

R Site TA15

14738

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August 12, 1954

8/12/1954

BERYLLIUM CONCENTRATION OF FIRING PIT AT R SITE

On 8/4/54, Homer Milford and Chain Robbins were present at R Site during firing of a shot containing several pounds of beryllium metal. The firing pit is located about a mile east of the main site buildings. The Control Point bunker is located 500 feet south of the firing pit.

Soil samples were obtained in the pit before and after the shot and an air sample was taken just outside the Control Point bunker immediately after the shot. The results are given in the accompanying table.

Following each shot, Robert Van Lyssel of GMX-4 runs a tractor and blade into the pit to fill in the crater. It was evident from the beryllium results obtained that a Comfo type respirator with an ultra filter should be worn whenever the operator (Van Lyssel) runs the tractor. The dust deposit around the crater is very finely divided and this suggests the possibility that some beryllium of a respirable size might be contained in the soil. In future shots, cascade impactor samples will be taken during the filling of the crater in an effort to determine the particle sizes of beryllium in the dust.

It was interesting to note that upon analyzing the soil samples for uranium the content ran close to 0.1%, not high enough to be economically feasible for mining! The background beryllium content in the samples before firing might be explained by a shot fired a week earlier which also contained some beryllium.

Bruce Ribe of H-1 returned to the site with us on 8/5/54 and monitored the pit. He obtained alpha readings of 2,000 c/m in isolated spots.

cc: Fred Tesche, GMX-4

Reviewed by ER PFF
JUL 22 1952
Hew

M. C. Robbins
Industrial Hygiene Group

Recd 11/20/02



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<u>Sample</u>	<u>Location</u>	<u>Milligrams Radium per gram of soil</u>
Soil	Before firing and under table on which shot was located	.001
"	"	<.001
"	"	<.001
"	After shot 15 ft out from crater	.00
"	Rim of crater	.005
"	Crater floor	.02
Air	Outside control room door	0 micrograms per cubic of air

All soil samples were composites of random samples taken at the designated locations.

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BERYLLIUM CONTENT OF SOIL AND AIR SAMPLES
AT A-SITE DURING FIRE

<u>Sample</u>	<u>Location</u>	<u>Milligrams Beryllium per gram of soil</u>
Soil	Before firing and under table on which shot was located	.001
"	"	<.001
"	"	<.001
"	After shot 15 ft out from crater	.08
"	Rim of crater	.005
"	Crater floor	.02
Air	Outside control room door	0 micrograms per cubic of air

All soil samples were composites of random samples taken at the designated locations.