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AEC 787/10

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January 10, 1956

COPY NO. 1

ATOMIC ENERGY COMMISSION

PACIFIC PROVING GROUND TEST ACTIVITIES  
FOR CALENDAR YEAR 1956

Note by the Secretary

The General Manager has requested that the attached report by the Director of Military Application be circulated for consideration by the Commission during the week of January 9, 1956.

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FOLDER MR3A7 Redwing Vol 1 Secretary

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By authority of U. S. Atomic Energy  
Commission  
Per Gen. A. H. Starbuck Date 1/10/56  
Document No. LXI-3584-1A~~

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ATOMIC ENERGY COMMISSION

PACIFIC PROVING GROUND TEST ACTIVITIES FOR  
CALENDAR YEAR 1956

Report to the General Manager by the  
Director of Military Application

THE PROBLEM

1. To consider the specific program for Operation REDWING.

BACKGROUND AND DISCUSSION

2. At Meeting 1135 on October 5, 1955, the Commission considered the general scope of a series of atomic tests at the Pacific Proving Ground during the calendar year 1956, commencing about May 1 and designated Operation REDWING. The Commission approved conducting the proposed test series of a scope substantially as outlined in Appendix "E" of AEC 787/3 and noted that a specific program for the test series in final form would be submitted to the Commission for consideration during the latter part of calendar year 1955.

3. By memorandum dated November 21, 1955 (AEC 787/7), the Military Liaison Committee transmitted to the AEC their favorable comments on the program for Operation REDWING and assured AEC of the full support of the Department of Defense for this operation.

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4. The specific test program is given in Appendix "A" of this paper. It should be noted that this program is as firm as can be expected this far in advance of the test series. Minor changes affecting the ready dates or other lesser details can be expected prior to and during the actual test operation. The Commission will be kept informed if changes occur.

5. It should be noted that the test program provides for two shots on a contingent basis.

[REDACTED]

DOE  
6.1 (a)

6. Two new shots are proposed for addition to the program previously approved by the Commission by action on AEC 787/3 and are submitted for Commission approval.

[REDACTED]

DOE  
6.1 (a)

[REDACTED]

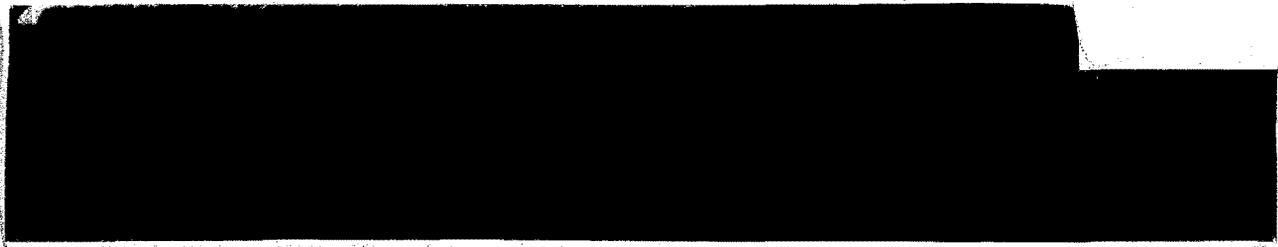
DOE  
6.1 (a)

[REDACTED]

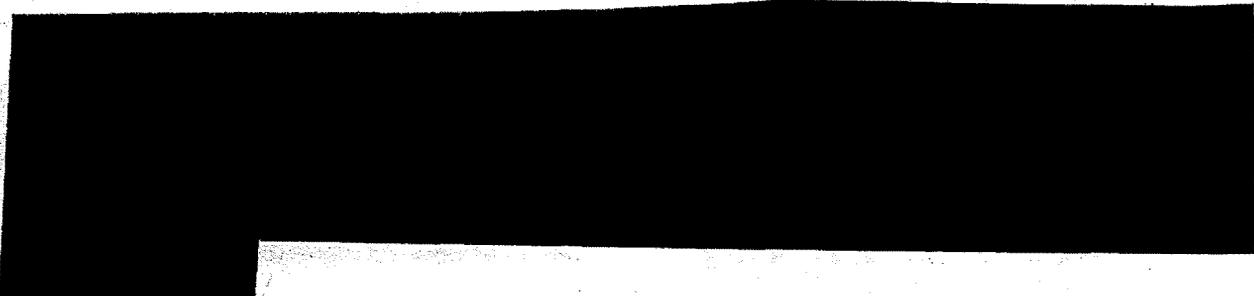
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6.1 (a)

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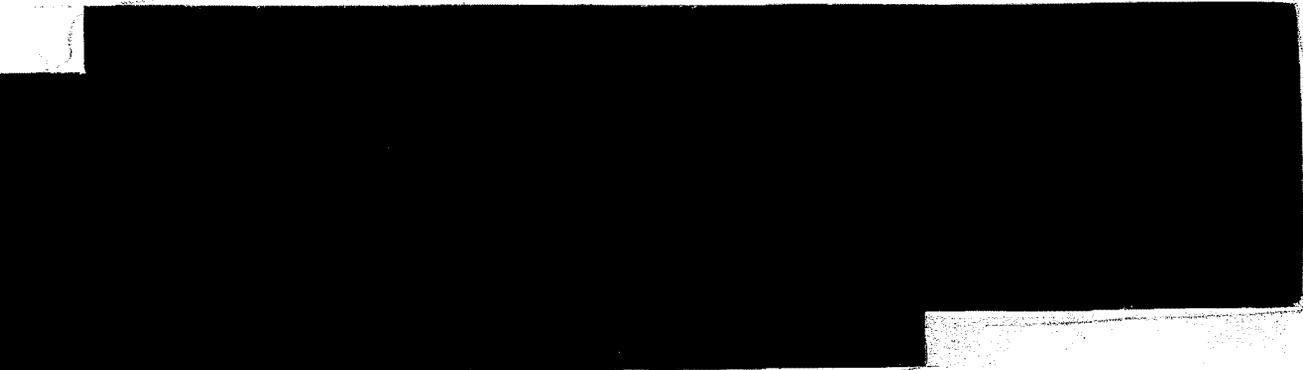
DOE  
6.16



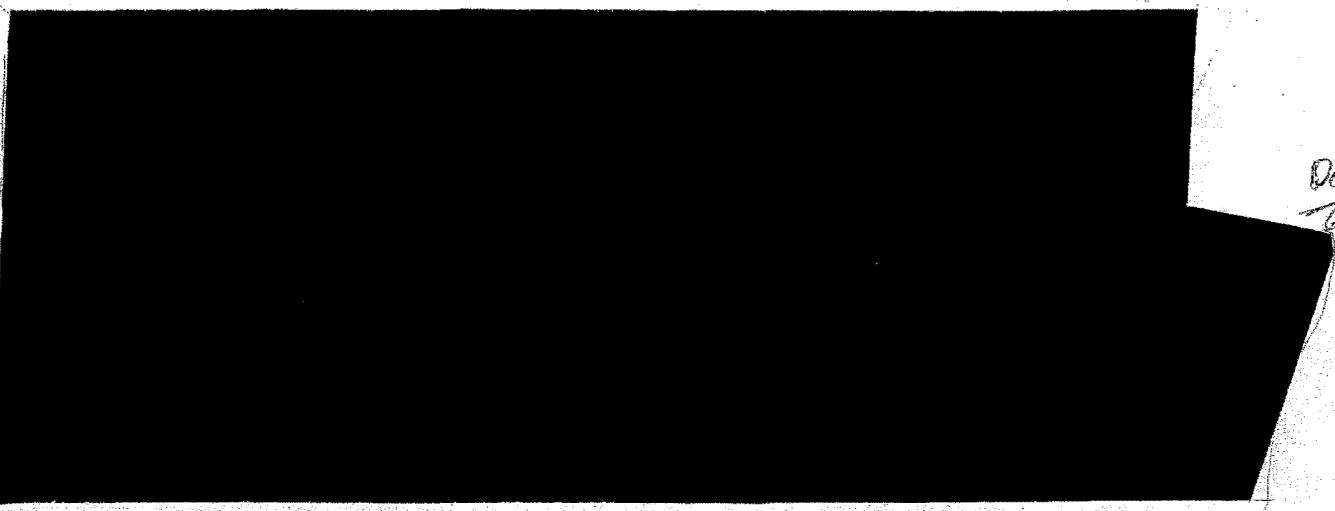
DOE  
6.16



DOE  
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DOE  
6.16



DOE  
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[REDACTED]

DOE  
6.1(9)

14. Appendix "B" gives the estimated amounts of nuclear materials which are required to be expended in Operation REDWING for a test program as listed in Appendix "A". All estimates are based on the maximum amounts required.

[REDACTED]

DOE  
6.1(9)

An allowance of 10 percent for unexpected contingencies has been included in computing the total requirements.

STAFF JUDGMENTS

15. The Divisions of Classification and of Biology and Medicine, and the Office of the General Counsel concur in the recommendation of this paper.

CONCLUSIONS

16. It is concluded that:
- a. The test program for Operation REDWING should be that given in Appendix "A".
  - b. The expenditure of nuclear materials up to the amounts given in Appendix "B" is required to carry out the proposed test program.

RECOMMENDATION

17. The General Manager recommends that the Atomic Energy Commission:
- a. Approve the specific test program for Operation REDWING as given in Appendix "A".

b. Approve the expenditure of nuclear materials up to the amounts listed in Appendix "B".

c. Note that the support of the Department of Defense will be requested for the expanded REDWING program by letter such as that in Appendix "C". (Informally DOD officials have indicated agreement and that formal answer can be given immediately.)

d. Note that after receipt of DOD comments, Presidential authorization for expenditure of the nuclear materials required for the tests will be requested by letter such as that in Appendix "D".

e. Note that the Secretary of State will be advised by letter such as that in Appendix "E" of the AEC request for Presidential authorization to expend the required special nuclear materials.

f. Note that subsequent to receipt of the Presidential authorization referred to in d above, the Joint Committee on Atomic Energy will be advised by appropriate letter of the specific REDWING program.

LIST OF ENCLOSURES

|  | <u>PAGE NO.</u> |
|--|-----------------|
| APPENDIX "A" - REDWING Test Program. . . . .                               | 6 - 7           |
| APPENDIX "B" - Estimates of Nuclear Materials to be Shot Expended. . . . . | 8               |
| APPENDIX "C" - Draft Letter to the Chairman, MLC . . . . .                 | 9               |
| APPENDIX "D" - Draft Letter to the President . . . . .                     | 10 - 11         |
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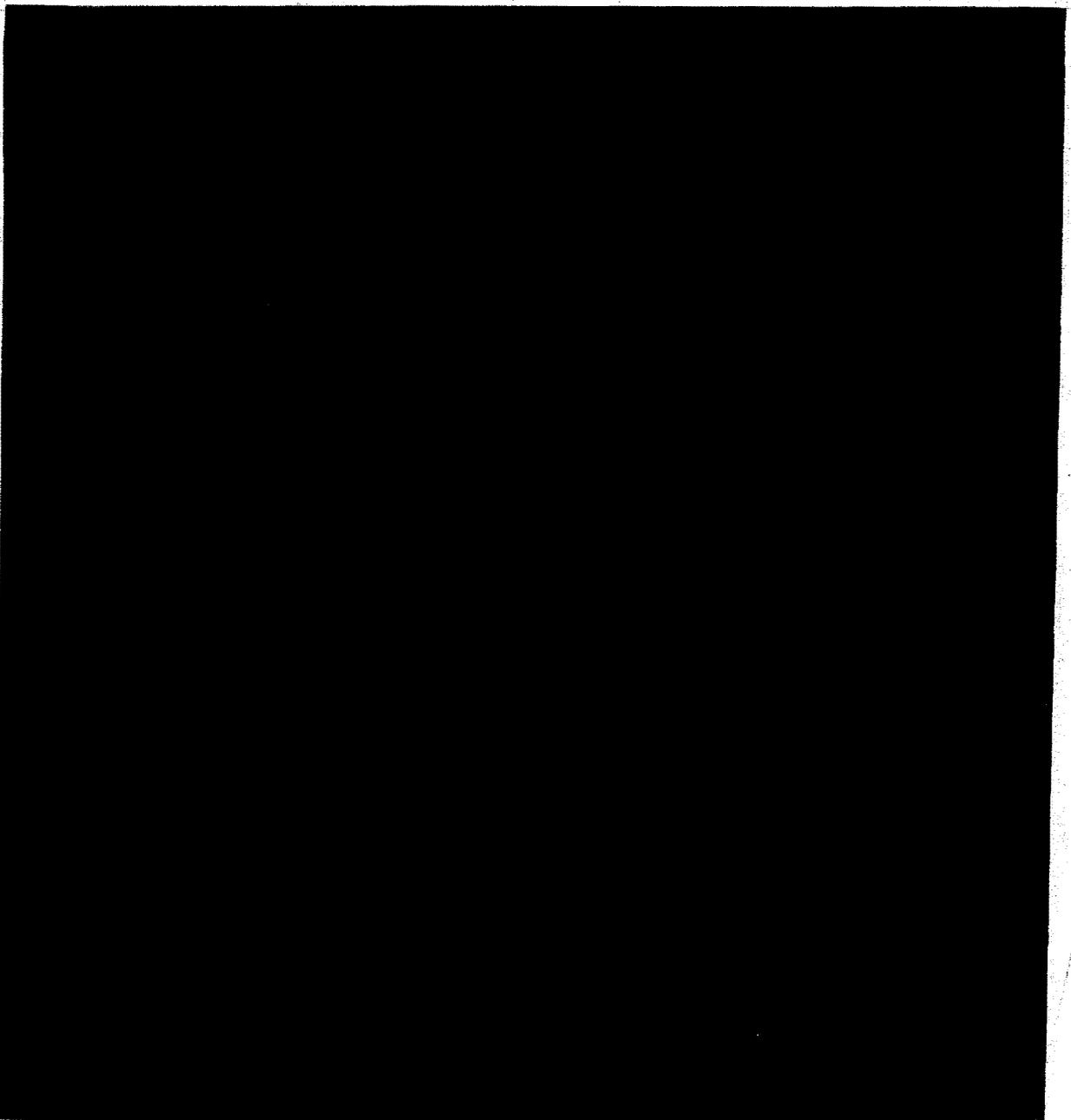
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APPENDIX "A"

REDWING TEST PROGRAM

1. The following fifteen shots are definitely in the test program; the description of the devices and the purpose of each test is given in AEC 787/3 on the page indicated.



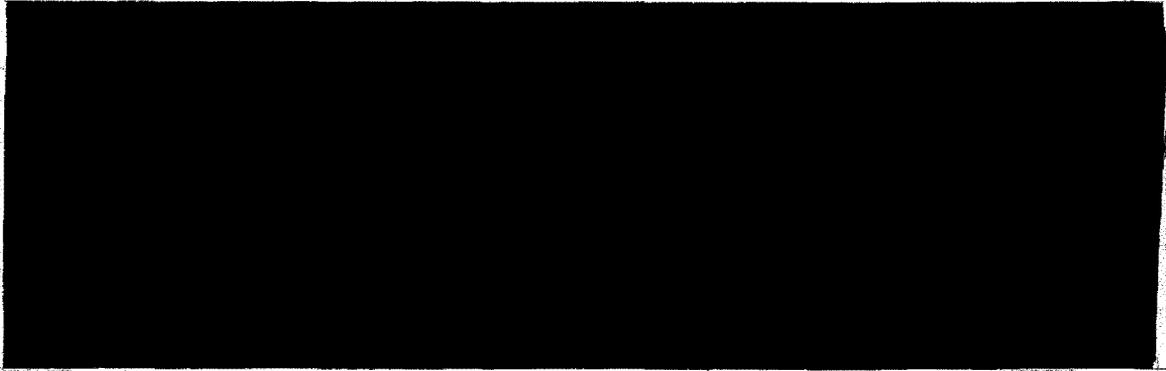
2. The following two shots are included in the test program on a contingent basis:

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Appendix "A"

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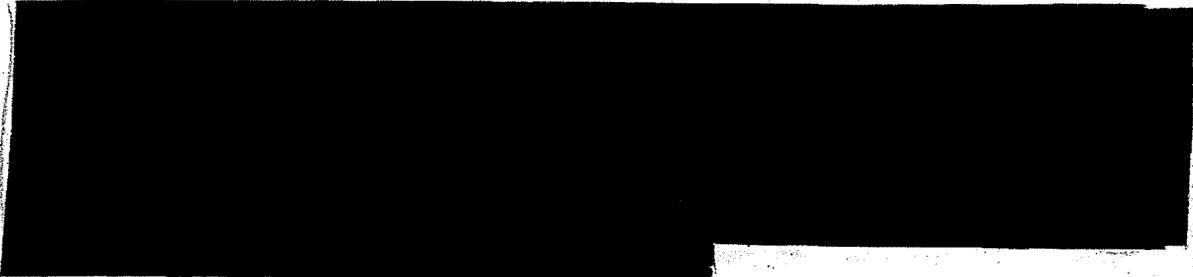
DOE  
6/10

3. The following two shots are in addition to those previously approved by the Commission in AEC 787/3:

Device

Lab

Yield



DOE  
6/10

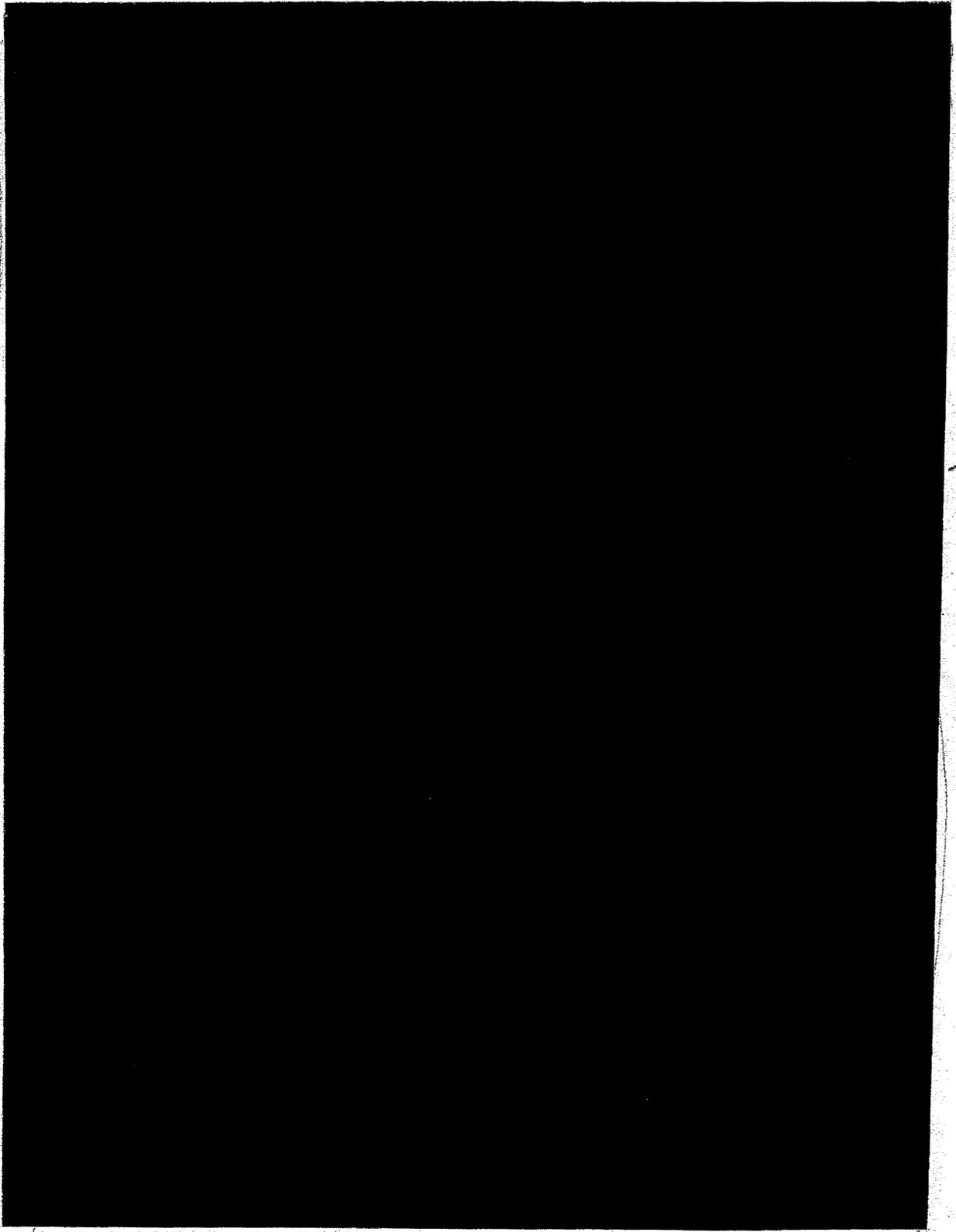
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APPENDIX "B"

ESTIMATES OF SPECIAL NUCLEAR MATERIALS TO BE SHOT EXPENDED



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6.1(07)

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APPENDIX "C"

DRAFT LETTER TO THE CHAIRMAN, MLC

1. I refer to our letter of October 17, 1955, informing you of the proposed Operation REDWING and requesting your comments and support, and to your reply of November 21 which assured us of the full support of the Department of Defense for this test series.

2. Further developments at the laboratories require that additional shots be included in the test program. The Commission has approved a test program which, besides the shots contained in Revision No. 6 dated December 7, 1955, to CTF 7.1 General Concept No. 1-55, J3-51, includes the test of two additional devices.

[REDACTED]

DOE  
6.1 (a)

[REDACTED]

DOE  
6.1 b

[REDACTED]

DOE  
6.1

5. We request your concurrence in the support of this expanded REDWING program.

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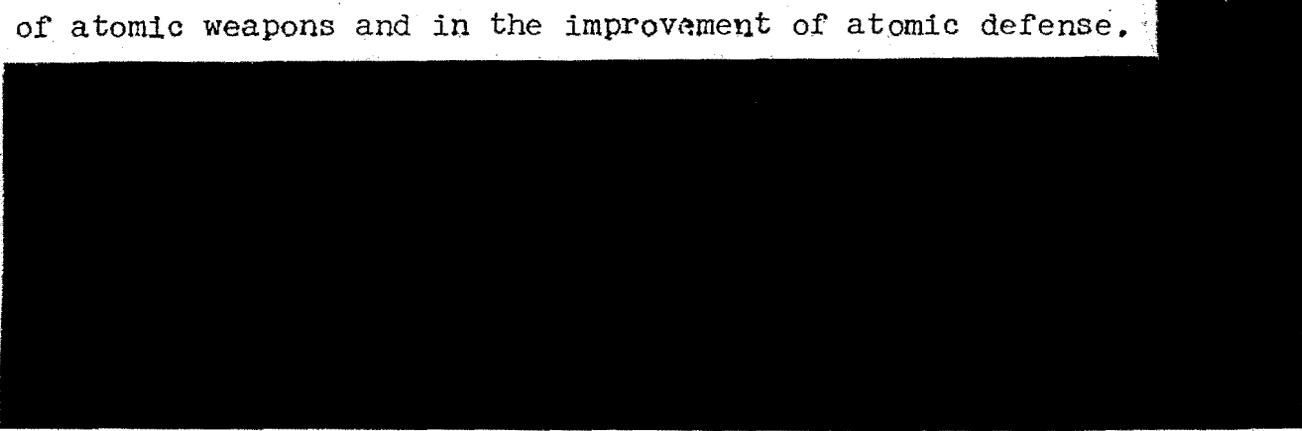
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APPENDIX "D"

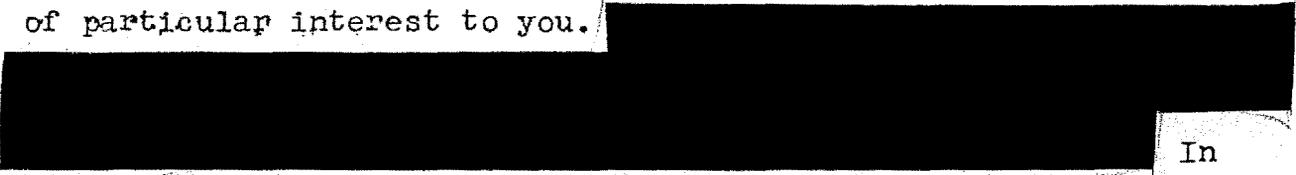
DRAFT LETTER TO THE PRESIDENT

1. The purpose of this letter is to obtain authority to expend the nuclear materials required for execution of the atomic test program planned for the late Spring of 1956 at the Pacific Proving Ground. The operation, which has been assigned the code name REDWING, is presently scheduled to begin May 1, 1956. Current plans show a need for 17 shots, and there is a possibility that one or two additional shots will be required to carry out the objectives of the program.

2. The test series is designed to achieve four objectives vital to our continued progress in the research and development of atomic weapons and in the improvement of atomic defense.



3. Certain aspects of this test series, we believe, will be of particular interest to you.



In addition, Operation REDWING incorporates development tests of devices to be adapted as strategic and tactical weapons, and includes tests designed to continue the research and development of small designs suitable for use in air-to-air and surface-to-air missiles. These latter, of course, have application to the air defense problem.



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*DOE  
6/1(a)*

*DOE  
6/1(a)*

*DOE  
6/1(a)*

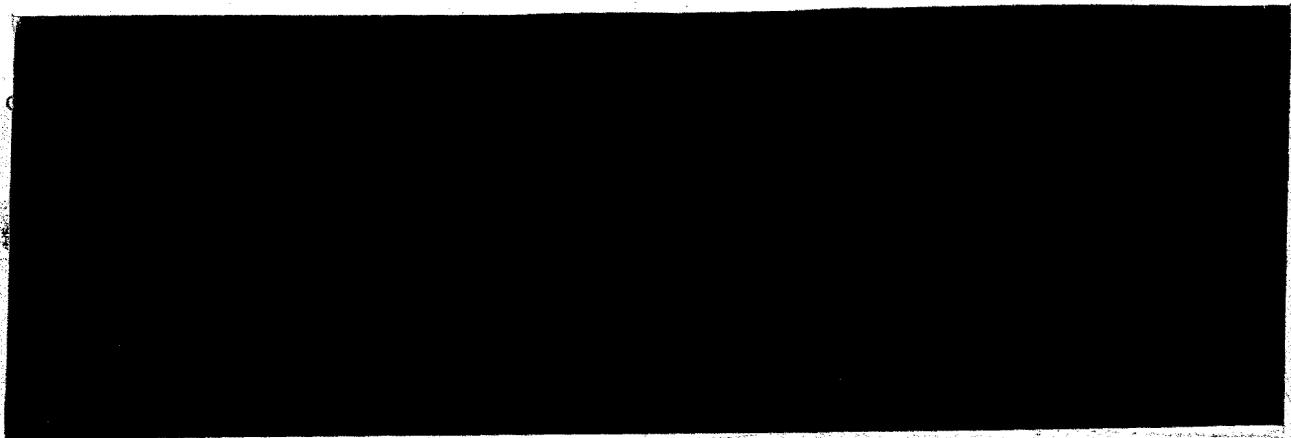
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called "clean" design for thermonuclear weapons whereby the major portion of the weapon yield will result from fusion rather than from fission, and a reduction in contamination is achieved.

4. With reference to the problems of radioactive contamination and fallout several points are worth noting. The danger area about the Pacific Proving Ground was temporarily enlarged during Operation CASTLE; it is intended that this larger area or a similar one will be used on Operation REDWING from the outset. Even though the number of shots for REDWING is much greater than that for CASTLE (approximately seventeen as against six), the total cumulative yield expected on REDWING from all shots is approximately half the cumulative yield obtained at CASTLE. When one considers the total cumulative fission yield from all shots, the balance is even more favorable for REDWING, that expected on REDWING being approximately one-third that obtained at CASTLE.

5. A public information plan will be prepared to cover all foreseeable contingencies. This plan will be coordinated with other interested government agencies and upon concurrence and approval will be implemented at the appropriate time.



7. Authority is requested to expend the above materials in the conduct of Operation REDWING.

APPROVED

Dwight D. Eisenhower

- 11 -

Appendix "D"

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APPENDIX "E"

DRAFT LETTER TO THE SECRETARY OF STATE

Our letter of October 25, 1955, advised you of our intention to seek Presidential approval for Operation REDWING, the series of atomic tests to be conducted at the Pacific Proving Ground, commencing about May 1, 1955. As you know, the President has recently authorized the announcement of these tests. In the near future, therefore, we intend to request Presidential authority to expend the required nuclear materials.

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