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COLLECTION 326/GM FILES #1135

BOX No. 5589 FOLDER 2

K. E. Fields

FOLDER JCAE FALLOUT HEARINGS
MAY 1957 - MAY 1959

June 25, 1957

R. E. Hollingsworth

DISCUSSION OF FALLOUT PROBLEMS

BEST COPY AVAILABLE

There was a June 20 meeting in my office in which the interested staff discussed briefly the recent fallout hearings and developed several recommendations as to further steps to be taken in this area. In attendance were: Tammaro, Traynor, Starbird, Dunham, Salisbury, Capt. Morse, Duncan Clark, Dwight Ink, and myself. The principal points covered in the discussion were as follows:

1. Impact of President's June 19 Statement. It was concluded that Hagerty's clarification statement means that our policy remains essentially unchanged by the President's remarks at his June 19 press conference. Therefore, the President's statement does not, per se, place new limitations on our planning for future tests. However, because of possible public reaction to the President's statement both at home and abroad, the incident may have some effect on our public information efforts.

2. General Analysis of Fallout Hearings.

The hearings generally progressed quite well, although the majority of the news reports featured the danger of fallout or stressed the scientific disagreement which exists.

a. Areas of Disagreement. No completely new area of scientific disagreement was brought out in the hearing. However, the general extent of disagreement was more clearly defined in the course of the hearings. The principal points of disagreement discussed in the hearings were as follows:

(1) Dr. Machta of the Weather Bureau stated that he favors a theory of stratospheric distribution of release to the troposphere of "fallout" which suggests the concentration of larger fractions of fallout in northern latitudes from past tests than assumed by Dr. Libby.

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- (2) There was no substantial disagreement with results previously published in the reports of the National Academy of Sciences last year. Expression of estimates in terms of total numbers of individuals in future generations who will be injured by gamma rays from current testing may appear to be in disagreement with estimates of the probability that a particular individual may be injured since a rather large number is used to represent the first and a very small fraction to represent the second.
- (3) Pathologists associated with the AEC's research programs generally believe that a threshold dose of radiation exists below which exposure to radiation will not cause leukemia. Other witnesses support the hypotheses that even small doses of radiation may cause a correspondingly small but calculable incidence of leukemia. If the latter were true the resulting number of cases of leukemia from fallout would be small compared to those resulting from natural radiation and other inescapable causes.
- (4) The considerations which apply to the possible production of bone cancer as a result of strontium 90 in the skeleton are small to those discussed in Item (3) above from production of leukemia by low levels of exposure to radiation. If there is a threshold of body content of strontium 90 below which bone cancer cannot result, this threshold is probably much higher than the presently accepted limit of 100 sunshine units for general population. Some witnesses support the hypotheses that for very small quantities of strontium 90 in the skeleton there may be a correspondingly small probability of bone cancer. Again, if this were true one would expect this incidence from fallout to be a small fraction of the normal incidence from natural sources of radiation and other causes.
- (5) There is disagreement with respect to the amount of Strontium 90 deposited in human bones at a given rate of nuclear testing. Dunham stated that Dr. Libby has received a letter from Hollister suggesting that there be a limited resumption of the roundtable discussion of this point in closed hearings in order to more clearly ascertain the thinking of the scientists. B&M will review the transcript of the hearings and list the various values given on these and other key points by each person who testified.

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b. AEC Commitments.

- (1) Dr. Libby and Dr. Dunham indicated that there should be a step-up in the program of biological studies. Durham asked Dunham (Page 1212) to "send up to the Committee your recommendations ... as early as you can." Dunham and Tammaro are handling. (2)
- (2) Dr. Dunham agreed that it would be desirable for the AEC to come out with a fairly strong policy statement for the need of scientists to work in certain biological areas. Dunham and Salisbury are handling. (3)
- (3) Although no AEC commitment was made in the course of the hearings, it is believed that we should take note of the criticism concerning the NAS Report being out of date. It was agreed that a letter should be forwarded to the NAS asking whether they expect to update their report and expressing the hope that the NAS will continue to work in this area, keeping us advised of their findings. Also, we would assure them of our cooperation. This matter would be discussed informally with NAS, however, before the letter would be dispatched. B&M will handle.

Letter to NAS come forward, signed 7/2 (attached)

B&M will review the transcript of the hearings to make sure that we do not fail to follow through on each direct or implied JCAE request or AEC commitment.

3. Changes in Program Emphasis. The principal change in our program emphasis resulting from the hearings relates to the biological effects of fallout. I believe you are familiar with the proposal now being developed by B&M which is expected to involve additional funds amounting to about \$93 million dollars over a five-year period beginning with \$7 million in FY 1958. This is being proposed as a FY 1958 supplemental budget request.

In this expanded program, priority will be given to those activities in which results can be achieved most rapidly, such as food sampling and stratospheric monitoring. Attention will also be given to the genetic problems, although years will be required to produce extensive results in this area. Also much work needs to be done on the distribution of strontium 90 in the bones. Some study is expected to be devoted to natural background radiation.

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The question was raised, but not discussed, as to whether accelerated effort should be given to developing cleaner weapons prior to the next series of tests. I understand this matter has been brought to you.

- h. Public Information. Salisbury reviewed the problems of developing an effective public information program in view of the current disarmament discussions. It was concluded that Salisbury will forward recommendations for an aggressive public information program. The program will be basically directed toward demonstrating the relatively small hazards associated with testing and showing that we must move ahead with weapons testing until a test ban agreement is concluded which provides adequate safeguards.

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This statement is expected to be ready to submit to you by Friday, June 28. If acceptable to you and the Commission, it is proposed that it be cleared with OGB and possibly the NSC in order to assure that we are not in conflict with the disarmament discussions now underway.

Rec'd 7-2
Memo to
Salisbury
7/2
(attached)

Reference was made to the fact that Cole and other members of the House Subcommittee were greatly impressed with Lapp's statement that about 70% of the fallout on Japan comes from Russian tests. However, we concluded that the amount of effort required to verify this information is not justified by the public relations advantage which might result from AEC publicizing this matter. It was felt that the principal effect of such a statement would be to merely re-emphasize to Japan that they are receiving substantial amounts of fallout.

We also feel that at a later date it will be desirable to elaborate on the President's statement concerning cleaner weapons.

We also concluded that it would be desirable for Starbird and Salisbury, working through Gen. Loper, to attempt to get DOD to issue a statement clarifying Secretary Wilson's statement which he made at Quantico concerning missile warheads.

memo from
Starbird
July 2
(attached)

We also concluded that it would be desirable for the Chairman and the DOD (possibly Gen. Loper) to contact informally the JCAE in an effort to prevail upon them to issue some statement to the public regarding the need to continue some type of weapons testing. This could be done by JCAE announcing that the hearings have now been concluded and that after reviewing the testimony the JCAE believes that the need for testing

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outweighs the hazards involved from fallout - at least until such time as an effective disarmament agreement is concluded. I mentioned to you last Thursday night Gen. Starbird's feeling that the time may be ripe for such an approach to the JCAE and his basis for this feeling. It was mentioned that such an effort might not succeed and that the statement, if issued, would probably be a mild statement in order to secure agreement of the JCAE members. However, a statement coming from that group would carry immeasurably more weight at this point than any statement coming from AEC on this point, and it is regarded worth trying.

It was pointed out that our program in this area must rely heavily on quick turnover media, rather than consumers' magazines, in order to avoid our statements becoming badly outdated by a sudden change in disarmament policy between the time the article is submitted to a magazine and the time the magazine appears on the newsstands.

- 5. Information Paper. Dr. Dunham will prepare an information paper which will include a resume of the fallout hearings and a brief discussion of the areas pointed up at the hearings in which we plan to devote substantial effort.

CC: Tammaro
 Traynor
 Starbird
 Dunham
 Salisbury
 Capt Morse
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