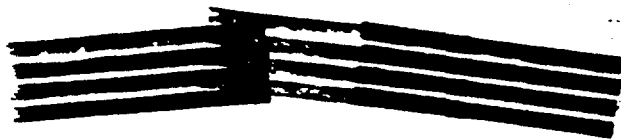


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February 10, 1953

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Mr. John C. Dwyer
Senior Director
Division of Biology and Medicine
U. S. Atomic Energy Commission
Washington, D. C.

Dear John:

Enclosed are five copies of a memo addressed to me listing and explaining the individual exposures in excess of 2.2 r among personnel participating in Operation Buster-Jangle. I would request that you forward one of these copies to Mr. Tol. Emphasizing so that he may take the necessary steps to insure that none of these people again get overexposed at the forthcoming operation. I have promised that the information would be supplied to him.

I would like to make a few comments of my own concerning these cases. First of all, it should be borne in mind that 13 overexposures out of a total of somewhere around 2,000 people is not a bad batting average. This of course would be a meaningless statement if we did not hasten to add that in no case was the overexposure as high as twice the permissible limit. We also point with a certain amount of pride to the fact that no Los Alamos staff member received an overexposure, and neither did any one of the monitors whom we had indoctrinated. I feel very strongly that this emphasizes the importance and necessity for the rigid training and indoctrination of monitoring and scientific personnel alike.

Let me comment very briefly on the four episodes in which overexposures were received:

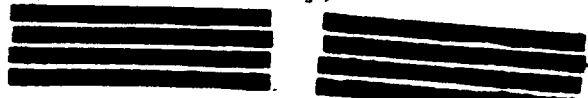
1. Frankly we are surprised that the Air Force men engaged in cloud sampling operations did not receive greater exposures than they did. This was one project where we frankly doubted our ability to hold our exposures below an arbitrary level. It is of considerable interest that the three men listed all occupied the same location in a B-17 and were the only men in the various crews to pass the accepted limits. The pilots of the jet planes were in no cases overexposed. Cloud sampling operations will always present a problem, and we are greatly indebted to Col. Carl Houghton for the excellence of his supervision of this phase of the work. We are currently working with him to develop an instrument which can easily be read by a plane pilot and which will tell him his integrated exposure up to that time.

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MEDICINE, HEALTH & SAFETY

2. The party of six individuals listed in this paragraph was principally a Desert Rock group. You will realize that at the time the operation was in the process of being set up, and we had

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no available monitors for the unscheduled party. The mission sounded simple enough, and it was agreed that I would go out with Major Hibson, an old acquaintance here, serving as monitor. Because of the lack of explicit indoctrination I forgot to take into account the overexposure factor, although it was clearly marked on the peak's location. It of course was possible, but I feel that the circumstances of the overexposure during this episode also points out the length of permitted recovery time previously scheduled, and that all workers have had the necessary training, to go into the contaminated area.

3. Here again we see the danger of depending on a worker with inadequate training and experience. The monitor in this particular instance was one of the men who was thrust upon us by the military in the period between Buller and Jungle. It points out the fact that monitors, while they should not expose themselves unnecessarily, must know precisely the exposure being received by the men under their control. This, too, was an unscheduled mission which did not have to be done.
4. This was really the only case where the overexposure resulted from a series of little exposures. The two men involved had been on numerous recovery operations, and it was the last one that pushed them over the limit. This of course is the situation where we would expect most of our overexposures to arise, and I regard it as a very creditable record that we prevented similar overexposures in all save these two instances. Here I feel that most of the credit should be given to our Photo Dosimetry and Records Section who every morning had the total exposure through the previous day listed. It is a thankless job but an essential one and requires more people than one might anticipate in advance.

I trust that the information contained here is what is needed. Will you be good enough to see that the interested parties, Walter Claus and others, get copies.

Very sincerely yours,

Tom
THOMAS L. SHIPMAN, M. D.
Health Division Leader

TLS:plw

Enc. Five copies of memo from W. R. Kennedy to T. L. Shipman. Dated Feb. 10, 1958

- Distributions: Dr. John Bugher (4) ←
Lt. Col. James Hartgering
Alvin Graves
Morris Bradbury

