

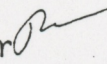
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Project Number _____

Internal Distribution

Date February 23, 1995

To

From PJ Weaver 

Subject Isotopic Content of HLV Tanks

I have compiled a breakdown of the isotopic content of the tanks in the 324 Building High Level Vault (HLV). The HLV contains four (4) tanks: TK-104, TK-105, TK-106, and TK-107. TK-106 is currently empty. The values given below are based on analytical work which was conducted in the spring of 1990 and represents the best data available to me at this time. Information was taken directly from the analytical report slips provided from the 325 Building. Prior to using this information for anything other than estimates, conformation samples should be run to confirm the data.

ISOTOPIC CONTENT OF THE 324 BUILDING HLV

Isotope	TK-104 ^a	TK-105 ^a	TK-107
--	pH = 1.4	pH = 1.07	pH = 0.7
Total Alpha	2.09 x 10 ⁻³ Ci	--	768 Ci
Am-241	--	14.6 Ci	433.7 Ci
Cm-242	--	--	2.6 Ci
Cm-244	8.57 x 10 ⁻³ Ci	8.23 x 10 ⁻³ Ci	357.6 Ci
Pu-239/240	1.52 x 10 ⁻³ Ci	0.26 Ci	1.8 Ci
Pu-238	1.07 x 10 ⁻³ Ci	0.57 Ci	2.8 Ci
U	0.47 grams	2.44 grams	3.6 grams
Cs-137	1367 Ci	25,811 Ci ^b	47,014 Ci
Cs-134	--	10.5 Ci	214 Ci
Sr-90	1906 Ci	14,795 Ci	30,559 Ci
Eu-154	--	35.4 Ci	497 Ci

a Values reflect two transfers (364.2 gal and 259.3 gal) from TK-104 to TK-105 in May 1991.

c A second analytical report slip indicates a curie content of 4213 Ci (5527 Ci after transfers from TK-104).

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