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NOTES ON "REPORT OF THE STUDY GROUP ON ORGANIZATION FOR FUTURE TEST OPERATIONS", 20 August 1959

This report about 260 pages long is classified SRD and a copy of it was sent to Los Alamos which was destroyed some time in the past and therefore I am taking the notes from the ALO copy for our records. The report was signed out on 20 August 1959 with a cover letter for the Secretary of Defense, the AEC Chairman, and the JCS Chairman from the study group who approved the conclusions and recommendations of the study who were the Commander of Joint Task Force 7 (Major Gen. Charles H. Anderson, U.S.A.F.) the Chief of <sup>DASA</sup>~~DACA~~ (Rear Admiral Edward N. Parker, U.S. Navy), and the Director of DMA (Starboard).

The enclosures to this study make up the background for conducting the study and also have some very interesting information of the deliberation and thinking in the AEC and DOD that have preceded this study and were very relevant to the moratorium situation through 1959.

A 7 March 1959 letter from the Deputy Secretary of Defense (Donald A. Quarles) to Mr. McCone, Chairman of the AEC notes that in reorganizing the Department of Defense and planning for a greater consolidation of atomic weapons activity in AFSWP the advisability of maintaining JTF7 on a permanent basis is becoming questionable in light of the current test moratorium. He states that "it seems probable that significant economies might accrue through transfer of the Task Force to the armed forces special weapons project under the new terms of reference. On the other hand, the possibility that future tests might have to be conducted on very short notice argues for the maintenance of the Joint Task Force on an active status."

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AFSWP

Quarles requests McCone to have the AEC join the DOD in studying the various ways for the military responsibilities in atomic testing to be properly and effectively related to the AEC responsibilities, to study the proper organization for future test conduct, and to look into the adequacy of the existing agreements between the AEC and the DOD pertaining to testing. In a letter dated April 9, 1959, Mr. McCone fully agreed with Mr. Quarles plans for such a study and designated General Starboard of DMA as the AEC representative to join in the group with the chief of AFSWP and the Commander of JTF7. In the letter McCone stated "the present test moratorium and the uncertainty as to the future of the international negotiations with respect to a test control agreement have created new problems that may require changes in our organizational plans for the ~~speedily~~ <sup>speedily</sup> and efficient mounting of an overseas test operation if authorized and necessary."

In the interim, Herbert Loper then Assistant to the Secretary of Defense (Atomic Energy) sent a memo to Major General Anderson, then with a certain AF organization and Rear Admiral Parker, chief of AFSWP on the subject of the organization of future test operations, dated 17 March 1959. He referred to Mr. Quarles proposal for a study of the test organization for future operations and reiterated the recommendations that the group would be asked to provide on the organization for future testing, arrangements that should exist for the DOD and AEC to support each others test requirements, and any modifications deemed appropriate as to the current agreements for maintaining the Pacific proving grounds or supporting and conducting tests. Further, he stated that without awaiting any further action to be directed from their recommendations they should proceed with agreeing on and implementing any functional or manning changes that are within their own authorities. Attached to Loper's

memo is a paper that apparently his office wrote entitled "Factors Bearing on the Organization and Planning of Future Weapons Tests" which essentially gives his views of what the study group can best provide in the way of recommendations and a brief view of the highlights and present status of the current testing probabilities and test organization relationships. Of interest, he states "the recently proposed consolidation of military responsibilities for testing in a single agency combined with the uncertainty as to the future of testing has suggested to the Joint Chiefs of Staff the feasibility of inactivating JTF7 and assigning its functions to the AFSWP." Furthermore, it is noted that there is a number of possible tests in areas and lists them in decreasing order of probability as follows:

1. Underground testing in Nevada.
2. Underground testing in Nevada plus high altitude tests from JI.
3. The same as (2) plus underwater and/or very high altitude shots at sea.
4. Same as (3) plus high altitude shots at Eniwetok.
5. Same as (4) plus low yield atmospheric shots in Nevada
6. Same as (5) plus atmospheric shots at Eniwetok limited as to numbers and total fission yield.

This paper feels that the present organization, ~~JTF7~~<sup>CE</sup> JTF7, is based more or less on business as usual which they feel to be No. 6 above which includes underground and atmospheric shots in Nevada, high altitude shots at Johnston Island and Eniwetok, underwater shots, very high altitude shots, plus atmospheric shots at Eniwetok. Further, he makes the remark that I don't understand that "since a number of factors point to the possibility of such a situation arising as early as mid-1960, the organization requirements

required for this contingency need careful examination." The situation referred to is apparently the simultaneous conduct of diagnostic tests at Eniwetok, high altitude weapons effects tests at Johnston Island, and very high altitude shots from the south pacific. Further interesting remarks are "it will be observed that regardless of conditions imposed upon future testing, AEC and DOD programs are likely to be less inter-dependent technically in the future than they have been in the past. Weapons effects programs will be directed primarily toward objectives which would require special effects shots. It is probable that AEC diagnostic shots will be set up on a "when ready" basis rather than an extended series, thus allowing limited time for coordination with weapons effects programs. Mutually supported activities will be quite as important in the future as in the past; however, the dove-tailing of technical programs should be far less complex."

In a 7 May 1959 memo for the JTF7 commander and the chief of AFSWP, Mr. Quarles directs that the study be done and that the group organize in any way that they see fit to accomplish their task. He refers to the past documentation just described above and in particular notes that the paper provided by Mr. Loper just described in the previous paragraph served as the initial guidance for the group. The findings are to be reported to the Secretary of Defense, the AEC Chairman, and the JCS Chairman for further consideration. He notes that the armed forces policy council will consider the findings prior to approval by the Secretary of Defense.

The group lists their assumptions as to the probability of resuming various types of testing and the degree of readiness warranted;

1. Contained underground testing: this form of testing has the greatest possibility of being permitted in the future; as for readiness it is

believed reasonable to make a limited amount of preparation for this type of testing so that it could proceed, if permitted, with minimal delay.

2. High altitude tests higher than 50 K which is the limitation of detectability of the Geneva experts system: this form has some probability of being permitted in the future, which is much less than the probability of contained underground testing and that it is more probable that it will be undertaken from JI than EPG; no extensive preparations for these tests are felt to be warranted due to the low probability but the possibility is sufficiently great that investigations and plans for this type of testing should be kept under continuous review.
3. Very small yield atmospheric tests at the NTS or elsewhere within the U.S.: such tests have very little probability of early resumption; any detailed planning or preparation is not warranted.
4. Atmospheric tests on or over the open sea or under water: this form of testing seems to have a slightly higher probability than atmospheric testing at EPG but still little chance of being undertaken due to the general opposition to atmospheric testing; sufficient planning and investigation is warranted for these types of tests as necessary to prove their feasibility and address the resources required to undertake them *but* should not be to the extent of making any substantial expenditure of funds or talent.
5. Atmospheric tests at EPG: Early resumption of this form of test even with limited yields has an extremely small probability although the probability of such tests in the very long-range future is hard to determine especially if there were a severe break-down in relations with the Soviet Union; it is believed that the EPG should be placed on

maintenance stand-by status and that expenditures should be limited on EPG to those funds necessary to prevent deterioration of essential facilities to the point where their replacement or repair could cause a long-term delay in getting tests underway. It would appear reasonable to assume that after receiving the authority to resume testing there would be a period of nine to twelve months before extensive firings would commence.

In the section entitled "Facts Bearing on the Problem," significant facts noted include "JTF7 under current JCS directives is responsible for directives for and conducting tests involving nuclear weapons and devices outside the continental U.S. When deployed in the EPG, CJTF7 has been jointly responsible to the DOD and AEC and in this capacity is responsible for the EPG and all related activities. During the period between tests, the EPG, except for the military support, is a responsibility of the AEC." Further, the Army has programmed for the development of J1 for launching missiles for the Nike Zeus test program with jurisdiction scheduled to pass from the Air Force to the Army on or around 1 January 1960. Also, it is stated that the EPG is the most suitable land mass outside the conus for conducting atmospheric tests. Finally, it is stated "guidance from higher authority indicates that the closing of EPG at this time, even if desirable, could have serious political and psychological consequences". Also, the heavy investments there as well as the possibility of important usage for various other agencies is noted.

The missions and detailed responsibilities of joint task force 7 during operation HARDTACK are detailed in Appendix B to enclosure F.

The 1959 agreement between the AEC and the DOD on costs and responsibilities

for the Pacific proving ground is included.

Under the section entitled "Discussion" four areas are defined as basic for the conduct of this study and they are: a) types of future tests envisioned, b) the organization best suited to retain DOD testing capability, c) the level of readiness to be maintained in the EPG, in terms of personnel, equipment and facilities, and d) the adequacy of AEC-DOD agreements pertaining to nuclear testing.

It is noted that for planning for future testing, the main tests under consideration at the present time are those concerned with TRUMPET and JERICHO at the NTS and WILLOW in EPG or JI and the open sea.

As for testing in various environments in the future, the working group created a sub-committee to study a "test when ready concept". They felt that the two most probable testing scenarios would be completely contained underground shots or out-of-the-atmosphere shots, missile launched from Johnston Island, with the former presently having an existing capability at the NTS. Based on this, the sub-committee's efforts were directed toward a shoot when ready concept for out of the atmosphere shots. For this particular concept they stated the following: "This concept is defined as a method of conducting nuclear tests as a requirement develops, limited only by the time period to prepare for <sup>the</sup> ~~this~~ scientific and technical requirements of the experiment. During the time frame considered (an eighteen month lead time as required for operation WILLOW), the Army will have completely reactivated Johnston Island for its Nike Zeus test program. Arrangements can be made with the Army to support nuclear tests launched from Johnston Island, using the same people who would already be there for support

for the Nike Zeus program. The only remaining requirement for a complete shoot when ready capability would be for a test director and staff (exclusive of forces from the services). Few if any task force personnel would have to remain at Johnston Island full time. Rather, as a test program, the test director and his staff, together with the forces required, would deploy to Johnston Island and be supported by the existing base complement under the terms of previous agreements and proceed to conduct the tests. Any action to implement this concept for testing should be made on a decision to resume testing, but consideration should be given at this time to prevent entering into any agreements or obligations at Johnston Island which may later preclude this concept from being implemented. "

Under a discussion of the organization for future testing the responsibilities of the DOD versus the AEC are discussed and it is noted that where the AEC conducts proof tests of weapons designs they also have been responsible generally with determining the diagnostic information for the general tests. It is further stated that where initially the AEC undertook substantial effort to determine effects information in various environments, with time the responsibility for effects determination had been taken over in large part by the DOD. In relation to the new DOD responsibilities given to ~~DASA~~ it is stated that "~~DASA~~ under its new charter, has the responsibility for supervising DOD atomic weapons test activities and for assisting in operational evaluation tests of atomic weapons systems involving nuclear detonations and coordinating other DOD programs for investigation of atomic weapons effects. In supervising the conduct of full scale DOD weapons effects tests, ~~DASA~~" has a variety of responsibilities that are enumerated here.

The study committee in trying to determine what type of organization and what lines of command or control best served the interests of both AEC and DOD

considered three possible solutions to the problem. Proposal A was a solution in which JTF7 would become a subordinate command of DASA. Thus during non-test periods, the Task Force would revert to the control of DASA and liaison would be maintained with the AEC through the DMA. Proposal B is a second approach in which JTF7 would be assigned to DASA for administrative support only but would be responsible to both the DOD and the AEC at all times as in testing situations. Proposal C is a third approach which would visualize disestablishing JTF7 and placing its functions in existing government agencies. Under this third plan, only a test planning board composed members of field command/DASA and ALOO would be retained. The study group considered the three alternatives and, considering the fact that the AEC requires joint control only after the decision has been made to resume testing, concluded that the proposal A would be the most efficient and acceptable organization.

As for manning decisions, it was recognized that ~~J~~TG7.1 presently located at Los Alamos, would not be required during the interim period and therefore it was disestablished with the military personnel returned to their respective services and the action to be completed by 31 August 1959. Furthermore, headquarters JTF7 and Task Group 7.2 (at the EPG) were reviewed and 7.2 is reduced from 559 to 393 and headquarters were reduced <sup>to</sup> 56 personnel as of 14 July 1959. As the study progressed and the possible manning figures under the three proposals were clarified, it became clear that there would be less manpower actually required under Proposal C than under Proposals A and B which would have approximately the same requirements. It was finally determined that "in order to maintain readiness capabilities under the assumptions provided and to perform the functions set forth in the charter for Proposals A and B, it is estimated

that the following personnel will be required: headquarters JTF7: 77; task group 7.2: 32; task group 7.3: 90; task group 7.4: .7; for a grand total of 206 personnel." These figures represent a 79% reduction in the number of currently authorized spaces. Furthermore, the DOD NTS support unit would be augmented by about 25 people from field command DASA. To facilitate obtaining any future military support required from the services, it was determined that two permanent task groups, 7.2 and 7.4, should be established similarly to task group 7.3, as recommended by CJTF7 in his 29 November 1958 letter.

As for the future status of the proving grounds, the study group determined that the NTS was in the process of roll-up and since the AEC has the responsibility for operating the NTS, no reason was foreseen to change this arrangement, withhold scheduled construction, or curtail military roll-up operations. A sub-committee formed to investigate the feasibility of phasing down the resources in the EPG to a maintenance stand-by status came to the following major conclusions and recommendations which were submitted to the Assistant to the Secretary of Defense (Atomic Energy) and the AEC general manager:

1. Consolidation of base camp facilities on Eniwetok Island.
2. Consolidation of AEC and DOD depots.
3. Moth balling facilities and equipment on PARRY Island.
4. Re-computation of heavy construction requirements, scientific stations, and associated equipment maintained in a moth ball status.
5. Boat Pool be reduced in size and the remainder stored in Pearl Harbor or otherwise disposed of.
6. Locally based aircraft be returned.

7. Airdome at Eniwetok must remain operational and provide for twice weekly MATS flights.
8. AEC contractor should assume the entire communications responsibility in EPG.
9. No further construction in EPG should be undertaken except for minor mods on Eniwetok in consolidating the base camp facilities.
10. Subject to recomputation, a total strength of 495 personnel (69 of which would be DOD) will be adequate to conduct maintenance standby-by operations.
11. An apportionment of operating costs between AEC and DOD which will reflect a transfer of functions and division of cost support activities is appropriate.

In addition to the two proving grounds the status of Johnston Island was considered and it was noted that control <sup>Would have</sup> ~~had~~ <sup>to</sup> passed ~~from~~ the Army <sup>from</sup> ~~to~~ the Air Force for the Nike Zeus program at the beginning of 1960. Furthermore, "the chief DASA has been requested to coordinate any DOD test requirements with the services and any other interested government agencies. In the event it is necessary to conduct high altitude tests as proposed in WILLOW, Johnston Island would be the logical launching sight for any high altitude nuclear tests."

The study group looked at existing DOD and AEC agreements and considered only three as presently effective: the AEC/DOD agreement on costs and responsibility for the pacific proving grounds, the amendment number 1 to that agreement, and a paper containing the mission of JTF7. As for specific changes to these agreements they would be dependent upon which portions of this overall study were approved and implemented in whatever detail.

Appendix A to the enclosure that discusses the overall report is a report by the sub-committee which looked at the organization for future test operation based on a test when ready concept. The test when ready concept probably deserves some discussion. The sub-committee and the working group as a whole concluded that the two most likely modes of testing and those considered by this study would be underground and high altitude or very high altitude tests and more or less disregarded other types of testing as too unlikely to consider. Furthermore, in feeling that the NTS facilities and programs and planning for underground testing more or less took care of that concept for future planning, this sub-committee looked only at the high altitude test requirements. Feeling that the extensive preparations and large amounts of money that would be required for rocket-borne testing and diagnosing and measuring effects from such tests would lower the number of tests that would be done by this method, the committee concluded that we would not test in a continuous manner or in a manner where there would be a series with a number of tests as in previous series but rather would have a "test when ready concept". It is stated that this would provide a "flexible method of operation, independent of time, scope, or place, in which the AEC or DOD would test separately or jointly as the requirement would dictate." The committee suggests that the traditional method of testing on a "series operation" basis has become obsolete and uneconomical if surface or atmospheric tests are outlawed. Briefly, the committee's recommendations were that the test when ready concept be adopted as the best solution to maintaining a future test capability in light of current estimates of probabilities, that the nucleus of a test supported organization be established on a permanent basis, that Johnston Island be specifically designated and prepared as a ready test ~~site~~<sup>site</sup> and that the first mission of

the test support organization would be to determine in a coordinated effort between AEC and DOD, the minimum requirements for the preparation of JI as a ready ~~sight~~ site .

Copies of the charters of the AEC, DASA, and DASA field command are included here for information.

Details of the three proposals for the change in the JTF7 structure during the moratorium are contained herein with charts of relationships between the AEC and DOD and the JTF7 organization, numbers of enlisted and officer personnel that would be assigned to which organization, etc. Under Proposal A the command structure would contain a headquarters, JTF7, with three task groups 7.2, 7.3 and 7.4 representing the Army, Navy and Air Force assigned permanently and any other task groups such as the AEC 7.5 task group assigned as necessary for planning.

A 29 November 1958 letter from Gen. Ludecke, Commander of JTF7 to the AEC and AFSWP gives Ludecke's personal feeling about what the status and activities and organization of JTF7 should be during the moratorium.

On 7 July 1959, the study group under separate cover letter forwarded a "report on future status and utilization of Eniwetok proving ground" to the Assistant to the Secretary of Defense (Atomic Energy) and the General Manager of the AEC. The remainder of the report, about 165 pages long, contains this sub-committee's report on Eniwetok. This concludes the notes on this study group's report on future test operations organization.