This document consists of 7 pages.
No. 1 of 17 copies. Series A.

4125

LOS ALAMOS SCIENTIFIC LABORATORY
MEMORANDUM

UNIQUE DOCUMENT # SAB200090830000

November 9, 1954

4716

TO: Distribution

FROM: George I. Bell

SUBJECT: CONTROL OF RADIOACTIVE CONTAMINATION FROM LARGE YIELD WEAPONS.(U)

SYMBOL: T-649

The characteristics have been investigated of some large yield weapons [redacted] it is felt that one must use a fuel which contains a substantial amount of Li^6 and which is compressed by an efficient implosion system. Two detailed calculations have been made. However, no general survey has been made to explore the yield as a function of implosion system and Li^6 concentration.

[redacted]

DOE b(3)

DOE b(3)

CRM FILE BC
DD 38387

DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW	
1ST REVIEW-DATE: 1-30-96	DETERMINATION [CIRCLE NUMBER(S)]
AUTHORITY: ☐AOC ☐ADC ☒ADD	(1) CLASSIFICATION RETAINED
NAME: R.A. Carpenter	2. CLASSIFICATION CHANGED TO:
2ND REVIEW-DATE: 1-31-96	3. CONTAINS NO DOE CLASSIFIED INFO
AUTHORITY: ADD	4. COORDINATE WITH:
NAME: R.A. Sanders	5. CLASSIFICATION CANCELLED
	(6) CLASSIFIED INFO BRACKETED
	7. OTHER (SPECIFY):

RESTRICTED DATA

This document [illegible] Restricted Data [illegible] Energy Act of 1954. [illegible] subject to Administrative and Criminal Sanctions.

96SA20B000009

[redacted]

DOE b(3)

Other wall materials have been considered. [redacted]

DOE b(3)

It is to be noted that this number of active atoms [redacted]

DOE b(3)

Neutron capture cross sections are not accurately known in the relevant energy regions; [redacted]

DOE b(3)

[redacted]

Two graphs have been prepared to show how this [redacted] compares with fission product activity. They are somewhat simplified in that the involvement of many half lives and gamma energies has been ignored and only the dominant (and more or less average) decay [redacted] has been considered. The predominant gamma ray energy is 0.41 Mev, somewhat less than that for an average fission product decay.

DOE b(3)

DOE b(3)

DOE b(3)

SECRET

[redacted] DOE b(3)

the graphs. There it is indicated that for periods up to about two weeks, and in areas where contamination from fall-out might otherwise be heavy enough to be practically significant, [redacted] On the other hand, after a period of five or six weeks, [redacted] DOE b(3)

George I. Bell

GIB:li

Distribution:
1A-N. E. Bradbury
2A-Jane H. Hall
3A-K. E. Fields
4A-K. E. Fields
5A-K. E. Fields
6A-K. E. Fields
7A-K. E. Fields
8A-K. E. Fields
9A-K. E. Fields
10A-K. E. Fields
11A-K. E. Fields
12A-K. E. Fields
13A-G. I. Bell
14A-T Division Office
15A-T Division Office
16A-T Division Office
17A-T Division Office

SECRET

FIGURE 1

359-120 KEUFFEL & ESSER CO.
Logarithmic, 3 X 3 Cyc.

b (3)

FIGURE 2