

HEADQUARTERS  
TASK GROUP 7.1  
JOINT TASK FORCE SEVEN

405031

LOS ALAMOS SCIENTIFIC LABORATORY  
J Division, P.O. Box 1663  
Los Alamos, New Mexico

29 July 1954

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Biophysics Branch  
Division of Biology and Medicine  
U. S. Atomic Energy Commission  
Washington 25, D. C.

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CARL WILSON 11-1-84  
REVIEWED BY DATE

By: Dick Koogle 7-17-87

Dear Gordon:

Thank you for your complimentary letter. The maintenance of records at an operation leaves much to be desired and it entails the largest work load of the unit. We have been studying methods to improve present dosimetry practices and hope that by experience we can improve and simplify the system presently used at the Nevada and Pacific Proving Grounds.

Two conspicuous deficiencies were noted during the operation:

a. In a widely dispersed operation, control must be exerted through the use of self-reading pocket dosimeters -- but these dosimeters should reflect film badge dosage, should be operative in areas of high moisture and under rugged usage, and should be easily maintained and repaired. At Castle we were hindered by cheap and unreliable pocket dosimeters as well as high loss rates.

b. High contamination conditions, dispersal of activities aboard scattered ships, and the processing and recording of film badges under fluid conditions is too slow for adequate control of personnel exposures when there is lack of a coordinated, planned program of activities within a radiologically contaminated area. A number of exposures between 4 and 5 roentgens were the result of late film recordings "catching up" with a worker who had continued to work in a contaminated area without respite. We felt that a limit of 3.0 roentgens would have provided a buffer that would have materially reduced the number of overexposures.

An analysis of exposures reveals 23 exposures in excess of 12 roentgens. The 3 exposures of Task Group 7.1 were military personnel of a DOD project who were assessed readings on the basis of one film badge left in a tent on Rongerik Atoll during a period of radioactive fall-out. Actual exposure is believed to be 40 - 45 roentgens.

Three TG 7.3 boat operators returned film badges reading 85, 95 and 96 roentgens. Our investigation indicated their activities did not substantiate these high exposures and left their actual exposure subject to question.

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Three members of YAG 39 and YAG 40 returned film badges reading 13.5, 55 and 135 roentgens. Investigation revealed that the badges had been left aboard these experimental ships during radioactive fall-out and do not reflect their true exposure. It is to be noted that the unit encountered badge tampering in three organizations located at Bikini for the longest period (TG 7.3 and 7.5).

Eleven Task Group 7.4 weather station personnel on Rongerik Atoll received exposures approximating 40 roentgens and one weather reconnaissance pilot received 17 roentgens. These first exposures are considered to be the highest actual exposures encountered by JTF Seven personnel during Castle.

Two members of Task Group 7.5 exceeded twelve roentgens due to extended work in contaminated areas and equipment. One individual accrued his exposure due to the fact that he went to sleep aboard a highly contaminated LCT that was being transported back to Eniwetok aboard the Belle Grove. This exposure was an avoidable exposure that resulted from the uncontrolled "roll-up" of equipment from Bikini.

The great bulk of Task Force exposures between 6 and 12 roentgens are due to the Navy ship decontamination project and the Air Force cloud sampling project. Whether the value of the decontamination project justifies the exposure or not, I cannot judge, but without these two projects the operation could have easily been completed with exposures of less than 6.0 roentgens.

Enclosed you will find a tabulation of exposures listing numbers of personnel rather than percentages.

I am being ordered to the Command and General Staff School for a period of 10 months and, before leaving, would like to express my appreciation to you and Dr. Bugher for your complete cooperation. After the school I hope to return to be the first radiological safety officer to say that he had no overexposures during a test operation.

Sincerely yours,


*John D. Servis*  
JOHN D. SERVIS

Enc. Tabulation of Exposures

cc: TU-7 File w/enc.  
Dep/Admin., TG 7.1 w/enc.  
M&R w/o enc.

US DOE ARCHIVES	
326 U.S. ATOMIC ENERGY	
COMMISSION	
RG	<u>DOE Historian (DBM)</u>
Collection	<u>1132</u>
Box	<u>3365</u>
Folder	<u>12</u>

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Tabulation of Exposures

<u>Task Group</u>	<u>0 - 2R</u>	<u>2 - 4R</u>	<u>4 - 6R</u>	<u>6 - 12R</u>	<u>Over 12R</u>	<u>Total</u>
7.1	882	281	108	26	3	1,300
7.2	521	21	9	0	0	551
7.3	4,935	896	211	105	6*	6,153
7.4	629	67	35	16	<del>12</del> 26	759 775
7.5	1,044	175	186	14	2	1,421
Hqs.	90	0	0	0	0	90
Total	8,101	1,440	549	161	23-37	10,274* 10 18

\*Corrected for error of addition.

↓ Film Series 140101 12 & 207 actual exposure unknown. See explanation below