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UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D. C.

April 4, 1956

MEMORANDUM

TO : K. E. Fields, General Manager

THRU : Harry S. Traynor, Assistant General Manager

FROM : Morse Salisbury, Director
Division of Information Services

SUBJECT: UNCLASSIFIED DOCUMENTARY MOTION PICTURE ON WEAPONS TEST

SYMBOL : ISP:ELW

In accordance with Commission action on AEC 787/12 at meeting of January 25, 1956, Recommendation 8g (Appendix B, Letter to Assistant Administrator, Planning Staff, Federal Civil Defense Administration) was forwarded to FCDA by the Chief, Civil Defense Liaison Branch, DBM, on January 27.

In addition to formal notification of AEC's agreement to the FCDA plan for AEC-sponsored and financed basic photography and FCDA-sponsored and financed completed-motion-picture-work, the letter requested FCDA to supply the AEC with detailed information on footage subject matter.

Supplementing and confirming the informal discussions that subsequently have been held between FCDA, AEC and the Lookout Mountain Laboratory of the USAF, a letter, dated March 29, 1956, from Ralph E. Spear, Assistant Administrator, Planning Staff, FCDA, to the Chief, CD Liaison Branch, AEC, supplies the requested information.

A copy of that letter is attached for your information. It is also being transmitted for guidance to Lookout Mountain Laboratory and Joint Task Force SEVEN.

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FEDERAL CIVIL DEFENSE ADMINISTRATION
National Office
BATTLE CREEK, MICHIGAN

March 29, 1956

Mr. Robert L. Corsbie, Chief
Civil Defense Liaison Branch
Division of Biology and Medicine
Atomic Energy Commission
16th & Constitution Avenue
Washington 25, D. C.

Dear Bob:

This is in reference to my letter to you of January 3,* 1956, and your reply dated January 27, 1956,** on the plans of the Federal Civil Defense Administration for motion picture treatment of thermonuclear weapons.

As you know from our discussions, we do not have in mind a film on any one particular test. What we want very much to do is a job of "balanced reporting" on the hydrogen bomb, showing the destructive powers of multimegaton weapons factually and vividly, and at the same time indicating the passive defenses which can be taken against them.

We do not want to show the H-bomb as the ultimate in destructive force for fear of deepening the very apathy we are trying to eradicate. Thermonuclear weapons should be made to appear, on the contrary, as a serious threat, but a manageable one.

From this you will conclude that an FCDA picture on REDWING is not proposed. In fact, the final product will undoubtedly use footage from IVY and CASTLE and perhaps from GREENHOUSE.

In our original request for footage from REDWING, FCDA's special, but not exclusive, interest in SHOT CHEROKEE was mentioned. To emphasize the deliverability of multimegaton weapons, footage should show activities related to loading, takeoff, delivery, and escape of the drop aircraft, to the extent that such footage would be subject to declassification.

The objective is to produce a motion picture that will demonstrate visually the effects of thermonuclear weapons, relating these effects to the problem of Civil Defense.

It is assumed that automatic camera coverage of various effects will be obtained for technical purposes, and that some amount of this footage will be available for unclassified release.

In addition, there are specific activities and events that may lend themselves to routine or special coverage, and which would be useful for a Civil Defense film. These include:

*Circulated as Appendix "A" to AEC 787/12.
**On file in the Office of the Secretary.

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(a) Shots of detonations from various angles. From the point of visual impact, magnitude of detonation as seen on the screen is a function of camera distance as well as shot yield. Therefore a great need is for detonation shots that provide a proper frame of reference. For example, if a multimegaton shot at Bikini could be photographed from Eniwetok and the distance given in general terms, i.e., "180 miles," the motion picture would give a much better idea of order of magnitude. Civil Defense could then relate the distance to well known distances between cities. A human figure, and perhaps palms, in the foreground of such a shot would lend further meaning. For shots closer to the point of burst, a ship of recognizable size in the foreground would have a similar effect. In general, relating the shot to known distances would allow super-imposition of animated effects later in order to obtain maximum understanding of the scope of effects. Similarly, relating automatic camera coverage to known distances would be of great value. The declassification difficulties inherent in such a proposal are recognized, and it should be made clear that FCDA does not require a high order of precision in distance relationships. Order of magnitude figures generally are adequate for Civil Defense purposes.

(b) Effects of blast and thermal radiation. These are difficult to picture adequately under circumstances of an Eniwetok Test Site Operation. However, the following suggestions may be helpful. On the advice of the Test Director's organization, it may be possible to select positions and structures where effects will be visible. Before and after shots may be planned for such positions. Such shots would be more useful if related to distances. As an example, damage to installations on various islands from CASTLE BRAVO would have provided good before and after pictures to demonstrate the effects of blast. It would also be of considerable value if pictorial differentiation between shock and drag targets were possible. Such pictures may possibly be obtained in cooperation with military effects programs. Similarly, any picturization of duration of thermal radiation would be of major assistance in illustrating propagation of this effect by large weapons, although it is difficult to imagine how such pictures could be taken except through the use of automatic cameras.

(c) Effects of fallout. It is assumed that fallout collecting devices will be used in substantial quantity and that before and after pictures of the devices will be available. Picturization of macroscopic fallout particles could be used in a way that would not be misleading. Pictures illustrating prediction techniques, with predicted patterns related to actual patterns would be of great value. In addition, FCDA wishes to stress the need for radiological defense monitoring. Pictures emphasizing that fallout measurements must be made, both by automatic recording stations and monitor personnel in aircraft and surface vessels, would be of use. Coverage of personnel protection activities would pose no particular problems. Ease of decontamination should be stressed, where decontamination

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poses no special problems; i.e., personnel decon procedures, ship decon procedures, aircraft decon procedures, etc. If there is occasion to decontaminate ground vehicles, even though of a military nature, this would be of particular value. It is assumed that full coverage of Task Force Safety measures will be made routinely, and this coverage will also be of use to FCDA.

(d) Water safety. In the event that potable water supplies are left on islands at the predicted perimeters of effects, such supplies probably would be monitored and the water pronounced safe for use -- if such were the case. Picturization would provide a useful Civil Defense illustration. Similarly, recreational fishing commonly has taken place after shots. This, too, would provide useful picture material for Civil Defense.

(e) Proximity of personnel to bursts. Manned stations would be of particular interest if used, and if subject to declassification. For example, photography of the firing party at Nan bunker during CASTLE BRAVO would have been of particular value for Civil Defense illustration.

Sincerely,

Ralph E. Spear
Assistant Administrator
Planning Staff

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