for Post CASTLE tests.

6. Operations Personnel: During this period the key operations personnel to augment the operational section reported for duty. Orientation to the operational problem was the biggest factor these officers faced during this period. They included a staff specialist for experiments involving aircraft, one for weapons/devices assembly and timing, one for diagnostic experimentation not involving aircraft, etc.

F. 1. Supply: The Supply and Property Division, LASL, augmented by TG 7.1 military personnel, handled all supply and shipping matters for the Group. Several of their men gained additional experience in this work during the Nevada tests, Winter and Spring of 1952, in addition to their work in warehouses and stockrooms at LASL. In agreement with JTF, it was determined that only one consignee designator, SCT, would be used during CASTLE, replacing the former list of more than thirty designators; air water cargo requirements reporting to JTF was begun in May. A complete stockroom, primarily mobile, was moved to PPG for use at Bikini. Plans were made for a new stockroom, shipping and receiving building to be completed on Parry Island in November. This will be a permanent structure, and will be used for storage between tests.

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G. 1. On 31 August 53 the combined experimental programs of LASL, DOD, and UCRL numbered 19, further divided into 61 projects. A list of these projects showing Task Unit, Program, and Project by numerical designation, with the name of the individual in charge, is available.(18) A list of personnel in charge of projects, and other personnel closely associated with the program, with correct addresses for classified correspondence, is also available.(19)

2. A concise description of the objectives of each project and a skeleton description of the manner of operation of each is in the ONO Book, a compilation by the J-3 section, issued as Appendix I, Annex C, Operation Plan 1-53, 1 October 53 (J-21323). This book contains a description of the experimental program by project, title, and sponsoring agency, project participation by shots, project location by island, and charts of the two areas showing geographical names and code names. It is replete with explanatory sketches showing physical layouts of individual projects.

H. Security

1. With the activation of TG 7.1, some functions of the AC/S J-2 of TG 132.1 were absorbed by J-1, along with one officer and one enlisted clerk from the former J-2 office. All J-2 files pertaining to Holmes and Narver personnel, State Department notifications, all J-2 files older than Ivy, and most J-2 IVY files were moved to TG 7.5 at the Eniwetok Field Office, Albuquerque. The remaining security activity moved into J-1 office space under title of Personnel Security Officer, and consisted of assisting with personnel clearance

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(18) Ltrs J-17930, 8 May 53 and J-18603, 1 July 1953, from CTG 7.1 to Distr. Subj: "Outline of Scientific Programs - Operation CASTLE". SSI-RD

(19) Ltr J-19114, 29 July 53, J-1 to Distr, Subj: "Task Group 7.1 General Distribution List and Addresses, RSI

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matters and of preparing to assist in the administration of the Task Force - TG 7.5 security indoctrination program.(20) This function is one of liaison; monitoring the clearance status of all personnel whose assignment to this Group is planned; maintaining cognizance of the clearance status of all personnel whose presence at PPG in connection with the TG 7.1 program is anticipated; notifying CinCPac that personnel traveling to PPG are good security risks (based on clearance confirmation from AEC sources) and other miscellaneous duties serving to facilitate the program insofar as personnel clearances are concerned.

2. Indoctrination is accomplished by coordination with CTG 7.5, who supplies or approves all matter used for this purpose.(21)(22) In the case of Security Memorandum No. 3 published by CJTF SEVEN, CTG 7.1 was authorized to use a substitute memo prepared by CTG 7.5.(23)

3. As interim measures, two security publications of minor nature were issued to TG 7.1 personnel, with the concurrence of CTG 7.5,

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(20) Ltr J-18836, 13 July 53, CTG 7.1 to Distr., Subj: "Functions of TG 7.1 Staff Sections and Task Units", also draft, 24 Dec 52, Log 6044-U, unsigned proposing a division of J-2 functions. Subsequent action was largely based on this proposal. J-Div file 040 CASTLE (016.1) RSI

(21) Ltr PG-9-3438 29 Sep 53, CTG 7.5 to CTG 7.1, Subj: "JTF SEVEN Security Memoranda", in which CTG 7.5 agrees to furnish CTG 7.1 with a document to use in lieu of JTF SEVEN Security Memo No. 3.

(22) Ltr 6 Mar 53, Adair to CTG 7.1 Attn Curry, Subj: "Handling of Security Matters within TG 7.1, RSI

(23) Ltr J-2/461 X 380.01, 18 Aug 53, CJTF 7 to CTG 7.1, Subj: "Substituting Instructions for Security Memoranda No. 3.

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on 28 Apr 53,[24] and 1 June 53[25].

4. As of the end of September, Q cleared TG 7.1 personnel numbered 116, with 16 clearances pending. In addition 58 Q clearances were pending for personnel whose temporary assignment to the Group is planned. The clearances of all personnel will be terminated, insofar as this Group is concerned, upon completion of their duty with this Group.

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(24) See J-17561, 28 April 53 to all TG 7.1 personnel, from J-1 Sec, Subj: "Security violations in the Department of Defense".

(25) See J-18162, 1 June 53, to TG 7.1 personnel, from CTG 7.1, Subj: "TG 7.1 Interim Security Indoctrination".

[redacted]

[redacted]

SECTION III

PROBLEMS AND THEIR SOLUTIONS

A. Administration, Including Security

B. Operational, Including Communications

C. Logistical

D. Fiscal

[redacted]

SECTION III, PROBLEMS AND THEIR SOLUTIO[redacted]per

A. Administration, including Security

1. The procurement of temporary military personnel was necessary because of the reduction of permanent personnel from the originally requested strength. It was found that 48 Rad Safety personnel and 27 clerical personnel would be required. CJTF SEVEN approved the use of TDy personnel, provided CTG 7.1 could handle all recruiting other than Rad Safety and assignment activities. Members of J-1 visited Hq Fourth Army, Ft McClellan, Ft Bliss and other bases and were able to obtain the tentative assignment of the required qualified personnel, for periods of 5 to 7 months. This was time-consuming and voluntary insofar as the furnishing agencies were concerned except for Rad Safety personnel. It is recommended that in similar circumstances in the future, CJTF SEVEN arrange for each service to issue appropriate directives requiring subordinate headquarters to furnish TDy personnel.

Check with Rpts in detail re this matter!

2. The filling of officer requisitions has been retarded by the recent reduction of officer strengths in all services. This Group has lost three Army, two Navy and one Air Force, officers thereby. Training and other functions have been disturbed somewhat, but the overall effort has not been materially affected.

3. The voluntary early release policy for enlisted men has caused no inconvenience to the Task Group although it has to the enlisted men concerned. Because of the impossibility of procuring Q cleared replacements within the available time only one enlisted man will

[redacted]

[redacted]

be released before the end of the operation [redacted]

4. Early estimates of the numbers of personnel involved in the scientific operations of CASTLE indicated that existing laboratory and office space and living quarters on Parry Island would be inadequate. This problem was solved by requesting CTG 7.5 to enlarge the Administration Compound and to provide tentage within the compound for working space.

a. Provision was also made for parking areas and utilities for trailers which the projects were encouraged to furnish for laboratory space. CTG 7.5 further agreed to erect six additional metal barracks which would increase living accommodations sufficiently to handle the peak population if all quarters were used to maximum capacity.

Interesting

b. The possibility that the main Bikini camp might become contaminated required that the alternate emergency living quarters be provided for the inhabitants of the Eniman camp. CJTF SEVEN was requested to provide a military transport which could be used for this purpose and also to assist in rollup activities at the end of the program.

c. There were early indications of a very heavy personnel movement during the first half of January. CJTF SEVEN was requested to furnish more airlift and efforts were made to schedule personnel on surface vessels where possible. It now appears that the total Task Force requirement for personnel and cargo by air westward from Honolulu will necessitate an average of three flights daily during the first two weeks of January.

[redacted]

5. The elimination from the Task Group of a J-2 Section which represented the AEC has made it impossible for the Task Group to confirm the security clearance status of its own people. This situation has occasionally resulted in embarrassment or delay of official visitors, etc., since direct communications between this headquarters and a requestor of security information could not be used. For future operation, it is recommended that an AEC Security Branch employee be attached to TG 7.1 Headquarters to handle confirmation of clearances.

6. The arrival of military personnel who have not yet been granted an AEC Q Clearance has been a problem, as it was during IVY. Hq JTF has succeeded in arranging with Washington Area Security Operations and the military services to facilitate the handling of Q Clearances and overall experiences thus far have shown an improvement over IVY. However, in several instances personnel have arrived here without Q Clearances. This causes a multiple problem in that the subject cannot assume the duties for which he was assigned to the Group, he must remain idle until cleared; he cannot be assigned housing (normally) at Los Alamos, and must be temporarily reassigned to a military unit at Sandia Base until cleared, then brought back when cleared. All this causes not only unjustifiable expense to the government, but embarrassing incidents when prospective employing offices see the JTF send a man who is not permitted to go to work because security requirements have not been satisfied. This has occasioned much time-consuming and costly communication, usually not effective. It is of

Item 7.1 view must be at variance with the Hqs, JTF 7 view. Fill out by discussion with Cfield

[redacted]

constant importance that the JTF arrangement of having the losing service not send a man from his home station until Q clearance has been granted, be impressed upon all concerned as a "must". The necessary system seems to have been established; it must have strict compliance to be successful.

B. Operational Problems

1. Admittedly there were, during the period covered by this report, major problems encountered by this Task Group. However, in reflection these problems were not unlike those which are inherent to scientific experimentation in the field of testing atomic weapons and/or devices. By making the most of the conference system and constantly reviewing plans and/or requirements, it is believed that the problems were or are being solved in the normal course of events. A major problem in this field in that of orienting the key personnel of supporting military services in the "way of weapons development act experimentation". The military Service School system and basic military professional training coupled with relative short tours of duty are, of course, not designed to prepare officers for the testing and experimental field of magnitude of our atomic overseas operations. The Air Task Group has recognized this problem and has taken steps to solve it by integrating key personnel and units of both the continental and overseas test programs within the Special Weapons Command, thereby insuring reasonable continuity in this specialized work. One of the missions of the J Division TG 7.1 operations section is to keep the supporting military task groups properly informed through the accepted Joint Task Force

[redacted]

[redacted]

channels.

2. Permanent Cloud Sampling Unit: Because of the increasing complexity of such sampling and its importance to the conclusions which can be drawn from atomic tests, a strong recommendation was made to the Military Liaison Committee that a permanent cloud sampling unit be established. The advantages to be gained by the forming of such a unit were:

a. Experienced personnel would be available at all times. Requests for Air Force participation could be met with minimum delay.

b. The hazard inherent in using pilots untrained in cloud sampling techniques would be reduced and more reliable samples assured.

c. The same aircraft could be used for several operations.

d. The impact of unscheduled demands would be relieved.

With present planning calling for a continuing rate of probably two tests series per year the requirement for an air sampling unit would remain through the foreseeable future. Although the period in which such unit would be active in test operations would not exceed eight months a year, pre-test, planning, practice operations and post-test development work would keep the proposed unit occupied on a full time basis. (19)

In January, JTF was advised that a cloud sampling unit was

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(19) Ltr, Dr A. C. Graves to B/Gen KE Fields, 13 Dec 52, file no. J-15164, in J Division files; Ltr Gordon Dean TR Lebaron, 9 Feb 53, file no 18812, in J Division files.

[redacted]

[redacted]

being established within the 4925th Test Group (Atomic) at AFSWC. This unit was to have full capability for ZI tests and, when augmented, would be able to perform sampling missions for CASTLE. It will provide both aircraft and a nucleus of trained personnel at all times. (20)

C. Logistics Problems

1. Other than problems which might be considered normal in an operation of this nature, the timing of reports has caused considerable extra work and inconvenience. J-4 prepares monthly status reports each month which are sent to JTF headquarters, supplying the cargo movement requirements for the succeeding month. These reports are submitted on the 30th of each month. Monthly reports from the numerous projects are now received too late for inclusion in the J-4 report to JTF Hq, and it is suggested for future operation that TG project status reports be as of 20th, due by 25th, with J-4 to JTF reports as of 30th, due by following 5th.

D. Fiscal Problems

1. The Budget and Fiscal Officer of Task Group 7.1 was charged with funding of Task Group 7.1 extra military funds for TG 7.1 operational purposes and extra military funds for general support items within the Task Group.

[redacted]

nhibited by law.

(20) Ltr, B/Gen KE Fields to Dr AC Graves, 18 Feb 53, w/encl, file #18923 in J Division files

[redacted]

[redacted]

2. A revised budgetary estimate of operational funds for the third and fourth quarters of fiscal year 1953, which was the first six months of CASTLE, was submitted in January 1953. On the basis of this revised budgetary estimate funds were received from Task Force for TG 7.1 operational expenses for the period January - June 1953.

3. During July 1953 the fiscal year 1954 budget was prepared and submitted to Task Force. As well as operational funds for Headquarters TG 7.1 and Headquarters TU-13, this budget included overseas travel per diem funds for TU-9 and all military and government civilian personnel in the DOD program, and also various general support items within TG 7.1.

4. The Task Group fiscal officer requested budget estimated from all DOD projects for R & D funds. However, it was decided that AFSWP would retain control of R & D funds for CASTLE with TU-13 in control of these funds through Field Command AFSWP. (21)

5. Extra military funds allotted TG 7.1 for operational purposes for the period 1 January - 30 September 1953 amount to $158,900.00.

6. During this period, the Budget and Fiscal office has been engaged in liquidating obligations against extra military funds allotted TG 7.1 for operation, and Research and Development funds, allotted DOD IVY projects, in the amount of $651,358.42 have been withdrawn as excess to the needs of these projects[redacted]

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(21) No correspondence to this effect has [redacted] TG 7.1

[redacted]

SECTION IV

STATISTICS

[redacted]

TG 7.1 Military Personnel

	OFFICERS			TOTAL	ENLISTED			TOTAL	GRAND TOTAL
	A	N	AF		A	N	AF		
	21	11	20	52	23	9	28	60	112
1 Feb 53-	21	11	20	52	23	9	28	60	112
1 Mar 53-	21	11	19	51	23	9	30	62	113
1 Apr 53-	21	11	17	49	22	9	30	61	110
1 May 53-	19	11	17	47	23	7	31	61	108
1 Jun 53-	19	11	17	47	23	10	32	65	112
1 Jul 53-	20	11	17	48	24	13	30	67	115
1 Aug 53-	21	12	17	50	23	13	30	66	116
1 Sep 53-	19	12	18	49	21	13	30	64	113
30 Sep 53-	19	12	17	48	23	13	31	67	115

Authorized Strength-
(Ref TD(Revised) Jul 53)

	OFFICERS			TOTAL	ENLISTED			TOTAL	GRAND TOTAL
	A	N	AF		A	N	AF		
	21	15	19	55	32	15	32	79	134

Personnel Movements to PPG, 1953

	Feb	Mar	Apr	May	June	July	Aug	Sep
Civ	7	14	1	9	2	49	11	30
Off	0	1	1	0	2	3	1	4
EM	0	1	0	0	0	1	1	1
Total	7	16	2	9	4	53	13	35

[redacted]

[redacted]

Cargo Movements to PPG, 1953

July

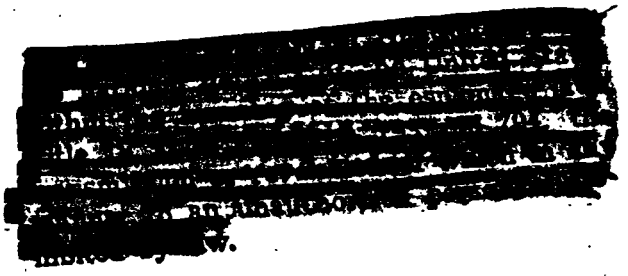
Ship -	USNS CRAIG	5 tons
Air -		2 tons(approx)

August

Ship -	USS AREQUIPA	22 tons and
	USNS MILLER	5 tube banks
Air -		3,632 lbs and
		5 passengers

September

Ship -	USNS CRAIN	207 tons and 6 trailers
Air -		1333 lbs & 6 passengers



[redacted]

[redacted]

ESTIMATED TG 7.1 OVERSEAS POPULATION FOR CASTLE *

DATE	Officer & Civilian	EM	TOTAL
October	97	12	109
November	126	25	151
December	175	34	209
Jan 1-9	522	67	589
Jan 10-16	646	123	769
Jan 17-23	721	153	874
Jan 24-30	755	163	918
Jan 31-Feb 6	876	178	1054
Feb 7-13	901	269	1170
Feb 14-20	869	273	1142
Feb 21-27	874	273	1147
Feb 28-Mar 6	865	273	1138
Mar 7-13	854	273	1127
Mar 14-20	836	273	1109
Mar 21-27	830	273	1103
Mar 28-Apr 3	824	273	1097
Apr 4-10	787	273	1060
Apr 11-17	696	265	961
Apr 18-24	538	252	790
Apr 25-May 1	276	106	382
May 2-8	164	87	251
May 9-15	52	28	80

*Based on latest Project Status Report estimates

[redacted]

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CASTLE

T.G. 7.1 HISTORY, INSTALL. 3

Castle Ref 8-3

[redacted]

[redacted]

HEADQUARTERS, TASK GROUP 7.1
Joint Task Force SEVEN
APO 187 (HOM) c/o Postmaster
San Francisco, California

6 May 1954

JF-8290

[redacted]

TO: Commander
Joint Task Force SEVEN
APO 187 (HOM) c/o PM
San Francisco, California

Attn: Historian

FROM: Commander, Task Group 7.1

SUBJECT: HISTORICAL REPORT

Enclosed herewith is the third installment of CASTLE history as it involves Task Group 7.1. This has been prepared in accordance with JTF 7 SOP No. 172-701, "Historical Reports", and your TWX DTG 310300Z March 1954.

FOR THE COMMANDER:

Armand W. Kelly
Armand W. Kelly
J-1

AWK:jmc

Distribution:

cy 1 & 2 - CJTF 7 w/incl
3 - CTG 7.1 w/incl
4 - J-1, TG 7.1 w/incl
5 - CTG 7.2 w/incl
6 - CTG 7.3 w/incl
7 - CTG 7.4 w/incl
8 - CTG 7.5 w/incl
9 - JF-Files w/incl
JF-Sec

[redacted]

[redacted]

[redacted]

[redacted]

TASK GROUP 7.1 HISTORICAL REPORT

THIRD INSTALLMENT

1 JAN - 10 APR 54

THIS DOCUMENT CONSISTS OF 29 PAGE(S)
NO 1 OF 7 COPIES, SERIES A

JF-8291

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TG 7.1 HISTORICAL REPORT

Third Installment, 1 Jan-10 Apr 54

TABLE OF CONTENTS

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[redacted]

I. GENERAL

A. The period 1 January 1954 to 10 April 1954 in CASTLE saw the culmination of the preparatory planning phase, the arrival of most of the TG 7.1 personnel and most of its essential equipment in the forward area, and detonation of the first three test devices. During January the population statistics reflected a great increase as key personnel activated their staffs and offices in the forward area. TG 7.1 headquarters was established at PARRY Island, Eniwetok, where the major portion of all administrative test activities were performed, with a branch camp on ROJOA. Since five of the projected seven detonations were scheduled to occur at Bikini, branch camps were established there as planned, with a base camp on ENIRMAN, and minor camps on NAMU, ENYU, and KOMURIKKU. All camps were used jointly by scientific, technical, administrative, and construction personnel, regardless of parent organization.

B. The energy yield [redacted] plus a last minute unfavorable wind-shift, resulted in heavy contamination of the ENIRMAN Island chain and ENYU where camps were located, as well as the KOMURIKKU area where many experimental stations were set up.

Task Group 7.1 had anticipated the possibility that any of the tests at Bikini might render the land camps uninhabitable, and had requested that adequate ship quarters and facilities, including a transport vessel for quartering personnel, be provided for this contingency. Nevertheless, the shift from a land-based to a ship-board operation multiplied the technical, operational and personnel problems. Personnel not accustomed to living aboard ship found long tours aboard sufficiently unpleasant that morale was adversely affected. A practice of rotating individuals between PARRY Island duty and the ships ameliorated this condition somewhat.

Operational problems were seriously aggravated by the change to ship bases. Communications were poorer, transportation slower and much more hazardous, especially the transfer from small boats to ships ladders in the rough water of the lagoon. Personnel living on the AINSWORTH or the CURTISS who wished to use helicopter transportation were required to make a time-consuming and wet boat trip to the BAIRD to

[redacted]

[redacted]

get aboard a helicopter. The contamination of Bikini land areas where work for subsequent tests had to be performed meant that all personnel must be carefully checked by the rad-safety organization, which caused additional delays and sometimes detours of personnel to pass the rad-safety check points.

The camp structures at ENIN.AN suffered severe blast damage from the detonation [redacted] (BRAVO event) on 1 March 1954. This indicated that the instrumentation for [redacted] on ENIN.AN would be damaged by barge shots at the nearer locations off the KOMURIKKU chain. Thus it appeared necessary to reschedule the tests subsequent [redacted] as soon as possible, certainly before the barge shots off KOMURIKKU. Since [redacted] (KOON event) could not be readied in time to be the 2nd shot [redacted] was scheduled as number 2, but was relocated from the KOMURIKKU barge position to a barge in the crater left [redacted] in order to be at a safer distance from ENIN.AN. [redacted] then scheduled as number 3, so that it might [redacted] (UNION event) [redacted] (YANKEE event) any one of which would probably damage [redacted]. UNION event on April 26 confirmed the soundness of this rescheduling by blasting or washing the remnant [redacted] pipes off ENIN.AN Island.

This rescheduling of all shots and re-locating [redacted] several problems for the experimental projects. Program 15, for example, set up a station on AOMOEN to be used for the barge shots off KOMURIKKU. The equipment was test-run on Bravo, although the distance to ground zero was considered excessive. When it was decided to use the Bravo zero point for Romeo also it was doubtful whether satisfactory results could be achieved. By modification of equipment during the period between Bravo and Romeo, a satisfactory experiment was performed and data obtained.

[redacted]

The change in schedule, the inability to predict yields closely, and the impossibility of determining test dates in advance, all created difficulties for the DOD experimenters attempting to obtain data on the effects of the detonations. Some projects had to be set in motion several days ahead of shot day to be successful, and when the shot was delayed, equipment had to be checked out again, personnel deployed, etc., sometimes on very short notice. The unpredictable yields made it difficult to set recording equipment in the proper range, which caused loss of much information.

One set of experiments (Project 13.4 and 13.5) suffered loss of nearly all data on BRAVO, although the recording equipment apparently functioned satisfactorally. The loss was due to failure of the reinforced concrete station which had not been designed for as high a yield [redacted] This failure permitted air-borne contaminated particles to enter the structure and fog the photographic film data records.

The heavy contamination of the YUROCHI-KOMURIKKU-AOKOEN chain of islands by fallout from BRAVO caused trouble for the groups which had to continue working there. The work of readying recording stations on this chain of islands was delayed and made troublesome by the contamination, and personnel from Programs 13 and 15 were forced to live in makeshift quarters on LCU craft off-shore.

Although the high yield [redacted] contamination of land areas at Bikini posed numerous problems, a few of which have been mentioned here by way of illustration, in general the major experiments planned for tests two and three were performed and satisfactory results obtained.

C. The contingencies of prevailing weather during this period, and similar matters of interest but not within the jurisdiction of CTG 7.1, are not included in this report. Activities of the various scientific units are covered in separate reports to be submitted to CTG 7.1 when available, and are not discussed herein. The following text is designed to cover matters that were not described in TG 7.1 Operation Plan No. 1-53 including its scientific Appendix 1, Annex C, the CNC Book.

II. OPERATIONAL

A. Organization and Location

1. The J-3 section was based at the TG 7.1 headquarters on Parry Island, Eniwetok, with a branch office on Eninman Island, Bikini. After BRAVO the Bikini office was maintained aboard USS ESTES, with additional representation aboard USS BAIROKO, USS AINSWORTH, and at times USS CURTISS. The J-3 office at Eniwetok worked closely with J-3 Bikini in coordinating operational requirements and assuring their completion. Helicopter requirements at Bikini were made known to J-3 on BAIROKO, who consolidated the requests when possible, then coordinated the required missions with the ship's aircraft operations officer and the ship's commander, who then caused aircraft and pilots to be dispatched. Usually, the pilot assigned to each mission was briefed by the J-3 in the presence of a ship's operations officer and the passengers on the mission, if any, immediately before takeoff. Thus it was assured that all participating personnel understood the mission as well as was possible at the time. The briefing included a rad-safe man, if appropriate. Boat requirements at Bikini were made known to J-3 on ESTES, who could, in problem cases, achieve coordination through a committee containing representatives of JTF, TG 7.1, TG 7.3, TG 7.5 including H&N. Normally, J-3 transmitted requirements to a boat office on AINSWORTH, where a TG 7.3 boat pool dispatcher and a Holmes and Narver marine supervisor cooperated to accomplish the missions. Based on the location of the mission and available boats, boat crews familiarity with the area

involved, and other similar operational considerations, H&N or Navy boats were dispatched to satisfy requirements. J-3 handled requests for boat transportation at Bikini and also between Bikini and Eniwetok. Staff personnel were usually rotated between Eniwetok and Bikini offices at intervals of two to four weeks.

2. A requirement for TG 7.1 space aboard the USS ESTES was made firm by a memo(1) describing the need for 65 officer billets, 15 enlisted billets, and certain parts of the Flag Deck and Second Deck as specified. Mr. Kelly, J-1, was named coordinator of these headquarters facilities, and LT Roberts was named coordinator of radio facilities aboard. Immediately after the BRAVO detonation, additional operational requirements arose, and the office space was expanded to include all of Flag Plot. TU-1 and TU-13 installed radio facilities in two cabins which were used for offices as well as living space.

3. Scientific personnel lived in work camps located according to their area of principal interest. After BRAVO they were quartered aboard the four larger ships. An effort was made to house key project personnel on the ESTES, convenient to the TG 7.1 Bikini headquarters. People requiring laboratory or ship facilities were aboard CURTISS, where shop space was available. Most of the people lived aboard AINSWORTH because of its larger number of living accommodations. BAIROKO was used mostly as a junction point for helicopter travel. Immediately prior to an event, some scientific personnel moved aboard BAIROKO in order to start recovery missions with minimum delay; between events, few TG 7.1 people other than Rad-Safe and J-3 personnel lived there.

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(1) JF-3555, TG 7.1 Space and Equipment Requirements Aboard USS ESTES (AG-12) 6 Feb 54 (CONF)

[redacted]

4. Travel between ships and between ships and shore locations at Bikini was time-consuming, uncomfortable, and not convenient for moving any luggage, equipment, or material other than small items that would be easily carried in one hand. M-Boats or smaller craft were used, with no protection from rain and spray, and a hazardous transfer was required between boat and gangway or ladder at each end of a trip. The helicopter platform on LSTLS was found to be an extremely valuable feature, and should receive serious consideration with regard to other ships involved in programs of this nature.

5. In preparation for BRAVO, several documents were produced as supplements to Operations Plan 1-53. They were designed for flexibility and were changed as necessary to meet altered circumstances. Those prepared prior to BRAVO were completed with fewer changes than were those for subsequent events. All were "working" papers, the results of many informal discussions and consultations, and were re-issued or amended if changes of any consequence became necessary. The principal papers are briefly described in the following text.

a. Twelve "Operational Letters"(2-13) contained details of impending operations such as movements of spetial devices, practices, and operations.

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(2) JF-2932, Hq TG 7.1 Operational Letter No. 1, 18 Jan 54, CONF.

(3) JF-3110 " " " No. 2, 25 Jan 54, CONF.

(4) JF-3654 " " " No. 3, 10 Feb 54, CONF. RD

(5) JF-3856 " " " No. 4, 16 Feb 54, CONF.

(6) JF-3888 " " " No. 5, 16 Feb 54, CONF.

(7) JF-3978 " " " No. 6, 18 Feb 54, CONF.

(8) JF-4531 " " " No. 7, 3 Mar 54, CONF.

(9) JF-5114 " " " No. 8, 10 Mar 54, CONF.

(10) JF-5478 " " " No. 9, 30 Mar 54, CONF.

(11) JF-6310 " " " No. 10, 1 Apr 54, CONF.

(12) JF-6929 " " " No. 11, 2 Apr 54, CONF.

(13) JF-6990 " " " No. 12, 4 Apr 54, CONF.

[redacted]

Contents usually included a chronological list of events, the responsibility and specific task of each participating unit, the names of participating ships, and the coordinating officer. Nos. 1 and 2 scheduled practice operations which confirmed the feasibility of barge operations by moving a special device from the TU-4 assembly building on ELMER to its site on CHARLIE, Bikini, and by moving a dummy device via barge from the assembly area to Bikini lagoon. No. 3 described the BRAVO evacuation plan, from B-5 thru 1900 on B-1, including time signals. No. 4 scheduled movement of a special device via LST from Eniwetok to Bikini, its transfer to LCU, and ultimate delivery to a site on CHARLIE. No. 5 listed details of a barge handling exercise at Eniwetok. No. 6 contained the schedule for the BRAVO rehearsal on a Task Force scale, using ships, aircraft, and facilities to the most complete extent possible without actually interfering with the preparatory mission. No. 7 described the movement of a barge via LSD from Eniwetok lagoon to Bikini lagoon. Nos. 8 and 9 were general planning outlines for the ROMEO and KOON events, respectively. No. 10 described KOON recovery operations. This was not followed closely, in that some of the missions scheduled for plus 2 were accomplished on plus 1, while because of an intensely high contamination over a small area, others were not completed until plus 3. No. 11 scheduled the movement of a barge via LSD from Eniwetok to its ultimate mooring at Bikini, and the positioning of the USS CURTISS nearby for support. No. 12 listed events preparatory to detonating RAMROD on RUBY, Eniwetok. This date was left flexible, to permit prior firing of UNION, if such appeared advisable. The capability for evacuation was to be maintained, although no evacuation was anticipated.

b. In addition to the Operations Letters, other plans involving operations were projected as changes to the basic Operation Plan, or as separate documents. To coordinate the planning of the several units involved, a letter(14) listed arrival of ships, rehearsals, actual movements of special equipment through the period 1 January to 10 February 54. This was supplemented by a similar paper(15) pertaining

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(14) JF-2795, Key Operational Events, 12 Jan 54, SECRET RD

(15) JF-3002, B306, Special Requirements for TU-4, 20-30 Jan 54, dtd 20 Jan 54 CONF.

to the responsibilities of TU-4. A very detailed plan of events to precede the BRAVO detonation was drafted 11 February and completed on 20 February as an annex to the basic Operation Plan. It contained a chronological evacuation list, helicopter, boat, heavy equipment, trailer, and vehicle movements.(16) A BRAVO re-entry and recovery plan(17) in greatest detail possible at the time, was drastically revised in the light of subsequent events, when it was found that re-entry was practical only for recovery missions, and at about B plus 11 to resume use of the Eninman airstrip. A BRAVO check list, furnishing general guidance, listed 23 items scheduled between 0900 on B-4 thru 0600 on B plus 5 at Eniwetok Atoll.(18) A general plan for TU-6 appeared,(19) having one section describing the entire test program, and a second section pertaining in greater detail to individual events. Final details were to be determined later. This was supplemented after BRAVO by a new schedule(20) for remaining events, which was later discarded because of weather factors. Another paper described key operational events for the first half of February,(21) in final preparation [redacted]. Consideration of BRAVO results and effects brought about the decision(22)(23) to schedule the remaining events, KOMEO, KOON, UNION, NECTAR, YANKEE and ECHO, in that order.

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(16) JF-3105, BRAVO Evacuation, Appendix 1 to Annex N, CTG 7.1 Operation Plan No. 1-53, 20 Feb 54, CONF, including JF-3108 (changes to same) 25 Feb 54, CONF.

(17) JF-3106 BRAVO Re-entry and Recovery, AppII to Annex N, CTG 7.1 Operation Plan No. 1-53, 22 Feb 54, CONF, including JF-3110 (changes to same) 25 Feb 54, CONF.

(18) JF-4217, BRAVO Check list, Eniwetok Atoll, 22 Feb 54, CONF.

(19) JF-3711, TU-6 CASTLE Operations Plan, 9 Feb 54, SECRET RD

(20) JF-4733, Changes in TU-6 Operation Plan, 6 Mar 54, SECRET RD

(21) JF-3390, Key Operational Events, Period 1 Feb-15 Feb 54, dtd 2 Feb 54, SECRET RD

(22) JF-4677, Change No. 3 to Operation Plan No. 1-53, 6 Mar 54. SECRET RD

(23) TWX SCIENCE 3064, to Bradbury from Graves, March 252055Z, SECRET RD

Consideration was given to the revision of yield estimates for later devices, such revised data to be made known when available. A ROMEO check list[24] included movement of YAG 39 and YAG 40, transportation of personnel and equipment, and sample handling. A KOON check list[25] similarly covered that event from 0800 on K-3 time 1200. A further change to the remaining schedule was issued on 29 March[26] eliminating all definite detonation dates to achieve greater flexibility. Situations were foreseen in which devices at Bikini and Eniwetok would be made ready simultaneously, and either one could be used, depending on which site had the more favorable weather. A detailed evacuation plan for Eniwetok Atoll[27] cited responsibility for emergency evacuation as that of CTG 7.5, except in the case of Eniwetok Island, where CTG 7.2 is responsible. An evacuation plan[28] for the ECHO event contained a chronological listing of 78 items, starting at 0730 on E-3 and ending at 2330 on E-1. The ships CURTISS and ESTES were to be available for use as needed.

B. Supplementing Annex O of the basic Operation Plan, Sample Returns, a detailed plan was issued on 13 February,[29] setting forth the concept of the scheme, and respective responsibilities of CJTF SEVEN, CTG 7.1, CTU-7 of 7.1, CTG 7.3, CTG 7.4.

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(24) JF-4870, ROMEO Check List, Eniwetok Atoll, 9 Mar 54, CONF

(25) JF-6269, KOON Check List, Eniwetok Atoll, 30 Mar 54, CONF

(26) JF-6235, Change No. 4 to CTG 7.1 Operations Plan No. 1-53, 29 Mar 54, SECRET RD

(27) JF-6884, Fall-Out Evacuation Plan for Eniwetok Atoll, 1 Apr 54, OUO

(28) JF-7012, ECHO Evacuation, Appendix III to Annex N, CTG 7.1 Operation Plan No. 1-53, 4 Apr 54, CONF

(29) JF-3844, Over-all Radiation Sample Return, 13 Feb 54, SECRET

Safety precautions, emergency procedures and directions pertaining to sample cargo and passengers were also discussed. An appendix listed additional details pertaining to individual flights. Helicopter requirements were described in a separate paper(30) with a detailed schedule. Another paper listed identities of persons to be contacted at destinations of sample flights.(31) J-3 composed a voice broadcast of time increments to be used prior to each detonation. A script accepted on 30 January(32) contained the wording and timing, and named the places of origin at Eniwetok and Bikini. After slight changes(33)(34) it was used, with a tape recording of the script being broadcast during the last fifteen minutes before each detonation.

C. Conclusions reached at the Aircraft Positioning meeting held at LASL on 21 December were distributed 14 Jan 54,(35) covering the use of various types of aircraft, and the technical views connected therewith. At a later meeting(36) at PPG, final positioning for those participating in BRAVO was determined. At another meeting (37) in Hq TG 7.1, safe positioning for aircraft participating in ROMEO was considered.

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(30) JF-3852, TG 7.1 H-19 Helicopter Support Requirements for Eniwetok Atoll. 13 Feb 54, CONF

(31) JF-4053, Sample Returns, 19 Feb 54, OUO

(32) JF-3321, Voice Time Broadcast, 30 Jan 54, CONF

(33) JF-3445, Letter of Transmittal, 4 Feb 54, CONF

(34) JF-6236, Voice Time Broadcast, 30 Mar 54, CONF

(35) JF-3069, Aircraft Positioning Meeting, 14 Jan 54 SECRET, RD

(36) JF-4412, Aircraft Safe Positioning Meeting, 20 Feb 54, SECRET RD

(37) JF-4695, Safe Positions for Aircraft in Vicinity [redacted] 6 Mar 54, SECRET RD

After discussing possible yield and recent experiences, it was decided that no aircraft would be placed closer to zero point than in BRAVO. Positions for effects aircraft participating in KOON were announced on 31 March,(38) locating B-47 and B-36 aircraft.

D. Immediately after BRAVO event, considerable emphasis was placed on the recovery of equipment, material, and personal effects from the Bikini camps as soon as radiological conditions would permit. Within a few days a number of laboratory trailers had been returned to Eniwetok and parked in the Administration Compound as planned. However, their radioactivity became immediately evident, creating emanations of sufficient strength to cause serious difficulty for the nearby counting laboratory. Upon request by J-6,(39) a trailer park with power facilities was established just north of the Parry airstrip, in a relatively isolated area, and was used for storage of trailers that were sufficiently contaminated to affect other facilities.

E. Bio-Medical Studies: For obvious reasons this project was not included in any operations plan prior to BRAVO. Immediately after the BRAVO detonation, the presence of a fall-out or much greater radioactivity than expected was reported from Rongerik, Rongelap, Utirik and other atolls east and south of Bikini. All weather personnel and natives, about 100 natives from Rongelap and 17 from Utirik, were evacuated by TG 7.3 craft and taken to Kwajalein(40) by 4 March for radiological safety and for observation and treatment. The value of conducting a study of the accidentally exposed people and areas was evident, and in response to a request from AFSWP including an offer of financial assistance,(41) and approved by CJTF SEVEN,(42) a new program was originated within TU-13.

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(38) TWX JF-6817 Lstes from Hooper DTG March 310100Z SECRET

(39) JF-4824, Trailer Parking Requirements, ELMER, 8 Mar 54, OUO

(40) TWX JF-4358, Graves to Bugher, AEC, March 020530Z CONF

(41) TWX, Chief AFSWP to CJTF-7, March 051927Z

(42) TWX, CJTF-7 to Chief AFSWP, March 060545Z

It was called Program 4, "Bio-Medical Studies", Project 4.1, "Study of Response of Human Beings Exposed to Significant Beta and Gamma Radiation Due to Fall-Out from High Yield Weapons", under the direction of Eugene P. Cronkite, Cmdr, USN.(43) Personnel, approximately 20, were principally radiological specialists from Naval Medical establishments, and were brought to Kwajelein on a few days notice. CTU-8 provided photographic documentation.(44) Other TG 7.1 personnel participated in survey flights to several of the Marshall and Gilbert Islands to determine the extent of contamination, investigating water, soil, humans, animals, and fowl from a radiological viewpoint. (45)(46)(47)(48)(49) Program 19 collected marine specimens, in response to a request from the Division of Biology and Medicine, AEC.(50) By 8 March it appeared that the natives under observation had displayed no symptoms of permanent radiation effects, were in satisfactory physical condition with very good morale. They were maintained on Kwajelein under continued close observation. Results of Project 4.1 studies will be detailed in preliminary, progress, and final reports.

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(43) TU-13-54-31S Hq TU-13 to CDR Cronkite, 8 Mar 54

(44) TWX JF-7055, to AFSWP from CTG 7.1, Apr 050233Z, SECRET

(45) TWX JF-4358, Graves to Bugher, March 030530Z, CONF

(46) TWX JF-4578, Graves to Bugher, March 040333Z, SECRET RD

(47) Reports attached to JTF-7 J-3/729.3/18 Mar, J-3/370/05, 9 Apr 54

(48) TWX JF-6934, for Cronkite from TU-13, Apr 020452Z, CONF

(49) TWX JF-7055, For AFSWP from CTG 7.1, Apr 050233Z, SECRET

(50) TWX Bugher to CJTF-7, March 192223Z

[redacted]

F. Communication: Previous plans were developed, including facilities on the USS ESTES, for operations afloat. A description of the PARRY-ENIWAN radioteletype service was published,(51) containing a schedule and instructions for preparing and handling messages. Hours of operation were established as required, during peak periods, 24 hour operation every day was the rule. Each message was delivered by phone or radio as soon as possible, with the usual precautions for classified matter. Functions of TG 7.1 communications afloat were published,(52) describing TWX processing, mail processing, with points of receipt and dispatch, and naming personnel who were authorized to release TWX messages. Certain precautions, such as the ban on release of messages containing any "results" information of scientific nature without prior approval of Dr. Ogle, were emphasized. After BRAVO, most Bikini communications facilities remained afloat,(53) and necessary adjustments were quickly made. The loss of the TG 7.1 teletype circuit after BRAVO had a serious effect, and placed a heavy load on the TG 7.1 voice radio circuit between the atolls, which was originally planned mostly for emergency back-up service. Use of the voice circuit was confined to unclassified messages, although use of prearranged code words made it possible, within limitiations, to transmit classified information. A new radio net at Bikini was established for TU-7, using military equipment on the four larger ships and the Mad-Safe barge. The TG 7.1 HF voice net transmitter on ENYU continued its operation, triggered by equipment on ESTES. After the ENIWAN airstrip resumed operations, the dispatcher there used small portable equipment. Several changes in the radio and radioteletype systems will be described in the final report of the TG 7.1 Communications Officer.

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(51) JF-3461, TG 7.1 Eniwetok-Bikini Teletype Circuit, 4 Feb 54, OUO

(52) JF-4861, TG 7.1 Communications and Mail Service During Operations Afloat, 9 Mar 54, OUO

(53) TWX JF-4603, to Hooper from Curry, March 042146Z, OUO

(54) JF-4901, Message Precedence, 10 Mar 54, Confidential

[redacted]

The intensity of operations preceding BRAVO, and especially during the adjustment period immediately thereafter, brought a deluge of high priority traffic. This jammed facilities and rendered the priority system almost totally ineffective. In one week during which a traffic survey was conducted, 78% of the traffic handled by USS ESTES was "Priority" or higher. As a result, all sections of TG 7.1 were cautioned(54) to select proper message precedence.

G. Transportation:

1. Transportation of personnel was handled jointly by J-1 and J-3. At Eniwetok, J-3 scheduled all intra-atoll and Eniwetok-Bikini air and surface travel, and effected coordination with operating units. J-1 scheduled all air and surface transportation to the ZI and Kwajelein. At Bikini J-3 handled all transportation to points outside the Atoll. Ship travel between Eniwetok and Bikini was sporadic until mid-February, when one ship departed from each atoll each night. Usually DD, LST, or ATF craft were used, plus the larger ships on occasions in connection with detonation dates.

2. The Eniwetok-Bikini airlift experienced a great increase in utilization during the month of January, and at a conference held 12 January by representatives from TG 7.1, TG 7.4, TG 7.5, it was agreed to schedule four flights daily each way. The flights leaving Eniwetok Island at 0830 and 1330 each day were to fly every day; the others could be cancelled if not needed. The two-a-day was begun about 15 January, and provided adequate service. The average daily number of passengers carried in January was 31; in February, 46. Additional flights were made when required, and all flights were grounded for short periods when use of the Bikini airstrip at [redacted] was not advisable.(55)

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(55) JF-3218 Standard Operating Procedure for Eniwetok-Bikini C-47 Shuttle 29 Jan 54, CUO

Due to contamination of the ENIWETOK Airstrip on 1 March, flight service was suspended. On 9 and 10 March a small work crew rehabilitated the site to a reasonable extent. On 11 March a small crash crew and a radio-equipped dispatcher assumed duties there, and passenger service was resumed. Because of the reduced population at Bikini, requirements were not heavy, and one or two round trips each day were usually adequate.

3. The Bikini helicopter lift experienced a similar history during this period. During January and February a regular schedule was flown, plus a few special flights, carrying an average of 251 passengers per day in January and 450 in February. During March and April, flights were entirely upon request, and carried a daily average of 115 in March and 65 in April. It was observed that the latter type of operation resulted in relatively greater strain on TG 7.3 facilities because it did not permit the most efficient use of available aircraft.

4. During the period when the Bikini airstrip was not usable, overnight Destroyer trips between the Atolls were set up as required, and LST trips were used to transport personnel as well as cargo. Limited air transportation via PBM was available between Eniwetok airstrip and Bikini Lagoon, mainly on an emergency basis. This service had a certain measure of usefulness, but was not a satisfactory substitute for the C-47 lift.

H. Rad-Safety Operations:

1. TU-7 personnel arrived in force by early January and immediately set up laboratory, training, decontamination and control establishments, and became oriented with the sites and organizations. At Bikini, three shore units and one shipboard laboratory were required, and BRAVO resulted in loss of the shore stations entirely. The high level of contamination created conditions that required major revision of the original Bikini plan. A barge alongside the USS AINSWORTH was used for a rad-safe center to handle most of the personnel decontamination, with smaller centers on USS ESTES and USS CURTISS, and one for helicopters on USS ESKIMO. These centers were successfully operated after BRAVO, ROMEO, and KOON. The ROMEO device yielded an

unexpected fall-out on the second night after detonation, which was detected by ABC telemetering equipment operated in an ENIWAN-BAIROKO hook-up. After KOON, all rad-safe laundry work was done at PARRY, due to destruction of the remaining facilities on ENIWAN. The TU-7 chemistry laboratory has collected valuable data from an analysis of lagoon water and ships' drinking water, and data on decay and energy of early fall-out, not available from any other unit. TU-7 personnel were augmented by approximately 60 men borrowed from CTG 7.2 as planned. Most of these men were not experienced, and were given necessary training by TU-7. The work of this Unit will be covered in a detailed report by its Commander upon conclusion of CASTLE.

2. It may be a matter of interest that the USS BAIROKO experienced a heavy fall-out contamination during BRAVO,(56) and that despite radiological safety precautions and monitoring, several ship's personnel received relatively heavy dosages. Lower dosages were received by personnel of the USS BELLE GROVE during cleanup and decontamination operations.

I. J-4

1. J-4 activities progressed as anticipated until BRAVO. Shipping of scientific cargo by water diminished during this period, and air shipments reached a peak. The USS CURTISS, carrying most of the special test equipment arrived and discharged cargo at Eniwetok on 25 January, and at Bikini on 27 January. Detailed schedules for these unloadings, listing responsibilities of participating units, were issued(57)(58)(59) During the period 1 January thru 27 February, cargo ships were unloaded at both Eniwetok and Bikini. Cargo was shuttled between atolls by a weekly LST trip, augmented by shipments of small items via daily C-47 trips. In addition to regular logistical movements of cargo, the J-4 shipping and receiving office arranged

(56) See TG 7.3 reports for authentication and details

(57) JF-3220, Present Plan for Off-Loading Cargo from USS CURTISS at FOGS, 23 Jan 54

(58) JF-3054, Requirements for Off-Loading, TU-14, cargo, 27 Jan 54 from USS CURTISS 25 Jan 54 SECRET

(59) TWX JF-3269, Jan 270526z, OUO

for innumerable movements of supplies and equipment via truck, boat, helicopter, and plane between various project sites.

2. Return of two weapons dummies and associated gear to ZI were scheduled for 6 March.(60) They were loaded on DALTON VICTORY for shipment to NSC Oakland, thence by truck to the American Car and Foundry Company in Albuquerque, New Mexico. Unloading of the Special Air Mission carrying special equipment [redacted] occurred on 9 March. A J-4 schedule(61) listed the sequence of events and specific responsibilities. The cargo was unloaded at Eniwetok Island and delivered to the TU-4 assembly area on PARRY as planned. Shipment of a capsule from Eniwetok to Bikini via ship on K-3 was described in a J-4 letter(62) containing instructions and precautionary advice. It was stated that under certain conditions the capsule, after safety devices had been removed, could be self destructive and dangerous to personnel, and that no replacement existed.

3. In a letter to CTG 7.1,(63) CJTF SEVEN expressed his appreciation of the efficient manner in which test equipment had been moved to PPG.

4. Planning for roll-up began with a survey of major items of material and equipment to be moved to ZI.

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(60) JF-4364, Return of Dummies to ZI, 26 Feb 54, SECRET RD

(61) JF-4771, Unload[redacted] SAM Flight, 8 Mar 54 CONF RD

(62) JF-4690, Shipment of CASTLE Device from Eniwetok to Bikini Atoll. 9 Mar 54, SECRET RD

(63) Ltr, Hq JTF SEVEN, to Ogle from Clarkson, 3 Feb 54, CONF.

In a report to JTF SEVEN[64] these items were chronologically listed and itemized for the period 1 March - 31 May. This listing excluded items to be returned via USS CURTISS, YAG 39, YAG 40, photo planes, and SAM for documents. Practically all items listed were for return via surface transportation.

5. J-4 supply vans at Bikini were located on INDIAN from 1 -- 15 January, on NAMU from 16 January -- 26 February. On 6 March their contents were moved into Shop 18 on the USS CURTISS, which remained the center of supply at Bikini for the balance of the period. The vans were moved at PARRY, Eniwetok, on 10 March for use in roll-up work.

6. After BRAVO J-4 implemented special efforts to recover essential equipment and property, including personal effects, from damaged shore sites.[65] Due to the widespread damage, large quantities of supplies and replacement equipment were airlifted from ZI during March. During March 3 to 13 about 30 large van type trailers and about 1000 measurement tons of equipment were evacuated from Bikini and taken to Eniwetok by LST. Space aboard several ships, all available transportation within the atoll and to Eniwetok, and the rotation of J-4 personnel, were all utilized to expedite recovery to the maximum permitted by conditions of radiological safety. Upon arrival at Eniwetok, recovered items were assembled, sorted, and restored to owners or using project as soon as possible. Items of unsafe radiological condition were stored in the TU-7 decontamination area for treatment or disposition. There were several known incidents of pilferage during the period of recovery, transportation, and return of property to owner, otherwise the recovery was carried out satisfactorily.

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(64) JF-3873, Roll-up Cargo Report, 15 Feb 54, UUO

(65) JF-4732, J-4 Activities, 4 Mar 54, SECRET

III. ADMINISTRATION

A. PPG Functions

1. The Headquarters Commandant office of J-1 became operational at PARRY in November 1953 to process incoming personnel. The J-1 office opened at PARRY in mid-January 1954. The requirement for a staff duty officer to be available at Hq TG 7.1 during all non-duty hours was established.(66)(67) Instructions provided for a duty roster for TG 7.1 staff officers and staff civilians when at PARRY, and described duties and special instructions. This was accompanied by a similar document pertaining to Duty non-commissioned officers.(68)(69) At BRAVO muster, at 1800, B-2, 494 persons were present at Bikini, distributed approximately thus; [redacted] 262, NAMU 90, KOLURIKKU 55, ENYU 75, afloat 12. Upon evacuation, shore based people were distributed to ships in approximately these proportions: CURTISS 108, ESTES 70, AINSWORTH 235, BAIROKO 65, other 14.

2. Billeting of personnel had presented no serious problems until BRAVO, when on B day it became evident that Bikini shore housing was no longer available and the four larger ships returned to Eniwetok. All personnel who had been shore based at Bikini debarked to reorganize, and Parry Island facilities were suddenly crowded beyond all planned capacities. By utilizing any reasonable acceptable space such as recreation buildings, beach clubs, storage buildings, etc., by sending a maximum number (permitted by available transportation) to the ZI, and moving others aboard ship for continuing operations at Bikini, this crisis was overcome, and in approximately a week normal conditions prevailed. During the night of B plus 1, ESTES with about 65 passengers, and BAIROKO with about 30 passengers, returned to Bikini lagoon to conduct recovery operations. AINSWORTH with about 90 passengers and CURTISS with about 60, returned on the nights of B plus 3 and B plus 4 respectively.

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(66) JF-3030, Staff Duty Officers Instructions, 22 Jan 54, OUO

(67) JF-4985, Staff Duty Officers Instructions, 9 Mar 54, UNCL

(68) JF-3131, Duty Non-Commissioned Officers Instructions, 22 Jan 54, OUO

[redacted]

once the extent of damage and contamination became known, the idea of re-entry for other than quick recoveries was revised, and the decision to maintain headquarters afloat was made.(70)(71)(72) J-1 representation was maintained on the four larger ships to assist in berthing, messing, and to facilitate matters for TG 7.1 personnel aboard in any way applicable. They also conducted musters, actual physical accounting, of all TG 7.1 personnel aboard prior to each event. The recovery of essential records, equipment and personal property was planned immediately and accomplished (by J-4 and TG 7.5) as soon as conditions of radiological safety permitted. This recovery had been completed to a great extent by about 20 March. Prior to ROMEO, 292 persons were mustered at Bikini, distributed approximately thus: ESTES 60, CURTISS 90, AINSWORTH 107, BAIROKO 35. At the KOON event, 285 persons were mustered at Bikini, distributed approximately as at ROMEO, with a few additional on BAIROKO. As a part of normal J-1 services, arrangements were made for two men from TG 7.2 Finance Office to visit the principal ships for the purpose of paying all TG 7.1 and TG 7.2 personnel whose vouchers had been completed.(73) This was done at intervals of about one week, with the result that all pay obligations were kept reasonably up to date.

3. A liaison officer stationed at Hickam Air Force Base was appointed Assistant Adjutant General, TG 7.1(74) for the purpose of issuing orders when needed to facilitate the movement of personnel in unusual circumstances, especially monitors, attendants, or couriers of classified material.(75) His instructions were contained in a subsequent letter.

4. Visitors: From time to time groups of official observers were escorted through TG 7.1 activities. These trips were usually sponsored by a higher headquarters,

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(70) TTX JF-4534, To Ogle from Curry, March 030440Z, CONF

(71) TTX JF-4600, To Hooper from Curry, March 041045Z, CONF

(72) TTX JF-4601, To Brockett from Kelly, March 041046Z

(73) JF-6280, To Hirons from McMullan, March 300345Z, OUO

(74) SO PPG 3, par 1, Hq TG 7.1, Eniwetok, 14 Feb 54

(75) [illegible], Designation and Functions of Assistant Adjutant General, TG 7.1, 16 Feb 54, OUO

[redacted]

but TG 7.1 provided guides, speakers, and security measures if appropriate. A typical tour was conducted on KOON - 2, when a goup visited ROJOA site, PARRY control area, both cryogenics plants, and assembly area. Instructions were issued to all TG 7.1 people involved,(76) and speakers were required to review their material with the Classification Officer before presenting it to the group.

5. In an attempt at some degree of standardization, a guide to preparation of scientific reports now due was issued to all scientific units.(77) The guide set forth certain general arrangements which would, if followed, facilitate the review, editing, evaluation, and final handling of CASTLE scientific reports. However, the requirement for completion of reports with minimum delay, regardless of form or arrangement, was emphasized.

6. To assist in reorganizing property and material recovered from BRAVO areas, instructions and information were published in two of the daily bulletins(78)(79) issued to all sections of the Group. These pertained to recovery of personal property as well as official files and equipment, that had been brought back to Eniwetok and made available for reclamation.

7. Air Force Officers on flying status utilized facilities of the Eniwetok Air Force Base, with their flying time certified to Sandia Base by the Eniwetok Base Operations Officer.(80) This arrangement was sponsored by J-3, on behalf of eight Air Force officers, two of whom were operations-administrative types, and six of whom were technical personnel.(81) In addition, one Naval officer was attached to TG 7.4 for flying.

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(76) JF-6286, Official Observer Schedule for KOON, 30 March 54, OUO

(77) JF-7050, CASTLE Reports, 5 Apr 54, UNCL

(78) Daily Bulletin No. 17, 5 Mar 54, par 1 Recovery and Salvage Operations

(79) Daily Bulletin No. 20, 12 Mar 54, par1, Recovery of Personal Property

(80) JF-3382, Submission of Form 122, 2 Feb 54, OUO

[redacted]

8. Planning for movement of personnel to the ZI was started 11 February when a memo was issued(82) to all sections requesting them to submit their proposed travel requirements chronologically as indicated on attached forms. A later memo(83) established procedures for returning personnel to ZI, and specified when exceptions could be made, in confirmation of oral agreements previously discussed.

B. Security

1. Security activities as outlined in CJTF SEVEN directives were carried on in the forward area by J-1 in close coordination with AC/S E-2 of TG 7.5. Arrangements were made to certify to the TG 7.5 Badge Office the clearances of 7.1 personnel who arrived prior to their badge requests, and this coordination was of material assistance in many cases, especially after BRAVO.

2. The maintenance of a chronological log of security measures was required of each Task Unit by CTG 7.1,(84) retroactive to 1 Nov 53. The memo used contained instructions and a sample record form.

3. Names of persons requiring access to the various exclusion areas were submitted to CTG 7.5 or to AC/S E-2, TG 7.5.(85) Some lists were furnished from the ZI prior to 1 January, but in most cases lists were compiled after project personnel arrived in the forward area and became oriented.

4. Letters of authorization were issued by the Task Group Commander as required to(86) enable personnel to carry classified documents, film, and photo equipment to and from, and within, the PPG.

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(82) JF-3718, Planning for Movement to Rear Area, 11 Feb 54, SECRET

(83) JF-5836, Return of TG 7.1 Personnel to ZI, 20 Mar 54, OUO

(84) JF-3471, Log of Security Measures, 4 Feb 54, OUO

(85) Sample: JF-3726, Exchange Badge Access Lists, and Persons Authorized to Sign Temporary Exclusion Area Permits, 9 Feb 54, SECRET

5. Contraband was handled in cooperation with travel control and security personnel of other organizations. Due to instructions issued prior to departure of personnel from the ZI, the occasions on which contraband was found were very few. Items were normally found during the routine baggage search upon arrival at Eniwetok, and transmitted by the Provost Marshal's office via convenient channels, to the unit to which the owner was assigned. In the case of TG 7.1, items were handled either by J-1 or by the Project Officer under whose supervision the owner was employed. The basic course of action was, first, determination whether the item in question was, official property or personal property. Then: a. if official property, an appropriate letter of authorization was obtained, and the item, with letter, returned to the man from whom it was taken; b. if personal, contraband restrictions were explained to the owner, and the item was immediately mailed to an address outside the PPG by the owner, under surveillance. Exposed film was developed by TG 7.5 and reviewed by the JTF Classification Officer, then returned or retained, as appropriate. Most of the contraband items were hunting knives confiscated in error. These were returned to owners with a minimum of ceremony. Informal consultations between the people actually handling contraband resulted in good coordination and proper disposition of all items.(87)(88)

6. Registration of photographic facilities was accomplished in a report(89) listing users of photo materials and indicating their respective processing arrangements in the forward area. This list was subsequently completed by a letter(90) listing a total of 26 such activities. CTU-8 and CTU-9, on behalf of CTG 7.1, cooperated closely with AC/S E-2 of TG 7.5 to carry out requirements for control of photographic activities and materials.

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(87) JF-3932, Confiscated Contraband, 17 Feb 54, CONF

(88) JF-3935, Confiscated Contraband, 17 Feb 54, CONF

(89) JF-3877, Photographic Processing Point Control, 15 Feb 54, CONF

(90) JF-4406, Photographic Processing Point Control, 4 Mar 54, UNCL.

8. Top Secret Control Officers were appointed within TG 7.1, with the aim of establishing a TSCO within each unit of the Group that held documents classified TOP SECRET.(92) The announcement of these appointments also contained instructions relative to: a. personnel having access to TOP SECRET information, b. review of Top Secret Controls, c. using cover sheet on DOD documents classified SECRET, d. authority to classify SECRET and CONFIDENTIAL information, and e. removal of documents classified SECRET or CONFIDENTIAL from security areas.

9. Inventories of TOP SECRET documents were made by custodians, and formal reports made, upon request by AC/S E-2 of TG 7.5.(93)(94)

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(91) JF-3869, Repository Control Registration, 15 Feb 54, UNCL

(92) JF-4633, Implementation of the Revisions of AEC Security Bulletins - GE-SEC-5 and SF-SEC-20, 5 Mar 54, CUO

(93) JF-4860, Inventory of TOP SECRET Documents, TU-1, 8 Mar 54, SECRET RD

(94) JF-4862, Inventory of TOP SECRET Documents, 8 Mar 54, SECRET RD

IV STATISTICS

A. TG 7.1 Population at rPG, 1954

Date	Enjwetok	Bikini	Other	Total
1 Jan	59	32	0	91
8 Jan	152	72	0	224
15 Jan	263	149	0	412
22 Jan	338	215	2	555
1 Feb	404	327	5	736
8 Feb	497	327	14	829
15 Feb	513	342	16	871
22 Feb	533	443	14	990
1 Mar	520	485	17	1022
8 Mar	640	344	13	997
15 Mar	583	380	13	976
22 Mar	610	311	34	955
29 Mar	595	294	2	891
5 Apr	617	211	0	828
12 Apr	629	140	0	769

[redacted]

(Statistics)

B. TG 7.1 Personnel Movements

	Jan	Feb	Mar
Personnel arriving at PPG	532	372	115
Personnel departing PPG	7	40	297
Greatest number in one day arriving	72	46	10
Greatest number in one day departing	2	12	34

During the period 1 Nov - 27 March, 1188 persons arrived at PPG

[redacted]

(Statistics)

C. Logistics

1. Air shipments received:

January	557 pieces, total 82,647 pounds
February	1221 pieces, total 129, 709 pounds
March	512 pieces, total 50,198 pounds

2. Water shipments received:

VIA: MILLER, January

Eniwetok	418,326 pounds,	29,965 cube tons
Bikini	302,400 pounds,	20,680 cube tons
Total	720,726 pounds,	50,645 cube tons

VIA: DALTON VICTORY, Feburary

Eniwetok	31,037 pounds	2,129 cube tons
Bikini	36,242 pounds	156 cube tons
Total	67,279 pounds	2,285 cube tons

March (None)

3. During January, February, March, J-4 warehouses issued an average of 143 line items each day.

[redacted]

RFCAL-S-391

Vol. IV

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CASTLE
T.G 7.1 HISTORY INSTALLMENT 4

Castle Ref 8-4

[redacted]

JOINT TASK FORCE SEVEN
P. O. Box 1663
LOS ALAMOS, NEW MEXICO

32-797

JUN 1 1 1954

TO: Commander
Joint Task Force SEVEN
Washington 25, D. C.

Attn: Historian

[redacted]

FROM: Commander, Task Group 7.1

SUBJECT: HISTORICAL REPORT

1. Attached is the fourth installment of CASTLE History as it involves Task Group 7.1 and is submitted in compliance with JTF SEVEN SOP No. 172-701, "Historical Reports", and your TWX DTG 232344Z, April 1954.

2. It will be noted that the enclosure includes an account of final event of CASTLE. It is suggested that the Report of the Commander, Task Group 7.1 be used as an additional source of historical data and that the enclosure be accepted as the final Historical Report from this Headquarters.

FOR THE COMMANDER:

W. Ogle
William E. Ogle
Commander, Task Group 7.1

DISTRIBUTION:
cy 1 & 2 - CJTF 7 w/incl
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7 - CTG 7.4 w/incl
8 - CTG 7.5 w/incl
9 - JF-Files w/incl
JF-Seq

For decision by 1 June

[redacted]

[redacted]

[redacted]

TASK FORCE 7.1 HISTORICAL REPORT

FOURTH INSTALLMENT

11 APRIL-30 MAY 1954

RECAL-S-391

[redacted]

FOURTH INSTALLMENT, 11 APRIL-30 MAY 54

TABLE OF CONTENTS

[redacted]

TASK GROUP [redacted] HISTORICAL REPORT

FOURTH INSTALLMENT

11 April 1954 - 30 May 1954

I. GENERAL

The period 11 April 1954 through 30 May 1954 in CASTLE saw completion of the test program, and return of practically all of the participating personnel and equipment to the ZI. Repeated delays were encountered, principally because of high altitude weather conditions which seemed unacceptable in view of [redacted] Modes of operation were essentially the same as during the first part of the program, with forces being split between Eniwetok and Bikini. The final detonation occurred at Eniwetok and no inordinate fall-out was experienced. An evacuation of Eniwetok of Eniwetok Atoll was not necessary. Roll-up operations centered on Parry. Personnel were phased out in accordance with the status of their respective projects. UCRL personnel departed after the third and fourth detonations, many TU-13 personnel departed after the fifth shot and TU-2 and TU-3 personnel left late in April; thus, after the last shot there was no great last minute rush. Pac Div MATS scheduled extra planes at this time, and except for the breakdown of seven MATS planes at Eniwetok within a period of four days and unsatisfactory MATS relations at Eniwetok, there were no significant transportation problems. Time lost due to weather delays was in part regained by the elimination of one test event, and the program as a whole was concluded a month after the scheduled date of the sixth shot.

II OPERATIONAL

A. Planning Phase

1. As in the earlier part of the program, the J-3 section formalized the more vital plans by issuing Operational Letters pertaining to each event. Operational Letter No. 13 (1) was the recovery plan beginning on Romrod Day (subsequently cancelled).

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(1) JF-7296, Subj: Operational Letter # 13, ECEC Recovery, 11 Apr 54, CONF.

Operational Letter No. 14[2] scheduled [redacted] from 1000 on minus one day thru a preliminary survey a few hours after zero hour. It lined projects participating and ship movements. Operational Letter No. 15[3] amplified the movement of the Station 10 barge from its ship on Parry to its ultimate mooring in the MIKE crater, Eniwetok, on 16 April, including provision for the accompanying housekeeping vessel. Operational Letter No. 16[4] explained the movement of the Station 40 [redacted] on to the LSD BELLE GROVE in Eniwetok lagoon on 28 April, its transportation to Bikini lagoon, and mooring off YUROCHI. The USS CURTISS and the helicopter barge were moored nearby. Operational Letter No. 17[5] contained the [redacted] to begin as soon the practicable after detonation.

Radiological safety, and the need for close coordination of all missions with J-3 were emphasized. A plan for the evacuation of Eniwetok Atoll, explaining definite procedures, was issued[6] [redacted] resulted in any significant local fall-out.

2. In all, six changes to the basic TG 7.1 Operation Plan 1-53 were made. The first[7] involved a change of a communications frequency, the second[8] a change of classification of a frequency, and the third,[9] fourth[10] and fifth[11] contained changes of shot schedules due to weather conditions.

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(2) JF-6496, Subj: Operational Letter #14, Union Event, 12 Apr 54, SECRET

(3) JF-7319, Subj: Operational Letter #15, 12 Apr 54, CONF

(4) JF-7477, Subj: Operational Letter #16, 14 Apr 54, CONF

(5) JF-7606, Subj: Operational Letter #17, NECTAR Recovery, 19 Apr 54, CONF

(6) JF-8006, Subj: Fall-Out Emergency Evacuation of Eniwetok Atoll, OUO 28 Apr 54

(7) JF-3310, Subj: (Change if frequency), 28 Jan 54, OUO

(8) JF-3335, Subj: (Change in Classification of Frequency) 30 Jan OUO

(9) JF-4677, Subj: (Change of Shot Schedule after BRAVO)6 Mar 54 SECRET RD

(10) JF-6235, Subj: (Change of Shot Schedule after ROMEO)29 Mar SECRET RD

(11) JF-7428, Subj: (Change of Shot Schedule for UNION, YANKEE, NECTAR) 13 Apr 54 SECRET RD

The sixth change contained a [redacted] estimated yield for [redacted] in which [redacted] was cancelled and replaced [redacted] which arrived in the Forward Area on 15 April.(13) This change had the effect of [redacted] and ended the work previously carried on by TU-2 and TU-3.

3. Check lists were made, itemizing the more important operations in each event.(14)(15) The check list [redacted](16) listed activities from 0630 [redacted] including recovery missions and flyaways. As for previous events, meetings and consultations were held to finalize plans for the participating aircraft. In connection [redacted] a meeting(17)(18) was held on 2 May, at which the following positions were approved: B-36, altitude 40,000 ft, horizontal range 39,500 ft at zero time, tail toward zero; P4Y2 positions at 30 Nautical Miles from zero; RB-36 controller at 50 Nautical Miles from zero; 2 C-54 photo aircraft at 75 Nautical Miles and one at 50 Nautical Miles from zero. A similar meeting for NECTAR was held(19) for [redacted]

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(12) JF-7957, Subj: (Change of Shot Schedule for YANKEE) 28 Apr SECRET RD

(13) J-3/139, Daily Diary, 9 Apr 54, discussion with TU-4, J-3 and J-4

(14) JF-7346, Subj: UNION Check List, Eniwetok Atoll, CONF, 12 Apr 54

(15) JF-7606, Subj: NECTAR Check List, 17 Apr 54, CONF

(16) JF-8165, Subj: YANKEE Check List, Eniwetok Atoll, 3 May 54, CONF

(17) JF-8221, Subj: Aircraft Positioning Meeting for YANKEE, 4 May 54, SECRET RD

(18) JF-8391, Subj: YANKEE Successful for B-36, 10 May 54, SECRET

(19) J-3/148, Daily Diary, Initial NECTAR Aircraft Positioning Meeting

[redacted]

[redacted]

1. [redacted] fourth device of the test series, was on a barge moored south of YUROCHI and was satisfactorily detonated at [illegible] on Monday 26 April 1954. Preparations were supported by the ships ESTES, CURTISS, AINSWORTH, BAIROKO, and other smaller vessels. All ships evacuated the lagoon on the afternoon of minus one and returned about 24 hours later. Eniwetok airstrip was found to be covered with debris which prevented its immediate use for C-47 shuttle flights. It was cleared to a width of 150 feet full length by 30 April. (First samples arrived at Eniwetok on the morning of 27 April). The [redacted] disclosed 441 persons at Eniwetok and 178 at Bikini.

2. [redacted] was scheduled for 14 April, and had been given all the usual preparatory arrangements. On 12 April an indefinite postponement was announced, and on 13 April [redacted] cancelled. (20)(21) Dismantling of the URSULA camp began immediately and was completed on 18 April. The primary components of the device, and their dummy counter-parts were returned to storage on 14 April (22) and ultimately returned to the ZI. (23)

3. [redacted] the fifth event of the CASTLE series, was detonated 5 May 54, on a barge moored in Bikini lagoon. This device was carried from the assembly area barge slip on Parry to the Bikini lagoon on 1 May 54 on the LSD BELLE GROVE. Preparatory work was entirely ship-based, supported by the ships ESTES, CURTISS, BAIROKO, AINSWORTH, and others. (The [redacted] listed 344 persons at Eniwetok and 152 at Bikini). All ships departed the lagoon during the afternoon on minus 1 and returned about 24 hours later. A radiological safety survey of the atoll was made on the afternoon of Shot Day.

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(20) JF-7410, Subj: [redacted] cancelled, 13 Apr SECRET RD

(21) JF-7418, Subj: ECHO has been cancelled, 13 Apr SECRET, also JF-7445&JF-7456

(22) J-3 Daily Diary, 137, 142, 143, 144

(23) JF-[illegible], Return of [redacted] and Classified components to ZI, 19 Apr 54 SECRET RD

The USS ESTES returned to Eniwetok on the night of [redacted] The USS CURTISS returned to Eniwetok on the night of [redacted] Recovery and roll-up work continued with personnel based on the BAIROKO, AINSWORTH, BELLE GROVE, and small craft; and was completed by 11 May 54. All TG 7.1 and TG 7.5 personnel returned to Eniwetok the night of 11-12 May, leaving the BAIROKO at Bikini for weather observations.

The Eniaman airstrip was covered with debris, but was cleared and regraded 150 ft wide full length by 9 May. However, C-47 shuttle flights were not resumed (24) presumably because of inadequate safety facilities.

4. [redacted] sixth and final event of the CASTLE series, was satisfactorily detonated on a barge moored in the MIKE crater at Eniwetok on Friday, 14 May 54. Plans had been made for the evacuation of Eniwetok Atoll if necessary, but conditions subsequent to the detonation did not warrant such action. [redacted] disclosed 393 persons at Eniwetok, none at Bikini. In compliance with a CTG 7.1 requirement, all persons who had received a dosage of 6 or more were evacuated from the forward area or aboard ship prior to the detonation to avoid possible additional exposure [redacted] fall-out. This detonation occurred during conditions of rain and low, solid clouds, and visible results other than flash, could not be seen by ground observers.

C. New Projects

1. In a change (25) to the basic list, the following three new projects were officially added to the test program:

a. Project 3.4 "Neutralization of a Planted Sea Mine Field", sponsored by Bureau of Ordnance, USN, under Project Officer James Murphy, USN. This project involved the placing and recovery of several mines in the Bikini lagoon during [redacted]

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(24) JF-0388, TWX to Cooper from Marvin, 10 May 000

(25) JF-6137, Subj: Outline of Scientific Programs-Operation CASTLE(change No. 2 to JF-2[illegible]6, 10 Nov 53) 1 May 54 SECRET RD

[redacted]

[redacted]

b. Project 4.1 "Study of Response of Human Beings Exposed to Significant Beta and Gamma Radiation Due to Fall-Out from High Yield Weapons", sponsored by AFSWP and the Division of Biology and Medicine, AEC, under Project Officer E. P. Cronkite, Cdr USN. This was a study of the various results of [redacted] fall-out on the residents of Rongerik and Rongelapatolls.

c. Project 6.1 "Test of Interim IBDA Procedures for High Yield Weapons" sponsored by The Stregetic Air Command, USAF, under Project Officer Rockly Triantafellu, Lt Col USAF. Radar indications of the detonation were used as a basic for an estimate of probable damage capabilities.

D. Radiological Safety

Precautionary functions proceeded as described in the earlier installment of this report, using the barge and other control points at Bikini, with additional monitors borrowed from Task Group 7.2 as maximum dosages were reached. Rad-Safe surveys were made a few hours after each detonation, and daily thereafter, and charts displaying latest readings on each island were maintained at several places. The CTU-7 prepared reports (26)(27)(28) from record readings in areas subjected to contamination. Reports were compiled from exposure records and the CTG 7.1 was informed when personnel reached allowable maximums with a recommendation for evacuation when appropriate. In one such report, 50 people having doses of 3.5r or more were listed. (29) In another, 6 E&N personnel were recommended for removal from Eniwetok prior to [redacted] (30) to avoid possibility of additional exposure.

(26) JF-7807, Subj: Shot Rad-Safe Survey Summaries, 23 Apr 54, CONF, Lists contamination of Bikini Islands and Lagoon in m/r after BRAVO, ROMEO, KOON.

(27) JF-8249, Subj: Preliminary Technical Report, [redacted] 5 May 54 SECRET RD

(28) JF-8250, Subj: Preliminary Technical Report [redacted] 5 May 54 SECRET RD

(29) JF-8370, Subj: Report of TG 7.1 Personnel Exposures Exceeding 3.5r as of 2400 8 May 54 (Pers remaining at PPG) 9 May 54, CUO

(30) JF-8443, Subj: Consideration of High Exposures Personnel, 11 May 54

[redacted]

In addition, evacuation of all personnel having doses of 6r or more were recommended.

E. Delays

1. The schedule of detonations was revised in several instances from the original plan, because of experience gained in the first event. Every effort was made to detonate when high altitude winds were favorable, with surface conditions holding a lesser degree of importance. The result was that several events were delayed from four to twenty-six days beyond their date of readiness. The detonation [redacted] occurred in conditions of rain and low 10/10 cloud which largely eliminated surface observation. The following schedule sets forth delays:

Sequence	Device	Site	Ready	Fired
1.	[redacted]	Bikini	1 Mar	1 Mar
2.		Bikini	13 Mar	27 Mar
3.		Bikini	2 Apr	7 Apr
4.		Bikini	16 Apr	26 Apr
5.		Bikini	5 May	5 May
6.		Eniwetok	18 Apr	14 May

[redacted] was substituted for [redacted] was cancelled)

2. As the vagaries of high altitude weather, especially winds, became apparent and postponements and delays resulted, changes were made in operational methods. Postponements were announced as late as one hour before zero time; and readiness, [redacted] was maintained on an eight hour basis.(31) That is, the decision to detonate might be made as late as eight hours prior to shot time and a 12 and 18 hours capability was maintained.(32) These close limits imposed considerable strain on some units, but they did permit utilization of favorable weather on short notice. In consideration of forseeable delays, a conference was held(33) [redacted] to review the probabilities

(31) JF-8461, TWX to DMWT from Gilbert, 11 May 54
(32) Science 3456, TWX, to Bradbury from Curry, 12 May 54
(33) J-3/206 Daily Diary, also JF-7568, Subj: Rev of Weather Criteria to Reduce delays.

and effects on the [illegible] [redacted] Atoll. The following points were discussed:

a. Delay could be minimized by revising weather criteria, thereby accepting the possibility of a significant fall-out on Eniwetok;

b. Since Parry and Eniwetok Islands now had a population of approximately 4800, plus essential facilities, the logistical problem of an evacuation would be very great. Various alternates were discussed, but no conclusions were reached, other than that the shot should not be fired if predictions indicated any real risk of significant fall-out on Eniwetok.

F. Revised Estimates

1. Several reports compiled during this period reflected revised estimates of yields, in the light [redacted] and other post-shot data.

[redacted]

[redacted] was derived from pressure-distance time difference, and shangmeter data. Stop watch data were not considered reliable, fireball films and telephone system produced no usable results, and all available data did not support an estimate with the desired degree of accuracy. Preliminary reports, supplemented by later reports using later data and revised values, and generally concluding in estimates of yield greater than those originally derived, were made for the [redacted]

G. Accidents

1. During the CASTLE program one fatality within Task Group 7.1 occurred when Mr. Robert D. England, a civilian employee of the University of California, Los Alamos Scientific Laboratory, died as result of an accident while working with electronic equipment. In an effort to repair an oscilloscope in a trailer at Bikini Atoll on 17 Feb 54, he was accidentally subjected to a charge of electricity (110 V) which was instantly fatal. A complete investigation was made at the site by a board of officers and civilians (43) and findings were reported to CTG 7.1. (44)

2. It is of interest to note that insofar as is known, only seven other incidents of operational emergency nature occurred during the operation. In only one of these did injuries occur, and none directly affected operations or personnel of TG 7.1. These incidents are contained in reports of appropriate Task Groups and are in brief as follows:

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(34) JF-8305, Subj: A very Preliminary Report on the Results of [redacted] Shot, 14 May 54, SECRET RD

(35) JF-7758, Subj: [redacted] Yield, Summary of Present Data, 22 Apr 54, SECRET RD

(36) JF-7810, Subj: Preliminary Report of Results [redacted] 27 Apr 54, SECRET RD

(37) JF-8135, Subj: Revised Hydrodynamic Yield, [redacted] 1 May 54, SECRET RD

(38) JF-8136, Subj: Revised Hydrodynamic Yield, [redacted] 1 May 54, SECRET RD

(39) JF-8022, Subj: Preliminary Report of [redacted] Shot, 3 May 54, SECRET RD

(40) JF-7953, Subj: [redacted] Yield as of 26 Apr 54, 27 Apr 54 SECRET RD

(41) JF-8164, Subj: [redacted], Summary of Preliminary Data, 2 May 54 SECRET RD

(42) JF-8080, Subj: [redacted] Yield by analytical Solution 8 May 54, SECRET RD

(43) SO PPG-4, 19 Feb 54, Hq TG 7.1, Appointing Board of Inquiry.

(44) Hq. TG 7.1, APO 187 (HOM), Subj: Report of Investigation of Board of Officers and Civilians. 18 Feb 54

c. On 12 April a helicopter made an emergency landing on the reef at the west end of Parry Island, and burned, with total loss of aircraft and minor injury to passengers.

b. On 4 May an LCVP from USS LEO swamped in Eniwetok lagoon. After a search by boats and aircraft, its three personnel were found floating in the lagoon at about 2350 hours.

c. On 3 May an M boat took a DUKW and 13 persons to an Eniwetok Island for a security sweep. Later, the DUKW exhausted its fuel and the people were picked up by helicopter. The M boat had trouble with jammed ramp, and attempted to return to Eniwetok in reverse. After search by boats and aircraft, the M boat was found near Eniwetok at 2340.

d. At Bikini, one helicopter made an emergency landing, effected minor repairs, and resumed the flight.

e. One C-47 shuttle flight carrying passengers to Bikini had one engine fail shortly after takeoff from Eniwetok, returned and landed safely.

f. Approximately three hours after [redacted] two F-84 samplers were forced down and landed successfully on the Enirman strip at Bikini, which fortunately had less than the expected amount of contamination and debris. After minor repairs and clearing of the airstrip, they took off successfully two days later.

g. About two hours [redacted] two F-84s were forced to land on Eniwetok during extremely unfavorable weather. In heavy rain, visibility about one quarter mile and ceiling two hundred feet. Successful landings were made with minor damage to one aircraft.

[redacted]

[redacted] [illegible]

H. Logistics

1. The roll-up at Bikini was completed by 12 May, and equipment at Eniwetok was prepared for return to the ZI. Various plans were made (45)(46)(47)(4 to cover movement of property back to home stations. At a conference (49) it was determined that four cargo ships would stop at Eniwetok to load CASTLE material for the ZI. As individual projects concluded their work, J-4 coordinated and assisted in preparing their equipment for return shipment. (50)(51)(52)

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(45) JF-8036, Subj: TU-4 and TU-14 Material to be Returned to ZI on USS CURTISS, 29 Apr 54, SECRET RD

(46) JF-8349, Subj: Loading List of TU-4 and TU-14 for USS CURTISS, SECRET RD

(47) JF-7695, Subj: Roll-Up Requirements, Rongerik Atoll, CONF, 21 Apr 54

(48) JF-7989, Subj: Communication Equipment Roll-Up (describes desposition of radios on atolls and ships). OUO 29 Apr 54

(49) JF-8176, Memo for record, Transportation Conference at J-4 scheduled for four ships. 1 May 54

(50) JF-8086, Subj: Roll-Up of TU-9, 30 Apr 54, OUO

(51) JF-8355, Subj: Roll-Up of Office Equipment and Supplies, uncl, 8 May 54

(52) JF-8465, Subj: Return of Records to Los Alamos, OUO, 12 May 54

[redacted]

2. A major item of deactivation was the mothballing of the TU-2 cryogenics plant and associated equipment. Because of developments in the test program which removed the requirement for the activity, the plant was shut down, and the decision was made to condition it for storage "as is" rather than dismantle the equipment.(53)

III Administrative

A. General

Administrative work continued as usual with principal activity being in the Headquarters Commandants Office, where personnel were processed for the return to the Z.I. Through the month of May, planned movements from Eniwetok totalled(54) 564 via air and 10 via water. On 1 May a new list of people authorized to release TG 7.1 messages within the Eniwetok-Bikini areas was issued.(55) Most of the 7.1 filed record material was shipped from the PPG via SAM flight(56) on 16 May 54. These flights carried 25 TG 7.1 personnel and 19 boxes of office records from J-1, J-3, J-6, TU-4, and TU-7. The TG 7.1 mail room concluded its functions on 19 May 54.

B. Decorations and Awards

In order to give recognition to participants in the overseas test program who contributed in an outstanding manner to its success, recommendations for 266 awards and decorations were prepared and letters and certificates were distributed as listed below in accordance with a JTF/SEVEN directive:(57)

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(53) JF-7747, Subj: Mothballing of Equipment Now in Progress, CONF, 19 Apr 54

(54) JF-7899, and JF-7913, Subj: Planned Personnel Movement, 26 Apr 54 (Ref RCS 7-MD-E6)

(55) JF-8148, Subj: Release of TG 7.1 Messages within Eniwetok-Bikini Area, 1 May 54

(56) JF-8240, Subj: Return of Records to Los Alamos, 5 May 54 (CJO)(SAM N plns 2)

(57) TTP 7 SOP 20-1, 21 Sep 53, Personnel Decorations and Awards

[redacted]

DA Certificate of Appreciation	6
Legion of Merit	2
Air Medal	12
Commendation Ribbon	29
Letters of Commendation:	
Signed by Maj. Gen. Clarkson	26
Signed by Dr. Ogle	24
Letters of Appreciation:	
Signed by Maj. Gen. Clarkson	4
Signed by Dr. Ogle	116
Certificates of Achievement	59

C. Security

1. Activities during the latter part of the program consisted of the usual investigation of security violations,(58) completion of security examinations and certificates, providing authorizations to carry classified matter away from the PPG(59) and handling of a few cases of contraband.

2. Access lists for shot stations were prepared and presented to CTG 7.5 for action.(60)(61) In compliance with a JTF request(62) a roster of all TG 7.1 personnel participating overseas was prepared, showing organization and clearance status. This roster contains 1431 names.

3. It may be of interest to note the processing time for a group of 73 applications for Q Clearances. Of this group, 8 were withdrawn before completion, and 65 granted. One reinstatement was made in 17 days, two Q Emergency clearances were granted in 48 and 70 days respectively. 62 Q Clearances were granted in the following times:

Less than 30 days	1	120 to 149 days	6
30 to 59 days	23	150 to 179 days	2
60 to 89 days	16	182 days	1
90 to 119 days	12	225 days	1

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(58) JF-7942, Subj: Improper Security Discipline, 26 Apr 54, OUO, and others

(59) JF-7710, Subj: Authorization to Hand Carry Classified Material, 20 Apr, OUO Also JF-8376, and others

(60) JF-7495, Subj: Access List for Sta 10 (J-3/144 Daily Diary)

(61) [illegible]

(62) J-2/201.3, Subj: Roster of Q-cleared personnel, 12 Mar 54, CONF

[redacted]

D. Commander's Report

Instructions for preparation of the Commander's Report were issued on 21 April 54.(63) This report was designed to contain brief but complete reports of all CASTLE operations, arranged in the following manner;

Chapter I - Objectives, Devices, and Weapons
1.1 LASL (T Div and TU-4)
1.2 UCRL (Gibbons and Livermore)
Chapter 2 - Summary of Experimental Programs
Chapter 3 - General Activities of Task Group 7.1 (section 3.1 thru 3.18)
Chapter 4 - Summary of Task Unit Activities (sections 4.1 thru 4.12)

Because of its detailed coverage, the Commander's Report is an excellent source of historical material. It is recommended as a reference for scientific and operational information and important conclusions and recommendations which, to avoid duplication, have not been furnished in TG 7.1 Historical Report.

(63) JT-7711, Subj: Outline of the CASTLE Report of the Commander, Task Group 7.1, 21 Apr 54, SECRET RD