[redacted]

404399

Comments by T. N. White on:

Report by the Commander, JTF-3 on Completion of Operation Greenhouse

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Conclusions:

Paragraph 9. I suggest the following changes:

Full scale operations are excellent training exercises for the armed forces in dealing with radioactivity. However, the exposure limit of 0.7r per week, although more liberal than the AEC standard limit of 0.3 r per week for steady exposure, does not represent a realistic limit to apply in a military or civilian emergency. Likewise, the general use of highly sensitive survey meters is unrealistic in that adverse psychological reactions result when these sensitive instruments go off scale. Although military and civil defense operations are perhaps unlikely to encounter such high intensities as those found in some cases at Greenhouse, the implication of the operational standard is that an excess over 0.7r in one week is harmful. The services should re-examine their educational programs and training and operating directives with a view towards stressing practical realities of emergency operations in the presence of radiation. Further, the services should reconsider the types of instruments now available to troops for training and for field usage. It is concluded that a total operational exposure limit might be preferable to a weekly exposure limit. Any total radiation limit placed for a whole operation would be closer to the amount of radiation which would be permitted under emergency conditions. It is believed that the maximum exposure should be decided in advance according to the expected duration of the operation and with reasonable allowance for unforeseeable contingencies, and that once this limit has been decided upon it should be accepted as authoritative.

REPOSITORY Los Alamos Nat Lab
COLLECTION CL-8
BOX No TR 49-58
FOLDER Greenhouse Fallout

by authority of the U. S. Atomic Energy Commission UNCLASSIFIED 9/26/74
By R. Kuhn 12-1-58
(Person authorizing change in classification) (Date)
By Bertha Grant 12-2-58
(Signature of person making the change, and date)

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Discussion:

Section 22. Radiological Safety

I suggest that the statement "This tolerance is based on a continuous lifetime exposure for radiation laboratory personnel" be changed to read:

This tolerance, slightly more liberal than the current 0.3 roentgen per week limit used for continuously exposed radiation laboratory personnel, was adopted with the expectation that the average exposure throughout the operation would not exceed 0.3 roentgen per week.

The following change is suggested on page 21:

"The prompt fall-out which occurred after "DOG" shot was unexpected, since . . . . . observed at Operation SANDSTONE."

APPENDIX "P"

RADIOLOGICAL SAFETY

1. General

c. 0.1 r/day is not the present permissible. See comment on Section 22 of "Discussion".

The implication that "personnel who are only occasionally exposed to radiation" should be permitted at least 7 r per week during an operation lasting 8 weeks seems highly questionable.

4. "EASY" Shot

b. Leave out "hitherto undiscovered". The phenomenon was predicted for Trinity and the predictions were verified by observations. A combination of circumstances made us neglect the lesson learned there.

c. I know of no evidence that the debris was particularly concentrated at the 30,000 - 45,000 foot levels. Those levels were ones from which debris

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was more likely to land on us in some cases.

d. (2) "4 to 5 miles to the southwest." Should read southeast?

General Comment on Rad-Safe Aspects of the Whole Report:

One gets the feeling that the report favors liberally dosing the military personnel with radiation at future operations, for the purpose of eliminating undue timidity, particularly in the military rad-safe personnel. This reader is fully in sympathy with efforts to educate those monitors who become unduly excited about a moderate fall-out on ships and inhabited islands. However, the general attitude of the report is not particularly applicable to the individuals who accept the highest risk of over-exposure in really hot recovery operations. It is generally regarded as good policy to hold exposure to a minimum. How far it is advisable to go in the opposite direction for educational purposes is debatable.

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0617	I (25 May)	1630–1640	I+1 0900–1030	I+2 0845–0945
Bogen	420 (1033)	3	55	25
Teiler	550 (1036)	16	60	33
Elugelab	4400 (1040)	24	480	340
mouth of Ruchi	16,000 (1043)	180		1000
Ruchi	13,000 (1045)	100		900
Bogombogom	10,000 (1048)	190	850	700
Bogallua	9,000 (1050)	2900	900	800
Ivuivu	5000 (1054)			
Rigili	7000 (1111)		650	450
Giriniri	2800 (1121)		410	250
Pokon	1600 (1124)	Ribarian	365 270	160
Mui	1300 (1128)		400	125
Iguerin	1400 (1133)		155	90
Wetete	45 (1152)	60 (1200)	40	28
Parry	6 (1150)	44 "	30	18
Aniyaanii	0.5 (1005)	3.2 (1600)	15 (0830)	
Runit	1.2 (1010)	1.2 (1612)	5 (")	
Piiroai	0.0 (1010)			
Eniwetok	0.7 (1020)	0.8 (1622)	2.2 "	
Bokon	0.0 (1020)		0	
Kirinian			0	
Muzin			1.5	

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	I+3 0812-1225	I+4 0815-0935
Bogon	14	
Teit	18	
Elu	180	120
N	600	430
Ruchi	480	
Bogom	400	
Bogollua	300	270
Rigili	280	170
Girin	140	110
Pokon	60	
Mui	80	
Ig	50	29
A (Wetoki)	25-35	
B (Parry)	10	9 (1130)
Ani	5.5	3.2
Runit	1.6	1.5
Piinacii	1.2	
Beejiri	1.2	0.9
Muzin	1.0	1.1

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