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DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
SINGLE REVIEW AUTHORIZED BY: <u>AA SINTSALLI W/22</u>	DETERMINATION (CIRCLE NUMBER(S))
REVIEWER (ADD):	1. CLASSIFICATION RETAINED
NAME: <u>ML KOLBAM</u>	2. CLASSIFICATION CHANGED TO:
DATE: <u>11/23/94</u>	3. CONTAINS NO DOE CLASSIFIED INFO
	4. COORDINATE WITH:
	5. CLASSIFICATION CANCELLED
	6. CLASSIFIED INFO BRACKETED
	7. OTHER (SPECIFY):

BR:LD

404014

October 2, 1992

BEST COPY AVAILABLE

Dr. G. PALLA  
Columbia University  
Radiological Research Laboratory  
630 West 168th Street  
New York 32, New York

Dear Dr. PALLA:

This letter will confirm our conversations regarding logistic support for your group at Nevada, during the Yeakob-Knochele Test, and it will provide you with more recent data regarding dates, schedules, etc.

Before we start into details, I think it's proper to re-emphasize for the record the general points covered, namely that you do not want to participate "full scale" in this program unless there is a reasonable chance that you can obtain good data; therefore, you would like to reserve the right to reduce your participation after more complete information is available on the test plans, but that for planning purposes, it will be assumed that your group will participate "full scale".

As for the logistic support, we understand that you will need the following:

- (1) Four people in Nevada for a two-week period (assuming that the shelter is to be tested for one shot only).
- (2) A small laboratory equipped with 110 power and about 200 ft.<sup>2</sup> floor space.
- (3) Transportation from Camp 3 to target area, preferably a weapons carrier, station wagon, or jeep.
- (4) Last minute access to the shelter (recognizing that this may not be possible).
- (5) A wire down the center of the shelter to anchor the chambers.

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(6) Either 110 power or a portable generator available inside the shelter during installation of the instruments. You will not require power or time signals for the operation of the instruments.

(7) You will not have any requirements for labor crews.

In addition to the above, I want to bring you up to date on the latest plans of the test organization, and to ascertain what effect these changes may have on your operations.

On September 29, the subcommittee (consisting of George Leroy, H. Andrews, and Lt. Comdr. Cronkite) of the Bio. Med. Test Screening Committee met here in Washington to consider in detail the proposed Biological experiments. At this same meeting, Bob Corsbie outlined the plans for the shelter test, etc.

Present planning seems to indicate that it would be desirable to test the shelter in Yucca Flat completely independent of the Military Effects Program. It would probably be subjected to at least two tower shots. The first shot to be on or about March 1, designed primarily to give the blast pressures necessary to test the structural characteristics of the shelter. The second tower shot would probably give a higher neutron yield and gamma ray dose. Probably the neutron doses (as measured by sulphur) would be of the order of  $10^9$  to  $10^{10}$  N/cm<sup>2</sup> inside the shelter. These neutron levels would be the minimum range that could be detected by the mice.

Dr. Leroy pointed out that the neutron levels we quote are based on Cd-gold and sulphur measurements. The Cd-gold technique does not measure much above .2 ev, and the sulphur technique does not measure anything below 3 MEV. Therefore, there is a gap between 2 ev. and 3 MEV that is not being measured. There is evidence from the Greenhouse work to indicate that there is biological damage which is believed to be from the neutron in the range. We have requested that copies of the Greenhouse report and the Shelter Test report be sent to you, and they should be there within the next few days.

As you can see from this letter, things are beginning to shape up to a point whereby we should be able to give you the distance from the bomb, expected radiation doses, etc. within the next few weeks.

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We have discussed the question of repeating Bill Chambers' experiments, and since AFSWP has not entirely shut the door on this program, we don't believe there is much we can do until the Military makes up their minds.

As soon as we get more definite information regarding shelter location, etc., we will pass it on to you.

Very truly yours,

L. Joe Beal  
Radiation Instruments Branch  
Division of Biology and Medicine

CC: R. L. Corsbie  
Dr. Bugher ✓

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