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Projected F-Tanks Radionuclide Concentrations at Closure

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Summary of Revisions

Revision 0 First revision

1 Summary

The purpose of this report is to project the radionuclide concentrations in the solids and liquid phases of the F-area tanks material at closure. The solid phase may be composed of dry sludge, zeolite, and insoluble salts. The liquid phase is considered homogenous with concentrations of free supernate. For each sub-category characterization, efforts are done to address as many identified isotopes as possible. Tank by tank calculated data are in Attachment A.

2 Inputs and Assumptions

Date pulled WCS data: 5/30/2005

Reference decay date: 9/30/2020. For most radioisotopes, standard decay equation is utilized except for Te-125m, Sb-126m, Sb-126, Ra-226, Ac-227, Ra-228, Th-229, Th-230, Pa-231, Pu-244, and ingrowths Am-241 and Cm-242. Decay calculations for these isotopes use equations in appropriate reference listed in Table 2.

Input data are obtained from the F Tank Closure Radioisotopes Inventory Report¹ and the June 2005 WCS Monthly Inventory Report².

Closure Tanks 18-19 data are obtained from the two Residual Material Characterization reports.^{3, 4}

Surrogate tank designation is maintained the same as established in the Closure Inventory report¹.

F-Tanks with designated surrogate tank will have sludge concentrations of the surrogate tank (Tank 26) regardless of their current sludge inventories.

The zeolite volume percent in closure material of certain tanks is assumed equal to that of the weight percent. This assumption is reasonable based on the Tanks 18-19 zeolite weight percent of around 50%, and residual solids density of around 8.0 lb/gal which is comparable to that of the nominal zeolite density¹ (Zeolite Tab). In this document, the solids term refers to residual material having both sludge and zeolite.

3 Computational Methods

3.1 Dry sludge

Tracked dry sludge activity inventories and zeolite volumes listed in Attachment A are extracted directly from workbook Sludge 1.5- Closure Build 195 (Pred Sludge (New) tab).¹ In addition, the reported Cm-242 inventory was based on reactor assembly data and was not accounted for the decay of Am-242m. Therefore, the Cm-242 value reported in this section is the sum of the calculated curium and 82% of the Am-242m.⁵ The volume activity concentration (in Ci/gal) is calculated by dividing the dry sludge activity by the corresponding settled sludge volume² (gal). The calculated concentrations as of 5/30/2005 are then decayed to 9/30/2020. Input data and calculated concentrations for the dry sludge are listed in pages 1-6, Attachment A. Closure Tanks 18 and 19 inventories are based on References 3 - 4 (See Section 3.5).

3.2 Residual Solids with Zeolite

Calculating activity concentrations per volume basis for tanks not containing zeolite is straight forward as seen in Section 3.1. Certain tanks, however, have zeolite in addition to the sludge material, and the zeolite bound activity has to be accounted for accordingly. Zeolite volumes in Tanks 7, 25 and 27 are 130, 1050, and 4990 gallons, respectively, which correspond to zeolite bound Cs-137 of 623 Ci, 6763 Ci, and 31095 Ci (Zeolite tab).¹ The zeolite loaded activity concentration is projected based on the analyzed zeolite weight percents of Tanks 18-19 closure materials (respectively 45.7% and 65.6%). A linear equation (zeolite percent= $7.00\text{E-}06 * \text{kg zeolite} + 0.4051$, figure 1) is obtained based on the zeolite weight percent data. Studies have shown that the zeolite used at SRS has an affinity for cesium, strontium, and europium (Holton, et.al, 1983). Experience with Tanks 18 and 19, however, has shown that the only element that accumulated on zeolite under actual in-tank conditions was cesium. At current, radioactive isotope loading zeolite data are only calculable for Cs-137 (Ba-137m) which is used to project loading zeolite values for Cs-134 and Cs-135. The zeolite volume percents of Tanks 7, 25, and 27 are calculated using the above equation with the assumption that zeolite weight and volume percents are the same in residual material. Table 1 summarizes the discussion in this paragraph.

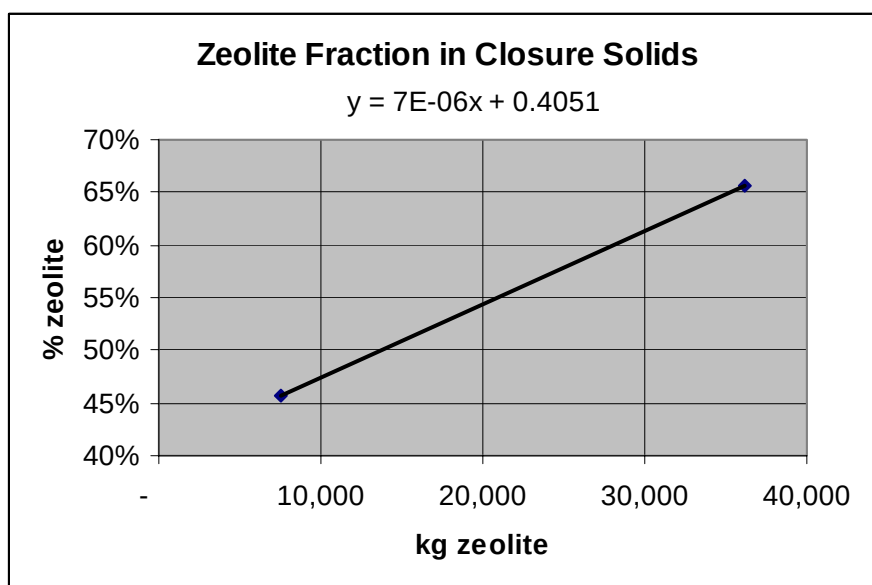


Figure 1: Zeolite Weight Percent in Closure Solids

Table 1: Cesium concentration in zeolite

Inventory Tank	Zeolite, kg	Zeolite, gal	Cs-137 Bound Zeolite, Ci	% Zeolite
7	472	130	623	@41%
25	3,812	1,050	6,763	@43%
27	18,114	4,990	31,095	@53%
18	7,475	NC	NC	46%
19	36,148	NC	NC	66%

@ Projected zeolite percent (of total solids remaining in residual material)

NC: not calculated

The solids concentrations are modeled based on the Tanks 18 and 19 closure data and it assumes that zeolite will remain unchanged during waste removal processes. The volume concentrations are calculated with the assumption that the zeolite weight and volume percents are the same. Dry solids (including dry sludge and zeolite) activity concentrations for Tanks 7, 25 and 27 are projected by multiplying the calculated dry sludge concentrations (Section 3.1) by the appropriate projected non-zeolite volume percent.

Cesium is treated differently to include the cesium bound zeolite. Cs-137 solid concentration is obtained by first calculating the total Cs-137 activity in solid (dry sludge and zeolite), and second obtaining the solid concentration by dividing the calculated total Cs-137 by the total solids volume. Other radioactive cesium isotopes Cs-134 and Cs-135 concentrations are proportioned to the calculated Cs-137 solid concentration using appropriate cesium dry sludge ratio.

For example:

Tank 7 Cs-137 solid concentration of 2.15 Ci/gal dry solid is calculated as follows

$$\frac{130 \text{ gal zeolite} * 0.59 \text{ gal sludge} / 0.41 \text{ gal zeolite} * 3.29\text{E-}01 \text{ Ci/gal dry sludge} + 623 \text{ Ci zeolite}}{130 \text{ gal zeolite} + 130 \text{ gal zeolite} * 0.59/0.41}$$

Tank 7 Cs-134 solid concentration of 1.03E-05 Ci/gal dry solid is calculated as follows:

$$\frac{1.58\text{E-}06 \text{ Ci [Cs-134]} / \text{gal sludge} * 2.15 \text{ Ci [Cs-137]} / \text{gal solid}}{3.29\text{E-}01 \text{ Ci [Cs-137]} / \text{gal sludge}}$$

The calculated concentrations for the sludge with zeolite as of 5/30/2005 are then decayed to 9/30/2020 and are listed in page 7, Attachment A.

3.3 Liquid

Concentrations of gamma/Cs-137, total liquid volumes and the total tank farm liquid Cs-137 inventory of 2.20E+08 Ci (not include Tank 48 material) are obtained from the WCS monthly report (WCS tab).² Concentrations of other isotopes are determined using algorithms or appropriate solubility factor⁵ unless noted otherwise. Sludge [isotope i] is the dry sludge activity of isotope i, obtained from the F-Tank Inventory report¹ (Section 3.1). Sludge [alpha] is the sludge alpha activity composed of major sludge alpha emitters in the tank. Table 2 below summaries the algorithms used to calculate the liquid concentrations (in Ci/gal). The calculated liquid concentrations as of 5/30/2005 and 9/30/2020 (note that the ingrowths of Am-241 and Cm-242 are accounted for) are listed in pages 8-13, Attachment A.

Table 2: Supernatant concentration algorithms

Liquid, Ci/gal	Algorithms, 5/30/2005	Reference	Decay to 9/30/2020
H-3	100000*0.0000000000001*1000*3.785	6	$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
C-14	1760*0.0000000000001*1000*3.785	6	$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Co-60	1030*0.0000000000001*1000*3.785	6	$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Ni-59	Sdg [Ni-59]/Sdg [Ni-63]* Liq [Ni-63]		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Ni-63	2500*0.0000000000001*1000*3.785	6	$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Se-79	Sdg Ci Se-79 * 0.05 / 0.95 / Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Sr-90	0.00026* Liq [gamma]	6	$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Y-90	equal [Sr-90]		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Nb-94	Sdg Ci Nb-94 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Tc-99	0.000195* Liq [Cs-137]	7	$1.95E-04*[Cs-137]/(0.5^{(t/T_{1/2, Cs-137})})$
Ru-106	Sdg Ci Ru-106 * 0.25/0.75/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Rh-106	Sdg Ci Rh-106 * 0.25/0.75/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Sb-125	Sdg Ci Sb-125 * 0.05/0.95/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Sn-126	Sdg Ci Sn-126 * 0.20/0.80/Liq Vol	7	$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
I-129	1.57E-07* Liq [Cs-137]	8	$1.57E-07*[Cs-137]/(0.5^{(t/T_{1/2, Cs-137})})$
Cs-134	Sdg Cs-134 / Sdg Cs-137 * Liq [Cs-137]		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Cs-135	Sdg Cs-135 / Sdg Cs-137 * Liq [Cs-137]		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Cs-137	WCS monthly report, June 2005	2	$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Ba-137m	WCS monthly report, June 2005	2	$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Ce-144	Sdg Ci Ce-144 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Pr-144	Sdg Ci Pr-144 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Pm-147	Sdg Ci Pm-147 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Eu-154	Sdg Ci Eu-154 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Th-232	Sdg Ci Th-232 / Sdg Ci alpha * Liq @		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
U-232	Sdg Ci U-232 / Sdg Ci alpha * Liq @		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
U-233	Sdg Ci U-233 / Sdg Ci alpha * Liq @		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$

Liquid, Ci/gal	Algorithms, 5/30/2005	Reference	Decay to 9/30/2020
U-234	Sdg Ci U-234 / Sdg Ci alpha * Liq @		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
U-235	Sdg Ci U-235 / Sdg Ci alpha * Liq @		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
U-236	Sdg Ci U-236 / Sdg Ci alpha * Liq @		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
U-238	Sdg Ci U-238 / Sdg Ci alpha * Liq @		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Np-237	Sdg Ci Np-237 / Sdg Ci alpha * Liq @		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Pu-238	Sdg Ci Pu-238 / Sdg Ci alpha * Liq @		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Pu-239	Sdg Ci Pu-239 / Sdg Ci alpha * Liq @		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Pu-240	Sdg Ci Pu-240 / Sdg Ci alpha * Liq @		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Pu-241	Sdg Ci Pu-241 / Sdg Ci alpha * Liq @		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Pu-242	Sdg Ci Pu-242 / Sdg Ci alpha * Liq @		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
iAm-241	Sdg Ci iAm-241 * 0.001/0.999/Liq Vol		Account for Pu-241 decay ^s
Am-241	Sdg Ci Am-241 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Am-242m	Sdg Ci Am-242m * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Na-22	5060*39.97%/220000000* Liq [Cs-137]	2	$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Al-26	29.4*0.44/220000000* Liq [Cs-137]	2	$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Te-125m	Liq [Sn-125]/4.095		Liq [Sn-125]/4.095
Sb-126	14%* Liq [Sb-126m]		14%* Liq [Sb-126m]
Sb-126m	(Liq [Sn-126]* Liq Vol+ Sdg Ci Sn-126) / Liq Vol*5%		(Liq [Sn-126]* Liq Vol+ Sdg [Sn-126] * Sdg Vol) / Liq Vol*5%
Sm-151	Sdg Ci Sm-151 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Eu-152	Sdg Ci Eu-152 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Eu-155	Sdg Ci Eu-155 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Ra-226	$1.4514 * \text{Liq [U-234]} * (1 - 1.015 * 0.5 ^ { (0.0000091976 * 30) } + 0.015 * 0.5 ^ { (0.00062133 * 30) })$	9	$1.4514 * \text{Liq [U-234]} * (1 - 1.015 * 0.5 ^ { (0.0000091976 * (t + 30)) } + 0.015 * 0.5 ^ { (0.00062133 * (t + 30)) })$
Ac-227	$\text{Liq [U-235]} * (1 - 1.00066 * 0.5 ^ { (0.000030488 * 30) } + 0.00066 * 0.5 ^ { (0.045926 * 30) })$	9	$\text{Liq [U-235]} * (1 - 1.00066 * 0.5 ^ { (0.000030488 * (t + 30)) } + 0.00066 * 0.5 ^ { (0.045926 * (t + 30)) })$
Ra-228	Liq [Th-232]	9	Liq [Th-232]
Th-229	$1.0481 * \text{Liq [U-233]} * (1 - 0.5 ^ { (0.0001307 * 30) })$	9	$1.0481 * \text{Liq [U-233]} * (1 - 0.5 ^ { (0.0001307 * (t + 30)) })$
Th-230	$1.442 * \text{Liq [U-234]} * (1 - 0.5 ^ { (0.0000091976 * 30) })$	9	$1.442 * \text{Liq [U-234]} * (1 - 0.5 ^ { (0.0000091976 * (t + 30)) })$
Pa-231	$\text{Liq [U-235]} * (1 - 0.5 ^ { (0.000030488 * 30) })$	9	$\text{Liq [U-235]} * (1 - 0.5 ^ { (0.000030488 * (t + 30)) })$
Pu-244	Liq [Pu-242]/0.00396*0.0000181	10	Liq [Pu-242]/0.00396*0.0000181
Bk-249	Sdg Ci Bk-249 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Cf-249	Sdg Ci Cf-249 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Cf-251	Sdg Ci Cf-251 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Cf-252	Sdg Ci Cf-252 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$

Liquid, Ci/gal	Algorithms, 5/30/2005	Reference	Decay to 9/30/2020
Am-243	Sdg Ci Am-243 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Cm-242	Sdg Ci Cm-242 (in 5/30/05) * 0.001/0.999/Liq Vol		Sdg Ci Cm-242 (in 9/30/20) * 0.001/0.999/Liq Vol
Cm-243	Sdg Ci Cm-243 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Cm-247	Sdg Ci Cm-247 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Cm-248	Sdg Ci Cm-248 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Cm-244	Sdg Ci Cm-244 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Cm-245	Sdg Ci Cm-245 * 0.001/0.999/Liq Vol		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})}$
Am-241total	Liq [Am-241] + Liq [iAm-241]		$A_{0i} * 0.5 ^ { (t / T_{1/2, i})} + \text{Pu-241 decay}$

Note			
Sdg	Sludge		
Liq	Liquid		
Vol	Volume		
@	Liquid alpha concentration: 0.00021 for 1-20 and 0.0071 for others, 2 (WCS 1.5)		
\$	Pu-241 decay	9	
$T_{1/2, i}$	Halflife of isotope i		
t	elapsed time		
A_{0i}	Initial activity of isotope i		

Note: when null values are obtained using the described algorithms, surrogate Tank 26 concentrations are applied.

3.4 Closure Tanks: 18-19

Total residual inventories of Tanks 18-19 are extracted from the reports^{3,4} and then decay adjusted to 9/30/2020 using described algorithms in Table 2. Calculated values of the two closed tanks can be found in page 14, Attachment A. There are special notes for the ingrowths of Am-241 and Cm-242 starting from the reports reference dates^{3,4} to 9/30/2020: 1) the ingrowth Am-241 concentrations are accounted for Pu-241 decay, and 2) The ingrowth Cm-242 values are accounted for the 82% decay of Am-242m.⁵

4 Conclusion

The radionuclide concentrations of dry sludge, sludge with zeolite, and liquid in F-Tank Farm residual material at closure are projected in this document, and they are listed in Attachment A. The sludge, zeolite and liquid phase concentrations are projected based on combination of WCS data, sample data and algorithms.

5 *References*

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Drysludge

Tank	Reference Date from Worksheet	Dry sludge mass (kg)	Zeolite, gal	H-3 (Ci)	C-14 (Ci)	Co-60 (Ci)	Ni-59 (Ci)	Ni-63 (Ci)	Se-79 (Ci)	Sr-90 (Ci)	Y-90 (Ci)	Nb-94 (Ci)	Tc-99 (Ci)
	Sludge 1.5												
1	5/30/05	11,275		0.00E+00	1.20E-02	1.85E+02	2.16E+01	1.77E+03	1.50E+01	5.19E+05	5.19E+05	1.13E-02	2.60E+02
2	5/30/05	1,581		0.00E+00	2.86E-03	1.35E+01	3.37E+00	2.67E+02	2.31E+00	7.10E+04	7.10E+04	1.73E-03	3.99E+01
3	5/30/05	3,055		0.00E+00	2.40E-03	1.48E+01	2.82E+00	2.27E+02	1.93E+00	6.22E+04	6.22E+04	1.45E-03	3.34E+01
4	5/30/05	65,477		0.00E+00	3.34E-03	4.17E+03	1.00E+02	8.76E+03	7.16E+01	3.15E+06	3.15E+06	5.37E-02	1.24E+03
5	5/30/05	57,629		0.00E+00	4.43E-02	1.33E+03	9.82E+01	8.23E+03	6.86E+01	2.58E+06	2.58E+06	5.14E-02	1.19E+03
6	5/30/05	38,708		0.00E+00	0.00E+00	1.98E+03	9.30E+01	8.01E+03	6.66E+01	2.74E+06	2.74E+06	4.99E-02	1.15E+03
7	5/30/05	11,844	130	0.00E+00	1.41E-02	7.98E+01	3.90E+00	3.36E+02	2.26E+00	9.24E+04	9.24E+04	1.68E-03	3.91E+01
8	5/30/05	1,799		0.00E+00	1.96E-03	2.77E+01	1.03E+00	8.98E+01	6.62E-01	2.83E+04	2.83E+04	4.94E-04	1.14E+01
25	5/30/05	-	1,050	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
26	5/30/05	159,462		0.00E+00	5.46E-01	9.21E+02	3.21E+01	3.13E+03	2.66E+00	1.71E+05	1.71E+05	1.41E-03	4.61E+01
27	5/30/05	-	4,990	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
28	5/30/05	-		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	5/30/05	242,468		0.00E+00	1.25E-01	4.95E+04	1.65E+02	1.63E+04	1.13E+02	7.61E+06	7.61E+06	8.47E-02	1.96E+03
34	5/30/05	77,119		0.00E+00	0.00E+00	3.23E+04	1.66E+02	1.61E+04	1.19E+02	7.36E+06	7.36E+06	8.92E-02	2.06E+03
44	5/30/05	-		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
45	5/30/05	-		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
46	5/30/05	-		0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
47	5/30/05	137,763		0.00E+00	4.32E-01	5.37E+02	2.54E+01	2.45E+03	2.10E+00	1.30E+05	1.30E+05	1.11E-03	3.65E+01

Tank	Reference Date from Worksheet	Sludge, gal	Surrogate H-3 Tank (Ci/gal)	C-14 (Ci/gal)	Co-60 (Ci/gal)	Ni-59 (Ci/gal)	Ni-63 (Ci/gal)	Se-79 (Ci/gal)	Sr-90 (Ci/gal)	Y-90 (Ci/gal)	Nb-94 (Ci/gal)	Tc-99 (Ci/gal)
	Sludge 1.5											
1	5/30/05	7,046	1 0.00E+00	1.71E-06	2.63E-02	3.07E-03	2.51E-01	2.13E-03	7.36E+01	7.36E+01	1.60E-06	3.69E-02
2	5/30/05	4,065	2 0.00E+00	7.04E-07	3.31E-03	8.29E-04	6.58E-02	5.68E-04	1.75E+01	1.75E+01	4.25E-07	9.82E-03
3	5/30/05	4,065	3 0.00E+00	5.90E-07	3.64E-03	6.94E-04	5.58E-02	4.75E-04	1.53E+01	1.53E+01	3.55E-07	8.22E-03
4	5/30/05	127,099	4 0.00E+00	2.63E-08	3.28E-02	7.88E-04	6.89E-02	5.63E-04	2.48E+01	2.48E+01	4.22E-07	9.74E-03
5	5/30/05	30,623	5 0.00E+00	1.45E-06	4.33E-02	3.21E-03	2.69E-01	2.24E-03	8.41E+01	8.41E+01	1.68E-06	3.88E-02
6	5/30/05	24,932	6 0.00E+00	0.00E+00	7.95E-02	3.73E-03	3.21E-01	2.67E-03	1.10E+02	1.10E+02	2.00E-06	4.62E-02
7	5/30/05	19,708	7 0.00E+00	7.18E-07	4.05E-03	1.98E-04	1.71E-02	1.15E-04	4.69E+00	4.69E+00	8.53E-08	1.99E-03
8	5/30/05	4,100	8 0.00E+00	4.78E-07	6.76E-03	2.50E-04	2.19E-02	1.61E-04	6.91E+00	6.91E+00	1.20E-07	2.79E-03
25	5/30/05	-	26 0.00E+00	2.11E-06	3.55E-03	1.24E-04	1.21E-02	1.02E-05	6.61E-01	6.61E-01	5.43E-09	1.78E-04
26	5/30/05	259,319	26 0.00E+00	2.11E-06	3.55E-03	1.24E-04	1.21E-02	1.02E-05	6.61E-01	6.61E-01	5.43E-09	1.78E-04
27	5/30/05	3,861	26 0.00E+00	2.11E-06	3.55E-03	1.24E-04	1.21E-02	1.02E-05	6.61E-01	6.61E-01	5.43E-09	1.78E-04
28	5/30/05	-	26 0.00E+00	2.11E-06	3.55E-03	1.24E-04	1.21E-02	1.02E-05	6.61E-01	6.61E-01	5.43E-09	1.78E-04
33	5/30/05	84,240	33 0.00E+00	1.48E-06	5.87E-01	1.95E-03	1.93E-01	1.34E-03	9.03E+01	9.03E+01	1.01E-06	2.32E-02
34	5/30/05	20,183	34 0.00E+00	0.00E+00	1.60E+00	8.23E-03	7.96E-01	5.89E-03	3.65E+02	3.65E+02	4.42E-06	1.02E-01
44	5/30/05	-	26 0.00E+00	2.11E-06	3.55E-03	1.24E-04	1.21E-02	1.02E-05	6.61E-01	6.61E-01	5.43E-09	1.78E-04
45	5/30/05	-	26 0.00E+00	2.11E-06	3.55E-03	1.24E-04	1.21E-02	1.02E-05	6.61E-01	6.61E-01	5.43E-09	1.78E-04
46	5/30/05	-	26 0.00E+00	2.11E-06	3.55E-03	1.24E-04	1.21E-02	1.02E-05	6.61E-01	6.61E-01	5.43E-09	1.78E-04
47	5/30/05	247,982	26 0.00E+00	2.11E-06	3.55E-03	1.24E-04	1.21E-02	1.02E-05	6.61E-01	6.61E-01	5.43E-09	1.78E-04

Tank	Reference date	Sludge, gal	Surrogate H-3 Tank (Ci/gal)	C-14 (Ci/gal)	Co-60 (Ci/gal)	Ni-59 (Ci/gal)	Ni-63 (Ci/gal)	Se-79 (Ci/gal)	Sr-90 (Ci/gal)	Y-90 (Ci/gal)	Nb-94 (Ci/gal)	Tc-99 (Ci/gal)
1	9/30/2020	7,046	1 0.00E+00	1.71E-06	3.50E-03	3.07E-03	2.26E-01	2.13E-03	5.07E+01	5.07E+01	1.60E-06	3.69E-02
2	9/30/2020	4,065	2 0.00E+00	7.03E-07	4.40E-04	8.29E-04	5.92E-02	5.68E-04	1.20E+01	1.20E+01	4.24E-07	9.82E-03
3	9/30/2020	4,065	3 0.00E+00	5.88E-07	4.85E-04	6.94E-04	5.02E-02	4.75E-04	1.05E+01	1.05E+01	3.55E-07	8.22E-03
4	9/30/2020	127,099	4 0.00E+00	2.62E-08	4.36E-03	7.88E-04	6.20E-02	5.63E-04	1.71E+01	1.71E+01	4.22E-07	9.74E-03
5	9/30/2020	30,623	5 0.00E+00	1.44E-06	5.76E-03	3.20E-03	2.42E-01	2.24E-03	5.79E+01	5.79E+01	1.68E-06	3.88E-02
6	9/30/2020	24,932	6 0.00E+00	0.00E+00	1.06E-02	3.73E-03	2.89E-01	2.67E-03	7.56E+01	7.56E+01	2.00E-06	4.62E-02
7	9/30/2020	19,708	7 0.00E+00	7.16E-07	5.39E-04	1.98E-04	1.53E-02	1.15E-04	3.23E+00	3.23E+00	8.53E-08	1.99E-03
8	9/30/2020	4,100	8 0.00E+00	4.78E-07	8.99E-04	2.50E-04	1.97E-02	1.61E-04	4.76E+00	4.76E+00	1.20E-07	2.79E-03
25	9/30/2020	-	26 0.00E+00	2.10E-06	4.73E-04	1.24E-04	1.09E-02	1.02E-05	4.55E-01	4.55E-01	5.43E-09	1.78E-04
26	9/30/2020	259,319	26 0.00E+00	2.10E-06	4.73E-04	1.24E-04	1.09E-02	1.02E-05	4.55E-01	4.55E-01	5.43E-09	1.78E-04
27	9/30/2020	3,861	26 0.00E+00	2.10E-06	4.73E-04	1.24E-04	1.09E-02	1.02E-05	4.55E-01	4.55E-01	5.43E-09	1.78E-04
28	9/30/2020	-	26 0.00E+00	2.10E-06	4.73E-04	1.24E-04	1.09E-02	1.02E-05	4.55E-01	4.55E-01	5.43E-09	1.78E-04
33	9/30/2020	84,240	33 0.00E+00	1.48E-06	7.81E-02	1.95E-03	1.74E-01	1.34E-03	6.22E+01	6.22E+01	1.01E-06	2.32E-02
34	9/30/2020	20,183	34 0.00E+00	0.00E+00	2.13E-01	8.23E-03	7.16E-01	5.89E-03	2.51E+02	2.51E+02	4.42E-06	1.02E-01
44	9/30/2020	-	26 0.00E+00	2.10E-06	4.73E-04	1.24E-04	1.09E-02	1.02E-05	4.55E-01	4.55E-01	5.43E-09	1.78E-04
45	9/30/2020	-	26 0.00E+00	2.10E-06	4.73E-04	1.24E-04	1.09E-02	1.02E-05	4.55E-01	4.55E-01	5.43E-09	1.78E-04
46	9/30/2020	-	26 0.00E+00	2.10E-06	4.73E-04	1.24E-04	1.09E-02	1.02E-05	4.55E-01	4.55E-01	5.43E-09	1.78E-04
47	9/30/2020	247,982	26 0.00E+00	2.10E-06	4.73E-04	1.24E-04	1.09E-02	1.02E-05	4.55E-01	4.55E-01	5.43E-09	1.78E-04

Half-life,
yr

1.23E+01 5.73E+03 5.27E+00 7.50E+04 1.00E+02 6.50E+04 2.85E+01 2.85E+01 2.03E+04 2.13E+05

Drysludge

Tank	Reference Date from Worksheet	Ru-106 (Ci)	Rh-106 (Ci)	Sb-125 (Ci)	Sn-126 (Ci)	I-129 (Ci)	Cs-134 (Ci)	Cs-135 (Ci)	Cs-137 (Ci)	Ba-137m (Ci)	Ce-144 (Ci)	Pr-144 (Ci)	Pm-147 (Ci)
	Sludge 1.5												
1	5/30/05	4.24E-06	4.24E-06	1.11E+01	2.80E+01	1.24E-03	1.04E-02	1.74E-01	3.68E+04	3.48E+04	4.39E-09	4.39E-09	1.55E+02
2	5/30/05	2.92E-09	2.92E-09	3.27E-01	4.29E+00	1.90E-04	1.55E-04	2.67E-02	5.06E+03	4.79E+03	4.04E-13	4.04E-13	4.18E+00
3	5/30/05	1.93E-08	1.93E-08	4.91E-01	3.59E+00	1.59E-04	2.95E-04	2.24E-02	4.43E+03	4.19E+03	6.63E-12	6.63E-12	6.45E+00
4	5/30/05	1.97E-01	1.97E-01	1.38E+03	1.33E+02	5.90E-03	4.10E+00	8.29E-01	2.20E+05	2.08E+05	3.49E-03	3.49E-03	2.22E+04
5	5/30/05	1.98E-04	1.98E-04	1.22E+02	1.28E+02	5.66E-03	1.52E-01	7.95E-01	1.82E+05	1.72E+05	3.84E-07	3.84E-07	1.75E+03
6	5/30/05	1.23E-03	1.23E-03	2.49E+02	1.24E+02	5.49E-03	3.77E-01	7.71E-01	1.92E+05	1.82E+05	4.39E-06	4.39E-06	3.67E+03
7	5/30/05	5.59E-04	5.59E-04	1.50E+01	4.21E+00	1.87E-04	3.11E-02	2.62E-02	6.49E+03	6.14E+03	9.04E-06	9.04E-06	2.30E+02
8	5/30/05	2.06E-04	2.06E-04	5.44E+00	1.23E+00	5.45E-05	1.13E-02	7.66E-03	1.98E+03	1.88E+03	3.36E-06	3.36E-06	8.35E+01
25	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
26	5/30/05	6.23E+01	6.23E+01	1.22E+03	4.93E+00	2.19E-04	9.67E+00	3.08E-02	1.17E+04	1.11E+04	2.89E+01	2.89E+01	2.20E+04
27	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
28	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	5/30/05	3.72E+03	3.72E+03	8.07E+04	2.10E+02	9.32E-03	7.03E+02	1.31E+00	5.19E+05	4.91E+05	1.23E+03	1.23E+03	1.48E+06
34	5/30/05	2.10E+02	2.10E+02	3.17E+04	2.21E+02	9.80E-03	1.91E+02	1.38E+00	5.05E+05	4.78E+05	2.74E+01	2.74E+01	5.55E+05
44	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
45	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
46	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
47	5/30/05	1.12E+00	1.12E+00	4.53E+02	3.90E+00	1.73E-04	2.37E+00	2.43E-02	8.89E+03	8.41E+03	7.76E-02	7.76E-02	7.83E+03

Tank	Reference Date from Worksheet	Ru-106 (Ci/gal)	Rh-106 (Ci/gal)	Sb-125 (Ci/gal)	Sn-126 (Ci/gal)	I-129 (Ci/gal)	Cs-134 (Ci/gal)	Cs-135 (Ci/gal)	Cs-137 (Ci/gal)	Ba-137m (Ci/gal)	Ce-144 (Ci/gal)	Pr-144 (Ci/gal)	Pm-147 (Ci/gal)
	Sludge 1.5												
1	5/30/05	6.01E-10	6.01E-10	1.58E-03	3.97E-03	1.76E-07	1.47E-06	2.47E-05	5.22E+00	4.94E+00	6.23E-13	6.23E-13	2.19E-02
2	5/30/05	7.19E-13	7.19E-13	8.05E-05	1.06E-03	4.68E-08	3.82E-08	6.57E-06	1.25E+00	1.18E+00	9.94E-17	9.94E-17	1.03E-03
3	5/30/05	4.75E-12	4.75E-12	1.21E-04	8.84E-04	3.92E-08	7.26E-08	5.50E-06	1.09E+00	1.03E+00	1.63E-15	1.63E-15	1.59E-03
4	5/30/05	1.55E-06	1.55E-06	1.09E-02	1.05E-03	4.64E-08	3.23E-05	6.52E-06	1.73E+00	1.64E+00	2.75E-08	2.75E-08	1.75E-01
5	5/30/05	6.48E-09	6.48E-09	3.98E-03	4.17E-03	1.85E-07	4.95E-06	2.60E-05	5.94E+00	5.61E+00	1.25E-11	1.25E-11	5.73E-02
6	5/30/05	4.94E-08	4.94E-08	9.98E-03	4.97E-03	2.20E-07	1.51E-05	3.09E-05	7.71E+00	7.29E+00	1.76E-10	1.76E-10	1.47E-01
7	5/30/05	2.84E-08	2.84E-08	7.63E-04	2.14E-04	9.46E-09	1.58E-06	1.33E-06	3.29E-01	3.11E-01	4.59E-10	4.59E-10	1.17E-02
8	5/30/05	5.03E-08	5.03E-08	1.33E-03	3.00E-04	1.33E-08	2.76E-06	1.87E-06	4.84E-01	4.58E-01	8.21E-10	8.21E-10	2.04E-02
25	5/30/05	2.40E-04	2.40E-04	4.70E-03	1.90E-05	8.43E-10	3.73E-05	1.19E-07	4.52E-02	4.28E-02	1.11E-04	1.11E-04	8.50E-02
26	5/30/05	2.40E-04	2.40E-04	4.70E-03	1.90E-05	8.43E-10	3.73E-05	1.19E-07	4.52E-02	4.28E-02	1.11E-04	1.11E-04	8.50E-02
27	5/30/05	2.40E-04	2.40E-04	4.70E-03	1.90E-05	8.43E-10	3.73E-05	1.19E-07	4.52E-02	4.28E-02	1.11E-04	1.11E-04	8.50E-02
28	5/30/05	2.40E-04	2.40E-04	4.70E-03	1.90E-05	8.43E-10	3.73E-05	1.19E-07	4.52E-02	4.28E-02	1.11E-04	1.11E-04	8.50E-02
33	5/30/05	4.42E-02	4.42E-02	9.58E-01	2.50E-03	1.11E-07	8.34E-03	1.55E-05	6.17E+00	5.83E+00	1.46E-02	1.46E-02	1.76E+01
34	5/30/05	1.04E-02	1.04E-02	1.57E+00	1.10E-02	4.85E-07	9.47E-03	6.82E-05	2.50E+01	2.37E+01	1.36E-03	1.36E-03	2.75E+01
44	5/30/05	2.40E-04	2.40E-04	4.70E-03	1.90E-05	8.43E-10	3.73E-05	1.19E-07	4.52E-02	4.28E-02	1.11E-04	1.11E-04	8.50E-02
45	5/30/05	2.40E-04	2.40E-04	4.70E-03	1.90E-05	8.43E-10	3.73E-05	1.19E-07	4.52E-02	4.28E-02	1.11E-04	1.11E-04	8.50E-02
46	5/30/05	2.40E-04	2.40E-04	4.70E-03	1.90E-05	8.43E-10	3.73E-05	1.19E-07	4.52E-02	4.28E-02	1.11E-04	1.11E-04	8.50E-02
47	5/30/05	2.40E-04	2.40E-04	4.70E-03	1.90E-05	8.43E-10	3.73E-05	1.19E-07	4.52E-02	4.28E-02	1.11E-04	1.11E-04	8.50E-02

Tank	Reference date	Ru-106 (Ci/gal)	Rh-106 (Ci/gal)	Sb-125 (Ci/gal)	Sn-126 (Ci/gal)	I-129 (Ci/gal)	Cs-134 (Ci/gal)	Cs-135 (Ci/gal)	Cs-137 (Ci/gal)	Ba-137m (Ci/gal)	Ce-144 (Ci/gal)	Pr-144 (Ci/gal)	Pm-147 (Ci/gal)
1	9/30/2020	1.79E-14	1.79E-14	3.22E-05	3.97E-03	1.76E-07	8.48E-09	2.47E-05	3.67E+00	3.47E+00	7.51E-19	7.51E-19	3.81E-04
2	9/30/2020	2.14E-17	2.14E-17	1.64E-06	1.06E-03	4.68E-08	2.20E-10	6.57E-06	8.75E-01	8.28E-01	1.20E-22	1.20E-22	1.79E-05
3	9/30/2020	1.41E-16	1.41E-16	2.46E-06	8.84E-04	3.92E-08	4.19E-10	5.50E-06	7.66E-01	7.25E-01	1.96E-21	1.96E-21	2.76E-05
4	9/30/2020	4.62E-11	4.62E-11	2.21E-04	1.05E-03	4.64E-08	1.86E-07	6.52E-06	1.22E+00	1.15E+00	3.31E-14	3.31E-14	3.03E-03
5	9/30/2020	1.93E-13	1.93E-13	8.11E-05	4.17E-03	1.85E-07	2.85E-08	2.60E-05	4.17E+00	3.95E+00	1.51E-17	1.51E-17	9.95E-04
6	9/30/2020	1.47E-12	1.47E-12	2.03E-04	4.97E-03	2.20E-07	8.72E-08	3.09E-05	5.42E+00	5.13E+00	2.12E-16	2.12E-16	2.56E-03
7	9/30/2020	8.44E-13	8.44E-13	1.55E-05	2.14E-04	9.46E-09	9.09E-09	1.33E-06	2.31E-01	2.19E-01	5.52E-16	5.52E-16	2.03E-04
8	9/30/2020	1.50E-12	1.50E-12	2.70E-05	3.00E-04	1.33E-08	1.59E-08	1.87E-06	3.40E-01	3.22E-01	9.89E-16	9.89E-16	3.54E-04
25	9/30/2020	7.15E-09	7.15E-09	9.56E-05	1.90E-05	8.43E-10	2.15E-07	1.19E-07	3.18E-02	3.01E-02	1.34E-10	1.34E-10	1.48E-03
26	9/30/2020	7.15E-09	7.15E-09	9.56E-05	1.90E-05	8.43E-10	2.15E-07	1.19E-07	3.18E-02	3.01E-02	1.34E-10	1.34E-10	1.48E-03
27	9/30/2020	7.15E-09	7.15E-09	9.56E-05	1.90E-05	8.43E-10	2.15E-07	1.19E-07	3.18E-02	3.01E-02	1.34E-10	1.34E-10	1.48E-03
28	9/30/2020	7.15E-09	7.15E-09	9.56E-05	1.90E-05	8.43E-10	2.15E-07	1.19E-07	3.18E-02	3.01E-02	1.34E-10	1.34E-10	1.48E-03
33	9/30/2020	1.31E-06	1.31E-06	1.95E-02	2.50E-03	1.11E-07	4.81E-05	1.55E-05	4.33E+00	4.10E+00	1.76E-08	1.76E-08	3.06E-01
34	9/30/2020	3.10E-07	3.10E-07	3.20E-02	1.10E-02	4.85E-07	5.46E-05	6.82E-05	1.76E+01	1.66E+01	1.64E-09	1.64E-09	4.78E-01
44	9/30/2020	7.15E-09	7.15E-09	9.56E-05	1.90E-05	8.43E-10	2.15E-07	1.19E-07	3.18E-02	3.01E-02	1.34E-10	1.34E-10	1.48E-03
45	9/30/2020	7.15E-09	7.15E-09	9.56E-05	1.90E-05	8.43E-10	2.15E-07	1.19E-07	3.18E-02	3.01E-02	1.34E-10	1.34E-10	1.48E-03
46	9/30/2020	7.15E-09	7.15E-09	9.56E-05	1.90E-05	8.43E-10	2.15E-07	1.19E-07	3.18E-02	3.01E-02	1.34E-10	1.34E-10	1.48E-03
47	9/30/2020	7.15E-09	7.15E-09	9.56E-05	1.90E-05	8.43E-10	2.15E-07	1.19E-07	3.18E-02	3.01E-02	1.34E-10	1.34E-10	1.48E-03

Half-life,
yr 1.02E+00 1.02E+00 2.73E+00 1.00E+05 1.57E+07 2.06E+00 2.30E+06 3.02E+01 3.02E+01 7.80E-01 7.80E-01 2.62E+00

Drysludge

Tank	Reference	Eu-154	Th-232	U-232 (Ci)	U-233 (Ci)	U-234 (Ci)	U-235 (Ci)	U-236 (Ci)	U-238 (Ci)	Np-237	Pu-238	Pu-239	Pu-240
	Date from Worksheet	(Ci)	(Ci)							(Ci)	(Ci)	(Ci)	(Ci)
	Sludge 1.5												
1	5/30/05	8.63E+02	0.00E+00	1.14E-02	0.00E+00	0.00E+00	1.76E-02	0.00E+00	4.39E-01	6.41E-01	4.97E+02	1.33E+02	2.97E+01
2	5/30/05	8.76E+01	0.00E+00	1.69E-03	0.00E+00	0.00E+00	8.12E-04	0.00E+00	2.02E-02	2.12E-01	1.38E+02	1.98E+01	4.42E+00
3	5/30/05	8.59E+01	0.00E+00	1.44E-03	0.00E+00	0.00E+00	2.03E-03	0.00E+00	5.06E-02	3.78E-01	1.66E+02	2.38E+01	5.31E+00
4	5/30/05	9.79E+03	0.00E+00	5.91E-02	0.00E+00	0.00E+00	7.77E-02	0.00E+00	3.34E+00	2.98E+00	6.05E+02	5.98E+02	1.34E+02
5	5/30/05	5.16E+03	0.00E+00	5.38E-02	0.00E+00	0.00E+00	1.05E-01	0.00E+00	2.48E+00	4.19E+00	2.89E+03	4.82E+02	1.15E+02
6	5/30/05	6.60E+03	0.00E+00	5.37E-02	0.00E+00	0.00E+00	6.65E-02	0.00E+00	2.49E+00	8.63E-01	0.00E+00	2.55E+02	8.84E+01
7	5/30/05	2.35E+02	0.00E+00	1.96E-03	0.00E+00	0.00E+00	6.68E-03	0.00E+00	2.75E-01	1.24E-01	5.12E+02	9.89E+01	2.38E+01
8	5/30/05	7.80E+01	0.00E+00	5.62E-04	0.00E+00	0.00E+00	1.49E-03	0.00E+00	6.84E-02	3.11E-02	8.90E+01	1.95E+01	4.60E+00
25	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
26	5/30/05	1.14E+03	0.00E+00	8.82E-03	2.69E-08	8.57E-08	2.54E-02	3.27E-03	3.04E+00	7.85E-03	1.62E+04	2.54E+03	5.68E+02
27	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
28	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	5/30/05	5.56E+04	0.00E+00	1.12E-01	5.39E-07	1.11E-02	2.09E-01	1.16E-01	3.02E+01	9.48E+00	1.55E+04	8.44E+03	1.48E+03
34	5/30/05	4.43E+04	0.00E+00	1.13E-01	0.00E+00	0.00E+00	1.14E-01	0.00E+00	8.05E+00	6.22E+00	0.00E+00	1.30E+03	2.91E+02
44	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
45	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
46	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
47	5/30/05	7.62E+02	0.00E+00	6.86E-03	0.00E+00	0.00E+00	1.86E-02	0.00E+00	1.48E+00	0.00E+00	1.58E+04	2.26E+03	5.06E+02
Tank	Reference	Eu-154	Th-232	U-232	U-233	U-234	U-235	U-236	U-238	Np-237	Pu-238	Pu-239	Pu-240
	Date from Worksheet	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)
	Sludge 1.5												
1	5/30/05	1.22E-01	0.00E+00	1.62E-06	0.00E+00	0.00E+00	2.50E-06	0.00E+00	6.23E-05	9.09E-05	7.06E-02	1.89E-02	4.22E-03
2	5/30/05	2.16E-02	0.00E+00	4.15E-07	0.00E+00	0.00E+00	2.00E-07	0.00E+00	4.98E-06	5.21E-05	3.40E-02	4.86E-03	1.09E-03
3	5/30/05	2.11E-02	0.00E+00	3.53E-07	0.00E+00	0.00E+00	4.99E-07	0.00E+00	1.24E-05	9.30E-05	4.09E-02	5.85E-03	1.31E-03
4	5/30/05	7.70E-02	0.00E+00	4.65E-07	0.00E+00	0.00E+00	6.11E-07	0.00E+00	2.63E-05	2.35E-05	4.76E-03	4.70E-03	1.05E-03
5	5/30/05	1.69E-01	0.00E+00	1.76E-06	0.00E+00	0.00E+00	3.42E-06	0.00E+00	8.10E-05	1.37E-04	9.43E-02	1.57E-02	3.76E-03
6	5/30/05	2.65E-01	0.00E+00	2.15E-06	0.00E+00	0.00E+00	2.67E-06	0.00E+00	9.97E-05	3.46E-05	0.00E+00	1.02E-02	3.55E-03
7	5/30/05	1.19E-02	0.00E+00	9.94E-08	0.00E+00	0.00E+00	3.39E-07	0.00E+00	1.39E-05	6.31E-06	2.60E-02	5.02E-03	1.21E-03
8	5/30/05	1.90E-02	0.00E+00	1.37E-07	0.00E+00	0.00E+00	3.63E-07	0.00E+00	1.67E-05	7.57E-06	2.17E-02	4.76E-03	1.12E-03
25	5/30/05	4.38E-03	0.00E+00	3.40E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	6.25E-02	9.80E-03	2.19E-03
26	5/30/05	4.38E-03	0.00E+00	3.40E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	6.25E-02	9.80E-03	2.19E-03
27	5/30/05	4.38E-03	0.00E+00	3.40E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	6.25E-02	9.80E-03	2.19E-03
28	5/30/05	4.38E-03	0.00E+00	3.40E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	6.25E-02	9.80E-03	2.19E-03
33	5/30/05	6.60E-01	0.00E+00	1.33E-06	6.40E-12	1.32E-07	2.48E-06	1.37E-06	3.58E-04	1.13E-04	1.84E-01	1.00E-01	1.76E-02
34	5/30/05	2.19E+00	0.00E+00	5.59E-06	0.00E+00	0.00E+00	5.65E-06	0.00E+00	3.99E-04	3.08E-04	0.00E+00	6.44E-02	1.44E-02
44	5/30/05	4.38E-03	0.00E+00	3.40E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	6.25E-02	9.80E-03	2.19E-03
45	5/30/05	4.38E-03	0.00E+00	3.40E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	6.25E-02	9.80E-03	2.19E-03
46	5/30/05	4.38E-03	0.00E+00	3.40E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	6.25E-02	9.80E-03	2.19E-03
47	5/30/05	4.38E-03	0.00E+00	3.40E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	6.25E-02	9.80E-03	2.19E-03
Tank	Reference	Eu-154	Th-232	U-232	U-233	U-234	U-235	U-236	U-238	Np-237	Pu-238	Pu-239	Pu-240
	date	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)	(Ci/gal)
1	9/30/2020	3.66E-02	0.00E+00	1.40E-06	0.00E+00	0.00E+00	2.50E-06	0.00E+00	6.23E-05	9.09E-05	6.25E-02	1.89E-02	4.21E-03
2	9/30/2020	6.44E-03	0.00E+00	3.58E-07	0.00E+00	0.00E+00	2.00E-07	0.00E+00	4.98E-06	5.21E-05	3.01E-02	4.86E-03	1.08E-03
3	9/30/2020	6.31E-03	0.00E+00	3.05E-07	0.00E+00	0.00E+00	4.99E-07	0.00E+00	1.24E-05	9.30E-05	3.63E-02	5.85E-03	1.31E-03
4	9/30/2020	2.30E-02	0.00E+00	4.01E-07	0.00E+00	0.00E+00	6.11E-07	0.00E+00	2.63E-05	2.35E-05	4.22E-03	4.70E-03	1.05E-03
5	9/30/2020	5.04E-02	0.00E+00	1.52E-06	0.00E+00	0.00E+00	3.42E-06	0.00E+00	8.10E-05	1.37E-04	8.36E-02	1.57E-02	3.75E-03
6	9/30/2020	7.91E-02	0.00E+00	1.86E-06	0.00E+00	0.00E+00	2.67E-06	0.00E+00	9.97E-05	3.46E-05	0.00E+00	1.02E-02	3.54E-03
7	9/30/2020	3.57E-03	0.00E+00	8.57E-08	0.00E+00	0.00E+00	3.39E-07	0.00E+00	1.39E-05	6.31E-06	2.30E-02	5.02E-03	1.21E-03
8	9/30/2020	5.69E-03	0.00E+00	1.18E-07	0.00E+00	0.00E+00	3.63E-07	0.00E+00	1.67E-05	7.57E-06	1.92E-02	4.76E-03	1.12E-03
25	9/30/2020	1.31E-03	0.00E+00	2.93E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	5.54E-02	9.79E-03	2.19E-03
26	9/30/2020	1.31E-03	0.00E+00	2.93E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	5.54E-02	9.79E-03	2.19E-03
27	9/30/2020	1.31E-03	0.00E+00	2.93E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	5.54E-02	9.79E-03	2.19E-03
28	9/30/2020	1.31E-03	0.00E+00	2.93E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	5.54E-02	9.79E-03	2.19E-03
33	9/30/2020	1.97E-01	0.00E+00	1.15E-06	6.40E-12	1.32E-07	2.48E-06	1.37E-06	3.58E-04	1.13E-04	1.63E-01	1.00E-01	1.76E-02
34	9/30/2020	6.55E-01	0.00E+00	4.82E-06	0.00E+00	0.00E+00	5.65E-06	0.00E+00	3.99E-04	3.08E-04	0.00E+00	6.44E-02	1.44E-02
44	9/30/2020	1.31E-03	0.00E+00	2.93E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	5.54E-02	9.79E-03	2.19E-03
45	9/30/2020	1.31E-03	0.00E+00	2.93E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	5.54E-02	9.79E-03	2.19E-03
46	9/30/2020	1.31E-03	0.00E+00	2.93E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	5.54E-02	9.79E-03	2.19E-03
47	9/30/2020	1.31E-03	0.00E+00	2.93E-08	1.04E-13	3.30E-13	9.78E-08	1.26E-08	1.17E-05	3.03E-08	5.54E-02	9.79E-03	2.19E-03
Half-life, yr		8.80E+00	1.41E+10	7.20E+01	1.59E+05	2.45E+05	7.04E+08	2.34E+07	4.47E+09	2.14E+06	8.77E+01	2.41E+04	6.56E+03

Drysludge

Tank	Reference Date from Worksheet Sludge 1.5	Pu-241 (Ci)	Pu-242 (Ci)	Ingrown Am- 241 sum at end (Ci)	Am-241 sum at end (Ci)	Am-242m (Ci)	Na-22	Al-26	Te-125m	Sb-126	Sb-126m	Sm-151	Eu-152
1	5/30/05	1.63E+02	6.12E-03	4.13E+01	1.94E+03	2.43E+00	6.55E-02	3.46E-02	2.72E+00	3.91E+00	2.80E+01	4.34E+04	9.55E+01
2	5/30/05	1.85E+01	9.08E-04	6.10E+00	2.95E+02	3.64E-01	8.97E-03	4.74E-03	7.99E-02	6.01E-01	4.29E+00	6.43E+03	1.13E+01
3	5/30/05	2.67E+01	1.09E-03	7.43E+00	2.48E+02	3.08E-01	7.87E-03	4.15E-03	1.20E-01	5.03E-01	3.59E+00	5.46E+03	1.05E+01
4	5/30/05	1.13E+03	2.75E-02	1.80E+02	9.85E+03	1.21E+01	3.98E-01	2.10E-01	3.38E+02	1.86E+01	1.33E+02	2.22E+05	7.88E+02
5	5/30/05	7.68E+02	3.40E-02	1.75E+02	8.92E+03	1.13E+01	3.26E-01	1.72E-01	2.98E+01	1.79E+01	1.28E+02	2.03E+05	5.22E+02
6	5/30/05	9.89E+02	1.74E-01	1.78E+02	8.79E+03	1.12E+01	3.46E-01	1.83E-01	6.08E+01	1.73E+01	1.24E+02	2.03E+05	6.11E+02
7	5/30/05	3.09E+02	2.66E-02	3.74E+01	3.17E+02	3.66E-01	1.17E-02	6.16E-03	3.63E+00	5.85E-01	4.18E+00	6.83E+03	2.08E+01
8	5/30/05	4.36E+01	5.80E-03	4.90E+00	9.67E+01	1.10E-01	3.58E-03	1.89E-03	1.33E+00	1.72E-01	1.23E+00	2.04E+03	6.73E+00
25	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
26	5/30/05	1.33E+04	1.13E-01	5.76E+02	0.00E+00	0.00E+00	2.17E-02	1.14E-02	2.97E+02	6.91E-01	4.93E+00	9.39E+03	6.40E+01
27	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
28	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	5/30/05	4.38E+04	8.57E-02	5.36E+02	2.34E+04	2.07E+01	9.61E-01	5.08E-01	1.97E+04	2.95E+01	2.10E+02	4.03E+05	2.96E+03
34	5/30/05	5.99E+03	6.03E-02	3.16E+02	1.50E+05	2.15E+01	9.30E-01	4.91E-01	7.73E+03	3.10E+01	2.21E+02	4.13E+05	2.62E+03
44	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
45	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
46	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
47	5/30/05	9.80E+03	1.04E-01	5.68E+02	0.00E+00	0.00E+00	1.64E-02	8.65E-03	1.11E+02	5.47E-01	3.90E+00	7.33E+03	4.58E+01
Tank	Reference Date from Worksheet Sludge 1.5	Pu-241 (Ci/gal)	Pu-242 (Ci/gal)	Ingrown Am- 241 (Ci/gal) (SUM at end)	Am-241 (Ci/gal) (SUM at end)	Am-242m (Ci/gal)	Na-22 (Ci/gal)	Al-26 (Ci/gal)	Te-125m (Ci/gal)	Sb-126 (Ci/gal)	Sb-126m (Ci/gal)	Sm-151 (Ci/gal)	Eu-152 (Ci/gal)
1	5/30/05	2.31E-02	8.68E-07	5.86E-03	2.76E-01	3.45E-04	9.30E-06	4.91E-06	3.86E-04	5.56E-04	3.97E-03	6.16E+00	1.35E-02
2	5/30/05	4.54E-03	2.23E-07	1.50E-03	7.26E-02	8.96E-05	2.21E-06	1.16E-06	1.97E-05	1.48E-04	1.06E-03	1.58E+00	2.78E-03
3	5/30/05	6.58E-03	2.69E-07	1.83E-03	6.10E-02	7.57E-05	1.93E-06	1.02E-06	2.95E-05	1.24E-04	8.84E-04	1.34E+00	2.57E-03
4	5/30/05	8.85E-03	2.16E-07	1.42E-03	7.75E-02	9.54E-05	3.13E-06	1.65E-06	2.66E-03	1.47E-04	1.05E-03	1.75E+00	6.20E-03
5	5/30/05	2.51E-02	1.11E-06	5.72E-03	2.91E-01	3.68E-04	1.06E-05	5.62E-06	9.72E-04	5.84E-04	4.17E-03	6.64E+00	1.70E-02
6	5/30/05	3.97E-02	6.98E-06	7.13E-03	3.52E-01	4.48E-04	1.39E-05	7.33E-06	2.44E-03	6.95E-04	4.97E-03	8.15E+00	2.45E-02
7	5/30/05	1.57E-02	1.35E-06	1.90E-03	1.61E-02	1.86E-05	5.91E-07	3.12E-07	1.84E-04	2.97E-05	2.12E-04	3.47E-01	1.06E-03
8	5/30/05	1.06E-02	1.41E-06	1.20E-03	2.36E-02	2.68E-05	8.73E-07	4.61E-07	3.24E-04	4.20E-05	3.00E-04	4.98E-01	1.64E-03
25	5/30/05	5.13E-02	4.36E-07	2.22E-03	0.00E+00	0.00E+00	8.35E-08	4.41E-08	1.15E-03	2.66E-06	1.90E-05	3.62E-02	2.47E-04
26	5/30/05	5.13E-02	4.36E-07	2.22E-03	0.00E+00	0.00E+00	8.35E-08	4.41E-08	1.15E-03	2.66E-06	1.90E-05	3.62E-02	2.47E-04
27	5/30/05	5.13E-02	4.36E-07	2.22E-03	0.00E+00	0.00E+00	8.35E-08	4.41E-08	1.15E-03	2.66E-06	1.90E-05	3.62E-02	2.47E-04
28	5/30/05	5.13E-02	4.36E-07	2.22E-03	0.00E+00	0.00E+00	8.35E-08	4.41E-08	1.15E-03	2.66E-06	1.90E-05	3.62E-02	2.47E-04
33	5/30/05	5.20E-01	1.02E-06	6.36E-03	2.78E-01	2.45E-04	1.14E-05	6.03E-06	2.34E-01	3.50E-04	2.50E-03	4.78E+00	3.51E-02
34	5/30/05	2.97E-01	2.99E-06	1.57E-02	7.41E+00	1.07E-03	4.61E-05	2.43E-05	3.83E-01	1.53E-03	1.10E-02	2.05E+01	1.30E-01
44	5/30/05	5.13E-02	4.36E-07	2.22E-03	0.00E+00	0.00E+00	8.35E-08	4.41E-08	1.15E-03	2.66E-06	1.90E-05	3.62E-02	2.47E-04
45	5/30/05	5.13E-02	4.36E-07	2.22E-03	0.00E+00	0.00E+00	8.35E-08	4.41E-08	1.15E-03	2.66E-06	1.90E-05	3.62E-02	2.47E-04
46	5/30/05	5.13E-02	4.36E-07	2.22E-03	0.00E+00	0.00E+00	8.35E-08	4.41E-08	1.15E-03	2.66E-06	1.90E-05	3.62E-02	2.47E-04
47	5/30/05	5.13E-02	4.36E-07	2.22E-03	0.00E+00	0.00E+00	8.35E-08	4.41E-08	1.15E-03	2.66E-06	1.90E-05	3.62E-02	2.47E-04
Tank	Reference date	Pu-241 (Ci/gal)	Pu-242 (Ci/gal)	Ingrown Am- 241 (Ci/gal) (SUM at end)	Am-241 (Ci/gal) (SUM at end)	Am-242m (Ci/gal)	Na-22 (Ci/gal)	Al-26 (Ci/gal)	Te-125m (Ci/gal)	Sb-126 (Ci/gal)	Sb-126m (Ci/gal)	Sm-151 (Ci/gal)	Eu-152 (Ci/gal)
1	9/30/2020	1.10E-02	8.68E-07	3.95E-04		3.21E-04	1.56E-07	4.91E-06	7.86E-06	5.55E-04	3.97E-03	5.47E+00	6.09E-03
2	9/30/2020	2.17E-03	2.23E-07	7.78E-05		8.35E-05	3.70E-08	1.16E-06	4.00E-07	1.48E-04	1.06E-03	1.41E+00	1.25E-03
3	9/30/2020	3.14E-03	2.69E-07	1.13E-04		7.06E-05	3.24E-08	1.02E-06	6.00E-07	1.24E-04	8.84E-04	1.19E+00	1.16E-03
4	9/30/2020	4.23E-03	2.16E-07	1.52E-04		8.89E-05	5.25E-08	1.65E-06	5.41E-05	1.47E-04	1.05E-03	1.56E+00	2.79E-03
5	9/30/2020	1.20E-02	1.11E-06	4.30E-04		3.43E-04	1.78E-07	5.62E-06	1.98E-05	5.84E-04	4.17E-03	5.90E+00	7.65E-03
6	9/30/2020	1.90E-02	6.98E-06	6.80E-04		4.17E-04	2.33E-07	7.33E-06	4.96E-05	6.95E-04	4.97E-03	7.24E+00	1.10E-02
7	9/30/2020	7.50E-03	1.35E-06	2.69E-04		1.73E-05	9.91E-09	3.12E-07	3.79E-06	2.99E-05	2.14E-04	3.08E-01	4.75E-04
8	9/30/2020	5.08E-03	1.41E-06	1.82E-04		2.50E-05	1.46E-08	4.61E-07	6.60E-06	4.20E-05	3.00E-04	4.43E-01	7.37E-04
25	9/30/2020	2.45E-02	4.36E-07	8.80E-04		0.00E+00	1.40E-09	4.41E-08	2.33E-05	2.66E-06	1.90E-05	3.22E-02	1.11E-04
26	9/30/2020	2.45E-02	4.36E-07	8.80E-04		0.00E+00	1.40E-09	4.41E-08	2.33E-05	2.66E-06	1.90E-05	3.22E-02	1.11E-04
27	9/30/2020	2.45E-02	4.36E-07	8.80E-04		0.00E+00	1.40E-09	4.41E-08	2.33E-05	2.66E-06	1.90E-05	3.22E-02	1.11E-04
28	9/30/2020	2.45E-02	4.36E-07	8.80E-04		0.00E+00	1.40E-09	4.41E-08	2.33E-05	2.66E-06	1.90E-05	3.22E-02	1.11E-04
33	9/30/2020	2.48E-01	1.02E-06	8.91E-03		2.29E-04	1.91E-07	6.03E-06	4.76E-03	3.50E-04	2.50E-03	4.25E+00	1.58E-02
34	9/30/2020	1.42E-01	2.99E-06	5.09E-03		9.94E-04	7.72E-07	2.43E-05	7.80E-03	1.53E-03	1.10E-02	1.82E+01	5.84E-02
44	9/30/2020	2.45E-02	4.36E-07	8.80E-04		0.00E+00	1.40E-09	4.41E-08	2.33E-05	2.66E-06	1.90E-05	3.22E-02	1.11E-04
45	9/30/2020	2.45E-02	4.36E-07	8.80E-04		0.00E+00	1.40E-09	4.41E-08	2.33E-05	2.66E-06	1.90E-05	3.22E-02	1.11E-04
46	9/30/2020	2.45E-02	4.36E-07	8.80E-04		0.00E+00	1.40E-09	4.41E-08	2.33E-05	2.66E-06	1.90E-05	3.22E-02	1.11E-04
47	9/30/2020	2.45E-02	4.36E-07	8.80E-04		0.00E+00	1.40E-09	4.41E-08	2.33E-05	2.66E-06	1.90E-05	3.22E-02	1.11E-04
Half-life, yr		1.44E+01	3.76E+05	4.33E+02	4.33E+02	1.52E+02	2.60E+00	7.15E+05	1.59E-01	3.40E-02	3.62E-05	9.01E+01	1.33E+01

Drysludge

Tank	Reference Date from Worksheet	Eu-155	Ra-226	Ac-227	Ra-228	Th-229	Th-230	Pa-231	Pu-244	Bk-249	Cf-249	Cf-251	Cf-252
Sludge 1.5													
1	5/30/05	4.86E+02	0.00E+00	7.74E-06	0.00E+00	0.00E+00	0.00E+00	1.65E-05	2.85E-05	2.35E-29	1.44E-17	0.00E+00	0.00E+00
2	5/30/05	3.33E+01	0.00E+00	4.27E-07	0.00E+00	0.00E+00	0.00E+00	8.52E-07	4.23E-06	5.62E-33	2.19E-18	0.00E+00	0.00E+00
3	5/30/05	3.74E+01	0.00E+00	9.85E-07	0.00E+00	0.00E+00	0.00E+00	2.02E-06	5.09E-06	5.96E-32	1.84E-18	0.00E+00	0.00E+00
4	5/30/05	1.22E+04	0.00E+00	2.81E-05	0.00E+00	0.00E+00	0.00E+00	6.43E-05	1.28E-04	4.97E-24	6.98E-17	0.00E+00	0.00E+00
5	5/30/05	3.58E+03	0.00E+00	4.21E-05	0.00E+00	0.00E+00	0.00E+00	9.27E-05	1.58E-04	1.54E-27	6.61E-17	0.00E+00	0.00E+00
6	5/30/05	5.47E+03	0.00E+00	2.27E-05	0.00E+00	0.00E+00	0.00E+00	5.35E-05	8.11E-04	1.32E-26	6.46E-17	0.00E+00	0.00E+00
7	5/30/05	2.23E+02	0.00E+00	1.85E-06	0.00E+00	0.00E+00	0.00E+00	4.14E-06	9.41E-05	1.29E-26	2.18E-18	0.00E+00	0.00E+00
8	5/30/05	7.87E+01	0.00E+00	5.62E-07	0.00E+00	0.00E+00	0.00E+00	1.26E-06	2.70E-05	4.80E-27	6.44E-19	0.00E+00	0.00E+00
25	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
26	5/30/05	2.94E+03	5.47E-15	2.12E-06	0.00E+00	4.42E-12	2.31E-12	8.60E-06	5.27E-04	6.10E-21	2.68E-18	0.00E+00	0.00E+00
27	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
28	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	5/30/05	1.56E+05	8.90E-10	1.11E-05	0.00E+00	2.66E-10	3.45E-07	5.03E-05	3.99E-04	3.00E-19	1.14E-16	0.00E+00	0.00E+00
34	5/30/05	1.02E+05	0.00E+00	1.30E-05	0.00E+00	0.00E+00	0.00E+00	4.85E-05	2.81E-04	1.52E-20	1.19E-16	0.00E+00	0.00E+00
44	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
45	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
46	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
47	5/30/05	1.69E+03	0.00E+00	2.37E-06	0.00E+00	0.00E+00	0.00E+00	8.45E-06	4.85E-04	5.86E-23	2.11E-18	0.00E+00	0.00E+00
Tank	Reference Date from Worksheet	Eu-155 (Ci/gal)	Ra-226 (Ci/gal)	Ac-227 (Ci/gal)	Ra-228 (Ci/gal)	Th-229 (Ci/gal)	Th-230 (Ci/gal)	Pa-231 (Ci/gal)	Pu-244 (Ci/gal)	Bk-249 (Ci/gal)	Cf-249 (Ci/gal)	Cf-251 (Ci/gal)	Cf-252 (Ci/gal)
Sludge 1.5													
1	5/30/05	6.89E-02	0.00E+00	1.10E-09	0.00E+00	0.00E+00	0.00E+00	2.34E-09	4.04E-09	3.33E-33	2.04E-21	0.00E+00	0.00E+00
2	5/30/05	8.20E-03	0.00E+00	1.05E-10	0.00E+00	0.00E+00	0.00E+00	2.09E-10	1.04E-09	1.38E-36	5.38E-22	0.00E+00	0.00E+00
3	5/30/05	9.21E-03	0.00E+00	2.42E-10	0.00E+00	0.00E+00	0.00E+00	4.98E-10	1.25E-09	1.47E-35	4.52E-22	0.00E+00	0.00E+00
4	5/30/05	9.62E-02	0.00E+00	2.21E-10	0.00E+00	0.00E+00	0.00E+00	5.06E-10	1.01E-09	3.91E-29	5.49E-22	0.00E+00	0.00E+00
5	5/30/05	1.17E-01	0.00E+00	1.37E-09	0.00E+00	0.00E+00	0.00E+00	3.03E-09	5.17E-09	5.05E-32	2.16E-21	0.00E+00	0.00E+00
6	5/30/05	2.19E-01	0.00E+00	9.12E-10	0.00E+00	0.00E+00	0.00E+00	2.14E-09	3.25E-08	5.31E-31	2.59E-21	0.00E+00	0.00E+00
7	5/30/05	1.13E-02	0.00E+00	9.40E-11	0.00E+00	0.00E+00	0.00E+00	2.10E-10	4.77E-09	6.53E-31	1.11E-22	0.00E+00	0.00E+00
8	5/30/05	1.92E-02	0.00E+00	1.37E-10	0.00E+00	0.00E+00	0.00E+00	3.07E-10	6.59E-09	1.17E-30	1.57E-22	0.00E+00	0.00E+00
25	5/30/05	1.13E-02	2.11E-20	8.18E-12	0.00E+00	1.70E-17	8.92E-18	3.31E-11	2.03E-09	2.35E-26	1.03E-23	0.00E+00	0.00E+00
26	5/30/05	1.13E-02	2.11E-20	8.18E-12	0.00E+00	1.70E-17	8.92E-18	3.31E-11	2.03E-09	2.35E-26	1.03E-23	0.00E+00	0.00E+00
27	5/30/05	1.13E-02	2.11E-20	8.18E-12	0.00E+00	1.70E-17	8.92E-18	3.31E-11	2.03E-09	2.35E-26	1.03E-23	0.00E+00	0.00E+00
28	5/30/05	1.13E-02	2.11E-20	8.18E-12	0.00E+00	1.70E-17	8.92E-18	3.31E-11	2.03E-09	2.35E-26	1.03E-23	0.00E+00	0.00E+00
33	5/30/05	1.85E+00	1.06E-14	1.32E-10	0.00E+00	3.15E-15	4.10E-12	5.97E-10	4.74E-09	3.56E-24	1.36E-21	0.00E+00	0.00E+00
34	5/30/05	5.07E+00	0.00E+00	6.45E-10	0.00E+00	0.00E+00	0.00E+00	2.40E-09	1.39E-08	7.54E-25	5.91E-21	0.00E+00	0.00E+00
44	5/30/05	1.13E-02	2.11E-20	8.18E-12	0.00E+00	1.70E-17	8.92E-18	3.31E-11	2.03E-09	2.35E-26	1.03E-23	0.00E+00	0.00E+00
45	5/30/05	1.13E-02	2.11E-20	8.18E-12	0.00E+00	1.70E-17	8.92E-18	3.31E-11	2.03E-09	2.35E-26	1.03E-23	0.00E+00	0.00E+00
46	5/30/05	1.13E-02	2.11E-20	8.18E-12	0.00E+00	1.70E-17	8.92E-18	3.31E-11	2.03E-09	2.35E-26	1.03E-23	0.00E+00	0.00E+00
47	5/30/05	1.13E-02	2.11E-20	8.18E-12	0.00E+00	1.70E-17	8.92E-18	3.31E-11	2.03E-09	2.35E-26	1.03E-23	0.00E+00	0.00E+00
Tank	Reference date	Eu-155 (Ci/gal)	Ra-226 (Ci/gal)	Ac-227 (Ci/gal)	Ra-228 (Ci/gal)	Th-229 (Ci/gal)	Th-230 (Ci/gal)	Pa-231 (Ci/gal)	Pu-244 (Ci/gal)	Bk-249 (Ci/gal)	Cf-249 (Ci/gal)	Cf-251 (Ci/gal)	Cf-252 (Ci/gal)
1	9/30/2020	8.08E-03	0.00E+00	1.14E-09	0.00E+00	0.00E+00	0.00E+00	2.40E-09	3.97E-09	1.80E-38	1.98E-21	0.00E+00	0.00E+00
2	9/30/2020	9.61E-04	0.00E+00	9.07E-11	0.00E+00	0.00E+00	0.00E+00	1.91E-10	1.02E-09	7.49E-42	5.22E-22	0.00E+00	0.00E+00
3	9/30/2020	1.08E-03	0.00E+00	2.27E-10	0.00E+00	0.00E+00	0.00E+00	4.78E-10	1.23E-09	7.94E-41	4.39E-22	0.00E+00	0.00E+00
4	9/30/2020	1.13E-02	0.00E+00	2.78E-10	0.00E+00	0.00E+00	0.00E+00	5.85E-10	9.88E-10	2.12E-34	5.33E-22	0.00E+00	0.00E+00
5	9/30/2020	1.37E-02	0.00E+00	1.55E-09	0.00E+00	0.00E+00	0.00E+00	3.27E-09	5.07E-09	2.73E-37	2.09E-21	0.00E+00	0.00E+00
6	9/30/2020	2.57E-02	0.00E+00	1.21E-09	0.00E+00	0.00E+00	0.00E+00	2.55E-09	3.19E-08	2.88E-36	2.51E-21	0.00E+00	0.00E+00
7	9/30/2020	1.33E-03	0.00E+00	1.54E-10	0.00E+00	0.00E+00	0.00E+00	3.25E-10	6.18E-09	3.54E-36	1.07E-22	0.00E+00	0.00E+00
8	9/30/2020	2.25E-03	0.00E+00	1.65E-10	0.00E+00	0.00E+00	0.00E+00	3.47E-10	6.46E-09	6.35E-36	1.52E-22	0.00E+00	0.00E+00
25	9/30/2020	1.33E-03	1.58E-18	4.44E-11	0.00E+00	4.45E-16	1.38E-16	9.37E-11	1.99E-09	1.27E-31	1.00E-23	0.00E+00	0.00E+00
26	9/30/2020	1.33E-03	1.58E-18	4.44E-11	0.00E+00	4.45E-16	1.38E-16	9.37E-11	1.99E-09	1.27E-31	1.00E-23	0.00E+00	0.00E+00
27	9/30/2020	1.33E-03	1.58E-18	4.44E-11	0.00E+00	4.45E-16	1.38E-16	9.37E-11	1.99E-09	1.27E-31	1.00E-23	0.00E+00	0.00E+00
28	9/30/2020	1.33E-03	1.58E-18	4.44E-11	0.00E+00	4.45E-16	1.38E-16	9.37E-11	1.99E-09	1.27E-31	1.00E-23	0.00E+00	0.00E+00
33	9/30/2020	2.17E-01	6.29E-13	1.12E-09	0.00E+00	2.75E-14	5.49E-11	2.37E-09	4.65E-09	1.93E-29	1.32E-21	0.00E+00	0.00E+00
34	9/30/2020	5.94E-01	0.00E+00	2.57E-09	0.00E+00	0.00E+00	0.00E+00	5.41E-09	1.37E-08	4.08E-30	5.73E-21	0.00E+00	0.00E+00
44	9/30/2020	1.33E-03	1.58E-18	4.44E-11	0.00E+00	4.45E-16	1.38E-16	9.37E-11	1.99E-09	1.27E-31	1.00E-23	0.00E+00	0.00E+00
45	9/30/2020	1.33E-03	1.58E-18	4.44E-11	0.00E+00	4.45E-16	1.38E-16	9.37E-11	1.99E-09	1.27E-31	1.00E-23	0.00E+00	0.00E+00
46	9/30/2020	1.33E-03	1.58E-18	4.44E-11	0.00E+00	4.45E-16	1.38E-16	9.37E-11	1.99E-09	1.27E-31	1.00E-23	0.00E+00	0.00E+00
47	9/30/2020	1.33E-03	1.58E-18	4.44E-11	0.00E+00	4.45E-16	1.38E-16	9.37E-11	1.99E-09	1.27E-31	1.00E-23	0.00E+00	0.00E+00
Half-life, yr		4.96E+00	1.60E+03	2.18E+01	5.75E+00	7.34E+03	7.54E+04	3.29E+04	8.25E+07	8.77E-01	3.51E+02	8.99E+02	2.64E+00

Drysludge

Tank	Reference Date from Worksheet Sludge 1.5	Am-243	Cm-242 (Ci)	Cm-243	Cm-247	Cm-248	Cm-244 (Ci)	Cm-245 (Ci)	Alpha Sum, Ci	iCm-242, (Ci)	Cm-242 total (Ci)
1	5/30/05	6.52E-03	3.51E-24	6.94E-02	2.31E-15	5.32E-16	3.50E-01	4.27E-07	2.81E+03	1.99E+00	1.99E+00
2	5/30/05	1.00E-03	3.34E-31	9.49E-03	3.54E-16	8.17E-17	4.46E-02	6.55E-08	4.83E+02	2.99E-01	2.99E-01
3	5/30/05	8.38E-04	1.37E-28	8.33E-03	2.97E-16	6.84E-17	4.02E-02	5.49E-08	4.78E+02	2.52E-01	2.52E-01
4	5/30/05	6.50E+01	1.67E-14	4.22E-01	1.10E-14	2.53E-15	1.59E+04	6.90E-01	2.84E+04	9.94E+00	9.94E+00
5	5/30/05	2.98E-02	1.52E-21	3.45E-01	1.05E-14	2.43E-15	1.82E+00	1.95E-06	1.34E+04	9.24E+00	9.24E+00
6	5/30/05	2.00E+01	1.28E-19	3.66E-01	1.02E-14	2.36E-15	1.38E+03	1.89E-06	1.17E+04	9.15E+00	9.15E+00
7	5/30/05	3.61E+00	7.35E-17	1.23E-02	3.45E-16	7.96E-17	5.79E+02	8.89E-03	1.88E+03	3.00E-01	3.00E-01
8	5/30/05	1.36E+00	2.77E-17	3.79E-03	1.02E-16	2.34E-17	1.83E+02	3.35E-03	4.41E+02	9.02E-02	9.02E-02
25	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
26	5/30/05	1.16E-03	2.16E-06	2.30E-02	4.09E-16	9.47E-17	1.64E-01	7.62E-08	3.32E+04	0.00E+00	2.16E-06
27	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
28	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33	5/30/05	4.92E-02	3.19E-05	1.01E+00	1.74E-14	4.01E-15	7.51E+00	3.21E-06	9.33E+04	1.70E+01	1.70E+01
34	5/30/05	5.17E-02	9.25E-08	5.18E+00	1.83E-14	4.21E-15	6.92E+00	3.38E-06	1.58E+05	1.76E+01	1.76E+01
44	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
45	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
46	5/30/05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
47	5/30/05	9.17E-04	2.66E-11	1.74E-02	3.23E-16	7.49E-17	1.20E-01	6.03E-08	2.89E+04	0.00E+00	2.66E-11

Tank	Reference Date from Worksheet Sludge 1.5	Am-243 (Ci/gal)	Cm-242 (Ci/gal)	Cm-243 (Ci/gal)	Cm-247 (Ci/gal)	Cm-248 (Ci/gal)	Cm-244 (Ci/gal)	Cm-245 (Ci/gal)	Am-241 total (Ci/gal)	iCm-242, Ci/gal	Cm-242 total (Ci/gal)
1	5/30/05	9.26E-07	4.99E-28	9.85E-06	3.28E-19	7.56E-20	4.97E-05	6.06E-11	2.81E-01	2.83E-04	2.83E-04
2	5/30/05	2.46E-07	8.21E-35	2.33E-06	8.72E-20	2.01E-20	1.10E-05	1.61E-11	7.41E-02	7.35E-05	7.35E-05
3	5/30/05	2.06E-07	3.37E-32	2.05E-06	7.30E-20	1.68E-20	9.89E-06	1.35E-11	6.28E-02	6.20E-05	6.20E-05
4	5/30/05	5.12E-04	1.31E-19	3.32E-06	8.65E-20	1.99E-20	1.25E-01	5.43E-06	7.89E-02	7.82E-05	7.82E-05
5	5/30/05	9.73E-07	4.96E-26	1.13E-05	3.44E-19	7.94E-20	5.96E-05	6.36E-11	2.97E-01	3.02E-04	3.02E-04
6	5/30/05	8.03E-04	5.12E-24	1.47E-05	4.10E-19	9.45E-20	5.53E-02	7.58E-11	3.59E-01	3.67E-04	3.67E-04
7	5/30/05	1.83E-04	3.73E-21	6.23E-07	1.75E-20	4.04E-21	2.94E-02	4.51E-07	1.80E-02	1.52E-05	1.52E-05
8	5/30/05	3.32E-04	6.76E-21	9.25E-07	2.48E-20	5.71E-21	4.46E-02	8.18E-07	2.48E-02	2.20E-05	2.20E-05
25	5/30/05	4.47E-09	8.32E-12	8.87E-08	1.58E-21	3.65E-22	6.31E-07	2.94E-13	2.22E-03	0.00E+00	8.32E-12
26	5/30/05	4.47E-09	8.32E-12	8.87E-08	1.58E-21	3.65E-22	6.31E-07	2.94E-13	2.22E-03	0.00E+00	8.32E-12
27	5/30/05	4.47E-09	8.32E-12	8.87E-08	1.58E-21	3.65E-22	6.31E-07	2.94E-13	2.22E-03	0.00E+00	8.32E-12
28	5/30/05	4.47E-09	8.32E-12	8.87E-08	1.58E-21	3.65E-22	6.31E-07	2.94E-13	2.22E-03	0.00E+00	8.32E-12
33	5/30/05	5.84E-07	3.79E-10	1.20E-05	2.06E-19	4.76E-20	8.91E-05	3.81E-11	2.85E-01	2.01E-04	2.01E-04
34	5/30/05	2.56E-06	4.58E-12	2.57E-04	9.05E-19	2.09E-19	3.43E-04	1.67E-10	7.43E+00	8.74E-04	8.74E-04
44	5/30/05	4.47E-09	8.32E-12	8.87E-08	1.58E-21	3.65E-22	6.31E-07	2.94E-13	2.22E-03	0.00E+00	8.32E-12
45	5/30/05	4.47E-09	8.32E-12	8.87E-08	1.58E-21	3.65E-22	6.31E-07	2.94E-13	2.22E-03	0.00E+00	8.32E-12
46	5/30/05	4.47E-09	8.32E-12	8.87E-08	1.58E-21	3.65E-22	6.31E-07	2.94E-13	2.22E-03	0.00E+00	8.32E-12
47	5/30/05	4.47E-09	8.32E-12	8.87E-08	1.58E-21	3.65E-22	6.31E-07	2.94E-13	2.22E-03	0.00E+00	8.32E-12

Tank	Reference date	Am-243 (Ci/gal)	Cm-242 (Ci/gal)	Cm-243 (Ci/gal)	Cm-247 (Ci/gal)	Cm-248 (Ci/gal)	Cm-244 (Ci/gal)	Cm-245 (Ci/gal)	Am-241 total (Ci/gal)	iCm-242 (Ci/gal)	Cm-242 total (Ci/gal)
1	9/30/2020	9.24E-07	2.29E-38	6.78E-06	3.28E-19	7.55E-20	2.76E-05	6.05E-11	2.75E-01	2.63E-04	2.63E-04
2	9/30/2020	2.46E-07	3.77E-45	1.61E-06	8.72E-20	2.01E-20	6.10E-06	1.61E-11	7.24E-02	6.85E-05	6.85E-05
3	9/30/2020	2.06E-07	1.54E-42	1.41E-06	7.30E-20	1.68E-20	5.50E-06	1.35E-11	6.14E-02	5.79E-05	5.79E-05
4	9/30/2020	5.11E-04	6.01E-30	2.28E-06	8.65E-20	1.99E-20	6.97E-02	5.42E-06	7.71E-02	7.29E-05	7.29E-05
5	9/30/2020	9.71E-07	2.27E-36	7.75E-06	3.44E-19	7.94E-20	3.31E-05	6.36E-11	2.90E-01	2.81E-04	2.81E-04
6	9/30/2020	8.02E-04	2.35E-34	1.01E-05	4.10E-19	9.45E-20	3.07E-02	7.57E-11	3.51E-01	3.42E-04	3.42E-04
7	9/30/2020	1.83E-04	1.71E-31	4.29E-07	1.75E-20	4.04E-21	1.63E-02	4.50E-07	1.78E-02	1.42E-05	1.42E-05
8	9/30/2020	3.32E-04	3.10E-31	6.37E-07	2.48E-20	5.71E-21	2.48E-02	8.17E-07	2.44E-02	2.05E-05	2.05E-05
25	9/30/2020	4.46E-09	3.82E-22	6.11E-08	1.58E-21	3.65E-22	3.51E-07	2.93E-13	3.05E-03	0.00E+00	3.82E-22
26	9/30/2020	4.46E-09	3.82E-22	6.11E-08	1.58E-21	3.65E-22	3.51E-07	2.93E-13	3.05E-03	0.00E+00	3.82E-22
27	9/30/2020	4.46E-09	3.82E-22	6.11E-08	1.58E-21	3.65E-22	3.51E-07	2.93E-13	3.05E-03	0.00E+00	3.82E-22
28	9/30/2020	4.46E-09	3.82E-22	6.11E-08	1.58E-21	3.65E-22	3.51E-07	2.93E-13	3.05E-03	0.00E+00	3.82E-22
33	9/30/2020	5.83E-07	1.74E-20	8.28E-06	2.06E-19	4.76E-20	4.96E-05	3.81E-11	2.87E-01	1.88E-04	1.88E-04
34	9/30/2020	2.56E-06	2.10E-22	1.77E-04	9.05E-19	2.09E-19	1.91E-04	1.67E-10	7.26E+00	8.15E-04	8.15E-04
44	9/30/2020	4.46E-09	3.82E-22	6.11E-08	1.58E-21	3.65E-22	3.51E-07	2.93E-13	3.05E-03	0.00E+00	3.82E-22
45	9/30/2020	4.46E-09	3.82E-22	6.11E-08	1.58E-21	3.65E-22	3.51E-07	2.93E-13	3.05E-03	0.00E+00	3.82E-22
46	9/30/2020	4.46E-09	3.82E-22	6.11E-08	1.58E-21	3.65E-22	3.51E-07	2.93E-13	3.05E-03	0.00E+00	3.82E-22
47	9/30/2020	4.46E-09	3.82E-22	6.11E-08	1.58E-21	3.65E-22	3.51E-07	2.93E-13	3.05E-03	0.00E+00	3.82E-22

Half-life, yr		7.37E+03	4.47E-01	2.85E+01	1.56E+07	3.40E+05	1.81E+01	8.50E+03	4.33E+02	4.47E-01	4.47E-01
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Drysludge with zeolite

	B	C	D	E	F	G	H	I
2	Inventory Tank		7	25	27	18	19	
3	Zeolite, kg		472	3,812	18,114	7,475	36,148	
4	% zeolite		41%	43%	53%	46%	66%	
5	Zeolite, gal		130	1,050	4,990			
6	Cs--137 bound zeolite, Ci		623	6,763	31,095			
7	% zeolite		41%	43%	53%			
8	Reference date		5/30/2005	5/30/2005	5/30/2005	9/30/2020	9/30/2020	9/30/2020
9		Ci/gal Half life, yr	7	25	27	7	25	27
10		H-3	1.23E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
11		C-14	5.73E+03	4.25E-07	1.20E-06	9.86E-07	4.24E-07	1.19E-06
12		Co-60	5.27E+00	2.40E-03	2.02E-03	1.66E-03	3.19E-04	2.69E-04
13		Ni-59	7.50E+04	1.17E-04	7.04E-05	5.80E-05	1.17E-04	7.03E-05
14		Ni-63	1.00E+02	1.01E-02	6.87E-03	5.66E-03	9.08E-03	6.18E-03
15		Se-79	6.50E+04	6.79E-05	5.82E-06	4.79E-06	6.79E-05	5.82E-06
16		Sr-90	2.85E+01	2.77E+00	3.76E-01	3.09E-01	1.91E+00	2.59E-01
17		Y-90	2.85E+01	2.77E+00	3.76E-01	3.09E-01	1.91E+00	2.59E-01
18		Nb-94	2.03E+04	5.05E-08	3.09E-09	2.54E-09	5.05E-08	3.09E-09
19		Tc-99	2.13E+05	1.18E-03	1.01E-04	8.32E-05	1.18E-03	1.01E-04
20		Ru-106	1.02E+00	1.68E-08	1.37E-04	1.12E-04	4.99E-13	4.06E-09
21		Rh-106	1.02E+00	1.68E-08	1.37E-04	1.12E-04	4.99E-13	4.06E-09
22		Sb-125	2.73E+00	4.51E-04	2.67E-03	2.20E-03	9.18E-06	5.43E-05
23		Sn-126	1.00E+05	1.26E-04	1.08E-05	8.91E-06	1.26E-04	1.08E-05
24		I-129	1.57E+07	5.60E-09	4.79E-10	3.95E-10	5.60E-09	4.79E-10
25		Cs-134	2.06E+00	1.03E-05	2.31E-03	2.75E-03	5.94E-08	1.33E-05
26		Cs-135	2.30E+06	8.69E-06	7.36E-06	8.74E-06	8.69E-06	7.36E-06
27		Cs-137	3.02E+01	2.15E+00	2.81E+00	3.34E+00	1.51E+00	1.97E+00
28		Ba-137m	3.02E+01	2.04E+00	2.66E+00	3.16E+00	1.43E+00	1.87E+00
29		Ce-144	7.80E-01	2.71E-10	6.33E-05	5.21E-05	3.27E-16	7.62E-11
30		Pr-144	7.80E-01	2.71E-10	6.33E-05	5.21E-05	3.27E-16	7.62E-11
31		Pm-147	2.62E+00	6.91E-03	4.83E-02	3.98E-02	1.20E-04	8.39E-04
32		Eu-154	8.80E+00	7.06E-03	2.49E-03	2.05E-03	2.11E-03	7.44E-04
33		Th-232	1.41E+10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
34		U-232	7.20E+01	5.88E-08	1.93E-08	1.59E-08	5.07E-08	1.67E-08
35		U-233	1.59E+05	0.00E+00	5.88E-14	4.85E-14	0.00E+00	5.88E-14
36		U-234	2.45E+05	0.00E+00	1.88E-13	1.55E-13	0.00E+00	1.88E-13
37		U-235	7.04E+08	2.01E-07	5.56E-08	4.58E-08	2.01E-07	5.56E-08
38		U-236	2.34E+07	0.00E+00	7.18E-09	5.91E-09	0.00E+00	7.18E-09
39		U-238	4.47E+09	8.25E-06	6.67E-06	5.50E-06	8.25E-06	6.67E-06
40		Np-237	2.14E+06	3.74E-06	1.72E-08	1.42E-08	3.74E-06	1.72E-08
41		Pu-238	8.77E+01	1.54E-02	3.55E-02	2.93E-02	1.36E-02	3.15E-02
42		Pu-239	2.41E+04	2.97E-03	5.57E-03	4.59E-03	2.97E-03	5.56E-03
43		Pu-240	6.56E+03	7.15E-04	1.24E-03	1.03E-03	7.14E-04	1.24E-03
44		Pu-241	1.44E+01	9.28E-03	2.92E-02	2.40E-02	4.44E-03	1.39E-02
45		Pu-242	3.76E+05	8.00E-07	2.48E-07	2.04E-07	7.99E-07	2.48E-07
46	Ingrown Am-241 (SUM at end)		4.33E+02	1.12E-03	1.26E-03	1.04E-03	1.59E-04	5.00E-04
47	Am-241 (SUM at end)		4.33E+02	9.51E-03	0.00E+00	0.00E+00		
48	Am-242m		1.52E+02	1.10E-05	0.00E+00	0.00E+00	1.03E-05	0.00E+00
49	Na-22		2.60E+00	3.50E-07	4.75E-08	3.91E-08	5.86E-09	7.95E-10
50	Al-26		7.15E+05	1.85E-07	2.51E-08	2.06E-08	1.85E-07	2.51E-08
51	Te-125m		1.59E-01	1.09E-04	6.52E-04	5.37E-04	2.24E-06	1.33E-05
52	Sb-126		3.40E-02	1.76E-05	1.51E-06	1.25E-06	1.77E-05	1.51E-06
53	Sb-126m		3.62E-05	1.26E-04	1.08E-05	8.91E-06	1.26E-04	1.08E-05
54	Sm-151		9.01E+01	2.05E-01	2.06E-02	1.70E-02	1.82E-01	1.83E-02
55	Eu-152		1.33E+01	6.25E-04	1.40E-04	1.16E-04	2.81E-04	6.31E-05
56	Eu-155		4.96E+00	6.70E-03	6.45E-03	5.31E-03	7.85E-04	7.56E-04
57	Ra-226		1.60E+03	0.00E+00	1.20E-20	9.87E-21	0.00E+00	8.96E-19
58	Ac-227		2.18E+01	5.56E-11	4.65E-12	3.83E-12	9.11E-11	2.52E-11
59	Ra-228		5.75E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
60	Th-229		7.34E+03	0.00E+00	9.69E-18	7.98E-18	0.00E+00	2.53E-16
61	Th-230		7.54E+04	0.00E+00	5.07E-18	4.17E-18	0.00E+00	7.82E-17
62	Pa-231		3.29E+04	1.24E-10	1.88E-11	1.55E-11	1.92E-10	5.32E-11
63	Pu-244		8.25E+07	2.82E-09	1.16E-09	9.52E-10	3.65E-09	1.13E-09
64	Bk-249		8.77E-01	3.86E-31	1.34E-26	1.10E-26	2.09E-36	7.24E-32
65	Cf-249		3.51E+02	6.54E-23	5.87E-24	4.84E-24	6.35E-23	5.70E-24
66	Cf-251		8.99E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
67	Cf-252		2.64E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
68	Am-243		7.37E+03	1.08E-04	2.54E-09	2.09E-09	1.08E-04	2.53E-09
69	Cm-242		4.47E-01	2.21E-21	4.73E-12	3.90E-12	1.01E-31	2.17E-22
70	Cm-243		2.85E+01	3.69E-07	5.04E-08	4.15E-08	2.54E-07	3.47E-08
71	Cm-247		1.56E+07	1.04E-20	8.96E-22	7.38E-22	1.04E-20	8.96E-22
72	Cm-248		3.40E+05	2.39E-21	2.08E-22	1.71E-22	2.39E-21	2.07E-22
73	Cm-244		1.81E+01	1.74E-02	3.59E-07	2.95E-07	9.67E-03	1.99E-07
74	Cm-245		8.50E+03	2.67E-07	1.67E-13	1.38E-13	2.66E-07	1.67E-13
75	Total Am-241		4.33E+02	1.06E-02	1.26E-03	1.04E-03	1.05E-02	1.73E-03
76	iCm-242		4.47E-01	9.02E-06	0.00E+00	0.00E+00	8.41E-06	0.00E+00
77	Total Cm-242		4.47E-01	9.02E-06	4.73E-12	3.90E-12	8.41E-06	2.17E-22

Liquid

Inventory Tank	liquid, gal	Supernate Rad alpha, Ci/gal	Reference date	Surrogate Tank	H-3 (Ci/gal)	C-14 (Ci/gal)	Co-60 (Ci/gal)	Ni-59 (Ci/gal)	Ni-63 (Ci/gal)	Se-79 (Ci/gal)	Sr-90 (Ci/gal)	
	1	165,988	0.00021	5/30/2005	1	3.79E-04	6.66E-06	3.90E-06	1.16E-07	9.46E-06	4.77E-06	4.88E-03
	2	163,657	0.00021	5/30/2005	2	3.79E-04	6.66E-06	3.90E-06	1.19E-07	9.46E-06	7.42E-07	1.81E-03
	3	163,657	0.00021	5/30/2005	3	3.79E-04	6.66E-06	3.90E-06	1.18E-07	9.46E-06	6.21E-07	1.83E-03
	4	396,148	0.00021	5/30/2005	4	3.79E-04	6.66E-06	3.90E-06	1.08E-07	9.46E-06	9.51E-06	2.16E-03
	5	17,149	0.00021	5/30/2005	5	3.79E-04	6.66E-06	3.90E-06	1.13E-07	9.46E-06	2.11E-04	4.43E-04
	6	268,940	0.00021	5/30/2005	6	3.79E-04	6.66E-06	3.90E-06	1.10E-07	9.46E-06	1.30E-05	9.09E-05
	7	288,665	0.00021	5/30/2005	7	3.79E-04	6.66E-06	3.90E-06	1.10E-07	9.46E-06	4.13E-07	3.81E-04
	8	10,152	0.00021	5/30/2005	8	3.79E-04	6.66E-06	3.90E-06	1.08E-07	9.46E-06	3.43E-06	1.71E-04
	25	366,444	0.0071	5/30/2005	26	3.79E-04	6.66E-06	3.90E-06	9.69E-08	9.46E-06	1.99E-07	9.27E-04
	26	700,582	0.0071	5/30/2005	26	3.79E-04	6.66E-06	3.90E-06	9.69E-08	9.46E-06	1.99E-07	1.83E-03
	27	783,183	0.0071	5/30/2005	26	3.79E-04	6.66E-06	3.90E-06	9.69E-08	9.46E-06	1.99E-07	1.97E-03
	28	495,331	0.0071	5/30/2005	26	3.79E-04	6.66E-06	3.90E-06	9.69E-08	9.46E-06	1.99E-07	1.10E-03
	33	942,470	0.0071	5/30/2005	33	3.79E-04	6.66E-06	3.90E-06	9.56E-08	9.46E-06	6.32E-06	9.96E-04
	34	640,663	0.0071	5/30/2005	34	3.79E-04	6.66E-06	3.90E-06	9.78E-08	9.46E-06	9.77E-06	1.21E-03
	44	564,296	0.0071	5/30/2005	26	3.79E-04	6.66E-06	3.90E-06	9.69E-08	9.46E-06	1.99E-07	1.30E-03
	45	511,646	0.0071	5/30/2005	26	3.79E-04	6.66E-06	3.90E-06	9.69E-08	9.46E-06	1.99E-07	1.23E-03
	46	674,120	0.0071	5/30/2005	26	3.79E-04	6.66E-06	3.90E-06	9.69E-08	9.46E-06	1.99E-07	1.85E-03
	47	600,196	0.0071	5/30/2005	26	3.79E-04	6.66E-06	3.90E-06	9.81E-08	9.46E-06	1.84E-07	3.41E-04
Half-life, yr						1.23E+01	5.73E+03	5.27E+00	7.50E+04	1.00E+02	6.50E+04	2.85E+01

Inventory Tank	liquid, gal	Reference date	H-3 (Ci/gal)	C-14 (Ci/gal)	Co-60 (Ci/gal)	Ni-59 (Ci/gal)	Ni-63 (Ci/gal)	Se-79 (Ci/gal)	Sr-90 (Ci/gal)
1	165,988	9/30/2020	1.60E-04	6.65E-06	5.19E-07	1.16E-07	8.51E-06	4.77E-06	3.36E-03
2	163,657	9/30/2020	1.60E-04	6.65E-06	5.19E-07	1.19E-07	8.51E-06	7.42E-07	1.25E-03
3	163,657	9/30/2020	1.60E-04	6.65E-06	5.19E-07	1.18E-07	8.51E-06	6.21E-07	1.26E-03
4	396,148	9/30/2020	1.60E-04	6.65E-06	5.19E-07	1.08E-07	8.51E-06	9.51E-06	1.49E-03
5	17,149	9/30/2020	1.60E-04	6.65E-06	5.19E-07	1.13E-07	8.51E-06	2.11E-04	3.05E-04
6	268,940	9/30/2020	1.60E-04	6.65E-06	5.19E-07	1.10E-07	8.51E-06	1.30E-05	6.26E-05
7	288,665	9/30/2020	1.60E-04	6.65E-06	5.19E-07	1.10E-07	8.51E-06	4.13E-07	2.62E-04
8	10,152	9/30/2020	1.60E-04	6.65E-06	5.19E-07	1.08E-07	8.51E-06	3.43E-06	1.18E-04
25	366,444	9/30/2020	1.60E-04	6.65E-06	5.19E-07	9.69E-08	8.51E-06	1.99E-07	6.38E-04
26	700,582	9/30/2020	1.60E-04	6.65E-06	5.19E-07	9.69E-08	8.51E-06	1.99E-07	1.26E-03
27	783,183	9/30/2020	1.60E-04	6.65E-06	5.19E-07	9.69E-08	8.51E-06	1.99E-07	1.35E-03
28	495,331	9/30/2020	1.60E-04	6.65E-06	5.19E-07	9.69E-08	8.51E-06	1.99E-07	7.57E-04
33	942,470	9/30/2020	1.60E-04	6.65E-06	5.19E-07	9.56E-08	8.51E-06	6.32E-06	6.86E-04
34	640,663	9/30/2020	1.60E-04	6.65E-06	5.19E-07	9.78E-08	8.51E-06	9.77E-06	8.35E-04
44	564,296	9/30/2020	1.60E-04	6.65E-06	5.19E-07	9.69E-08	8.51E-06	1.99E-07	8.98E-04
45	511,646	9/30/2020	1.60E-04	6.65E-06	5.19E-07	9.69E-08	8.51E-06	1.99E-07	8.49E-04
46	674,120	9/30/2020	1.60E-04	6.65E-06	5.19E-07	9.69E-08	8.51E-06	1.99E-07	1.27E-03
47	600,196	9/30/2020	1.60E-04	6.65E-06	5.19E-07	9.81E-08	8.51E-06	1.84E-07	2.35E-04

Liquid

	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005
Inventory Tank	Y-90 (Ci/gal)	Nb-94 (Ci/gal)	Tc-99 (Ci/gal)	Ru-106 (Ci/gal)	Rh-106 (Ci/gal)	Sb-125 (Ci/gal)	Sn-126 (Ci/gal)	I-129 (Ci/gal)	Cs-134 (Ci/gal)	Cs-135 (Ci/gal)	Cs-137 (Ci/gal)	Ba-137m (Ci/gal)
1	4.88E-03	6.79E-11	3.87E-03	8.51E-12	8.51E-12	3.53E-06	4.21E-05	3.11E-06	5.59E-06	9.39E-05	1.98E+01	1.88E+01
2	1.81E-03	1.06E-11	1.43E-03	5.96E-15	5.96E-15	1.05E-07	6.56E-06	1.15E-06	2.26E-07	3.88E-05	7.35E+00	6.96E+00
3	1.83E-03	8.84E-12	1.45E-03	3.94E-14	3.94E-14	1.58E-07	5.49E-06	1.17E-06	4.97E-07	3.77E-05	7.45E+00	7.05E+00
4	2.16E-03	1.36E-10	1.72E-03	1.66E-07	1.66E-07	1.84E-04	8.40E-05	1.38E-06	1.64E-04	3.31E-05	8.80E+00	8.32E+00
5	4.43E-04	3.00E-09	3.51E-04	3.86E-09	3.86E-09	3.74E-04	1.86E-03	2.83E-07	1.50E-06	7.88E-06	1.80E+00	1.71E+00
6	9.09E-05	1.86E-10	7.21E-05	1.53E-09	1.53E-09	4.87E-05	1.15E-04	5.80E-08	7.25E-07	1.48E-06	3.69E-01	3.50E-01
7	3.81E-04	5.83E-12	3.02E-04	6.46E-10	6.46E-10	2.74E-06	3.65E-06	2.43E-07	7.41E-06	6.26E-06	1.55E+00	1.46E+00
8	1.71E-04	4.87E-11	1.36E-04	6.77E-09	6.77E-09	2.82E-05	3.03E-05	1.09E-07	3.97E-06	2.68E-06	6.95E-01	6.58E-01
25	9.27E-04	2.01E-12	7.35E-04	2.96E-05	2.96E-05	9.15E-05	1.76E-06	5.91E-07	6.14E-03	1.95E-05	3.77E+00	3.56E+00
26	1.83E-03	2.01E-12	1.45E-03	2.96E-05	2.96E-05	9.15E-05	1.76E-06	1.17E-06	6.14E-03	1.95E-05	7.45E+00	7.05E+00
27	1.97E-03	2.01E-12	1.56E-03	2.96E-05	2.96E-05	9.15E-05	1.76E-06	1.25E-06	6.14E-03	1.95E-05	7.99E+00	7.56E+00
28	1.10E-03	2.01E-12	8.72E-04	2.96E-05	2.96E-05	9.15E-05	1.76E-06	7.02E-07	6.14E-03	1.95E-05	4.47E+00	4.23E+00
33	9.96E-04	9.00E-11	7.90E-04	1.32E-03	1.32E-03	4.51E-03	5.58E-05	6.36E-07	5.48E-03	1.02E-05	4.05E+00	3.83E+00
34	1.21E-03	1.39E-10	9.61E-04	1.09E-04	1.09E-04	2.60E-03	8.63E-05	7.74E-07	1.87E-03	1.34E-05	4.93E+00	4.66E+00
44	1.30E-03	2.01E-12	1.03E-03	2.96E-05	2.96E-05	9.15E-05	1.76E-06	8.32E-07	6.14E-03	1.95E-05	5.30E+00	5.01E+00
45	1.23E-03	2.01E-12	9.77E-04	2.96E-05	2.96E-05	9.15E-05	1.76E-06	7.87E-07	6.14E-03	1.95E-05	5.01E+00	4.74E+00
46	1.85E-03	2.01E-12	1.47E-03	2.96E-05	2.96E-05	9.15E-05	1.76E-06	1.18E-06	6.14E-03	1.95E-05	7.52E+00	7.11E+00
47	3.41E-04	1.86E-12	2.71E-04	6.22E-07	6.22E-07	3.97E-05	1.63E-06	2.18E-07	3.70E-04	3.80E-06	1.39E+00	1.31E+00
Half-life, yr	2.85E+01	2.03E+04	2.13E+05	1.02E+00	1.02E+00	2.73E+00	1.00E+05	1.57E+07	2.06E+00	2.30E+06	3.02E+01	3.02E+01
	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020

Inventory Tank	Y-90 (Ci/gal)	Nb-94 (Ci/gal)	Tc-99 (Ci/gal)	Ru-106 (Ci/gal)	Rh-106 (Ci/gal)	Sb-125 (Ci/gal)	Sn-126 (Ci/gal)	I-129 (Ci/gal)	Cs-134 (Ci/gal)	Cs-135 (Ci/gal)	Cs-137 (Ci/gal)	Ba-137m (Ci/gal)
1	3.36E-03	6.78E-11	3.87E-03	2.53E-16	2.53E-16	7.20E-08	4.21E-05	3.11E-06	3.22E-08	9.39E-05	1.39E+01	1.32E+01
2	1.25E-03	1.06E-11	1.43E-03	1.77E-19	1.77E-19	2.14E-09	6.56E-06	1.15E-06	1.30E-09	3.88E-05	5.17E+00	4.89E+00
3	1.26E-03	8.84E-12	1.45E-03	1.17E-18	1.17E-18	3.21E-09	5.49E-06	1.17E-06	2.87E-09	3.77E-05	5.24E+00	4.96E+00
4	1.49E-03	1.36E-10	1.72E-03	4.94E-12	4.94E-12	3.74E-06	8.40E-05	1.38E-06	9.45E-07	3.31E-05	6.18E+00	5.85E+00
5	3.05E-04	3.00E-09	3.51E-04	1.15E-13	1.15E-13	7.62E-06	1.86E-03	2.83E-07	8.67E-09	7.88E-06	1.27E+00	1.20E+00
6	6.26E-05	1.86E-10	7.21E-05	4.54E-14	4.54E-14	9.92E-07	1.15E-04	5.80E-08	4.18E-09	1.48E-06	2.60E-01	2.46E-01
7	2.62E-04	5.83E-12	3.02E-04	1.92E-14	1.92E-14	5.58E-08	3.65E-06	2.43E-07	4.27E-08	6.26E-06	1.09E+00	1.03E+00
8	1.18E-04	4.87E-11	1.36E-04	2.01E-13	2.01E-13	5.74E-07	3.03E-05	1.09E-07	2.29E-08	2.68E-06	4.89E-01	4.62E-01
25	6.38E-04	2.01E-12	7.35E-04	8.82E-10	8.82E-10	1.86E-06	1.76E-06	5.91E-07	3.54E-05	1.95E-05	2.65E+00	2.51E+00
26	1.26E-03	2.01E-12	1.45E-03	8.82E-10	8.82E-10	1.86E-06	1.76E-06	1.17E-06	3.54E-05	1.95E-05	5.24E+00	4.95E+00
27	1.35E-03	2.01E-12	1.56E-03	8.82E-10	8.82E-10	1.86E-06	1.76E-06	1.25E-06	3.54E-05	1.95E-05	5.62E+00	5.32E+00
28	7.57E-04	2.01E-12	8.72E-04	8.82E-10	8.82E-10	1.86E-06	1.76E-06	7.02E-07	3.54E-05	1.95E-05	3.14E+00	2.97E+00
33	6.86E-04	9.00E-11	7.90E-04	3.92E-08	3.92E-08	9.18E-05	5.58E-05	6.36E-07	3.16E-05	1.02E-05	2.85E+00	2.69E+00
34	8.35E-04	1.39E-10	9.61E-04	3.25E-09	3.25E-09	5.30E-05	8.63E-05	7.74E-07	1.08E-05	1.34E-05	3.47E+00	3.28E+00
44	8.98E-04	2.01E-12	1.03E-03	8.82E-10	8.82E-10	1.86E-06	1.76E-06	8.32E-07	3.54E-05	1.95E-05	3.73E+00	3.52E+00
45	8.49E-04	2.01E-12	9.77E-04	8.82E-10	8.82E-10	1.86E-06	1.76E-06	7.87E-07	3.54E-05	1.95E-05	3.52E+00	3.33E+00
46	1.27E-03	2.01E-12	1.47E-03	8.82E-10	8.82E-10	1.86E-06	1.76E-06	1.18E-06	3.54E-05	1.95E-05	5.28E+00	5.00E+00
47	2.35E-04	1.86E-12	2.71E-04	1.85E-11	1.85E-11	8.09E-07	1.63E-06	2.18E-07	2.14E-06	3.80E-06	9.76E-01	9.23E-01

Liquid

	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005
Inventory Tank	Ce-144 (Ci/gal)	Pr-144 (Ci/gal)	Pm-147 (Ci/gal)	Eu-154 (Ci/gal)	Th-232 (Ci/gal)	U-232 (Ci/gal)	U-233 (Ci/gal)	U-234 (Ci/gal)	U-235 (Ci/gal)	U-236 (Ci/gal)	U-238 (Ci/gal)	Np-237 (Ci/gal)	Pu-238 (Ci/gal)
1	2.65E-17	2.65E-17	9.32E-07	5.20E-06		8.53E-10			1.32E-09		3.28E-08	4.79E-08	3.72E-05
2	2.47E-21	2.47E-21	2.56E-08	5.36E-07		7.33E-10			3.53E-10		8.81E-09	9.21E-08	6.01E-05
3	4.05E-20	4.05E-20	3.94E-08	5.25E-07		6.31E-10			8.90E-10		2.22E-08	1.66E-07	7.31E-05
4	8.83E-12	8.83E-12	5.60E-05	2.47E-05		4.37E-10			5.73E-10		2.47E-08	2.20E-08	4.47E-06
5	2.24E-14	2.24E-14	1.02E-04	3.01E-04		8.45E-10			1.64E-09		3.90E-08	6.58E-08	4.54E-05
6	1.64E-14	1.64E-14	1.37E-05	2.46E-05		9.65E-10			1.19E-09		4.47E-08	1.55E-08	
7	3.13E-14	3.13E-14	7.98E-07	8.16E-07		2.19E-10			7.47E-10		3.07E-08	1.39E-08	5.72E-05
8	3.32E-13	3.32E-13	8.23E-06	7.70E-06		2.68E-10			7.07E-10		3.26E-08	1.48E-08	4.24E-05
25	4.13E-08	4.13E-08	3.15E-05	1.62E-06		1.88E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.47E-03
26	4.13E-08	4.13E-08	3.15E-05	1.62E-06		1.88E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.47E-03
27	4.13E-08	4.13E-08	3.15E-05	1.62E-06		1.88E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.47E-03
28	4.13E-08	4.13E-08	3.15E-05	1.62E-06		1.88E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.47E-03
33	1.31E-06	1.31E-06	1.57E-03	5.90E-05		8.56E-09	4.10E-14	8.45E-10	1.59E-08	8.80E-09	2.30E-06	7.22E-07	1.18E-03
34	4.29E-08	4.29E-08	8.68E-04	6.92E-05		5.08E-09			5.14E-09		3.63E-07	2.80E-07	
44	4.13E-08	4.13E-08	3.15E-05	1.62E-06		1.88E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.47E-03
45	4.13E-08	4.13E-08	3.15E-05	1.62E-06		1.88E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.47E-03
46	4.13E-08	4.13E-08	3.15E-05	1.62E-06		1.88E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.47E-03
47	1.29E-10	1.29E-10	1.31E-05	1.27E-06		1.68E-09	5.74E-15	1.83E-14	4.58E-09	7.00E-10	3.63E-07	1.68E-09	3.87E-03
Half-life, yr	7.80E-01	7.80E-01	2.62E+00	8.80E+00	1.41E+10	7.20E+01	1.59E+05	2.45E+05	7.04E+08	2.34E+07	4.47E+09	2.14E+06	8.77E+01
	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020
Inventory Tank	Ce-144 (Ci/gal)	Pr-144 (Ci/gal)	Pm-147 (Ci/gal)	Eu-154 (Ci/gal)	Th-232 (Ci/gal)	U-232 (Ci/gal)	U-233 (Ci/gal)	U-234 (Ci/gal)	U-235 (Ci/gal)	U-236 (Ci/gal)	U-238 (Ci/gal)	Np-237 (Ci/gal)	Pu-238 (Ci/gal)
1	3.19E-23	3.19E-23	1.62E-08	1.55E-06		7.36E-10			1.32E-09		3.28E-08	4.79E-08	3.29E-05
2	2.98E-27	2.98E-27	4.45E-10	1.60E-07		6.32E-10			3.53E-10		8.81E-09	9.21E-08	5.33E-05
3	4.88E-26	4.88E-26	6.85E-10	1.57E-07		5.44E-10			8.90E-10		2.22E-08	1.66E-07	6.47E-05
4	1.06E-17	1.06E-17	9.74E-07	7.39E-06		3.77E-10			5.73E-10		2.47E-08	2.20E-08	3.96E-06
5	2.70E-20	2.70E-20	1.78E-06	9.00E-05		7.29E-10			1.64E-09		3.90E-08	6.58E-08	4.02E-05
6	1.97E-20	1.97E-20	2.37E-07	7.34E-06		8.33E-10			1.19E-09		4.47E-08	1.55E-08	
7	3.78E-20	3.78E-20	1.39E-08	2.44E-07		1.89E-10			7.47E-10		3.07E-08	1.39E-08	5.07E-05
8	4.00E-19	4.00E-19	1.43E-07	2.30E-06		2.31E-10			7.07E-10		3.26E-08	1.48E-08	3.75E-05
25	4.97E-14	4.97E-14	5.47E-07	4.85E-07		1.63E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.07E-03
26	4.97E-14	4.97E-14	5.47E-07	4.85E-07		1.63E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.07E-03
27	4.97E-14	4.97E-14	5.47E-07	4.85E-07		1.63E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.07E-03
28	4.97E-14	4.97E-14	5.47E-07	4.85E-07		1.63E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.07E-03
33	1.57E-12	1.57E-12	2.73E-05	1.76E-05		7.38E-09	4.10E-14	8.45E-10	1.59E-08	8.80E-09	2.30E-06	7.22E-07	1.04E-03
34	5.16E-14	5.16E-14	1.51E-05	2.07E-05		4.38E-09			5.14E-09		3.63E-07	2.80E-07	
44	4.97E-14	4.97E-14	5.47E-07	4.85E-07		1.63E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.07E-03
45	4.97E-14	4.97E-14	5.47E-07	4.85E-07		1.63E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.07E-03
46	4.97E-14	4.97E-14	5.47E-07	4.85E-07		1.63E-09	5.74E-15	1.83E-14	5.42E-09	7.00E-10	6.51E-07	1.68E-09	3.07E-03
47	1.56E-16	1.56E-16	2.27E-07	3.80E-07		1.45E-09	5.74E-15	1.83E-14	4.58E-09	7.00E-10	3.63E-07	1.68E-09	3.43E-03

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	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005
Inventory Tank	Pu-239 (Ci/gal)	Pu-240 (Ci/gal)	Pu-241 (Ci/gal)	Pu-242 (Ci/gal)	Ingrown Am-241 (Ci/gal) (SUM at end)	Am-241 (Ci/gal) (SUM at end)	Am-242m (Ci/gal)	Na-22 (Ci/gal)	Al-26 (Ci/gal)	Te-125m (Ci/gal)	Sb-126 (Ci/gal)	Sb-126m (Ci/gal)
1	9.94E-06	2.22E-06	1.22E-05	4.57E-10	2.49E-07	1.17E-05	1.46E-08	1.82E-04	1.17E-06	8.63E-07	1.47E-06	1.05E-05
2	8.59E-06	1.92E-06	8.03E-06	3.95E-10	3.73E-08	1.81E-06	2.23E-09	6.76E-05	4.32E-07	2.57E-08	2.29E-07	1.64E-06
3	1.04E-05	2.33E-06	1.17E-05	4.80E-10	4.54E-08	1.52E-06	1.88E-09	6.85E-05	4.38E-07	3.85E-08	1.92E-07	1.37E-06
4	4.41E-06	9.86E-07	8.31E-06	2.03E-10	4.55E-07	2.49E-05	3.06E-08	8.09E-05	5.17E-07	4.48E-05	2.94E-06	2.10E-05
5	7.57E-06	1.81E-06	1.21E-05	5.34E-10	1.02E-05	5.21E-04	6.58E-07	1.66E-05	1.06E-07	9.14E-05	6.51E-05	4.65E-04
6	4.57E-06	1.59E-06	1.78E-05	3.13E-09	6.62E-07	3.27E-05	4.15E-08	3.40E-06	2.17E-08	1.19E-05	4.03E-06	2.88E-05
7	1.11E-05	2.66E-06	3.46E-05	2.98E-09	1.30E-07	1.10E-06	1.27E-09	1.42E-05	9.10E-08	6.69E-07	1.28E-07	9.11E-07
8	9.29E-06	2.19E-06	2.07E-05	2.76E-09	4.83E-07	9.53E-06	1.08E-08	6.39E-06	4.09E-08	6.89E-06	1.06E-06	7.58E-06
25	5.43E-04	1.21E-04	2.85E-03	2.42E-08	8.22E-07			3.46E-05	2.22E-07	2.23E-05	6.16E-08	4.40E-07
26	5.43E-04	1.21E-04	2.85E-03	2.42E-08	8.22E-07			6.85E-05	4.38E-07	2.23E-05	6.16E-08	4.40E-07
27	5.43E-04	1.21E-04	2.85E-03	2.42E-08	8.22E-07			7.35E-05	4.70E-07	2.23E-05	6.16E-08	4.40E-07
28	5.43E-04	1.21E-04	2.85E-03	2.42E-08	8.22E-07			4.11E-05	2.63E-07	2.23E-05	6.16E-08	4.40E-07
33	6.43E-04	1.13E-04	3.33E-03	6.53E-09	5.69E-07	2.49E-05	2.20E-08	3.72E-05	2.38E-07	1.10E-03	1.95E-06	1.40E-05
34	5.86E-05	1.31E-05	2.70E-04	2.72E-09	4.94E-07	2.34E-04	3.36E-08	4.53E-05	2.90E-07	6.35E-04	3.02E-06	2.16E-05
44	5.43E-04	1.21E-04	2.85E-03	2.42E-08	8.22E-07			4.87E-05	3.12E-07	2.23E-05	6.16E-08	4.40E-07
45	5.43E-04	1.21E-04	2.85E-03	2.42E-08	8.22E-07			4.61E-05	2.95E-07	2.23E-05	6.16E-08	4.40E-07
46	5.43E-04	1.21E-04	2.85E-03	2.42E-08	8.22E-07			6.91E-05	4.42E-07	2.23E-05	6.16E-08	4.40E-07
47	5.56E-04	1.24E-04	2.41E-03	2.56E-08	9.48E-07			1.28E-05	8.16E-08	9.71E-06	5.69E-08	4.07E-07
Halflife, yr	2.41E+04	6.56E+03	1.44E+01	3.76E+05	4.33E+02	4.33E+02	1.52E+02	2.60E+00	7.15E+05	1.59E-01	3.40E-02	3.62E-05
	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020
Inventory Tank	Pu-239 (Ci/gal)	Pu-240 (Ci/gal)	Pu-241 (Ci/gal)	Pu-242 (Ci/gal)	Ingrown Am-241 (Ci/gal) (SUM at end)	Am-241 (Ci/gal) (SUM at end)	Am-242m (Ci/gal)	Na-22 (Ci/gal)	Al-26 (Ci/gal)	Te-125m (Ci/gal)	Sb-126 (Ci/gal)	Sb-126m (Ci/gal)
1	9.94E-06	2.22E-06	5.81E-06	4.57E-10	2.08E-07		1.37E-08	3.05E-06	1.17E-06	1.76E-08	2.95E-07	2.11E-06
2	8.59E-06	1.92E-06	3.84E-06	3.95E-10	1.38E-07		2.08E-09	1.13E-06	4.32E-07	5.23E-10	4.59E-08	3.28E-07
3	1.04E-05	2.33E-06	5.61E-06	4.80E-10	2.01E-07		1.75E-09	1.15E-06	4.38E-07	7.84E-10	3.84E-08	2.74E-07
4	4.41E-06	9.85E-07	3.97E-06	2.03E-10	1.42E-07		2.86E-08	1.36E-06	5.17E-07	9.13E-07	5.88E-07	4.20E-06
5	7.57E-06	1.81E-06	5.77E-06	5.34E-10	2.07E-07		6.13E-07	2.78E-07	1.06E-07	1.86E-06	1.30E-05	9.30E-05
6	4.57E-06	1.59E-06	8.49E-06	3.13E-09	3.04E-07		3.87E-08	5.69E-08	2.17E-08	2.42E-07	8.06E-07	5.75E-06
7	1.11E-05	2.66E-06	1.65E-05	2.98E-09	5.92E-07		1.18E-09	2.39E-07	9.10E-08	1.36E-08	2.55E-08	1.82E-07
8	9.29E-06	2.18E-06	9.92E-06	2.76E-09	3.56E-07		1.01E-08	1.07E-07	4.09E-08	1.40E-07	2.12E-07	1.51E-06
25	5.43E-04	1.21E-04	1.36E-03	2.42E-08	4.88E-05			5.80E-07	2.21E-07	4.55E-07	1.23E-08	8.80E-08
26	5.43E-04	1.21E-04	1.36E-03	2.42E-08	4.88E-05			1.15E-06	4.38E-07	4.55E-07	1.23E-08	8.80E-08
27	5.43E-04	1.21E-04	1.36E-03	2.42E-08	4.88E-05			1.23E-06	4.70E-07	4.55E-07	1.23E-08	8.80E-08
28	5.43E-04	1.21E-04	1.36E-03	2.42E-08	4.88E-05			6.89E-07	2.63E-07	4.55E-07	1.23E-08	8.80E-08
33	6.42E-04	1.13E-04	1.59E-03	6.53E-09	5.71E-05		2.05E-08	6.24E-07	2.38E-07	2.24E-05	3.91E-07	2.79E-06
34	5.86E-05	1.31E-05	1.29E-04	2.72E-09	4.63E-06		3.13E-08	7.59E-07	2.90E-07	1.29E-05	6.04E-07	4.31E-06
44	5.43E-04	1.21E-04	1.36E-03	2.42E-08	4.88E-05			8.16E-07	3.12E-07	4.55E-07	1.23E-08	8.80E-08
45	5.43E-04	1.21E-04	1.36E-03	2.42E-08	4.88E-05			7.72E-07	2.95E-07	4.55E-07	1.23E-08	8.80E-08
46	5.43E-04	1.21E-04	1.36E-03	2.42E-08	4.88E-05			1.16E-06	4.42E-07	4.55E-07	1.23E-08	8.80E-08
47	5.56E-04	1.24E-04	1.15E-03	2.56E-08	4.13E-05			2.14E-07	8.16E-08	1.98E-07	1.14E-08	8.13E-08

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	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005
Inventory Tank	Sm-151 (Ci/gal)	Eu-152 (Ci/gal)	Eu-155 (Ci/gal)	Ra-226 (Ci/gal)	Ac-227 (Ci/gal)	Ra-228 (Ci/gal)	Th-229 (Ci/gal)	Th-230 (Ci/gal)	Pa-231 (Ci/gal)	Pu-244 (Ci/gal)	Bk-249 (Ci/gal)	Cf-249 (Ci/gal)
1	2.62E-04	5.76E-07	2.93E-06		3.01E-13				8.36E-13	2.09E-12	1.42E-37	8.67E-26
2	3.93E-05	6.90E-08	2.04E-07		8.06E-14				2.24E-13	1.81E-12	3.44E-41	1.34E-26
3	3.34E-05	6.40E-08	2.29E-07		2.03E-13				5.64E-13	2.19E-12	3.65E-40	1.13E-26
4	5.62E-04	1.99E-06	3.09E-05		1.31E-13				3.63E-13	9.27E-13	1.26E-32	1.76E-25
5	1.19E-02	3.04E-05	2.09E-04		3.75E-13				1.04E-12	2.44E-12	9.02E-35	3.86E-24
6	7.56E-04	2.28E-06	2.04E-05		2.73E-13				7.57E-13	1.43E-11	4.93E-35	2.41E-25
7	2.37E-05	7.22E-08	7.74E-07		1.70E-13				4.73E-13	1.36E-11	4.46E-35	7.56E-27
8	2.01E-04	6.64E-07	7.76E-06		1.61E-13				4.48E-13	1.26E-11	4.74E-34	6.35E-26
25	1.34E-05	9.15E-08	4.20E-06	4.13E-20	1.24E-12		1.63E-17	5.05E-18	3.44E-12	1.11E-10	8.72E-30	3.83E-27
26	1.34E-05	9.15E-08	4.20E-06	4.13E-20	1.24E-12		1.63E-17	5.05E-18	3.44E-12	1.11E-10	8.72E-30	3.83E-27
27	1.34E-05	9.15E-08	4.20E-06	4.13E-20	1.24E-12		1.63E-17	5.05E-18	3.44E-12	1.11E-10	8.72E-30	3.83E-27
28	1.34E-05	9.15E-08	4.20E-06	4.13E-20	1.24E-12		1.63E-17	5.05E-18	3.44E-12	1.11E-10	8.72E-30	3.83E-27
33	4.28E-04	3.14E-06	1.66E-04	1.91E-15	3.62E-12		1.17E-16	2.33E-13	1.01E-11	2.98E-11	3.19E-28	1.21E-25
34	6.45E-04	4.10E-06	1.60E-04		1.17E-12				3.26E-12	1.24E-11	2.38E-29	1.86E-25
44	1.34E-05	9.15E-08	4.20E-06	4.13E-20	1.24E-12		1.63E-17	5.05E-18	3.44E-12	1.11E-10	8.72E-30	3.83E-27
45	1.34E-05	9.15E-08	4.20E-06	4.13E-20	1.24E-12		1.63E-17	5.05E-18	3.44E-12	1.11E-10	8.72E-30	3.83E-27
46	1.34E-05	9.15E-08	4.20E-06	4.13E-20	1.24E-12		1.63E-17	5.05E-18	3.44E-12	1.11E-10	8.72E-30	3.83E-27
47	1.22E-05	7.63E-08	2.82E-06	4.13E-20	1.05E-12		1.63E-17	5.05E-18	2.90E-12	1.17E-10	9.77E-32	3.52E-27
Half-life, yr	9.01E+01	1.33E+01	4.96E+00	1.60E+03	2.18E+01	5.75E+00	7.34E+03	7.54E+04	3.29E+04	8.25E+07	8.77E-01	3.51E+02
	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020

Inventory Tank	Sm-151 (Ci/gal)	Eu-152 (Ci/gal)	Eu-155 (Ci/gal)	Ra-226 (Ci/gal)	Ac-227 (Ci/gal)	Ra-228 (Ci/gal)	Th-229 (Ci/gal)	Th-230 (Ci/gal)	Pa-231 (Ci/gal)	Pu-244 (Ci/gal)	Bk-249 (Ci/gal)	Cf-249 (Ci/gal)
1	2.32E-04	2.59E-07	3.43E-07		5.99E-13				1.26E-12	2.09E-12	7.67E-43	8.42E-26
2	3.49E-05	3.10E-08	2.39E-08		1.60E-13				3.38E-13	1.81E-12	1.86E-46	1.30E-26
3	2.97E-05	2.88E-08	2.68E-08		4.04E-13				8.53E-13	2.19E-12	1.97E-45	1.09E-26
4	5.00E-04	8.95E-07	3.62E-06		2.60E-13				5.49E-13	9.27E-13	6.81E-38	1.71E-25
5	1.06E-02	1.37E-05	2.45E-05		7.47E-13				1.57E-12	2.44E-12	4.88E-40	3.74E-24
6	6.72E-04	1.02E-06	2.39E-06		5.42E-13				1.14E-12	1.43E-11	2.67E-40	2.33E-25
7	2.10E-05	3.24E-08	9.07E-08		3.39E-13				7.15E-13	1.36E-11	2.42E-40	7.33E-27
8	1.79E-04	2.98E-07	9.09E-07		3.21E-13				6.77E-13	1.26E-11	2.57E-39	6.16E-26
25	1.19E-05	4.11E-08	4.93E-07	8.74E-20	2.46E-12		2.47E-17	7.63E-18	5.19E-12	1.11E-10	4.72E-35	3.71E-27
26	1.19E-05	4.11E-08	4.93E-07	8.74E-20	2.46E-12		2.47E-17	7.63E-18	5.19E-12	1.11E-10	4.72E-35	3.71E-27
27	1.19E-05	4.11E-08	4.93E-07	8.74E-20	2.46E-12		2.47E-17	7.63E-18	5.19E-12	1.11E-10	4.72E-35	3.71E-27
28	1.19E-05	4.11E-08	4.93E-07	8.74E-20	2.46E-12		2.47E-17	7.63E-18	5.19E-12	1.11E-10	4.72E-35	3.71E-27
33	3.80E-04	1.41E-06	1.94E-05	4.04E-15	7.21E-12		1.76E-16	3.52E-13	1.52E-11	2.98E-11	1.73E-33	1.18E-25
34	5.73E-04	1.84E-06	1.87E-05		2.33E-12				4.92E-12	1.24E-11	1.29E-34	1.81E-25
44	1.19E-05	4.11E-08	4.93E-07	8.74E-20	2.46E-12		2.47E-17	7.63E-18	5.19E-12	1.11E-10	4.72E-35	3.71E-27
45	1.19E-05	4.11E-08	4.93E-07	8.74E-20	2.46E-12		2.47E-17	7.63E-18	5.19E-12	1.11E-10	4.72E-35	3.71E-27
46	1.19E-05	4.11E-08	4.93E-07	8.74E-20	2.46E-12		2.47E-17	7.63E-18	5.19E-12	1.11E-10	4.72E-35	3.71E-27
47	1.09E-05	3.43E-08	3.30E-07	8.74E-20	2.08E-12		2.47E-17	7.63E-18	4.39E-12	1.17E-10	5.29E-37	3.42E-27

Liquid

	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005	5/30/2005
Inventory Tank	Cf-251 (Ci/gal)	Cf-252 (Ci/gal)	Am-243 (Ci/gal)	Cm-242 (Ci/gal)	Cm-243 (Ci/gal)	Cm-247 (Ci/gal)	Cm-248 (Ci/gal)	Cm-244 (Ci/gal)	Cm-245 (Ci/gal)	Am-241 total (Ci/gal)	iCm-242 (Ci/gal)	Cm-242 total (Ci/gal)
1			3.93E-11	2.12E-32	4.19E-10	1.39E-23	3.21E-24	2.11E-09	2.57E-15	1.20E-05	1.20E-08	1.20E-08
2			6.12E-12	2.04E-39	5.81E-11	2.17E-24	5.00E-25	2.73E-10	4.01E-16	1.84E-06	1.83E-09	1.83E-09
3			5.13E-12	8.37E-37	5.09E-11	1.81E-24	4.19E-25	2.46E-10	3.36E-16	1.56E-06	1.54E-09	1.54E-09
4			1.64E-07	4.21E-23	1.07E-09	2.78E-23	6.40E-24	4.03E-05	1.74E-09	2.53E-05	2.51E-08	2.51E-08
5			1.74E-09	8.87E-29	2.01E-08	6.15E-22	1.42E-22	1.06E-07	1.14E-13	5.31E-04	5.39E-07	5.39E-07
6			7.45E-08	4.75E-28	1.36E-09	3.80E-23	8.77E-24	5.13E-06	7.04E-15	3.34E-05	3.41E-08	3.41E-08
7			1.25E-08	2.55E-25	4.26E-11	1.20E-24	2.76E-25	2.01E-06	3.08E-11	1.23E-06	1.04E-09	1.04E-09
8			1.34E-07	2.73E-24	3.74E-10	1.00E-23	2.31E-24	1.80E-05	3.31E-10	1.00E-05	8.89E-09	8.89E-09
25			1.66E-12	3.08E-15	3.29E-11	5.84E-25	1.35E-25	2.34E-10	1.09E-16	8.22E-07		3.08E-15
26			1.66E-12	3.08E-15	3.29E-11	5.84E-25	1.35E-25	2.34E-10	1.09E-16	8.22E-07		3.08E-15
27			1.66E-12	3.08E-15	3.29E-11	5.84E-25	1.35E-25	2.34E-10	1.09E-16	8.22E-07		3.08E-15
28			1.66E-12	3.08E-15	3.29E-11	5.84E-25	1.35E-25	2.34E-10	1.09E-16	8.22E-07		3.08E-15
33			5.23E-11	3.39E-14	1.08E-09	1.85E-23	4.26E-24	7.97E-09	3.41E-15	2.55E-05	1.80E-08	1.80E-08
34			8.08E-11	1.45E-16	8.10E-09	2.85E-23	6.58E-24	1.08E-08	5.27E-15	2.34E-04	2.76E-08	2.76E-08
44			1.66E-12	3.08E-15	3.29E-11	5.84E-25	1.35E-25	2.34E-10	1.09E-16	8.22E-07		3.08E-15
45			1.66E-12	3.08E-15	3.29E-11	5.84E-25	1.35E-25	2.34E-10	1.09E-16	8.22E-07		3.08E-15
46			1.66E-12	3.08E-15	3.29E-11	5.84E-25	1.35E-25	2.34E-10	1.09E-16	8.22E-07		3.08E-15
47			1.53E-12	4.44E-20	2.90E-11	5.39E-25	1.25E-25	2.00E-10	1.01E-16	9.48E-07		4.44E-20
Halflife, yr	8.99E+02	2.64E+00	7.37E+03	4.47E-01	2.85E+01	1.56E+07	3.40E+05	1.81E+01	8.50E+03	4.33E+02	4.47E-01	4.47E-01
	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020	9/30/2020
Inventory Tank	Cf-251 (Ci/gal)	Cf-252 (Ci/gal)	Am-243 (Ci/gal)	Cm-242 (Ci/gal)	Cm-243 (Ci/gal)	Cm-247 (Ci/gal)	Cm-248 (Ci/gal)	Cm-244 (Ci/gal)	Cm-245 (Ci/gal)	Am-241 total (Ci/gal)	iCm-242 (Ci/gal)	Cm-242 total (Ci/gal)
1			3.93E-11	9.71E-43	2.88E-10	1.39E-23	3.21E-24	1.17E-09	2.57E-15	1.19E-05	1.59E-12	1.59E-12
2			6.11E-12	9.36E-50	4.00E-11	2.17E-24	5.00E-25	1.52E-10	4.00E-16	1.94E-06	4.19E-13	4.19E-13
3			5.12E-12	3.84E-47	3.51E-11	1.81E-24	4.19E-25	1.37E-10	3.35E-16	1.73E-06	3.54E-13	3.54E-13
4			1.64E-07	1.93E-33	7.34E-10	2.78E-23	6.40E-24	2.24E-05	1.74E-09	2.49E-05	1.84E-13	1.84E-13
5			1.74E-09	4.07E-39	1.39E-08	6.15E-22	1.42E-22	5.92E-08	1.14E-13	5.18E-04	1.64E-11	1.64E-11
6			7.44E-08	2.18E-38	9.39E-10	3.80E-23	8.77E-24	2.85E-06	7.03E-15	3.29E-05	1.27E-12	1.27E-12
7			1.25E-08	1.17E-35	2.93E-11	1.20E-24	2.76E-25	1.12E-06	3.08E-11	1.79E-06	4.93E-14	4.93E-14
8			1.34E-07	1.25E-34	2.57E-10	1.00E-23	2.31E-24	1.00E-05	3.30E-10	1.01E-05	2.02E-12	2.02E-12
25			1.65E-12	1.41E-25	2.26E-11	5.84E-25	1.35E-25	1.30E-10	1.09E-16	4.96E-05		1.41E-25
26			1.65E-12	1.41E-25	2.26E-11	5.84E-25	1.35E-25	1.30E-10	1.09E-16	4.96E-05		1.41E-25
27			1.65E-12	1.41E-25	2.26E-11	5.84E-25	1.35E-25	1.30E-10	1.09E-16	4.96E-05		1.41E-25
28			1.65E-12	1.41E-25	2.26E-11	5.84E-25	1.35E-25	1.30E-10	1.09E-16	4.96E-05		1.41E-25
33			5.22E-11	1.55E-24	7.41E-10	1.85E-23	4.26E-24	4.43E-09	3.41E-15	8.20E-05	1.99E-13	1.99E-13
34			8.07E-11	6.63E-27	5.58E-09	2.85E-23	6.58E-24	6.01E-09	5.27E-15	2.33E-04	1.27E-12	1.27E-12
44			1.65E-12	1.41E-25	2.26E-11	5.84E-25	1.35E-25	1.30E-10	1.09E-16	4.96E-05		1.41E-25
45			1.65E-12	1.41E-25	2.26E-11	5.84E-25	1.35E-25	1.30E-10	1.09E-16	4.96E-05		1.41E-25
46			1.65E-12	1.41E-25	2.26E-11	5.84E-25	1.35E-25	1.30E-10	1.09E-16	4.96E-05		1.41E-25
47			1.53E-12	2.04E-30	2.00E-11	5.39E-25	1.25E-25	1.11E-10	1.00E-16	4.22E-05		2.04E-30

Closure Tanks 18-19

	A	B	C	D	E	F
2	Date		8/1/2003	1/14/2002	9/30/2020	9/30/2020
3	Tank		18	19	18	19
4	Nuclide	Half-life, yr	Total Inventory, Ci	Total Inventory, Ci	Total Inventory, Ci	Total Inventory, Ci
5	H-3	1.23E+01	6.16E-02	3.78E-01	2.35E-02	1.32E-01
6	C-14	5.73E+03	5.61E-02	1.12E-01	5.60E-02	1.11E-01
7	Co-60	5.27E+00	4.35E+00	7.28E+00	4.55E-01	6.21E-01
8	Ni-59	7.50E+04	9.12E-01	8.26E-01	9.12E-01	8.26E-01
9	Ni-63	1.00E+02	8.04E+01	7.62E+01	7.14E+01	6.70E+01
10	Se-79	6.50E+04	5.05E-02	5.89E-02	5.05E-02	5.89E-02
11	Sr-90	2.85E+01	1.41E+03	4.00E+01	9.28E+02	2.54E+01
12	Y-90	2.85E+01	1.41E+03	4.00E+01	9.28E+02	2.54E+01
13	Nb-94	2.03E+04	4.01E-05	3.63E-05	4.01E-05	3.62E-05
14	Tc-99	2.13E+05	1.48E+00	6.76E+00	1.48E+00	6.76E+00
15	Ru-106	1.02E+00	9.72E-05	2.70E-04	8.34E-10	8.12E-10
16	Rh-106	1.02E+00	9.72E-05	2.70E-04	8.34E-10	8.12E-10
17	Sb-125	2.73E+00	1.17E+00	2.59E+00	1.50E-02	2.24E-02
18	Sn-126	1.00E+05	1.40E-01	1.27E-01	1.40E-01	1.27E-01
19	I-129	1.57E+07	6.42E-06	4.95E-05	6.42E-06	4.95E-05
20	Cs-134	2.06E+00	3.29E-03	7.60E-03	1.03E-05	1.41E-05
21	Cs-135	2.30E+06	8.74E-04	7.91E-04	8.74E-04	7.91E-04
22	Cs-137	3.02E+01	1.26E+04	4.92E+04	8.50E+03	3.20E+04
23	Ba-137m	3.02E+01	1.16E+04	4.64E+04	7.83E+03	3.02E+04
24	Ce-144	7.80E-01	1.44E-06	3.71E-06	3.41E-13	2.23E-13
25	Pr-144	7.80E-01	1.44E-06	3.71E-06	3.41E-13	2.23E-13
26	Pm-147	2.62E+00	1.85E+01	4.15E+01	1.98E-01	2.96E-01
27	Eu-154	8.80E+00	1.06E+01	1.47E+01	2.74E+00	3.37E+00
28	Th-232	1.41E+10				
29	U-232	7.20E+01	2.18E-04	2.10E-04	1.84E-04	1.75E-04
30	U-233	1.59E+05	4.41E+00	9.83E-01	4.41E+00	9.83E-01
31	U-234	2.45E+05	2.53E+00	8.96E-02	2.53E+00	8.95E-02
32	U-235	7.04E+08	9.31E-03	1.36E-03	9.31E-03	1.36E-03
33	U-236	2.34E+07	3.15E-02	3.27E-03	3.15E-02	3.27E-03
34	U-238	4.47E+09	2.37E-01	4.54E-02	2.37E-01	4.54E-02
35	Np-237	2.14E+06	1.18E-01	1.12E-02	1.18E-01	1.12E-02
36	Pu-238	8.77E+01	7.01E+01	2.45E+01	6.12E+01	2.12E+01
37	Pu-239	2.41E+04	1.40E+02	3.12E+01	1.40E+02	3.11E+01
38	Pu-240	6.56E+03	5.81E+01	1.11E+01	5.80E+01	1.11E+01
39	Pu-241	1.44E+01	2.52E+02	5.49E+01	1.10E+02	2.23E+01
40	Pu-242	3.76E+05	5.60E-01	3.72E-01	5.60E-01	3.72E-01
41	iAm-241	4.33E+02			4.64E+00	1.07E+00
42	Am-241	4.33E+02	7.41E+01	1.17E+01	7.21E+01	1.14E+01
43	Am-242m	1.52E+02	8.03E-01	1.93E+00	7.43E-01	1.77E+00
44	Na-22	2.60E+00				
45	Al-26	7.15E+05				
46	Te-125m	1.59E-01	2.87E-01	6.32E-01	3.66E-03	5.47E-03
47	Sb-126	3.40E-02	1.96E-02	1.78E-02	1.96E-02	1.78E-02
48	Sb-126m	3.62E-05	1.40E-01	1.27E-01	1.40E-01	1.27E-01
49	Sm-151	9.01E+01	4.58E+01	1.30E+00	4.01E+01	1.13E+00
50	Eu-152	1.33E+01	1.98E-01	5.62E-03	8.09E-02	2.12E-03
51	Eu-155	4.96E+00	2.67E+00	7.57E-02	2.42E-01	5.54E-03
52	Ra-226	1.60E+03	4.90E-07	1.06E-07	1.30E-05	4.88E-07
53	Ac-227	2.18E+01	1.64E-06	2.85E-07	4.51E-06	6.94E-07
54	Ra-228	5.75E+00			0.00E+00	0.00E+00
55	Th-229	7.34E+03	2.27E-03	2.61E-03	1.97E-02	4.54E-03
56	Th-230	7.54E+04	6.00E-05	1.29E-05	1.10E-03	4.01E-05
57	Pa-231	3.29E+04	4.57E-06	7.90E-07	9.28E-06	1.40E-06
58	Pu-244	8.25E+07	3.39E-04	1.66E-03	2.56E-03	1.70E-03
59	Bk-249	8.77E-01	1.89E-28	5.36E-30	2.41E-34	2.02E-36
60	Cf-249	3.51E+02	1.39E-20	3.96E-22	1.34E-20	3.82E-22
61	Cf-251	8.99E+02				
62	Cf-252	2.64E+00				
63	Am-243	7.37E+03	6.15E-06	1.75E-07	6.14E-06	1.75E-07
64	Cm-242	4.47E-01	3.19E-20	9.07E-22	8.55E-32	2.21E-34
65	Cm-243	2.85E+01	9.52E-05	2.70E-06	6.27E-05	1.71E-06
66	Cm-247	1.56E+07	2.17E-18	6.16E-20	2.17E-18	6.16E-20
67	Cm-248	3.40E+05	5.02E-19	1.42E-20	5.02E-19	1.42E-20
68	Cm-244	1.81E+01	1.69E+02	3.05E-03	8.78E+01	1.49E-03
69	Cm-245	8.50E+03	2.17E-09	1.97E-09	2.17E-09	1.96E-09
70	Am-241 total	4.33E+02	7.41E+01	1.17E+01	7.68E+01	1.24E+01
71	iCm-242				6.09E-01	1.45E+00
72	Cm-242 total				6.09E-01	1.45E+00