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OPERATION PLUMBBOB CIVIL EFFECTS TEST GROUP PROJECT SUMMARIES

1957

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CIVIL EFFECTS TEST GROUP
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May 29, 1957

TO : Chief, AFSWP, Department of Defense
FROM : Robert L. Conable, Director, Civil Effects Test Group
SUBJECT : OPERATION PLUMBBOB, CIVIL EFFECTS TEST GROUP, PROJECT SUMMARIES
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As a supplement to the early information on the organization and program content of the Civil Effects Tests in Operation Plumbbob which was distributed in March, the enclosed is transmitted for your information and retention.

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OPERATION PLUMBBOB

CIVIL EFFECTS TEST GROUP PROJECT SUMMARIES

Compiled by

ROBERT L. CORSBIE, Director
Civil Effects Test Group

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FOREWORD

The projects in the Civil Effects Test Group for Operation Plumbbob originate primarily in the Atomic Energy Commission and the Federal Civil Defense Administration. Project participation also includes other government agencies, private industrial groups, and two foreign nations. The content of the Civil Effects Tests in Operation Plumbbob has been governed by (1) work begun on previous operations, (2) advances in weaponry, (3) the increased use of nuclear energy, and (4) the establishment of a long-range program of objectives. All projects have been screened and endorsed by the appropriate Structural and/or Biomedical Test Screening Committees, coordinated with the Department of Defense Military Effects Tests, and reviewed by the Test Director for feasibility of execution and noninterference with the weapons-development program.

The scientific and technical programs comprise many kinds of studies and investigations relating to continuing efforts to establish reliable criteria essential to improving the probability of survival and continuity of production in wartime and to safeguarding our health in peacetime applications of atomic energy. The investigations can be divided into six categories: (1) fallout radiation, (2) prompt-gamma and prompt-neutron radiation, (3) blast effects on structures, (4) blast biology, (5) radiological countermeasures and training, and (6) instrumentation and support.

The interim reports, together with the final weapons test reports, will contribute significantly to the knowledge necessary for the improvement of our self-defense against enemy action in the event of war and the establishment of proper safeguards in peacetime applications of nuclear energy. This, however, is not enough. In addition, it is the objective and the policy of the Civil Effects Test Group to make the results of these tests available to the public by the prompt issuance of unclassified reports insofar as is consistent with national security. This will permit immediate practical application of knowledge gained and guidance in continuing research in national self-protection against all parameters of nuclear effects.

Robert L. Corsbie
Director
Civil Effects Test Group

May 1957

This Project Cancelled EEP

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5.70

Project 32.3

SYSTEMS OPERATIONS EXERCISE AND EVALUATION

Project Officer: W. E. Strobe
Sponsor: DBM
Performing Agency: NRDL

The objectives of this project are to evaluate some operational characteristics of a radiological shelter and to determine values for some countermeasures-system parameters.

The first phase of the field operation will consist in measurements taken by project personnel housed in a high-performance radiological shelter during the event. The shelter will be located on the predicted hot line downwind from zero at about the 3-psi line. These personnel will test several methods for determining the radiological situation outside the shelter and will take any measurements necessary for an evaluation of shelter performance.

The second phase of the operation consists in a determination of precise intensities around the shelter and the location of a suitable area for reclamation, evaluation of small-area reclamation procedures, actual reclamation of a staging area, determination of the effect of mounding earth in the buffer zone, the minimum distance to which contaminated earth must be moved, the actual residual number for the staging area and the equipment shielding residual numbers, and the recording of personnel contamination due to aerosol kick-up.

Results from this experiment will be compared with similar data to be obtained from a laboratory scale test with synthesized material. These data will make it possible to evaluate the practical application of the proposed countermeasures system.

Participation is scheduled for three shots.