David M. Stearns, Group Leader, D-7 November 10, 1952

Thomas N. White, Group Leader, E-6

INFORMATION REQUESTED IN MEMO RICHARD G. ELLIOTT TO NORRIS E. BRADBURY DTD 10/30/52. SUBJ: "ACTION PLANNED IN REGARD TO PUBLIC EDUCATION CONCERNING CONTINENTAL TEST FALLOUT"
E-6

In accordance with our telephone conversation this morning I am forwarding to you attached the material which Mr. William Johnson wrote up on this subject during my absence last week. An envelope containing some photographs and charts which he collected is also attached. The following are my comments on his write-up listed according to paragraph numbers:

1. To this paragraph I would add a statement that our experience has shown that there is no significant fallout problem from air burst bombs at the Nevada Proving Ground. The control of air traffic is necessary, however, following air bursts, and in addition to the obvious meteorological factors the problem of the height to which the main body of the cloud will rise, as depending on expected yield, has to be given special consideration. Considerable experience on this subject has been obtained, and predictions on cloud height can be made with considerable accuracy.

The following additional explanation is offered concerning the enclosed air space closure chart. In advance of each shot there is a general broadcast through the C.A.A. facilities of a public warning requesting anyone who proposes to fly anywhere within a specified circle during specified hours to inquire of C.A.A. for a safe routing. This circle is called the warning circle. The zone that is to be closed within this warning circle is not made public. This zone is given to the C.A.A. Center which airmen are asked to contact, and when an inquiry is made, the proposed flight plan is checked to see whether it crosses the danger zone. If it does, an alternate flight plan is suggested by C.A.A. The "flash circle" specifies the zone within which there would be some danger of an accident due to temporary blindness produced by the flash from the bomb.

2. In the case of air bursts considerations of wind speed and direction are not very important. The problem of rainout is very important for both air bursts and tower shots. Here again the prediction of cloud height is very important since if it is certain that the height will be well above that of any clouds from which precipitation might occur, the shot may be fired without danger of rainout.

7. The most pertinent data on this subject (from the Snapper test) are not available at Los Alamos. They are probably in the hands of AFSWP Headquarters in Washington. In very rough outline the overall results of tower shot experience may be presented as follows:

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These results represent the worst that has been experienced from fallout. The levels quoted are those observed immediately after the fallout has occurred when the intensities are greatest: within the Proving Ground itself, 50 r per hour or more in a strip a few hundred yards in width running to perhaps five or ten miles from Ground Zero; at a distance of 50 miles, an intensity of about one r per hour covering an area of a few miles in diameter; at distances from 100 to 200 miles, a few hundredths of an r per hour in a strip of a few tenths (dozen) of miles in width.

ORIGINAL SIGNED BY THOMAS N. WHITE

Thomas N. White
Group Leader
H-6

TNW:pw

Enc. 1. W. S. Johnson's write-up
2. Photographs
3. Charts

cc David Stearns
William S. Johnson
H-6 Files