

OFFICE MEMORANDUM

TO : Margaret Anne Rogers, H-12, MS-490

DATE: March 15, 1978

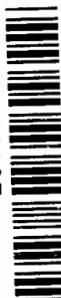
FROM : Carl Buckland, H-1

SUBJECT : COMMENT ON UPDATE OF LA-6848-MS

SYMBOL : H-1

MAIL STOP: 401

- 1734 General
1. I would question whether it is necessary to change ERDA to DOE.
 2. Page C-3, Item B
It is difficult to envision 25 Ci of uranium in Area C. I suspect the bulk of the uranium is normal or depleted uranium. It would take 40 tons of normal or 63 tons of depleted to equal 25 Ci.
 3. Page D-3, first paragraph
To the best of our knowledge, no ^{210}Po was added to chamber HP-6 when it was destroyed on 4/15/52. Perhaps you should recheck reference 234 and discuss with Charles Blackwell. The activity detected after the chamber destruction is believed due to residual ^{210}Po contamination remaining from the shot of 12/23/48. I believe that somehow the continuity of events was mixed up when taken from the references. The first and original experiment in HP-6 did contain ^{210}Po and explosives. There was no breach in the ground surface when the experiment was fired on 12/23/48. About 3 years later, the shaft of HP-6 was excavated and the chamber reentered. A large quantity of explosives (without polonium) was then placed in the chamber and fired after refilling the shaft. The ground surface was disturbed appreciably from the 4/15/52 detonation.
 4. Page G-13, Table G-IV
I believe the Curie content for ^{239}Pu should be corrected for the ^{241}Pu contribution in weapon grade plutonium. Using the referenced Ci/g number of 0.072, the pits have ~ 5111 g and shafts ~ 639 g. The corrected Ci/g value for weapon grade plutonium is .519 Ci/g based on 93.6% 239, 6% 240, and .4% 241. (241 is by far the isotope providing the highest specific activity per unit of weight which is 112 Ci/g.) The corrected Curie content then becomes ~ 2653 Ci for pits and ~ 332 Ci for shafts.
 5. Page G-16, first paragraph
The man that fell in the dump in 1959 was not the result of an edge crumbling but rather from one side of a pickup truck tailgate not being pinned. At 1:30 p.m. on 1/23/59, Charles Blackwell, in company with Bruce Riebe, backed a pickup truck to the dump edge to dispose of some material. Blackwell walked to the back of the truck and removed the locking pin on one side of the tailgate. As he walked in back of the truck to release the other pin, he held on to the tailgate which subsequently gave way, since the second pin was not secured, and fell into the pit.



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6. Page G-81, paragraph on high tritium concentrations.
I would suggest changing the range of numbers to 1.8×10^{-3} and $1.18 \mu\text{Ci/ml}$. I was confused by the manner in which $1180,630 \times 10^{-6} \mu\text{Ci/ml}$ was printed and did not understand the number until I picked it up later in Table G-IX.
7. Page APF-1, under Packaging, second sentence.
We are not required to be this rigid. We utilize packaging that provides protection comparable to DOT requirements. The degree of compromise is compensated by adequate administrative control as circumstances warrant.

Your report is comprehensive and exhaustive in nature. I would hope, however, that it not be perpetuated further.


Carl Buckland

CB:ed

Cy: John Gallimore, H-1, MS-401
File

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Item - 3 -

I am sure that additional ^{210}Po was placed in the chamber before the 2nd delimitation on 4/15/52. Waste material containing ^{210}Po was obtained from DPEast to be used as a tracer. RSD/M