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HEADQUARTERS
TASK GROUP 7.1
JOINT TASK FORCE SEVEN
APO 187 (HOW), % POSTMASTER
SAN FRANCISCO, CALIFORNIA

-6197

March 29 1954

410632

E. F. Cox, 5110
Sandia Corporation
Sandia Base
Albuquerque, New Mexico

Dear Everett,

It is time to send you the news from the front lines. I arrived at Eniwetok on Saturday the 20th after the usual 16 hours in bucket seats, preceded by two full days in Honolulu. It then seemed that if I were to see all the instrumentation, I should head for Bikini before the next shot got the area all hot again, so there I went. Even at that, the radiation level at George was 500-800 mr/hr on March 25 with spots over 1000.

The story on contamination is in some respects worse than the public announcement by the AEC would imply. My source (Col. Gilbert) says that natives at Rongelap got doses somewhere in the range 70-200 R, that some have beta ray burns and lesions and are losing hair, but that their blood counts have leveled off. He believed that there would be at least one death, of an old person already dying of half the tropical diseases in the book. I gather that the command was fooled by the large yield (14-15 MT) combined with wind shears and shifts not expected. As a result there has been postponement after postponement of Romeo, which only Saturday went off. There are also changes in schedule of which you should know.

As to schedule: Col. Gilbert said yesterday that plans are to have a shot ready at all times at each atoll, and to fire either as weather permits. Koon is practically ready now on Eniman Island. Echo will be gotten ready to go not earlier than April 15. The following Bikini shot would be Union, at its originally designated spot in the lagoon off George, not in the Bravo crater. Nothing was said about Yankee. Winds have been generally strong and from the east; such wind would favor the Eniwetok shots. ~~I also understand that in any case this show will close by June 1.~~

Now special word for various people. For Tom Cook: I have seen no figure on contamination that anywhere near compares with the figure from IVY Mike of 100 R/hr at 1 hour 10 miles upwind. Where was this measured and when? I am enclosing the pre-Romeo rad safe map for your information.

For Bill Perret: I have had a chance to fly around the Bravo crater. The islands nearby are of course stripped clean except for a bunker on Charlie. The reef has been thoroughly scoured to where instead of being the normal dark color of coral rock it is a bright orange. The crater breached the reef into the lagoon. Vaile took soundings from a DUKW at plus 8 days and thus has three profiles of the area. Each profile starts down at the edge but shows a flat bottom

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100 feet deep all across the floor of the crater. Near the edge of this flat there was a double return, the second return being a continuation downward of the slope. Projecting these profiles down to the center and back out to the surface we get a diameter of 6000 ft. and a depth of 180 ft. I ended up with doubt whether the flat bottom was real or just the distance to which fine suspended particles had settled, for Mr. Curran, the H&H chief surveyor commented that lead line soundings in the center had gone down below 200 feet.

For Jim Shreve and Luke Vortman: With Larry Swift I have been over to see the 3.1 cubicle on Uncle. It looks good; the gauges are well mounted and fortunately on the landward end of the cubicle. Free air measurements include q measurements as well as ground baffle gauges and the two ten foot tower arrays of baffled gauges. The ground in front of the cubicle is as smooth as can be expected, but behind is not as good as I would have liked to see it. The edge of the island cuts across diagonally in front of the structure with a 2-3 ft. declivity to high tide level... Because it now looks as if Union will be burst at Eniwetok, Swift and I considered the proposition of instrumenting the S.1.1. building after all, but decided against it, at least between ourselves.

General comments for anyone: On Bravo the gauges on Fox-George were activated. Pressures were about 3 psi, clean waves slightly rounded at the peaks. Trees and jungle on the Dog-George string suffered severe damage. On Dog just a few bedraggled palms are left. On Fox the underbrush is all blackened and gone, the trees much the worse for wear. On Uncle trees not scorched, but a considerable amount of wind throw. Camps on Fox-George flattened and burnt to the ground, very probably from secondary fires. Camp on Tare damaged, many tents collapsed, some burnt, mess hall caved in, but more rugged buildings still standing. Tare pressure reported 1.8 psi. Two airplanes were in delivery position, a B-36 and a B-47. The B-47 escaped clean, but the B-36 was damaged, although not so bad but what it flew back to Eniwetok and landed. The B-36 was at 50,000 ft. altitude, range I don't know, tail-on position. Little thermal damage, rubber scorched inside blisters just forward of the tail, and blisters on the trailing edges of the wings. Considerable blast damage, in particular to the bomb bay doors. I understand the same plane was to be run in closer on todays shot.

Most instrumentation has worked fairly well, so that I have a variety of preliminary data to send you:

Proj. 1.2b (ERL) Shot Bravo

Station	Range ft.	Pos Pressure psi	% Gauge Rating
122.06	6260	238	157
122.07	7100	185	123
122.08	7617	116	230
123.02	12871	30	120
123.03	15929	18.6	74
123.09	40631	4.6	90

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Proj. 1.2a (SC) Shot Bravo

Island	Station	Range	Pos.Press.	Neg.Press	Time Arrival	Pos. Phase	Neg. Phase
Fox	120.01	47790	3.35	.75	28.16	9.60	31
Fox	120.02	48595	3.35	.60	28.81	11.30	30
Fox	120.03	50415	3.10	.70	30.40	9.60	31
Fox	120.04	52610	2.86	.69	32.07	9.83	32
George	120.05	54970	2.89	.61	34.03	10.05	31
George	120.23	54175	3.08	.40	33.36	11.64	30

Microbarograph from Bravo you have.

Proj. 1.2a (SC) Shot Romeo

Station	Range	Pos. Press.	Time. Arrival
120.01	47788	2.81	29.38
120.02	48595	2.80	30.04
120.03	50414	2.58	31.65
120.04	52611	2.49	33.35
120.05	54972	2.21	35.33
120.23	54174	2.33	34.64
PP	54196	2.55	34.83

Proj. 17.1 (Microbarograph) Shot Romeo

Station	Range	Pos. Press.mb	Arr.Time(sec)	PosDur(SEC)	NegDur(sec)
Curtiss	195,000 ft	16.6-21.1	184	17	31.5
Parry	172 mile	4			52
Glenn		3			63
Kwajalein					41.8

Temperature was 79°F.

That is all the gossip for today. If there are any particular things that someone wants looked into, let them send the word. In the meantime I would like to be kept posted on affairs at Sandia and in the city, particularly the results of the elections and in the political maneuverings prior to the elections.

Last minute word: None of the islands in Bikini are any hotter now than before Romeo and they already have sent working parties in. Practically no fallout on Eniwetok. Major damage to bomb bays on B-36; B-47 again unscathed.

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Very Truly Yours

M. L. Merritt

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