Feed Basis for Processing Relatively Low Radioactivity Waste Tanks

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WSRC-TR-2001-00559, Rev. 1
Keywords: Salt Processing, Waste Characterization
Retention: Permanent
Publication Date: February 25, 2002

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Feed Basis for Processing Relatively Low Radioactivity Waste Tanks

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ABSTRACT

This paper presents the characterization of potential feed for processing relatively low radioactive waste tanks. The feed characterization is based on waste characterization data extracted from the waste characterization system. This data is compared to salt cake sample results from Tanks 37, 38 and 41.

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1 Introduction

To prepare cesium (Cs) for final disposal, it is necessary to separate Cs and other soluble transuranic material from the waste stream. The original baseline salt processing step at SRS, known as In-Tank Precipitation (ITP), initiated operation in September 1995. During operations, benzene (a flammable gas) evolved from the process at higher rates than expected.

In August 1996, the Defense Nuclear Facilities Safety Board (DNFSB) issued Recommendation 96-1 that operations and tests in the ITP Facility not proceed without an improved understanding of the mechanisms of benzene generation, retention, and release. Extensive laboratory studies conducted from December 1995 through January 1998 ultimately concluded that production goals and safety requirements could not be simultaneously met in the ITP Facility, as configured. This resulted in a Westinghouse Savannah River Company (WSRC) recommendation to the Department of Energy in January 1998 to suspend ITP operations and conduct a systems engineering evaluation of salt disposition options and to recommend the preferred alternatives.

DOE designated a preferred alternative, Caustic Side Solvent Extraction, in October 2001.As described in the Salt Processing EIS Record of Decision (ROD), DOE plans to pursue a variety of methods to disposition the salt waste. These are:

- Low Curie Salt Waste Direct to Saltstone (no treatment)
- Actinide Removal from Low Curie Waste followed by Disposal in Saltstone
- Actinide Removal followed by future treatment of the resulting stream rich in Cs
- Caustic Side Solvent Extraction

This paper presents the characterization of potential feed for processing relatively low radioactive waste tanks. The feed characterization is based on waste characterization data extracted from the Waste Characterization System (WCS). This data is compared to salt cake sample results from Tanks 37, 38 and 41. Any revisions to the expected feed will be represented by revisions to this document.

2 Approach

Salt cake in High Level Waste (HLW) tanks consists of crystallized salts with interstitial space and entrained insoluble solids assumed to be sludge solids. In order to determine the composition of the salt cake, the individual parts are first identified and then combined in the appropriate ratios to formulate the final characterization. The feed material for processing relatively low radioactivity waste tanks consists of the salt cake dissolved to an assumed 6.44 M total sodium concentration.

The interstitial space is assumed to consist of gas and supernate. Prior to dissolving the salt cake, the interstitial space is assumed to be drained such that less than 30% liquid supernate remains. Such drainage is possible in a laboratory test on simulated salt cake.[1] Hydraulic modeling of a full-scale tank indicates the same may be possible at full-scale.[2] The total interstitial liquid volume is assumed to be 22%.[3]

Chemical and Radionuclide concentrations for salt cake and supernate in each waste tank with salt cake are extracted from the HLW Waste Characterization System (WCS)[3] or calculated from the information given in the WCS. Tanks with salt cake and no free supernate data are not included. WCS indicates radionuclides are assumed to be in the interstitial supernate and entrained insoluble solids and not in the salt cake solids.

The radionuclide and chemical data are adjusted to solutions at 6.44 M total sodium concentration by simulating dissolution and dilution with water. The sodium concentration in actual material transferred as feed will change from existing concentrations due to in-transfer dilution.

The radionuclide contribution of the insoluble solids is estimated from the average distribution of radionuclides in HLW sludge, which is extracted from the WCS. The radionuclide contribution range of sludge is then calculated by multiplying the mass-based distribution by 0, 100, 350 and 600 mg of sludge solids per liter of final solution.[3] The sludge contribution is then added to the supernate contribution estimated above.

3 Salt Cake and Feed Solution Characterization

Waste tanks with Salt cake include Tanks 1, 2, 3, 9, 10, 25, 27, 28, 29, 31, 33, 34, 36, 37, 38, 41, 44, 45, 46, and 47. Tanks 1, 2, 3, 9, and 10 do not have transferable free supernate. Without adequate supernate, no supernate sample data exists from the last 15 years to adequately characterize the radionuclide inventory, therefore, these tanks were eliminated from further analysis.

Table 1 shows the salt cake composition as calculated from the information given in the WCS. WCS lists only two compositions for salt cake, one for F-Area salt waste and one for H-Area salt waste, thus, Table 1: Salt Cake Composition shows Tanks in F-Area have the same composition and the tanks in H-Area have the same composition. Table 2 shows the supernate composition per tank extracted from WCS and converted to a consistent set of units. Appendix A contains total gamma data from the Tank Chemistry Database, which provides a comparison of current cesium values in WCS to historical analysis. Table 3 shows the average composition of sludge from WCS. Average sludge composition is estimated by dividing the total of each component by the total mass of sludge in both tank farms as reported by WCS. Table 4 - Table 7 show estimated composition of the feed material produced after draining 70% of the supernate from the salt cake and with variable amounts of entrained insoluble solids. Table 8 - Table 15 shows additional estimates of feed material composition assuming interstitial liquid drainage of 80% and 90%. All feed compositions are projected by dissolving the salt to 6.44 M total sodium concentration with water.

Tables 16, 17, and 18 show the total estimated volume of salt solution produced after dissolution and dilution of each waste tank with salt cake at 70%, 80% and 90% supernate drainage respectively. To account for the non-ideal solution, the specific gravity of the dissolved salt solution was calculated based on the sodium concentration.[8] The amount of dilution water required to give a final dissolved salt solution sodium concentration of 6.44 M was then determined algebraically.

$$\rho_{ss} = (1.009+.04454*[Na]_{ss})*8.34 \quad (1)$$

$$\rho_{ss} = m_{ss}/V_{ss} \quad (2)$$

$$m_{ss} = m_{ds}+m_{H2O} \quad (3)$$

Combining equations 2 and 3 and equating them to equation 1, yields

$$(m_{ds}+m_{H2O})/V_{ss} = (1.009+.04454*[Na]_{ss})*8.34 \quad (4)$$

$$m_{H2O} = V_{ss}*[(1.009+.04454*[Na]_{ss})*8.34]- m_{ds} \quad (5)$$

$$V_{ss} = [Na]_{ds}/[Na]_{ss} * V_{ds} \quad (6)$$

Inserting equation 6 into equation 5 yields

$$m_{H2O} = [Na]_{ds}/[Na]_{ss} * V_{ds}*[(1.009+.04454*[Na]_{ss})*8.34]-m_{ds} \quad (7)$$

$$V_{H20} = m_{H2O}/\rho_{H2O} \quad (8)$$

Combining equations 7 and 8 yield

$$V_{H2O} = \{[Na]_{ds}/[Na]_{ss} * V_{ds} * [(1.009 + .04454 * [Na]_{ss}) * 8.34] - m_{ds}\}/\rho_{H2O} \quad (9)$$

ss = salt solution after dilution

ds = drained salt

H2O = dilution water

ρ = density (lb/gal)

[Na] = sodium concentration (M)

V = volume (gal)

m = mass (lb)

Table 1: Salt Cake Composition

Salt Composition (M)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	1.90E+01	1.90E+01	1.90E+01	2.06E+01	2.06E+01	1.90E+01	1.90E+01	2.06E+01	2.06E+01	2.06E+01	2.06E+01	1.90E+01	1.90E+01	1.90E+01	1.90E+01
Al(OH)4	9.52E-01	9.52E-01	9.52E-01	1.28E+00	1.28E+00	9.52E-01	9.52E-01	1.28E+00	1.28E+00	1.28E+00	1.28E+00	9.52E-01	9.52E-01	9.52E-01	9.52E-01
CO3	6.62E-01	6.62E-01	6.62E-01	4.28E-01	4.28E-01	6.62E-01	6.62E-01	4.28E-01	4.28E-01	4.28E-01	4.28E-01	6.62E-01	6.62E-01	6.62E-01	6.62E-01
C2O4	6.67E-02	6.67E-02	6.67E-02	4.54E-02	4.54E-02	6.67E-02	6.67E-02	4.54E-02	4.54E-02	4.54E-02	4.54E-02	6.67E-02	6.67E-02	6.67E-02	6.67E-02
NO2	3.03E-01	3.03E-01	3.03E-01	2.37E+00	2.37E+00	3.03E-01	3.03E-01	2.37E+00	2.37E+00	2.37E+00	2.37E+00	3.03E-01	3.03E-01	3.03E-01	3.03E-01
NO3	1.13E+01	1.13E+01	1.13E+01	8.55E+00	8.55E+00	1.13E+01	1.13E+01	8.55E+00	8.55E+00	8.55E+00	8.55E+00	1.13E+01	1.13E+01	1.13E+01	1.13E+01
OH	2.68E+00	2.68E+00	2.68E+00	5.91E+00	5.91E+00	2.68E+00	2.68E+00	5.91E+00	5.91E+00	5.91E+00	5.91E+00	2.68E+00	2.68E+00	2.68E+00	2.68E+00
PO4	3.86E-03	3.86E-03	3.86E-03	5.03E-02	5.03E-02	3.86E-03	3.86E-03	5.03E-02	5.03E-02	5.03E-02	5.03E-02	3.86E-03	3.86E-03	3.86E-03	3.86E-03
SO4	9.74E-01	9.74E-01	9.74E-01	5.92E-01	5.92E-01	9.74E-01	9.74E-01	5.92E-01	5.92E-01	5.92E-01	5.92E-01	9.74E-01	9.74E-01	9.74E-01	9.74E-01
Ca	1.51E-04	1.51E-04	1.51E-04	1.00E-04	1.00E-04	1.51E-04	1.51E-04	1.00E-04	1.00E-04	1.00E-04	1.00E+00	1.51E-04	1.51E-04	1.51E-04	1.51E-04
Cl	1.28E-01	1.28E-01	1.28E-01	1.24E-01	1.24E-01	1.28E-01	1.28E-01	1.24E-01	1.24E-01	1.24E-01	1.24E-01	1.28E-01	1.28E-01	1.28E-01	1.28E-01
F	2.13E-01	2.13E-01	2.13E-01	1.16E-01	1.16E-01	2.13E-01	2.13E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	2.13E-01	2.13E-01	2.13E-01	2.13E-01
K	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02	1.43E-02
NH4	---	---	---	4.53E-03	4.53E-03	---	---	4.53E-03	4.53E-03	4.53E-03	4.53E-03	---	---	---	---

Table 2: Supernate Composition

Supernate Composition (M)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	1.19E+01	1.30E+01	1.24E+01	4.87E+00	1.27E+01	3.07E+00	1.08E+01	1.27E+01	1.27E+01	1.48E+00	9.94E+00	1.41E+01	1.33E+01	1.50E+01	8.56E+00
Al(OH)4	5.00E-01	1.08E+00	5.10E-01	3.20E-01	8.60E-01	1.00E-02	2.90E-01	1.00E-02	4.80E-01	1.60E-01	2.00E-01	3.80E-01	2.20E-01	7.00E-02	4.00E-01
CO3	1.30E-01	1.20E-01	4.00E-02	1.00E-02	5.00E-02	1.00E-02	5.30E-01	8.00E-02	6.00E-02	1.00E-01	2.60E-01	2.00E-01	2.90E-01	1.00E-02	2.80E-01
C2O4	6.80E-03	6.70E-03	6.80E-03	6.40E-03	6.80E-03	5.70E-03	7.40E-03	6.80E-03	1.70E-02	5.90E-03	5.70E-03	6.80E-03	6.70E-03	5.70E-03	6.80E-03
NO2	1.30E+00	1.42E+00	1.72E+00	8.79E-01	2.50E+00	4.70E-02	1.16E+00	2.24E+00	1.96E+00	3.42E-01	9.89E-01	1.52E+00	1.70E+00	1.58E+00	6.20E-01
NO3	1.34E+00	1.71E+00	2.10E+00	8.49E-01	2.39E+00	1.34E+00	2.47E+00	1.66E+00	2.29E+00	3.59E-01	3.30E+00	1.13E+00	1.22E+00	1.73E+00	2.37E+00
OH	9.22E+00	9.54E+00	7.04E+00	1.97E+00	5.22E+00	1.22E+00	6.16E+00	1.05E+01	7.00E+00	1.71E+00	3.95E+00	1.18E+01	1.31E+01	6.39E+00	3.76E+00
PO4	1.80E-02	1.80E-02	2.40E-02	7.30E-03	2.20E-02	5.30E-03	6.90E-03	3.10E-02	1.60E-02	5.50E-03	2.63E-02	1.20E-02	1.30E-02	1.76E-02	6.30E-03
SO4	5.00E-03	8.60E-03	7.60E-03	9.70E-03	1.60E-02	5.15E-02	3.00E-02	4.20E-03	1.50E-02	8.60E-03	4.86E-02	4.20E-03	5.00E-03	1.87E-02	3.90E-02
Ag	8.34E-07	4.91E-06	3.62E-06	1.95E-06	1.69E-06	1.69E-06	1.69E-06	1.69E-06	1.69E-06	2.13E-06	1.69E-06	1.69E-06	1.69E-06	1.69E-06	1.69E-06
As	1.47E-04	1.33E-04	1.74E-04	2.54E-04	2.66E-03	1.16E-03	3.01E-03	4.61E-03	3.32E-03	1.74E-04	2.18E-03	5.12E-03	5.60E-03	3.09E-03	2.11E-03
Ba	1.46E-07	1.46E-06	1.09E-06	1.02E-05	----	----	----	----	----	3.64E-07	----	----	----	----	----
Ca	----	----	----	5.29E-05	----	6.91E-05	----	----	----	5.85E-05	9.97E-06	----	----	----	1.41E-05
Cd	4.00E-06	3.83E-06	5.07E-06	6.67E-06	7.15E-05	1.39E-05	8.51E-05	1.47E-04	9.72E-05	3.56E-06	5.32E-05	1.67E-04	1.85E-04	8.84E-05	5.05E-05
Cl	2.00E-02	2.10E-02	2.10E-02	5.30E-03	9.80E-03	2.80E-03	1.60E-02	1.90E-02	1.30E-02	2.90E-03	1.16E-02	2.40E-02	2.80E-02	2.24E-02	7.70E-03
Co	2.13E-05	2.18E-05	1.79E-05	1.01E-05	1.51E-05	8.94E-06	1.66E-05	2.32E-05	1.79E-05	9.70E-06	1.32E-05	2.53E-05	2.73E-05	1.69E-05	1.29E-05
Cr	8.85E-04	5.39E-04	1.79E-03	7.83E-03	1.06E-02	1.18E-02	1.03E-02	9.02E-03	1.01E-02	9.79E-03	1.10E-02	8.61E-03	8.22E-03	1.03E-02	1.11E-02
Cu	7.66E-03	7.93E-03	5.80E-03	1.47E-03	4.24E-03	8.32E-04	5.05E-03	8.72E-03	5.76E-03	1.25E-03	3.16E-03	9.87E-03	1.10E-02	5.24E-03	3.00E-03
Fe	6.45E-05	6.45E-05	5.01E-05	4.12E-05	1.93E-04	4.26E-05	2.29E-04	3.91E-04	2.60E-04	9.49E-05	1.45E-04	4.42E-04	4.90E-04	2.37E-04	1.38E-04
F	1.30E-02	1.30E-02	1.30E-02	5.90E-03	1.30E-02	5.90E-03	1.30E-02	1.30E-02	1.30E-02	5.50E-03	5.20E-03	1.30E-02	1.30E-02	7.80E-03	1.30E-02
Hg	4.99E-05	4.99E-05	4.99E-05	9.97E-05	6.13E-04	5.82E-04	6.20E-04	6.53E-04	6.26E-04	4.99E-05	6.03E-04	6.63E-04	6.73E-04	6.22E-04	6.02E-04
K	1.30E-01	1.40E-01	1.30E-01	4.10E-02	7.60E-02	1.30E-02	7.60E-02	1.70E-01	8.70E-02	1.33E-02	3.70E-02	1.60E-01	1.80E-01	8.60E-02	5.40E-02
Mg	----	----	4.70E-07	6.44E-06	2.61E-06	7.32E-06	1.51E-06	----	5.17E-07	6.74E-06	4.11E-06	----	----	1.23E-06	4.33E-06
Mn	2.73E-06	3.28E-06	4.37E-06	5.46E-06	9.99E-06	4.73E-06	1.12E-05	1.69E-05	1.23E-05	2.91E-06	8.32E-06	1.87E-05	2.04E-05	1.15E-05	8.07E-06
Nd	----	----	----	2.14E-04	----	2.65E-04	----	----	----	2.31E-04	7.95E-05	----	----	----	9.24E-05
Ni	5.11E-05	5.24E-05	4.21E-05	2.12E-05	3.46E-05	1.81E-05	3.85E-05	5.62E-05	4.19E-05	2.01E-05	2.94E-05	6.18E-05	6.71E-05	3.94E-05	2.86E-05
Pb	1.40E-04	1.16E-04	1.59E-04	2.46E-04	----	----	----	----	----	1.45E-04	----	----	----	----	----
Ru	8.08E-04	8.35E-04	6.27E-04	2.05E-04	4.75E-04	1.42E-04	5.53E-04	9.12E-04	6.23E-04	1.83E-04	3.69E-04	1.02E-03	1.13E-03	5.73E-04	3.54E-04
Se	1.04E-03	7.98E-04	1.34E-03	2.98E-03	8.15E-03	9.87E-03	7.75E-03	5.91E-03	7.39E-03	2.85E-03	8.70E-03	5.33E-03	4.78E-03	7.65E-03	8.78E-03
Si	4.95E-03	4.34E-03	2.54E-02	8.90E-04	----	----	----	----	----	6.94E-03	----	----	----	----	----
Sr	----	----	----	1.44E-04	----	1.83E-04	----	----	----	1.57E-04	3.98E-05	----	----	----	4.98E-05
Zn	9.30E-03	9.59E-03	7.28E-03	2.58E-03	5.59E-03	1.88E-03	6.46E-03	1.05E-02	7.24E-03	2.34E-03	4.41E-03	1.17E-02	1.29E-02	6.68E-03	4.24E-03
Zr	2.45E-04	2.53E-04	1.87E-04	5.21E-05	1.38E-04	3.22E-05	1.63E-04	2.78E-04	1.86E-04	4.52E-05	1.05E-04	3.14E-04	3.48E-04	1.70E-04	9.96E-05

Table 2: Supernate Composition (continued)

Radionuclide Composition (Ci/gal)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Sr-90	2.90E-03	2.90E-03	2.90E-03	1.10E-02	1.10E-02	1.10E-02	1.10E-02	1.10E-02	1.10E-02	2.90E-03	2.90E-03	2.90E-03	2.90E-03	2.90E-03	2.90E-03
Y-90	2.90E-03	2.90E-03	2.90E-03	1.10E-02	1.10E-02	1.10E-02	1.10E-02	1.10E-02	1.10E-02	2.90E-03	2.90E-03	2.90E-03	2.90E-03	2.90E-03	2.90E-03
Cs-137	4.29E+00	4.07E+00	4.47E+00	4.09E+00	1.14E+01	9.93E-02	3.48E+00	2.09E+01	1.52E+01	2.70E-01	2.52E+00	5.30E+00	5.01E+00	6.47E+00	2.67E+00
Ba-137m	4.06E+00	3.85E+00	4.23E+00	3.87E+00	1.07E+01	9.40E-02	3.29E+00	1.98E+01	1.44E+01	2.56E-01	2.39E+00	5.01E+00	4.74E+00	6.12E+00	2.52E+00
Th-232	----	----	----	5.39E-10	5.39E-10	----	----	5.39E-10	5.39E-10	----	----	----	----	----	----
U-232	3.48E-09	3.48E-09	3.48E-09	1.53E-10	1.53E-10	4.59E-08	4.66E-08	1.53E-10	1.53E-10	----	----	3.48E-09	3.48E-09	3.48E-09	3.48E-09
U-233	----	----	----	1.10E-07	1.10E-07	----	----	1.10E-07	1.10E-07	----	----	----	----	----	----
U-234	----	----	----	1.56E-08	1.56E-08	----	----	1.56E-08	1.56E-08	2.55E-07	2.55E-07	----	----	----	----
U-235	7.79E-09	7.79E-09	7.79E-09	4.26E-10	4.26E-10	5.44E-08	4.36E-08	4.26E-10	4.26E-10	2.57E-09	2.57E-09	7.79E-09	7.79E-09	7.79E-09	7.79E-09
U-236	----	----	----	1.61E-09	1.61E-09	----	----	1.61E-09	1.61E-09	3.88E-08	3.88E-08	----	----	----	----
U-238	7.12E-07	7.12E-07	7.12E-07	4.98E-09	4.98E-09	4.97E-06	3.08E-06	4.98E-09	4.98E-09	3.60E-10	3.60E-10	7.12E-07	7.12E-07	7.12E-07	7.12E-07
Np-237	----	----	----	4.01E-08	4.01E-08	4.10E-06	2.38E-06	4.01E-08	4.01E-08	2.22E-07	2.22E-07	----	----	----	----
Pu-238	5.90E-03	5.90E-03	5.90E-03	1.53E-04	1.53E-04	----	----	1.53E-04	1.53E-04	7.00E-03	7.00E-03	5.90E-03	5.90E-03	5.90E-03	5.90E-03
Pu-239	8.43E-04	8.43E-04	8.43E-04	3.96E-06	3.96E-06	5.95E-04	4.98E-04	3.96E-06	3.96E-06	2.16E-05	2.16E-05	8.43E-04	8.43E-04	8.43E-04	8.43E-04
Pu-240	1.88E-04	1.88E-04	1.88E-04	1.64E-06	1.64E-06	1.33E-04	1.11E-04	1.64E-06	1.64E-06	1.43E-05	1.43E-05	1.88E-04	1.88E-04	1.88E-04	1.88E-04
Pu-241	5.05E-03	5.05E-03	5.05E-03	3.56E-05	3.56E-05	3.46E-03	2.83E-03	3.56E-05	3.56E-05	1.19E-03	1.19E-03	5.05E-03	5.05E-03	5.05E-03	5.05E-03
Pu-242	3.87E-08	3.87E-08	3.87E-08	1.09E-09	1.09E-09	2.74E-08	2.31E-08	1.09E-09	1.09E-09	2.68E-07	2.68E-07	3.87E-08	3.87E-08	3.87E-08	3.87E-08
Am-241	----	----	----	4.50E-05	4.50E-05	6.24E-03	6.38E-03	4.50E-05	4.50E-05	3.74E-05	3.74E-05	----	----	----	----
Am-242m	----	----	----	5.50E-08	5.50E-08	8.52E-06	8.68E-06	5.50E-08	5.50E-08	4.65E-08	4.65E-08	----	----	----	----
Cm-244	7.32E-08	7.32E-08	7.32E-08	1.32E-07	1.32E-07	3.31E-06	3.26E-06	1.32E-07	1.32E-07	6.31E-07	6.31E-07	7.32E-08	7.32E-08	7.32E-08	7.32E-08
Cm-245	2.88E-14	2.88E-14	2.88E-14	1.63E-11	1.63E-11	1.30E-12	1.33E-12	1.63E-11	1.63E-11	3.88E-11	3.88E-11	2.88E-14	2.88E-14	2.88E-14	2.88E-14
Total Alpha	6.93E-03	6.93E-03	6.93E-03	2.04E-04	2.04E-04	6.98E-03	7.00E-03	2.04E-04	2.04E-04	7.08E-03	7.08E-03	6.93E-03	6.93E-03	6.93E-03	6.93E-03

Notes:

- Sr/Y concentrations are extracted from reference 4 due to limited data within WCS.
- Cs concentrations were converted to Ci/gal from the Cs concentrations in mg/L given in WCS, using a Specific Activity of 8.70 E-2 Ci/mg.
- Ba-137m concentrations assumed to be 94.6% of the Cs-137 concentration.

Table 3: Average Radionuclide Concentration in Sludge

Nuclides	Sludge Solids (Ci/mg)
C-14	1.49E-12
Ni-59	8.55E-10
Ni-63	1.33E-12
Co-60	1.36E-07
Se-79	5.04E-10
Tc-99	8.58E-09
Ru-106	3.17E-09
Rh-106	3.17E-09
Sb-125	8.11E-08
Sn-126	6.74E-10
I-129	7.89E-14
Cs-134	3.55E-09
Cs-135	6.03E-12
Cs-137	1.79E-06
Ba-137m	1.70E-06
Sr-90	2.97E-05
Y-90	2.97E-05
Ce-144	1.63E-09
Pr-144	1.63E-09
Pm-147	1.71E-06
Eu-154	3.33E-07
Th-232	9.57E-13
U-232	2.06E-13
U-233	3.24E-11
U-234	1.04E-11
U-235	5.12E-13
U-236	1.47E-12
U-238	1.57E-11
Np-237	2.24E-11
Pu-238	6.31E-07
Pu-239	1.08E-08
Pu-240	5.04E-09
Pu-241	3.44E-07
Pu-242	9.84E-12
Am-241	7.12E-08
Am-242m	6.69E-11
Cm-244	7.32E-08
Cm-245	5.45E-12

Notes:

- Sludge radionuclide distribution derived from HLW Waste Characterization Database.

Table 4: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
600 mg/L sludge; 30% of interstitial supernate remaining

Concentration (M)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00
Al(OH)4	3.20E-01	3.32E-01	3.20E-01	4.00E-01	4.01E-01	3.19E-01	3.17E-01	3.84E-01	3.93E-01	4.01E-01	3.91E-01	3.15E-01	3.13E-01	3.08E-01	3.22E-01
CO3	2.18E-01	2.17E-01	2.16E-01	1.32E-01	1.30E-01	2.22E-01	2.27E-01	1.30E-01	1.30E-01	1.35E-01	1.35E-01	2.18E-01	2.20E-01	2.13E-01	2.24E-01
C2O4	2.18E-02	2.17E-02	2.18E-02	1.41E-02	1.38E-02	2.24E-02	2.19E-02	1.38E-02	1.40E-02	1.43E-02	1.39E-02	2.17E-02	2.17E-02	2.16E-02	2.21E-02
NO2	1.26E-01	1.28E-01	1.35E-01	7.48E-01	7.62E-01	1.02E-01	1.24E-01	7.57E-01	7.52E-01	7.45E-01	7.39E-01	1.30E-01	1.34E-01	1.31E-01	1.13E-01
NO3	3.72E+00	3.71E+00	3.73E+00	2.65E+00	2.61E+00	3.83E+00	3.76E+00	2.60E+00	2.61E+00	2.67E+00	2.65E+00	3.69E+00	3.70E+00	3.69E+00	3.78E+00
OH	1.07E+00	1.07E+00	1.02E+00	1.86E+00	1.88E+00	9.25E-01	1.01E+00	1.98E+00	1.91E+00	1.87E+00	1.87E+00	1.12E+00	1.15E+00	9.99E-01	9.63E-01
PO4	1.64E-03	1.63E-03	1.77E-03	1.56E-02	1.55E-02	1.41E-03	1.41E-03	1.57E-02	1.54E-02	1.58E-02	1.58E-02	1.50E-03	1.53E-03	1.61E-03	1.40E-03
SO4	3.17E-01	3.16E-01	3.16E-01	1.82E-01	1.78E-01	3.27E-01	3.18E-01	1.78E-01	1.78E-01	1.84E-01	1.80E-01	3.14E-01	3.15E-01	3.14E-01	3.21E-01
Ag	1.79E-08	1.05E-07	7.74E-08	3.95E-08	3.34E-08	3.73E-08	3.63E-08	3.34E-08	3.34E-08	4.38E-08	3.37E-08	3.59E-08	3.60E-08	3.58E-08	3.66E-08
As	3.15E-06	2.85E-06	3.72E-06	5.15E-06	5.26E-05	2.57E-05	6.47E-05	9.14E-05	6.58E-05	3.56E-06	4.36E-05	1.09E-04	1.20E-04	6.56E-05	4.58E-05
Ba	3.12E-09	3.11E-08	2.34E-08	2.07E-07	----	----	----	----	----	7.47E-09	----	----	----	----	----
Ca	4.92E-05	4.90E-05	4.91E-05	3.19E-05	3.01E-05	5.22E-05	4.93E-05	3.01E-05	3.01E-05	3.24E-05	3.03E-01	4.88E-05	4.89E-05	4.87E-05	5.00E-05
Cd	8.59E-08	8.18E-08	1.09E-07	1.35E-07	1.42E-06	3.08E-07	1.83E-06	2.92E-06	1.93E-06	7.30E-08	1.06E-06	3.55E-06	3.95E-06	1.88E-06	1.10E-06
Cl	4.19E-02	4.18E-02	4.18E-02	3.83E-02	3.74E-02	4.28E-02	4.20E-02	3.76E-02	3.75E-02	3.86E-02	3.78E-02	4.17E-02	4.19E-02	4.15E-02	4.21E-02
Co	4.57E-07	4.66E-07	3.84E-07	2.05E-07	3.00E-07	1.98E-07	3.57E-07	4.60E-07	3.54E-07	1.99E-07	2.63E-07	5.39E-07	5.84E-07	3.60E-07	2.79E-07
Cr	1.90E-05	1.15E-05	3.83E-05	1.59E-04	2.10E-04	2.61E-04	2.22E-04	1.79E-04	2.00E-04	2.01E-04	2.20E-04	1.83E-04	1.76E-04	2.18E-04	2.40E-04
Cu	1.64E-04	1.69E-04	1.24E-04	2.99E-05	8.41E-05	1.84E-05	1.09E-04	1.73E-04	1.14E-04	2.56E-05	6.31E-05	2.10E-04	2.34E-04	1.11E-04	6.50E-05
Fe	1.38E-06	1.38E-06	1.07E-06	8.36E-07	3.83E-06	9.41E-07	4.92E-06	7.74E-06	5.15E-06	1.95E-06	2.90E-06	9.40E-06	1.05E-05	5.04E-06	3.00E-06
F	6.95E-02	6.93E-02	6.94E-02	3.59E-02	3.52E-02	7.15E-02	6.98E-02	3.52E-02	3.52E-02	3.63E-02	3.53E-02	6.90E-02	6.92E-02	6.87E-02	7.03E-02
Hg	1.07E-06	1.07E-06	1.07E-06	2.02E-06	1.21E-05	1.29E-05	1.34E-05	1.29E-05	1.24E-05	1.02E-06	1.20E-05	1.41E-05	1.44E-05	1.32E-05	1.31E-05
K	7.45E-03	7.64E-03	7.44E-03	5.24E-03	5.81E-03	5.09E-03	6.32E-03	7.67E-03	6.03E-03	4.73E-03	5.08E-03	8.04E-03	8.48E-03	6.44E-03	5.89E-03
Mg	----	----	1.01E-08	1.31E-07	5.17E-08	1.62E-07	3.24E-08	----	1.02E-08	1.38E-07	8.20E-08	----	----	2.62E-08	9.39E-08
Mn	5.86E-08	7.00E-08	9.36E-08	1.11E-07	1.98E-07	1.04E-07	2.42E-07	3.35E-07	2.44E-07	5.98E-08	1.66E-07	3.98E-07	4.35E-07	2.45E-07	1.75E-07
Nd	----	----	----	4.34E-06	----	5.85E-06	----	----	----	4.75E-06	1.59E-06	----	----	----	2.00E-06
Ni	1.10E-06	1.12E-06	9.01E-07	4.30E-07	6.85E-07	4.00E-07	8.28E-07	1.11E-06	8.30E-07	4.13E-07	5.87E-07	1.32E-06	1.43E-06	8.37E-07	6.20E-07
Pb	3.00E-06	2.48E-06	3.41E-06	5.00E-06	----	----	----	----	----	2.97E-06	----	----	----	----	----
Ru	1.73E-05	1.78E-05	1.34E-05	4.15E-06	9.41E-06	3.14E-06	1.19E-05	1.81E-05	1.23E-05	3.76E-06	7.38E-06	2.18E-05	2.42E-05	1.22E-05	7.67E-06
Se	2.23E-05	1.71E-05	2.87E-05	6.04E-05	1.62E-04	2.18E-04	1.67E-04	1.17E-04	1.46E-04	5.85E-05	1.74E-04	1.13E-04	1.02E-04	1.62E-04	1.90E-04
Si	1.06E-04	9.29E-05	5.44E-04	1.81E-05	----	----	----	----	----	1.42E-04	----	----	----	----	----
Sr	----	----	----	2.92E-06	----	4.05E-06	----	----	----	3.23E-06	7.95E-07	----	----	----	1.08E-06
Zn	1.99E-04	2.05E-04	1.56E-04	5.24E-05	1.11E-04	4.16E-05	1.39E-04	2.07E-04	1.43E-04	4.80E-05	8.82E-05	2.49E-04	2.76E-04	1.42E-04	9.19E-05
Zr	5.25E-06	5.41E-06	4.00E-06	1.06E-06	2.74E-06	7.12E-07	3.52E-06	5.50E-06	3.68E-06	9.28E-07	2.09E-06	6.68E-06	7.43E-06	3.60E-06	2.16E-06
Insol.Sol.mg/L	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600

Table 4: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
600 mg/L sludge; 30% of interstitial supernate remaining (continued)

Radionuclide Composition (Ci/gal)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
C-14	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09
Ni-59	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06
Ni-63	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09
Co-60	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04
Se-79	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06
Tc-99	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05
Ru-106	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06
Rh-106	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06
Sb-125	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04
Sn-126	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06
I-129	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10
Cs-134	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06
Cs-135	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08
Cs-137	9.61E-02	9.12E-02	9.98E-02	8.72E-02	2.29E-01	6.27E-03	7.90E-02	4.18E-01	3.05E-01	9.62E-03	5.45E-02	1.17E-01	1.11E-01	1.41E-01	6.20E-02
Ba-137m	9.09E-02	8.62E-02	9.44E-02	8.24E-02	2.17E-01	5.93E-03	7.47E-02	3.96E-01	2.88E-01	9.10E-03	5.16E-02	1.11E-01	1.05E-01	1.34E-01	5.86E-02
Sr-90	6.74E-02	6.74E-02	6.74E-02	6.76E-02	6.75E-02	6.76E-02	6.76E-02	6.75E-02	6.75E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02
Y-90	6.74E-02	6.74E-02	6.74E-02	6.76E-02	6.75E-02	6.76E-02	6.76E-02	6.75E-02	6.75E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02
H-3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ce-144	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06
Pr-144	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06
Pm-147	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03
Eu-154	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04
Th-232	2.17E-09	2.17E-09	2.17E-09	2.18E-09	2.18E-09	2.17E-09	2.17E-09	2.18E-09	2.18E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09
U-232	5.43E-10	5.43E-10	5.43E-10	4.71E-10	4.71E-10	1.48E-09	1.47E-09	4.71E-10	4.71E-10	4.68E-10	4.68E-10	5.42E-10	5.43E-10	5.42E-10	5.44E-10
U-233	7.35E-08	7.35E-08	7.35E-08	7.57E-08	7.57E-08	7.35E-08	7.35E-08	7.57E-08	7.57E-08	7.35E-08	7.35E-08	7.35E-08	7.35E-08	7.35E-08	7.35E-08
U-234	2.35E-08	2.35E-08	2.35E-08	2.38E-08	2.38E-08	2.35E-08	2.35E-08	2.38E-08	2.38E-08	2.87E-08	2.86E-08	2.35E-08	2.35E-08	2.35E-08	2.35E-08
U-235	1.33E-09	1.33E-09	1.33E-09	1.17E-09	1.17E-09	2.36E-09	2.10E-09	1.17E-09	1.17E-09	1.21E-09	1.21E-09	1.33E-09	1.33E-09	1.33E-09	1.33E-09
U-236	3.34E-09	3.34E-09	3.34E-09	3.37E-09	3.37E-09	3.34E-09	3.34E-09	3.37E-09	3.37E-09	4.13E-09	4.11E-09	3.34E-09	3.34E-09	3.34E-09	3.34E-09
U-238	5.09E-08	5.08E-08	5.09E-08	3.57E-08	3.57E-08	1.45E-07	1.02E-07	3.57E-08	3.57E-08	3.56E-08	3.56E-08	5.08E-08	5.08E-08	5.07E-08	5.11E-08
Np-237	5.08E-08	5.08E-08	5.08E-08	5.16E-08	5.16E-08	1.41E-07	1.02E-07	5.16E-08	5.16E-08	5.53E-08	5.52E-08	5.08E-08	5.08E-08	5.08E-08	5.08E-08
Pu-238	1.56E-03	1.56E-03	1.56E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.57E-03	1.57E-03	1.56E-03	1.56E-03	1.56E-03	1.56E-03
Pu-239	4.27E-05	4.26E-05	4.26E-05	2.47E-05	2.47E-05	3.78E-05	3.53E-05	2.47E-05	2.47E-05	2.50E-05	2.50E-05	4.25E-05	4.26E-05	4.25E-05	4.29E-05
Pu-240	1.55E-05	1.55E-05	1.55E-05	1.15E-05	1.15E-05	1.44E-05	1.38E-05	1.15E-05	1.15E-05	1.17E-05	1.17E-05	1.54E-05	1.54E-05	1.54E-05	1.55E-05
Pu-241	8.89E-04	8.88E-04	8.88E-04	7.81E-04	7.81E-04	8.57E-04	8.41E-04	7.81E-04	7.81E-04	8.05E-04	8.04E-04	8.88E-04	8.88E-04	8.87E-04	8.90E-04
Pu-242	2.31E-08	2.31E-08	2.31E-08	2.23E-08	2.23E-08	2.29E-08	2.28E-08	2.23E-08	2.23E-08	2.78E-08	2.77E-08	2.31E-08	2.31E-08	2.31E-08	2.31E-08
Am-241	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	2.99E-04	2.99E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04
Am-242m	1.52E-07	1.52E-07	1.52E-07	1.53E-07	1.53E-07	3.40E-07	3.39E-07	1.53E-07	1.53E-07	1.53E-07	1.53E-07	1.52E-07	1.52E-07	1.52E-07	1.52E-07
Cm-242	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cm-244	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04
Cm-245	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08
Total Alpha	1.94E-03	1.94E-03	1.94E-03	1.80E-03	1.80E-03	1.95E-03	1.95E-03	1.80E-03	1.80E-03	1.94E-03	1.94E-03	1.94E-03	1.94E-03	1.94E-03	1.94E-03

Table 5: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
350 mg/L sludge; 30% of interstitial supernate remaining

	Concentration (M)														
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00
Al(OH)4	3.20E-01	3.32E-01	3.20E-01	4.00E-01	4.01E-01	3.19E-01	3.17E-01	3.84E-01	3.93E-01	4.01E-01	3.91E-01	3.15E-01	3.13E-01	3.08E-01	3.22E-01
CO3	2.18E-01	2.17E-01	2.16E-01	1.32E-01	1.30E-01	2.22E-01	2.27E-01	1.30E-01	1.30E-01	1.35E-01	1.35E-01	2.18E-01	2.20E-01	2.13E-01	2.24E-01
C2O4	2.18E-02	2.17E-02	2.18E-02	1.41E-02	1.38E-02	2.24E-02	2.19E-02	1.38E-02	1.40E-02	1.43E-02	1.39E-02	2.17E-02	2.17E-02	2.16E-02	2.21E-02
NO2	1.26E-01	1.28E-01	1.35E-01	7.48E-01	7.62E-01	1.02E-01	1.24E-01	7.57E-01	7.52E-01	7.45E-01	7.39E-01	1.30E-01	1.34E-01	1.31E-01	1.13E-01
NO3	3.72E+00	3.71E+00	3.73E+00	2.65E+00	2.61E+00	3.83E+00	3.76E+00	2.60E+00	2.61E+00	2.67E+00	2.65E+00	3.69E+00	3.70E+00	3.69E+00	3.78E+00
OH	1.07E+00	1.07E+00	1.02E+00	1.86E+00	1.88E+00	9.25E-01	1.01E+00	1.98E+00	1.91E+00	1.87E+00	1.87E+00	1.12E+00	1.15E+00	9.99E-01	9.63E-01
PO4	1.64E-03	1.63E-03	1.77E-03	1.56E-02	1.55E-02	1.41E-03	1.41E-03	1.57E-02	1.54E-02	1.58E-02	1.58E-02	1.50E-03	1.53E-03	1.61E-03	1.40E-03
SO4	3.17E-01	3.16E-01	3.16E-01	1.82E-01	1.78E-01	3.27E-01	3.18E-01	1.78E-01	1.78E-01	1.84E-01	1.80E-01	3.14E-01	3.15E-01	3.14E-01	3.21E-01
Ag	1.79E-08	1.05E-07	7.74E-08	3.95E-08	3.34E-08	3.73E-08	3.63E-08	3.34E-08	3.34E-08	4.38E-08	3.37E-08	3.59E-08	3.60E-08	3.58E-08	3.66E-08
As	3.15E-06	2.85E-06	3.72E-06	5.15E-06	5.26E-05	2.57E-05	6.47E-05	9.14E-05	6.58E-05	3.56E-06	4.36E-05	1.09E-04	1.20E-04	6.56E-05	4.58E-05
Ba	3.12E-09	3.11E-08	2.34E-08	2.07E-07	----	----	----	----	----	7.47E-09	----	----	----	----	----
Ca	4.92E-05	4.90E-05	4.91E-05	3.19E-05	3.01E-05	5.22E-05	4.93E-05	3.01E-05	3.01E-05	3.24E-05	3.03E-01	4.88E-05	4.89E-05	4.87E-05	5.00E-05
Cd	8.59E-08	8.18E-08	1.09E-07	1.35E-07	1.42E-06	3.08E-07	1.83E-06	2.92E-06	1.93E-06	7.30E-08	1.06E-06	3.55E-06	3.95E-06	1.88E-06	1.10E-06
Cl	4.19E-02	4.18E-02	4.18E-02	3.83E-02	3.74E-02	4.28E-02	4.20E-02	3.76E-02	3.75E-02	3.86E-02	3.78E-02	4.17E-02	4.19E-02	4.15E-02	4.21E-02
Co	4.57E-07	4.66E-07	3.84E-07	2.05E-07	3.00E-07	1.98E-07	3.57E-07	4.60E-07	3.54E-07	1.99E-07	2.63E-07	5.39E-07	5.84E-07	3.60E-07	2.79E-07
Cr	1.90E-05	1.15E-05	3.83E-05	1.59E-04	2.10E-04	2.61E-04	2.22E-04	1.79E-04	2.00E-04	2.01E-04	2.20E-04	1.83E-04	1.76E-04	2.18E-04	2.40E-04
Cu	1.64E-04	1.69E-04	1.24E-04	2.99E-05	8.41E-05	1.84E-05	1.09E-04	1.73E-04	1.14E-04	2.56E-05	6.31E-05	2.10E-04	2.34E-04	1.11E-04	6.50E-05
Fe	1.38E-06	1.38E-06	1.07E-06	8.36E-07	3.83E-06	9.41E-07	4.92E-06	7.74E-06	5.15E-06	1.95E-06	2.90E-06	9.40E-06	1.05E-05	5.04E-06	3.00E-06
F	6.95E-02	6.93E-02	6.94E-02	3.59E-02	3.52E-02	7.15E-02	6.98E-02	3.52E-02	3.52E-02	3.63E-02	3.53E-02	6.90E-02	6.92E-02	6.87E-02	7.03E-02
Hg	1.07E-06	1.07E-06	1.07E-06	2.02E-06	1.21E-05	1.29E-05	1.34E-05	1.29E-05	1.24E-05	1.02E-06	1.20E-05	1.41E-05	1.44E-05	1.32E-05	1.31E-05
K	7.45E-03	7.64E-03	7.44E-03	5.24E-03	5.81E-03	5.09E-03	6.32E-03	7.67E-03	6.03E-03	4.73E-03	5.08E-03	8.04E-03	8.48E-03	6.44E-03	5.89E-03
Mg	----	----	1.01E-08	1.31E-07	5.17E-08	1.62E-07	3.24E-08	----	1.02E-08	1.38E-07	8.20E-08	----	----	2.62E-08	9.39E-08
Mn	5.86E-08	7.00E-08	9.36E-08	1.11E-07	1.98E-07	1.04E-07	2.42E-07	3.35E-07	2.44E-07	5.98E-08	1.66E-07	3.98E-07	4.35E-07	2.45E-07	1.75E-07
Nd	----	----	----	4.34E-06	----	5.85E-06	----	----	----	4.75E-06	1.59E-06	----	----	----	2.00E-06
Ni	1.10E-06	1.12E-06	9.01E-07	4.30E-07	6.85E-07	4.00E-07	8.28E-07	1.11E-06	8.30E-07	4.13E-07	5.87E-07	1.32E-06	1.43E-06	8.37E-07	6.20E-07
Pb	3.00E-06	2.48E-06	3.41E-06	5.00E-06	----	----	----	----	----	2.97E-06	----	----	----	----	----
Ru	1.73E-05	1.78E-05	1.34E-05	4.15E-06	9.41E-06	3.14E-06	1.19E-05	1.81E-05	1.23E-05	3.76E-06	7.38E-06	2.18E-05	2.42E-05	1.22E-05	7.67E-06
Se	2.23E-05	1.71E-05	2.87E-05	6.04E-05	1.62E-04	2.18E-04	1.67E-04	1.17E-04	1.46E-04	5.85E-05	1.74E-04	1.13E-04	1.02E-04	1.62E-04	1.90E-04
Si	1.06E-04	9.29E-05	5.44E-04	1.81E-05	----	----	----	----	----	1.42E-04	----	----	----	----	----
Sr	----	----	----	2.92E-06	----	4.05E-06	----	----	----	3.23E-06	7.95E-07	----	----	----	1.08E-06
Zn	1.99E-04	2.05E-04	1.56E-04	5.24E-05	1.11E-04	4.16E-05	1.39E-04	2.07E-04	1.43E-04	4.80E-05	8.82E-05	2.49E-04	2.76E-04	1.42E-04	9.19E-05
Zr	5.25E-06	5.41E-06	4.00E-06	1.06E-06	2.74E-06	7.12E-07	3.52E-06	5.50E-06	3.68E-06	9.28E-07	2.09E-06	6.68E-06	7.43E-06	3.60E-06	2.16E-06
Insol.Sol.mg/L	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350

Table 5: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
350 mg/L sludge; 30% of interstitial supernate remaining (continued)

Radionuclide Composition (Ci/gal)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
C-14	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09
Ni-59	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06
Ni-63	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09
Co-60	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04
Se-79	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07
Tc-99	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05
Ru-106	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06
Rh-106	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06
Sb-125	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04
Sn-126	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07
I-129	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10
Cs-134	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06
Cs-135	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09
Cs-137	9.44E-02	8.95E-02	9.81E-02	8.55E-02	2.27E-01	4.57E-03	7.73E-02	4.17E-01	3.03E-01	7.92E-03	5.28E-02	1.15E-01	1.09E-01	1.40E-01	6.03E-02
Ba-137m	8.93E-02	8.46E-02	9.28E-02	8.08E-02	2.15E-01	4.32E-03	7.31E-02	3.94E-01	2.87E-01	7.50E-03	5.00E-02	1.09E-01	1.04E-01	1.32E-01	5.70E-02
Sr-90	3.93E-02	3.93E-02	3.93E-02	3.95E-02	3.95E-02	3.95E-02	3.95E-02	3.95E-02	3.95E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02
Y-90	3.93E-02	3.93E-02	3.93E-02	3.95E-02	3.95E-02	3.95E-02	3.95E-02	3.95E-02	3.95E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02
H-3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ce-144	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06
Pr-144	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06
Pm-147	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03
Eu-154	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04
Th-232	1.27E-09	1.27E-09	1.27E-09	1.28E-09	1.28E-09	1.27E-09	1.27E-09	1.28E-09	1.28E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09
U-232	3.48E-10	3.48E-10	3.48E-10	2.76E-10	2.76E-10	1.29E-09	1.28E-09	2.76E-10	2.76E-10	2.73E-10	2.73E-10	3.47E-10	3.48E-10	3.47E-10	3.49E-10
U-233	4.29E-08	4.29E-08	4.29E-08	4.51E-08	4.50E-08	4.29E-08	4.29E-08	4.50E-08	4.50E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08
U-234	1.37E-08	1.37E-08	1.37E-08	1.40E-08	1.40E-08	1.37E-08	1.37E-08	1.40E-08	1.40E-08	1.89E-08	1.88E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08
U-235	8.44E-10	8.44E-10	8.44E-10	6.86E-10	6.86E-10	1.88E-09	1.62E-09	6.86E-10	6.86E-10	7.30E-10	7.28E-10	8.43E-10	8.44E-10	8.43E-10	8.46E-10
U-236	1.95E-09	1.95E-09	1.95E-09	1.98E-09	1.98E-09	1.95E-09	1.95E-09	1.98E-09	1.98E-09	2.74E-09	2.72E-09	1.95E-09	1.95E-09	1.95E-09	1.95E-09
U-238	3.61E-08	3.60E-08	3.60E-08	2.09E-08	2.09E-08	1.31E-07	8.71E-08	2.09E-08	2.09E-08	2.08E-08	2.08E-08	3.59E-08	3.60E-08	3.59E-08	3.62E-08
Np-237	2.96E-08	2.96E-08	2.96E-08	3.04E-08	3.04E-08	1.20E-07	8.09E-08	3.04E-08	3.04E-08	3.42E-08	3.41E-08	2.96E-08	2.96E-08	2.96E-08	2.96E-08
Pu-238	9.61E-04	9.61E-04	9.61E-04	8.38E-04	8.38E-04	8.35E-04	8.35E-04	8.38E-04	8.38E-04	9.78E-04	9.75E-04	9.60E-04	9.61E-04	9.60E-04	9.63E-04
Pu-239	3.24E-05	3.24E-05	3.24E-05	1.44E-05	1.44E-05	2.75E-05	2.51E-05	1.44E-05	1.44E-05	1.48E-05	1.48E-05	3.23E-05	3.23E-05	3.22E-05	3.26E-05
Pu-240	1.07E-05	1.07E-05	1.07E-05	6.70E-06	6.70E-06	9.61E-06	9.06E-06	6.70E-06	6.70E-06	6.96E-06	6.95E-06	1.07E-05	1.07E-05	1.07E-05	1.08E-05
Pu-241	5.64E-04	5.63E-04	5.63E-04	4.56E-04	4.56E-04	5.32E-04	5.16E-04	4.56E-04	4.56E-04	4.80E-04	4.79E-04	5.63E-04	5.63E-04	5.62E-04	5.65E-04
Pu-242	1.38E-08	1.38E-08	1.38E-08	1.30E-08	1.30E-08	1.36E-08	1.35E-08	1.30E-08	1.30E-08	1.85E-08	1.84E-08	1.38E-08	1.38E-08	1.38E-08	1.39E-08
Am-241	9.42E-05	9.42E-05	9.42E-05	9.51E-05	9.51E-05	2.32E-04	2.32E-04	9.51E-05	9.51E-05	9.50E-05	9.50E-05	9.42E-05	9.42E-05	9.42E-05	9.42E-05
Am-242m	8.85E-08	8.85E-08	8.85E-08	8.97E-08	8.96E-08	2.77E-07	2.75E-07	8.96E-08	8.96E-08	8.95E-08	8.95E-08	8.85E-08	8.85E-08	8.85E-08	8.85E-08
Cm-242	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cm-244	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.69E-05	9.69E-05	9.68E-05	9.68E-05	9.69E-05	9.69E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05
Cm-245	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09
Total Alpha	1.20E-03	1.20E-03	1.20E-03	1.05E-03	1.05E-03	1.20E-03	1.20E-03	1.05E-03	1.05E-03	1.19E-03	1.19E-03	1.19E-03	1.19E-03	1.19E-03	1.20E-03

Table 6: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
100 mg/L sludge; 30% of interstitial supernate remaining

	Concentration (M)														
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00
Al(OH)4	3.20E-01	3.32E-01	3.20E-01	4.00E-01	4.01E-01	3.19E-01	3.17E-01	3.84E-01	3.93E-01	4.01E-01	3.91E-01	3.15E-01	3.13E-01	3.08E-01	3.22E-01
CO3	2.18E-01	2.17E-01	2.16E-01	1.32E-01	1.30E-01	2.22E-01	2.27E-01	1.30E-01	1.30E-01	1.35E-01	1.35E-01	2.18E-01	2.20E-01	2.13E-01	2.24E-01
C2O4	2.18E-02	2.17E-02	2.18E-02	1.41E-02	1.38E-02	2.24E-02	2.19E-02	1.38E-02	1.40E-02	1.43E-02	1.39E-02	2.17E-02	2.17E-02	2.16E-02	2.21E-02
NO2	1.26E-01	1.28E-01	1.35E-01	7.48E-01	7.62E-01	1.02E-01	1.24E-01	7.57E-01	7.52E-01	7.45E-01	7.39E-01	1.30E-01	1.34E-01	1.31E-01	1.13E-01
NO3	3.72E+00	3.71E+00	3.73E+00	2.65E+00	2.61E+00	3.83E+00	3.76E+00	2.60E+00	2.61E+00	2.67E+00	2.65E+00	3.69E+00	3.70E+00	3.69E+00	3.78E+00
OH	1.07E+00	1.07E+00	1.02E+00	1.86E+00	1.88E+00	9.25E-01	1.01E+00	1.98E+00	1.91E+00	1.87E+00	1.87E+00	1.12E+00	1.15E+00	9.99E-01	9.63E-01
PO4	1.64E-03	1.63E-03	1.77E-03	1.56E-02	1.55E-02	1.41E-03	1.41E-03	1.57E-02	1.54E-02	1.58E-02	1.58E-02	1.50E-03	1.53E-03	1.61E-03	1.40E-03
SO4	3.17E-01	3.16E-01	3.16E-01	1.82E-01	1.78E-01	3.27E-01	3.18E-01	1.78E-01	1.78E-01	1.84E-01	1.80E-01	3.14E-01	3.15E-01	3.14E-01	3.21E-01
Ag	1.79E-08	1.05E-07	7.74E-08	3.95E-08	3.34E-08	3.73E-08	3.63E-08	3.34E-08	3.34E-08	4.38E-08	3.37E-08	3.59E-08	3.60E-08	3.58E-08	3.66E-08
As	3.15E-06	2.85E-06	3.72E-06	5.15E-06	5.26E-05	2.57E-05	6.47E-05	9.14E-05	6.58E-05	3.56E-06	4.36E-05	1.09E-04	1.20E-04	6.56E-05	4.58E-05
Ba	3.12E-09	3.11E-08	2.34E-08	2.07E-07	----	----	----	----	----	7.47E-09	----	----	----	----	----
Ca	4.92E-05	4.90E-05	4.91E-05	3.19E-05	3.01E-05	5.22E-05	4.93E-05	3.01E-05	3.01E-05	3.24E-05	3.03E-01	4.88E-05	4.89E-05	4.87E-05	5.00E-05
Cd	8.59E-08	8.18E-08	1.09E-07	1.35E-07	1.42E-06	3.08E-07	1.83E-06	2.92E-06	1.93E-06	7.30E-08	1.06E-06	3.55E-06	3.95E-06	1.88E-06	1.10E-06
Cl	4.19E-02	4.18E-02	4.18E-02	3.83E-02	3.74E-02	4.28E-02	4.20E-02	3.76E-02	3.75E-02	3.86E-02	3.78E-02	4.17E-02	4.19E-02	4.15E-02	4.21E-02
Co	4.57E-07	4.66E-07	3.84E-07	2.05E-07	3.00E-07	1.98E-07	3.57E-07	4.60E-07	3.54E-07	1.99E-07	2.63E-07	5.39E-07	5.84E-07	3.60E-07	2.79E-07
Cr	1.90E-05	1.15E-05	3.83E-05	1.59E-04	2.10E-04	2.61E-04	2.22E-04	1.79E-04	2.00E-04	2.01E-04	2.20E-04	1.83E-04	1.76E-04	2.18E-04	2.40E-04
Cu	1.64E-04	1.69E-04	1.24E-04	2.99E-05	8.41E-05	1.84E-05	1.09E-04	1.73E-04	1.14E-04	2.56E-05	6.31E-05	2.10E-04	2.34E-04	1.11E-04	6.50E-05
Fe	1.38E-06	1.38E-06	1.07E-06	8.36E-07	3.83E-06	9.41E-07	4.92E-06	7.74E-06	5.15E-06	1.95E-06	2.90E-06	9.40E-06	1.05E-05	5.04E-06	3.00E-06
F	6.95E-02	6.93E-02	6.94E-02	3.59E-02	3.52E-02	7.15E-02	6.98E-02	3.52E-02	3.52E-02	3.63E-02	3.53E-02	6.90E-02	6.92E-02	6.87E-02	7.03E-02
Hg	1.07E-06	1.07E-06	1.07E-06	2.02E-06	1.21E-05	1.29E-05	1.34E-05	1.29E-05	1.24E-05	1.02E-06	1.20E-05	1.41E-05	1.44E-05	1.32E-05	1.31E-05
K	7.45E-03	7.64E-03	7.44E-03	5.24E-03	5.81E-03	5.09E-03	6.32E-03	7.67E-03	6.03E-03	4.73E-03	5.08E-03	8.04E-03	8.48E-03	6.44E-03	5.89E-03
Mg	----	----	1.01E-08	1.31E-07	5.17E-08	1.62E-07	3.24E-08	----	1.02E-08	1.38E-07	8.20E-08	----	----	2.62E-08	9.39E-08
Mn	5.86E-08	7.00E-08	9.36E-08	1.11E-07	1.98E-07	1.04E-07	2.42E-07	3.35E-07	2.44E-07	5.98E-08	1.66E-07	3.98E-07	4.35E-07	2.45E-07	1.75E-07
Nd	----	----	----	4.34E-06	----	5.85E-06	----	----	----	4.75E-06	1.59E-06	----	----	----	2.00E-06
Ni	1.10E-06	1.12E-06	9.01E-07	4.30E-07	6.85E-07	4.00E-07	8.28E-07	1.11E-06	8.30E-07	4.13E-07	5.87E-07	1.32E-06	1.43E-06	8.37E-07	6.20E-07
Pb	3.00E-06	2.48E-06	3.41E-06	5.00E-06	----	----	----	----	----	2.97E-06	----	----	----	----	----
Ru	1.73E-05	1.78E-05	1.34E-05	4.15E-06	9.41E-06	3.14E-06	1.19E-05	1.81E-05	1.23E-05	3.76E-06	7.38E-06	2.18E-05	2.42E-05	1.22E-05	7.67E-06
Se	2.23E-05	1.71E-05	2.87E-05	6.04E-05	1.62E-04	2.18E-04	1.67E-04	1.17E-04	1.46E-04	5.85E-05	1.74E-04	1.13E-04	1.02E-04	1.62E-04	1.90E-04
Si	1.06E-04	9.29E-05	5.44E-04	1.81E-05	----	----	----	----	----	1.42E-04	----	----	----	----	----
Sr	----	----	----	2.92E-06	----	4.05E-06	----	----	----	3.23E-06	7.95E-07	----	----	----	1.08E-06
Zn	1.99E-04	2.05E-04	1.56E-04	5.24E-05	1.11E-04	4.16E-05	1.39E-04	2.07E-04	1.43E-04	4.80E-05	8.82E-05	2.49E-04	2.76E-04	1.42E-04	9.19E-05
Zr	5.25E-06	5.41E-06	4.00E-06	1.06E-06	2.74E-06	7.12E-07	3.52E-06	5.50E-06	3.68E-06	9.28E-07	2.09E-06	6.68E-06	7.43E-06	3.60E-06	2.16E-06
Insol.Sol.mg/L	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table 6: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
100 mg/L sludge; 30% of interstitial supernate remaining (continued)

Radionuclide Composition (Ci/gal)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
C-14	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10
Ni-59	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07
Ni-63	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10
Co-60	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05
Se-79	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07
Tc-99	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06
Ru-106	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06
Rh-106	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06
Sb-125	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05
Sn-126	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07
I-129	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11
Cs-134	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06
Cs-135	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09
Cs-137	9.27E-02	8.78E-02	9.64E-02	8.38E-02	2.26E-01	2.87E-03	7.56E-02	4.15E-01	3.01E-01	6.23E-03	5.11E-02	1.14E-01	1.08E-01	1.38E-01	5.86E-02
Ba-137m	8.77E-02	8.30E-02	9.12E-02	7.92E-02	2.14E-01	2.72E-03	7.15E-02	3.93E-01	2.85E-01	5.89E-03	4.84E-02	1.07E-01	1.02E-01	1.31E-01	5.54E-02
Sr-90	1.13E-02	1.13E-02	1.13E-02	1.14E-02	1.14E-02	1.15E-02	1.15E-02	1.14E-02	1.14E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02
Y-90	1.13E-02	1.13E-02	1.13E-02	1.14E-02	1.14E-02	1.15E-02	1.15E-02	1.14E-02	1.14E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02
H-3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ce-144	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07
Pr-144	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07
Pm-147	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04
Eu-154	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04
Th-232	3.62E-10	3.62E-10	3.62E-10	3.73E-10	3.72E-10	3.62E-10	3.62E-10	3.72E-10	3.72E-10	3.62E-10	3.62E-10	3.62E-10	3.62E-10	3.62E-10	3.62E-10
U-232	1.53E-10	1.52E-10	1.53E-10	8.12E-11	8.11E-11	1.09E-09	1.08E-09	8.11E-11	8.11E-11	7.80E-11	7.80E-11	1.52E-10	1.52E-10	1.52E-10	1.54E-10
U-233	1.22E-08	1.22E-08	1.22E-08	1.45E-08	1.44E-08	1.22E-08	1.22E-08	1.44E-08	1.44E-08	1.22E-08	1.22E-08	1.22E-08	1.22E-08	1.22E-08	1.22E-08
U-234	3.92E-09	3.92E-09	3.92E-09	4.23E-09	4.23E-09	3.92E-09	3.92E-09	4.23E-09	4.23E-09	9.14E-09	9.00E-09	3.92E-09	3.92E-09	3.92E-09	3.92E-09
U-235	3.61E-10	3.60E-10	3.60E-10	2.02E-10	2.02E-10	1.40E-09	1.13E-09	2.02E-10	2.02E-10	2.46E-10	2.45E-10	3.59E-10	3.60E-10	3.59E-10	3.62E-10
U-236	5.56E-10	5.56E-10	5.56E-10	5.89E-10	5.88E-10	5.56E-10	5.56E-10	5.88E-10	5.88E-10	1.35E-09	1.33E-09	5.56E-10	5.56E-10	5.56E-10	5.56E-10
U-238	2.12E-08	2.12E-08	2.12E-08	6.04E-09	6.04E-09	1.16E-07	7.23E-08	6.04E-09	6.04E-09	5.94E-09	5.94E-09	2.11E-08	2.11E-08	2.10E-08	2.14E-08
Np-237	8.47E-09	8.47E-09	8.47E-09	9.28E-09	9.26E-09	9.90E-08	5.97E-08	9.26E-09	9.26E-09	1.30E-08	1.29E-08	8.47E-09	8.47E-09	8.47E-09	8.47E-09
Pu-238	3.65E-04	3.65E-04	3.65E-04	2.42E-04	2.42E-04	2.38E-04	2.38E-04	2.42E-04	2.42E-04	3.82E-04	3.78E-04	3.64E-04	3.64E-04	3.64E-04	3.66E-04
Pu-239	2.22E-05	2.21E-05	2.21E-05	4.18E-06	4.18E-06	1.73E-05	1.48E-05	4.18E-06	4.18E-06	4.54E-06	4.53E-06	2.20E-05	2.21E-05	2.20E-05	2.24E-05
Pu-240	5.95E-06	5.93E-06	5.94E-06	1.94E-06	1.94E-06	4.85E-06	4.30E-06	1.94E-06	1.94E-06	2.20E-06	2.19E-06	5.92E-06	5.93E-06	5.90E-06	5.99E-06
Pu-241	2.38E-04	2.38E-04	2.38E-04	1.31E-04	1.31E-04	2.06E-04	1.91E-04	1.31E-04	1.31E-04	1.55E-04	1.54E-04	2.38E-04	2.38E-04	2.37E-04	2.40E-04
Pu-242	4.55E-09	4.55E-09	4.55E-09	3.74E-09	3.74E-09	4.32E-09	4.22E-09	3.74E-09	3.74E-09	9.21E-09	9.07E-09	4.54E-09	4.55E-09	4.54E-09	4.56E-09
Am-241	2.69E-05	2.69E-05	2.69E-05	2.78E-05	2.78E-05	1.65E-04	1.64E-04	2.78E-05	2.78E-05	2.77E-05	2.77E-05	2.69E-05	2.69E-05	2.69E-05	2.69E-05
Am-242m	2.53E-08	2.53E-08	2.53E-08	2.64E-08	2.64E-08	2.14E-07	2.12E-07	2.64E-08	2.64E-08	2.63E-08	2.62E-08	2.53E-08	2.53E-08	2.53E-08	2.53E-08
Cm-242	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cm-244	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05
Cm-245	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09
Total Alpha	4.48E-04	4.47E-04	4.48E-04	3.03E-04	3.03E-04	4.53E-04	4.50E-04	3.03E-04	3.03E-04	4.44E-04	4.41E-04	4.47E-04	4.47E-04	4.46E-04	4.49E-04

Table 7: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
no sludge; 30% of interstitial supernate remaining

	Concentration (M)														
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00
Al(OH)4	3.20E-01	3.32E-01	3.20E-01	4.00E-01	4.01E-01	3.19E-01	3.17E-01	3.84E-01	3.93E-01	4.01E-01	3.91E-01	3.15E-01	3.13E-01	3.08E-01	3.22E-01
CO3	2.18E-01	2.17E-01	2.16E-01	1.32E-01	1.30E-01	2.22E-01	2.27E-01	1.30E-01	1.30E-01	1.35E-01	1.35E-01	2.18E-01	2.20E-01	2.13E-01	2.24E-01
C2O4	2.18E-02	2.17E-02	2.18E-02	1.41E-02	1.38E-02	2.24E-02	2.19E-02	1.38E-02	1.40E-02	1.43E-02	1.39E-02	2.17E-02	2.17E-02	2.16E-02	2.21E-02
NO2	1.26E-01	1.28E-01	1.35E-01	7.48E-01	7.62E-01	1.02E-01	1.24E-01	7.57E-01	7.52E-01	7.45E-01	7.39E-01	1.30E-01	1.34E-01	1.31E-01	1.13E-01
NO3	3.72E+00	3.71E+00	3.73E+00	2.65E+00	2.61E+00	3.83E+00	3.76E+00	2.60E+00	2.61E+00	2.67E+00	2.65E+00	3.69E+00	3.70E+00	3.69E+00	3.78E+00
OH	1.07E+00	1.07E+00	1.02E+00	1.86E+00	1.88E+00	9.25E-01	1.01E+00	1.98E+00	1.91E+00	1.87E+00	1.87E+00	1.12E+00	1.15E+00	9.99E-01	9.63E-01
PO4	1.64E-03	1.63E-03	1.77E-03	1.56E-02	1.55E-02	1.41E-03	1.41E-03	1.57E-02	1.54E-02	1.58E-02	1.58E-02	1.50E-03	1.53E-03	1.61E-03	1.40E-03
SO4	3.17E-01	3.16E-01	3.16E-01	1.82E-01	1.78E-01	3.27E-01	3.18E-01	1.78E-01	1.78E-01	1.84E-01	1.80E-01	3.14E-01	3.15E-01	3.14E-01	3.21E-01
Ag	1.79E-08	1.05E-07	7.74E-08	3.95E-08	3.34E-08	3.73E-08	3.63E-08	3.34E-08	3.34E-08	4.38E-08	3.37E-08	3.59E-08	3.60E-08	3.58E-08	3.66E-08
As	3.15E-06	2.85E-06	3.72E-06	5.15E-06	5.26E-05	2.57E-05	6.47E-05	9.14E-05	6.58E-05	3.56E-06	4.36E-05	1.09E-04	1.20E-04	6.56E-05	4.58E-05
Ba	3.12E-09	3.11E-08	2.34E-08	2.07E-07	----	----	----	----	----	7.47E-09	----	----	----	----	----
Ca	4.92E-05	4.90E-05	4.91E-05	3.19E-05	3.01E-05	5.22E-05	4.93E-05	3.01E-05	3.01E-05	3.24E-05	3.03E-01	4.88E-05	4.89E-05	4.87E-05	5.00E-05
Cd	8.59E-08	8.18E-08	1.09E-07	1.35E-07	1.42E-06	3.08E-07	1.83E-06	2.92E-06	1.93E-06	7.30E-08	1.06E-06	3.55E-06	3.95E-06	1.88E-06	1.10E-06
Cl	4.19E-02	4.18E-02	4.18E-02	3.83E-02	3.74E-02	4.28E-02	4.20E-02	3.76E-02	3.75E-02	3.86E-02	3.78E-02	4.17E-02	4.19E-02	4.15E-02	4.21E-02
Co	4.57E-07	4.66E-07	3.84E-07	2.05E-07	3.00E-07	1.98E-07	3.57E-07	4.60E-07	3.54E-07	1.99E-07	2.63E-07	5.39E-07	5.84E-07	3.60E-07	2.79E-07
Cr	1.90E-05	1.15E-05	3.83E-05	1.59E-04	2.10E-04	2.61E-04	2.22E-04	1.79E-04	2.00E-04	2.01E-04	2.20E-04	1.83E-04	1.76E-04	2.18E-04	2.40E-04
Cu	1.64E-04	1.69E-04	1.24E-04	2.99E-05	8.41E-05	1.84E-05	1.09E-04	1.73E-04	1.14E-04	2.56E-05	6.31E-05	2.10E-04	2.34E-04	1.11E-04	6.50E-05
Fe	1.38E-06	1.38E-06	1.07E-06	8.36E-07	3.83E-06	9.41E-07	4.92E-06	7.74E-06	5.15E-06	1.95E-06	2.90E-06	9.40E-06	1.05E-05	5.04E-06	3.00E-06
F	6.95E-02	6.93E-02	6.94E-02	3.59E-02	3.52E-02	7.15E-02	6.98E-02	3.52E-02	3.52E-02	3.63E-02	3.53E-02	6.90E-02	6.92E-02	6.87E-02	7.03E-02
Hg	1.07E-06	1.07E-06	1.07E-06	2.02E-06	1.21E-05	1.29E-05	1.34E-05	1.29E-05	1.24E-05	1.02E-06	1.20E-05	1.41E-05	1.44E-05	1.32E-05	1.31E-05
K	7.45E-03	7.64E-03	7.44E-03	5.24E-03	5.81E-03	5.09E-03	6.32E-03	7.67E-03	6.03E-03	4.73E-03	5.08E-03	8.04E-03	8.48E-03	6.44E-03	5.89E-03
Mg	----	----	1.01E-08	1.31E-07	5.17E-08	1.62E-07	3.24E-08	----	1.02E-08	1.38E-07	8.20E-08	----	----	2.62E-08	9.39E-08
Mn	5.86E-08	7.00E-08	9.36E-08	1.11E-07	1.98E-07	1.04E-07	2.42E-07	3.35E-07	2.44E-07	5.98E-08	1.66E-07	3.98E-07	4.35E-07	2.45E-07	1.75E-07
Nd	----	----	----	4.34E-06	----	5.85E-06	----	----	----	4.75E-06	1.59E-06	----	----	----	2.00E-06
Ni	1.10E-06	1.12E-06	9.01E-07	4.30E-07	6.85E-07	4.00E-07	8.28E-07	1.11E-06	8.30E-07	4.13E-07	5.87E-07	1.32E-06	1.43E-06	8.37E-07	6.20E-07
Pb	3.00E-06	2.48E-06	3.41E-06	5.00E-06	----	----	----	----	----	2.97E-06	----	----	----	----	----
Ru	1.73E-05	1.78E-05	1.34E-05	4.15E-06	9.41E-06	3.14E-06	1.19E-05	1.81E-05	1.23E-05	3.76E-06	7.38E-06	2.18E-05	2.42E-05	1.22E-05	7.67E-06
Se	2.23E-05	1.71E-05	2.87E-05	6.04E-05	1.62E-04	2.18E-04	1.67E-04	1.17E-04	1.46E-04	5.85E-05	1.74E-04	1.13E-04	1.02E-04	1.62E-04	1.90E-04
Si	1.06E-04	9.29E-05	5.44E-04	1.81E-05	----	----	----	----	----	1.42E-04	----	----	----	----	----
Sr	----	----	----	2.92E-06	----	4.05E-06	----	----	----	3.23E-06	7.95E-07	----	----	----	1.08E-06
Zn	1.99E-04	2.05E-04	1.56E-04	5.24E-05	1.11E-04	4.16E-05	1.39E-04	2.07E-04	1.43E-04	4.80E-05	8.82E-05	2.49E-04	2.76E-04	1.42E-04	9.19E-05
Zr	5.25E-06	5.41E-06	4.00E-06	1.06E-06	2.74E-06	7.12E-07	3.52E-06	5.50E-06	3.68E-06	9.28E-07	2.09E-06	6.68E-06	7.43E-06	3.60E-06	2.16E-06
Insol.Sol.mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 7: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration no sludge; 30% of interstitial supernate (continued)

Radionuclide Composition (Ci/gal)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
C-14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ni-59	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ni-63	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Co-60	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Se-79	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Tc-99	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ru-106	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Rh-106	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Sb-125	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Sn-126	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I-129	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cs-134	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cs-135	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cs-137	9.21E-02	8.71E-02	9.58E-02	8.31E-02	2.25E-01	2.20E-03	7.49E-02	4.14E-01	3.01E-01	5.55E-03	5.04E-02	1.13E-01	1.07E-01	1.37E-01	5.79E-02
Ba-137m	8.71E-02	8.24E-02	9.06E-02	7.86E-02	2.13E-01	2.08E-03	7.09E-02	3.92E-01	2.84E-01	5.25E-03	4.77E-02	1.07E-01	1.01E-01	1.30E-01	5.48E-02
Sr-90	6.22E-05	6.20E-05	6.21E-05	2.23E-04	2.18E-04	2.43E-04	2.37E-04	2.18E-04	2.18E-04	5.95E-05	5.79E-05	6.18E-05	6.19E-05	6.16E-05	6.29E-05
Y-90	6.22E-05	6.20E-05	6.21E-05	2.23E-04	2.18E-04	2.43E-04	2.37E-04	2.18E-04	2.18E-04	5.95E-05	5.79E-05	6.18E-05	6.19E-05	6.16E-05	6.29E-05
H-3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ce-144	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Pr-144	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Pm-147	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Eu-154	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Th-232	----	----	----	1.09E-11	1.07E-11	----	----	1.07E-11	1.07E-11	----	----	----	----	----	----
U-232	7.47E-11	7.44E-11	7.46E-11	3.11E-12	3.04E-12	1.02E-09	1.00E-09	3.04E-12	3.04E-12	----	----	7.42E-11	7.44E-11	7.39E-11	7.56E-11
U-233	----	----	----	2.24E-09	2.19E-09	----	----	2.19E-09	2.19E-09	----	----	----	----	----	----
U-234	----	----	----	3.16E-10	3.09E-10	----	----	3.09E-10	3.09E-10	5.22E-09	5.09E-09	----	----	----	----
U-235	1.67E-10	1.67E-10	1.67E-10	8.65E-12	8.44E-12	1.20E-09	9.40E-10	8.44E-12	8.44E-12	5.27E-11	5.13E-11	1.66E-10	1.66E-10	1.65E-10	1.69E-10
U-236	----	----	----	3.26E-11	3.18E-11	----	----	3.18E-11	3.18E-11	7.96E-10	7.75E-10	----	----	----	----
U-238	1.53E-08	1.52E-08	1.52E-08	1.01E-10	9.87E-11	1.10E-07	6.64E-08	9.87E-11	9.87E-11	7.40E-12	7.20E-12	1.52E-08	1.52E-08	1.51E-08	1.54E-08
Np-237	----	----	----	8.13E-10	7.94E-10	9.06E-08	5.13E-08	7.94E-10	7.94E-10	4.55E-09	4.43E-09	----	----	----	----
Pu-238	1.27E-04	1.26E-04	1.26E-04	3.11E-06	3.03E-06	----	----	3.03E-06	3.03E-06	1.44E-04	1.40E-04	1.26E-04	1.26E-04	1.25E-04	1.28E-04
Pu-239	1.81E-05	1.80E-05	1.80E-05	8.05E-08	7.85E-08	1.32E-05	1.07E-05	7.85E-08	7.85E-08	4.43E-07	4.31E-07	1.79E-05	1.80E-05	1.79E-05	1.83E-05
Pu-240	4.04E-06	4.03E-06	4.03E-06	3.33E-08	3.25E-08	2.94E-06	2.40E-06	3.25E-08	3.25E-08	2.93E-07	2.85E-07	4.01E-06	4.02E-06	4.00E-06	4.09E-06
Pu-241	1.08E-04	1.08E-04	1.08E-04	7.22E-07	7.05E-07	7.65E-05	6.10E-05	7.05E-07	7.05E-07	2.45E-05	2.38E-05	1.08E-04	1.08E-04	1.07E-04	1.10E-04
Pu-242	8.31E-10	8.28E-10	8.30E-10	2.21E-11	2.16E-11	6.05E-10	4.97E-10	2.16E-11	2.16E-11	5.49E-09	5.35E-09	8.25E-10	8.28E-10	8.23E-10	8.41E-10
Am-241	----	----	----	9.14E-07	8.92E-07	1.38E-04	1.37E-04	8.92E-07	8.92E-07	7.66E-07	7.46E-07	----	----	----	----
Am-242m	----	----	----	1.12E-09	1.09E-09	1.88E-07	1.87E-07	1.09E-09	1.09E-09	9.55E-10	9.30E-10	----	----	----	----
Cm-242	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cm-244	1.57E-09	1.56E-09	1.57E-09	2.68E-09	2.61E-09	7.31E-08	7.01E-08	2.61E-09	2.61E-09	1.30E-08	1.26E-08	1.56E-09	1.56E-09	1.55E-09	1.59E-09
Cm-245	6.19E-16	6.17E-16	6.18E-16	3.30E-13	3.22E-13	2.88E-14	2.87E-14	3.22E-13	3.22E-13	7.97E-13	7.76E-13	6.14E-16	6.16E-16	6.12E-16	6.26E-16
Total Alpha	1.49E-04	1.48E-04	1.48E-04	4.14E-06	4.04E-06	1.54E-04	1.51E-04	4.04E-06	4.04E-06	1.45E-04	1.41E-04	1.48E-04	1.48E-04	1.47E-04	1.50E-04

Table 8: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
600 mg/L sludge; 20% of interstitial supernate remaining

Concentration (M)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00
Al(OH)4	3.21E-01	3.29E-01	3.21E-01	3.99E-01	4.00E-01	3.20E-01	3.19E-01	3.89E-01	3.95E-01	4.00E-01	3.94E-01	3.18E-01	3.16E-01	3.12E-01	3.22E-01
CO3	2.20E-01	2.19E-01	2.18E-01	1.33E-01	1.31E-01	2.23E-01	2.26E-01	1.31E-01	1.31E-01	1.35E-01	1.34E-01	2.20E-01	2.22E-01	2.17E-01	2.24E-01
C2O4	2.21E-02	2.20E-02	2.20E-02	1.41E-02	1.39E-02	2.25E-02	2.21E-02	1.39E-02	1.40E-02	1.42E-02	1.40E-02	2.19E-02	2.20E-02	2.19E-02	2.22E-02
NO2	1.19E-01	1.20E-01	1.24E-01	7.46E-01	7.56E-01	1.02E-01	1.17E-01	7.52E-01	7.48E-01	7.44E-01	7.40E-01	1.21E-01	1.24E-01	1.22E-01	1.09E-01
NO3	3.76E+00	3.75E+00	3.76E+00	2.65E+00	2.63E+00	3.83E+00	3.78E+00	2.62E+00	2.63E+00	2.67E+00	2.66E+00	3.74E+00	3.74E+00	3.74E+00	3.80E+00
OH	1.02E+00	1.02E+00	9.85E-01	1.85E+00	1.87E+00	9.20E-01	9.75E-01	1.94E+00	1.89E+00	1.86E+00	1.86E+00	1.05E+00	1.07E+00	9.69E-01	9.45E-01
PO4	1.53E-03	1.53E-03	1.62E-03	1.57E-02	1.56E-02	1.37E-03	1.37E-03	1.57E-02	1.55E-02	1.57E-02	1.57E-02	1.44E-03	1.45E-03	1.51E-03	1.37E-03
SO4	3.21E-01	3.20E-01	3.21E-01	1.83E-01	1.80E-01	3.28E-01	3.22E-01	1.80E-01	1.80E-01	1.85E-01	1.82E-01	3.19E-01	3.20E-01	3.19E-01	3.24E-01
Ag	1.21E-08	7.10E-08	5.23E-08	2.65E-08	2.26E-08	2.49E-08	2.45E-08	2.26E-08	2.26E-08	2.92E-08	2.27E-08	2.43E-08	2.44E-08	2.43E-08	2.46E-08
As	2.13E-06	1.93E-06	2.51E-06	3.45E-06	3.55E-05	1.72E-05	4.37E-05	6.17E-05	4.44E-05	2.38E-06	2.94E-05	7.38E-05	8.09E-05	4.45E-05	3.08E-05
Ba	2.11E-09	2.11E-08	1.58E-08	1.39E-07	----	----	----	----	----	4.99E-09	----	----	----	----	----
Ca	4.98E-05	4.97E-05	4.98E-05	3.17E-05	3.05E-05	5.19E-05	4.99E-05	3.05E-05	3.05E-05	3.20E-05	3.06E-01	4.96E-05	4.97E-05	4.95E-05	5.04E-05
Cd	5.80E-08	5.53E-08	7.34E-08	9.08E-08	9.57E-07	2.06E-07	1.24E-06	1.97E-06	1.30E-06	4.88E-08	7.17E-07	2.40E-06	2.68E-06	1.27E-06	7.37E-07
Cl	4.23E-02	4.22E-02	4.23E-02	3.84E-02	3.79E-02	4.29E-02	4.23E-02	3.80E-02	3.79E-02	3.87E-02	3.81E-02	4.21E-02	4.23E-02	4.20E-02	4.24E-02
Co	3.09E-07	3.15E-07	2.60E-07	1.37E-07	2.02E-07	1.32E-07	2.41E-07	3.11E-07	2.39E-07	1.33E-07	1.77E-07	3.65E-07	3.95E-07	2.44E-07	1.88E-07
Cr	1.28E-05	7.79E-06	2.59E-05	1.06E-04	1.42E-04	1.75E-04	1.50E-04	1.21E-04	1.35E-04	1.34E-04	1.48E-04	1.24E-04	1.19E-04	1.48E-04	1.61E-04
Cu	1.11E-04	1.15E-04	8.39E-05	2.00E-05	5.68E-05	1.23E-05	7.33E-05	1.17E-04	7.71E-05	1.71E-05	4.25E-05	1.42E-04	1.59E-04	7.54E-05	4.38E-05
Fe	9.34E-07	9.32E-07	7.26E-07	5.60E-07	2.58E-06	6.30E-07	3.32E-06	5.23E-06	3.48E-06	1.30E-06	1.96E-06	6.37E-06	7.08E-06	3.41E-06	2.02E-06
F	7.04E-02	7.02E-02	7.03E-02	3.61E-02	3.56E-02	7.17E-02	7.06E-02	3.56E-02	3.56E-02	3.63E-02	3.57E-02	7.00E-02	7.02E-02	6.98E-02	7.09E-02
Hg	7.23E-07	7.21E-07	7.22E-07	1.36E-06	8.20E-06	8.61E-06	9.01E-06	8.74E-06	8.38E-06	6.83E-07	8.12E-06	9.57E-06	9.73E-06	8.95E-06	8.79E-06
K	6.61E-03	6.74E-03	6.60E-03	4.99E-03	5.38E-03	5.01E-03	5.84E-03	6.64E-03	5.53E-03	4.65E-03	4.88E-03	7.01E-03	7.31E-03	5.93E-03	5.55E-03
Mg	----	----	6.80E-09	8.76E-08	3.49E-08	1.08E-07	2.19E-08	----	6.92E-09	9.24E-08	5.53E-08	----	----	1.78E-08	6.32E-08
Mn	3.96E-08	4.74E-08	6.32E-08	7.43E-08	1.34E-07	6.99E-08	1.63E-07	2.26E-07	1.65E-07	3.99E-08	1.12E-07	2.69E-07	2.94E-07	1.66E-07	1.18E-07
Nd	----	----	----	2.91E-06	----	3.91E-06	----	----	----	3.17E-06	1.07E-06	----	----	----	1.35E-06
Ni	7.40E-07	7.57E-07	6.09E-07	2.88E-07	4.63E-07	2.68E-07	5.59E-07	7.52E-07	5.61E-07	2.76E-07	3.95E-07	8.91E-07	9.69E-07	5.67E-07	4.17E-07
Pb	2.03E-06	1.67E-06	2.31E-06	3.35E-06	----	----	----	----	----	1.98E-06	----	----	----	----	----
Ru	1.17E-05	1.21E-05	9.07E-06	2.78E-06	6.36E-06	2.10E-06	8.04E-06	1.22E-05	8.34E-06	2.51E-06	4.97E-06	1.48E-05	1.64E-05	8.24E-06	5.16E-06
Se	1.51E-05	1.15E-05	1.94E-05	4.05E-05	1.09E-04	1.46E-04	1.13E-04	7.90E-05	9.89E-05	3.90E-05	1.17E-04	7.68E-05	6.90E-05	1.10E-04	1.28E-04
Si	7.17E-05	6.28E-05	3.68E-04	1.21E-05	----	----	----	----	----	9.51E-05	----	----	----	----	----
Sr	----	----	----	1.96E-06	----	2.71E-06	----	----	----	2.16E-06	5.35E-07	----	----	----	7.27E-07
Zn	1.35E-04	1.39E-04	1.05E-04	3.51E-05	7.48E-05	2.79E-05	9.39E-05	1.40E-04	9.69E-05	3.20E-05	5.94E-05	1.69E-04	1.86E-04	9.61E-05	6.19E-05
Zr	3.55E-06	3.66E-06	2.70E-06	7.09E-07	1.85E-06	4.76E-07	2.37E-06	3.72E-06	2.48E-06	6.19E-07	1.41E-06	4.52E-06	5.03E-06	2.44E-06	1.46E-06
Insol.Sol.mg/L	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600

Table 8: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
600 mg/L sludge; 20% of interstitial supernate remaining (continued)

Radionuclide Composition (Ci/gal)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
C-14	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09
Ni-59	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06
Ni-63	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09
Co-60	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04
Se-79	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06
Tc-99	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05
Ru-106	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06
Rh-106	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06
Sb-125	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04
Sn-126	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06
I-129	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10
Cs-134	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06
Cs-135	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08
Cs-137	6.63E-02	6.30E-02	6.88E-02	5.97E-02	1.56E-01	5.54E-03	5.46E-02	2.84E-01	2.07E-01	7.78E-03	3.80E-02	8.05E-02	7.65E-02	9.72E-02	4.30E-02
Ba-137m	6.27E-02	5.96E-02	6.51E-02	5.65E-02	1.48E-01	5.24E-03	5.17E-02	2.69E-01	1.96E-01	7.36E-03	3.60E-02	7.62E-02	7.24E-02	9.20E-02	4.07E-02
Sr-90	6.74E-02	6.74E-02	6.74E-02	6.75E-02	6.75E-02	6.75E-02	6.75E-02	6.75E-02	6.75E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02
Y-90	6.74E-02	6.74E-02	6.74E-02	6.75E-02	6.75E-02	6.75E-02	6.75E-02	6.75E-02	6.75E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02
H-3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ce-144	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06
Pr-144	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06
Pm-147	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03
Eu-154	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04
Th-232	2.17E-09	2.17E-09	2.17E-09	2.18E-09	2.18E-09	2.17E-09	2.17E-09	2.18E-09	2.18E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09
U-232	5.19E-10	5.19E-10	5.19E-10	4.70E-10	4.70E-10	1.15E-09	1.15E-09	4.70E-10	4.70E-10	4.68E-10	4.68E-10	5.18E-10	5.19E-10	5.18E-10	5.19E-10
U-233	7.35E-08	7.35E-08	7.35E-08	7.50E-08	7.49E-08	7.35E-08	7.35E-08	7.49E-08	7.49E-08	7.35E-08	7.35E-08	7.35E-08	7.35E-08	7.35E-08	7.35E-08
U-234	2.35E-08	2.35E-08	2.35E-08	2.37E-08	2.37E-08	2.35E-08	2.35E-08	2.37E-08	2.37E-08	2.70E-08	2.69E-08	2.35E-08	2.35E-08	2.35E-08	2.35E-08
U-235	1.27E-09	1.27E-09	1.27E-09	1.17E-09	1.17E-09	1.97E-09	1.79E-09	1.17E-09	1.17E-09	1.20E-09	1.20E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09
U-236	3.34E-09	3.34E-09	3.34E-09	3.36E-09	3.36E-09	3.34E-09	3.34E-09	3.36E-09	3.36E-09	3.87E-09	3.86E-09	3.34E-09	3.34E-09	3.34E-09	3.34E-09
U-238	4.59E-08	4.59E-08	4.59E-08	3.57E-08	3.57E-08	1.09E-07	8.04E-08	3.57E-08	3.57E-08	3.56E-08	3.56E-08	4.59E-08	4.59E-08	4.59E-08	4.60E-08
Np-237	5.08E-08	5.08E-08	5.08E-08	5.13E-08	5.13E-08	1.11E-07	8.54E-08	5.13E-08	5.13E-08	5.38E-08	5.38E-08	5.08E-08	5.08E-08	5.08E-08	5.08E-08
Pu-238	1.52E-03	1.52E-03	1.52E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.53E-03	1.53E-03	1.52E-03	1.52E-03	1.52E-03	1.52E-03
Pu-239	3.68E-05	3.68E-05	3.68E-05	2.46E-05	2.46E-05	3.34E-05	3.18E-05	2.46E-05	2.46E-05	2.49E-05	2.49E-05	3.67E-05	3.68E-05	3.67E-05	3.69E-05
Pu-240	1.42E-05	1.41E-05	1.42E-05	1.14E-05	1.14E-05	1.34E-05	1.30E-05	1.14E-05	1.14E-05	1.16E-05	1.16E-05	1.41E-05	1.41E-05	1.41E-05	1.42E-05
Pu-241	8.53E-04	8.53E-04	8.53E-04	7.81E-04	7.81E-04	8.31E-04	8.21E-04	7.81E-04	7.81E-04	7.96E-04	7.96E-04	8.53E-04	8.53E-04	8.53E-04	8.54E-04
Pu-242	2.29E-08	2.29E-08	2.29E-08	2.23E-08	2.23E-08	2.27E-08	2.26E-08	2.23E-08	2.23E-08	2.60E-08	2.59E-08	2.29E-08	2.29E-08	2.29E-08	2.29E-08
Am-241	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	2.54E-04	2.54E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04
Am-242m	1.52E-07	1.52E-07	1.52E-07	1.53E-07	1.53E-07	2.78E-07	2.78E-07	1.53E-07	1.53E-07	1.52E-07	1.52E-07	1.52E-07	1.52E-07	1.52E-07	1.52E-07
Cm-242	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cm-244	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04
Cm-245	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08
Total Alpha	1.90E-03	1.89E-03	1.89E-03	1.80E-03	1.80E-03	1.90E-03	1.90E-03	1.80E-03	1.80E-03	1.89E-03	1.89E-03	1.89E-03	1.89E-03	1.89E-03	1.90E-03

Table 9: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
350 mg/L sludge; 20% of interstitial supernate remaining

Concentration (M)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00
Al(OH)4	3.21E-01	3.29E-01	3.21E-01	3.99E-01	4.00E-01	3.20E-01	3.19E-01	3.89E-01	3.95E-01	4.00E-01	3.94E-01	3.18E-01	3.16E-01	3.12E-01	3.22E-01
CO3	2.20E-01	2.19E-01	2.18E-01	1.33E-01	1.31E-01	2.23E-01	2.26E-01	1.31E-01	1.31E-01	1.35E-01	1.34E-01	2.20E-01	2.22E-01	2.17E-01	2.24E-01
C2O4	2.21E-02	2.20E-02	2.20E-02	1.41E-02	1.39E-02	2.25E-02	2.21E-02	1.39E-02	1.40E-02	1.42E-02	1.40E-02	2.19E-02	2.20E-02	2.19E-02	2.22E-02
NO2	1.19E-01	1.20E-01	1.24E-01	7.46E-01	7.56E-01	1.02E-01	1.17E-01	7.52E-01	7.48E-01	7.44E-01	7.40E-01	1.21E-01	1.24E-01	1.22E-01	1.09E-01
NO3	3.76E+00	3.75E+00	3.76E+00	2.65E+00	2.63E+00	3.83E+00	3.78E+00	2.62E+00	2.63E+00	2.67E+00	2.66E+00	3.74E+00	3.74E+00	3.74E+00	3.80E+00
OH	1.02E+00	1.02E+00	9.85E-01	1.85E+00	1.87E+00	9.20E-01	9.75E-01	1.94E+00	1.89E+00	1.86E+00	1.86E+00	1.05E+00	1.07E+00	9.69E-01	9.45E-01
PO4	1.53E-03	1.53E-03	1.62E-03	1.57E-02	1.56E-02	1.37E-03	1.37E-03	1.57E-02	1.55E-02	1.57E-02	1.57E-02	1.44E-03	1.45E-03	1.51E-03	1.37E-03
SO4	3.21E-01	3.20E-01	3.21E-01	1.83E-01	1.80E-01	3.28E-01	3.22E-01	1.80E-01	1.80E-01	1.85E-01	1.82E-01	3.19E-01	3.20E-01	3.19E-01	3.24E-01
Ag	1.21E-08	7.10E-08	5.23E-08	2.65E-08	2.26E-08	2.49E-08	2.45E-08	2.26E-08	2.26E-08	2.92E-08	2.27E-08	2.43E-08	2.44E-08	2.43E-08	2.46E-08
As	2.13E-06	1.93E-06	2.51E-06	3.45E-06	3.55E-05	1.72E-05	4.37E-05	6.17E-05	4.44E-05	2.38E-06	2.94E-05	7.38E-05	8.09E-05	4.45E-05	3.08E-05
Ba	2.11E-09	2.11E-08	1.58E-08	1.39E-07	----	----	----	----	----	4.99E-09	----	----	----	----	----
Ca	4.98E-05	4.97E-05	4.98E-05	3.17E-05	3.05E-05	5.19E-05	4.99E-05	3.05E-05	3.05E-05	3.20E-05	3.06E-01	4.96E-05	4.97E-05	4.95E-05	5.04E-05
Cd	5.80E-08	5.53E-08	7.34E-08	9.08E-08	9.57E-07	2.06E-07	1.24E-06	1.97E-06	1.30E-06	4.88E-08	7.17E-07	2.40E-06	2.68E-06	1.27E-06	7.37E-07
Cl	4.23E-02	4.22E-02	4.23E-02	3.84E-02	3.79E-02	4.29E-02	4.23E-02	3.80E-02	3.79E-02	3.87E-02	3.81E-02	4.21E-02	4.23E-02	4.20E-02	4.24E-02
Co	3.09E-07	3.15E-07	2.60E-07	1.37E-07	2.02E-07	1.32E-07	2.41E-07	3.11E-07	2.39E-07	1.33E-07	1.77E-07	3.65E-07	3.95E-07	2.44E-07	1.88E-07
Cr	1.28E-05	7.79E-06	2.59E-05	1.06E-04	1.42E-04	1.75E-04	1.50E-04	1.21E-04	1.35E-04	1.34E-04	1.48E-04	1.24E-04	1.19E-04	1.48E-04	1.61E-04
Cu	1.11E-04	1.15E-04	8.39E-05	2.00E-05	5.68E-05	1.23E-05	7.33E-05	1.17E-04	7.71E-05	1.71E-05	4.25E-05	1.42E-04	1.59E-04	7.54E-05	4.38E-05
Fe	9.34E-07	9.32E-07	7.26E-07	5.60E-07	2.58E-06	6.30E-07	3.32E-06	5.23E-06	3.48E-06	1.30E-06	1.96E-06	6.37E-06	7.08E-06	3.41E-06	2.02E-06
F	7.04E-02	7.02E-02	7.03E-02	3.61E-02	3.56E-02	7.17E-02	7.06E-02	3.56E-02	3.56E-02	3.63E-02	3.57E-02	7.00E-02	7.02E-02	6.98E-02	7.09E-02
Hg	7.23E-07	7.21E-07	7.22E-07	1.36E-06	8.20E-06	8.61E-06	9.01E-06	8.74E-06	8.38E-06	6.83E-07	8.12E-06	9.57E-06	9.73E-06	8.95E-06	8.79E-06
K	6.61E-03	6.74E-03	6.60E-03	4.99E-03	5.38E-03	5.01E-03	5.84E-03	6.64E-03	5.53E-03	4.65E-03	4.88E-03	7.01E-03	7.31E-03	5.93E-03	5.55E-03
Mg	----	----	6.80E-09	8.76E-08	3.49E-08	1.08E-07	2.19E-08	----	6.92E-09	9.24E-08	5.53E-08	----	----	1.78E-08	6.32E-08
Mn	3.96E-08	4.74E-08	6.32E-08	7.43E-08	1.34E-07	6.99E-08	1.63E-07	2.26E-07	1.65E-07	3.99E-08	1.12E-07	2.69E-07	2.94E-07	1.66E-07	1.18E-07
Nd	----	----	----	2.91E-06	----	3.91E-06	----	----	----	3.17E-06	1.07E-06	----	----	----	1.35E-06
Ni	7.40E-07	7.57E-07	6.09E-07	2.88E-07	4.63E-07	2.68E-07	5.59E-07	7.52E-07	5.61E-07	2.76E-07	3.95E-07	8.91E-07	9.69E-07	5.67E-07	4.17E-07
Pb	2.03E-06	1.67E-06	2.31E-06	3.35E-06	----	----	----	----	----	1.98E-06	----	----	----	----	----
Ru	1.17E-05	1.21E-05	9.07E-06	2.78E-06	6.36E-06	2.10E-06	8.04E-06	1.22E-05	8.34E-06	2.51E-06	4.97E-06	1.48E-05	1.64E-05	8.24E-06	5.16E-06
Se	1.51E-05	1.15E-05	1.94E-05	4.05E-05	1.09E-04	1.46E-04	1.13E-04	7.90E-05	9.89E-05	3.90E-05	1.17E-04	7.68E-05	6.90E-05	1.10E-04	1.28E-04
Si	7.17E-05	6.28E-05	3.68E-04	1.21E-05	----	----	----	----	----	9.51E-05	----	----	----	----	----
Sr	----	----	----	1.96E-06	----	2.71E-06	----	----	----	2.16E-06	5.35E-07	----	----	----	7.27E-07
Zn	1.35E-04	1.39E-04	1.05E-04	3.51E-05	7.48E-05	2.79E-05	9.39E-05	1.40E-04	9.69E-05	3.20E-05	5.94E-05	1.69E-04	1.86E-04	9.61E-05	6.19E-05
Zr	3.55E-06	3.66E-06	2.70E-06	7.09E-07	1.85E-06	4.76E-07	2.37E-06	3.72E-06	2.48E-06	6.19E-07	1.41E-06	4.52E-06	5.03E-06	2.44E-06	1.46E-06
Insol.Sol.mg/L	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350

Table 9: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
350 mg/L sludge; 20% of interstitial supernate remaining (continued)

Radionuclide Composition (Ci/gal)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
C-14	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09
Ni-59	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06
Ni-63	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09
Co-60	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04
Se-79	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07
Tc-99	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05
Ru-106	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06
Rh-106	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06
Sb-125	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04
Sn-126	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07
I-129	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10
Cs-134	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06
Cs-135	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09
Cs-137	6.46E-02	6.13E-02	6.71E-02	5.80E-02	1.54E-01	3.84E-03	5.29E-02	2.82E-01	2.06E-01	6.08E-03	3.63E-02	7.88E-02	7.48E-02	9.55E-02	4.13E-02
Ba-137m	6.11E-02	5.80E-02	6.35E-02	5.49E-02	1.46E-01	3.64E-03	5.01E-02	2.67E-01	1.94E-01	5.75E-03	3.44E-02	7.46E-02	7.08E-02	9.04E-02	3.91E-02
Sr-90	3.93E-02	3.93E-02	3.93E-02	3.94E-02	3.94E-02	3.94E-02	3.94E-02	3.94E-02	3.94E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02
Y-90	3.93E-02	3.93E-02	3.93E-02	3.94E-02	3.94E-02	3.94E-02	3.94E-02	3.94E-02	3.94E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02
H-3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ce-144	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06
Pr-144	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06
Pm-147	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03
Eu-154	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04
Th-232	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09
U-232	3.24E-10	3.24E-10	3.24E-10	2.75E-10	2.75E-10	9.53E-10	9.50E-10	2.75E-10	2.75E-10	2.73E-10	2.73E-10	3.23E-10	3.23E-10	3.23E-10	3.24E-10
U-233	4.29E-08	4.29E-08	4.29E-08	4.44E-08	4.43E-08	4.29E-08	4.29E-08	4.43E-08	4.43E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08
U-234	1.37E-08	1.37E-08	1.37E-08	1.39E-08	1.39E-08	1.37E-08	1.37E-08	1.39E-08	1.39E-08	1.72E-08	1.71E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08
U-235	7.90E-10	7.90E-10	7.90E-10	6.83E-10	6.83E-10	1.48E-09	1.31E-09	6.83E-10	6.83E-10	7.12E-10	7.12E-10	7.90E-10	7.90E-10	7.89E-10	7.91E-10
U-236	1.95E-09	1.95E-09	1.95E-09	1.97E-09	1.97E-09	1.95E-09	1.95E-09	1.97E-09	1.97E-09	2.48E-09	2.47E-09	1.95E-09	1.95E-09	1.95E-09	1.95E-09
U-238	3.11E-08	3.11E-08	3.11E-08	2.08E-08	2.08E-08	9.43E-08	6.56E-08	2.08E-08	2.08E-08	2.08E-08	2.08E-08	3.10E-08	3.11E-08	3.10E-08	3.12E-08
Np-237	2.96E-08	2.96E-08	2.96E-08	3.02E-08	3.02E-08	9.02E-08	6.42E-08	3.02E-08	3.02E-08	3.27E-08	3.26E-08	2.96E-08	2.96E-08	2.96E-08	2.96E-08
Pu-238	9.20E-04	9.20E-04	9.20E-04	8.37E-04	8.37E-04	8.35E-04	8.35E-04	8.37E-04	8.37E-04	9.31E-04	9.29E-04	9.20E-04	9.20E-04	9.20E-04	9.21E-04
Pu-239	2.66E-05	2.65E-05	2.65E-05	1.44E-05	1.44E-05	2.32E-05	2.16E-05	1.44E-05	1.44E-05	1.46E-05	1.46E-05	2.65E-05	2.65E-05	2.65E-05	2.67E-05
Pu-240	9.40E-06	9.39E-06	9.39E-06	6.69E-06	6.69E-06	8.63E-06	8.28E-06	6.69E-06	6.69E-06	6.86E-06	6.86E-06	9.38E-06	9.39E-06	9.38E-06	9.42E-06
Pu-241	5.28E-04	5.28E-04	5.28E-04	4.56E-04	4.56E-04	5.06E-04	4.96E-04	4.56E-04	4.56E-04	4.71E-04	4.71E-04	5.28E-04	5.28E-04	5.28E-04	5.29E-04
Pu-242	1.36E-08	1.36E-08	1.36E-08	1.30E-08	1.30E-08	1.34E-08	1.33E-08	1.30E-08	1.30E-08	1.67E-08	1.66E-08	1.36E-08	1.36E-08	1.36E-08	1.36E-08
Am-241	9.42E-05	9.42E-05	9.42E-05	9.48E-05	9.48E-05	1.86E-04	1.87E-04	9.48E-05	9.48E-05	9.47E-05	9.47E-05	9.42E-05	9.42E-05	9.42E-05	9.42E-05
Am-242m	8.85E-08	8.85E-08	8.85E-08	8.93E-08	8.93E-08	2.14E-07	2.15E-07	8.93E-08	8.93E-08	8.92E-08	8.92E-08	8.85E-08	8.85E-08	8.85E-08	8.85E-08
Cm-242	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cm-244	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.69E-05	9.69E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05
Cm-245	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09
Total Alpha	1.15E-03	1.15E-03	1.15E-03	1.05E-03	1.05E-03	1.15E-03	1.15E-03	1.05E-03	1.05E-03	1.14E-03	1.14E-03	1.15E-03	1.15E-03	1.15E-03	1.15E-03

Table 10: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
100 mg/L sludge; 20% of interstitial supernate remaining

	Concentration (M)														
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00
Al(OH)4	3.21E-01	3.29E-01	3.21E-01	3.99E-01	4.00E-01	3.20E-01	3.19E-01	3.89E-01	3.95E-01	4.00E-01	3.94E-01	3.18E-01	3.16E-01	3.12E-01	3.22E-01
CO3	2.20E-01	2.19E-01	2.18E-01	1.33E-01	1.31E-01	2.23E-01	2.26E-01	1.31E-01	1.31E-01	1.35E-01	1.34E-01	2.20E-01	2.22E-01	2.17E-01	2.24E-01
C2O4	2.21E-02	2.20E-02	2.20E-02	1.41E-02	1.39E-02	2.25E-02	2.21E-02	1.39E-02	1.40E-02	1.42E-02	1.40E-02	2.19E-02	2.20E-02	2.19E-02	2.22E-02
NO2	1.19E-01	1.20E-01	1.24E-01	7.46E-01	7.56E-01	1.02E-01	1.17E-01	7.52E-01	7.48E-01	7.44E-01	7.40E-01	1.21E-01	1.24E-01	1.22E-01	1.09E-01
NO3	3.76E+00	3.75E+00	3.76E+00	2.65E+00	2.63E+00	3.83E+00	3.78E+00	2.62E+00	2.63E+00	2.67E+00	2.66E+00	3.74E+00	3.74E+00	3.74E+00	3.80E+00
OH	1.02E+00	1.02E+00	9.85E-01	1.85E+00	1.87E+00	9.20E-01	9.75E-01	1.94E+00	1.89E+00	1.86E+00	1.86E+00	1.05E+00	1.07E+00	9.69E-01	9.45E-01
PO4	1.53E-03	1.53E-03	1.62E-03	1.57E-02	1.56E-02	1.37E-03	1.37E-03	1.57E-02	1.55E-02	1.57E-02	1.57E-02	1.44E-03	1.45E-03	1.51E-03	1.37E-03
SO4	3.21E-01	3.20E-01	3.21E-01	1.83E-01	1.80E-01	3.28E-01	3.22E-01	1.80E-01	1.80E-01	1.85E-01	1.82E-01	3.19E-01	3.20E-01	3.19E-01	3.24E-01
Ag	1.21E-08	7.10E-08	5.23E-08	2.65E-08	2.26E-08	2.49E-08	2.45E-08	2.26E-08	2.26E-08	2.92E-08	2.27E-08	2.43E-08	2.44E-08	2.43E-08	2.46E-08
As	2.13E-06	1.93E-06	2.51E-06	3.45E-06	3.55E-05	1.72E-05	4.37E-05	6.17E-05	4.44E-05	2.38E-06	2.94E-05	7.38E-05	8.09E-05	4.45E-05	3.08E-05
Ba	2.11E-09	2.11E-08	1.58E-08	1.39E-07	----	----	----	----	----	4.99E-09	----	----	----	----	----
Ca	4.98E-05	4.97E-05	4.98E-05	3.17E-05	3.05E-05	5.19E-05	4.99E-05	3.05E-05	3.05E-05	3.20E-05	3.06E-01	4.96E-05	4.97E-05	4.95E-05	5.04E-05
Cd	5.80E-08	5.53E-08	7.34E-08	9.08E-08	9.57E-07	2.06E-07	1.24E-06	1.97E-06	1.30E-06	4.88E-08	7.17E-07	2.40E-06	2.68E-06	1.27E-06	7.37E-07
Cl	4.23E-02	4.22E-02	4.23E-02	3.84E-02	3.79E-02	4.29E-02	4.23E-02	3.80E-02	3.79E-02	3.87E-02	3.81E-02	4.21E-02	4.23E-02	4.20E-02	4.24E-02
Co	3.09E-07	3.15E-07	2.60E-07	1.37E-07	2.02E-07	1.32E-07	2.41E-07	3.11E-07	2.39E-07	1.33E-07	1.77E-07	3.65E-07	3.95E-07	2.44E-07	1.88E-07
Cr	1.28E-05	7.79E-06	2.59E-05	1.06E-04	1.42E-04	1.75E-04	1.50E-04	1.21E-04	1.35E-04	1.34E-04	1.48E-04	1.24E-04	1.19E-04	1.48E-04	1.61E-04
Cu	1.11E-04	1.15E-04	8.39E-05	2.00E-05	5.68E-05	1.23E-05	7.33E-05	1.17E-04	7.71E-05	1.71E-05	4.25E-05	1.42E-04	1.59E-04	7.54E-05	4.38E-05
Fe	9.34E-07	9.32E-07	7.26E-07	5.60E-07	2.58E-06	6.30E-07	3.32E-06	5.23E-06	3.48E-06	1.30E-06	1.96E-06	6.37E-06	7.08E-06	3.41E-06	2.02E-06
F	7.04E-02	7.02E-02	7.03E-02	3.61E-02	3.56E-02	7.17E-02	7.06E-02	3.56E-02	3.56E-02	3.63E-02	3.57E-02	7.00E-02	7.02E-02	6.98E-02	7.09E-02
Hg	7.23E-07	7.21E-07	7.22E-07	1.36E-06	8.20E-06	8.61E-06	9.01E-06	8.74E-06	8.38E-06	6.83E-07	8.12E-06	9.57E-06	9.73E-06	8.95E-06	8.79E-06
K	6.61E-03	6.74E-03	6.60E-03	4.99E-03	5.38E-03	5.01E-03	5.84E-03	6.64E-03	5.53E-03	4.65E-03	4.88E-03	7.01E-03	7.31E-03	5.93E-03	5.55E-03
Mg	----	----	6.80E-09	8.76E-08	3.49E-08	1.08E-07	2.19E-08	----	6.92E-09	9.24E-08	5.53E-08	----	----	1.78E-08	6.32E-08
Mn	3.96E-08	4.74E-08	6.32E-08	7.43E-08	1.34E-07	6.99E-08	1.63E-07	2.26E-07	1.65E-07	3.99E-08	1.12E-07	2.69E-07	2.94E-07	1.66E-07	1.18E-07
Nd	----	----	----	2.91E-06	----	3.91E-06	----	----	----	3.17E-06	1.07E-06	----	----	----	1.35E-06
Ni	7.40E-07	7.57E-07	6.09E-07	2.88E-07	4.63E-07	2.68E-07	5.59E-07	7.52E-07	5.61E-07	2.76E-07	3.95E-07	8.91E-07	9.69E-07	5.67E-07	4.17E-07
Pb	2.03E-06	1.67E-06	2.31E-06	3.35E-06	----	----	----	----	----	1.98E-06	----	----	----	----	----
Ru	1.17E-05	1.21E-05	9.07E-06	2.78E-06	6.36E-06	2.10E-06	8.04E-06	1.22E-05	8.34E-06	2.51E-06	4.97E-06	1.48E-05	1.64E-05	8.24E-06	5.16E-06
Se	1.51E-05	1.15E-05	1.94E-05	4.05E-05	1.09E-04	1.46E-04	1.13E-04	7.90E-05	9.89E-05	3.90E-05	1.17E-04	7.68E-05	6.90E-05	1.10E-04	1.28E-04
Si	7.17E-05	6.28E-05	3.68E-04	1.21E-05	----	----	----	----	----	9.51E-05	----	----	----	----	----
Sr	----	----	----	1.96E-06	----	2.71E-06	----	----	----	2.16E-06	5.35E-07	----	----	----	7.27E-07
Zn	1.35E-04	1.39E-04	1.05E-04	3.51E-05	7.48E-05	2.79E-05	9.39E-05	1.40E-04	9.69E-05	3.20E-05	5.94E-05	1.69E-04	1.86E-04	9.61E-05	6.19E-05
Zr	3.55E-06	3.66E-06	2.70E-06	7.09E-07	1.85E-06	4.76E-07	2.37E-06	3.72E-06	2.48E-06	6.19E-07	1.41E-06	4.52E-06	5.03E-06	2.44E-06	1.46E-06
Insol.Sol.mg/L	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table 10: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
100 mg/L sludge; 20% of interstitial supernate remaining (continued)

	Radionuclide Composition (Ci/gal)														
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
C-14	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10
Ni-59	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07
Ni-63	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10
Co-60	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05
Se-79	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07
Tc-99	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06
Ru-106	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06
Rh-106	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06
Sb-125	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05
Sn-126	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07
I-129	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11
Cs-134	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06
Cs-135	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09
Cs-137	6.29E-02	5.96E-02	6.54E-02	5.63E-02	1.53E-01	2.15E-03	5.12E-02	2.81E-01	2.04E-01	4.38E-03	3.46E-02	7.71E-02	7.31E-02	9.38E-02	3.96E-02
Ba-137m	5.95E-02	5.64E-02	6.19E-02	5.33E-02	1.44E-01	2.03E-03	4.85E-02	2.65E-01	1.93E-01	4.15E-03	3.28E-02	7.30E-02	6.92E-02	8.88E-02	3.75E-02
Sr-90	1.13E-02	1.13E-02	1.13E-02	1.14E-02	1.14E-02	1.14E-02	1.14E-02	1.14E-02	1.14E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02
Y-90	1.13E-02	1.13E-02	1.13E-02	1.14E-02	1.14E-02	1.14E-02	1.14E-02	1.14E-02	1.14E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02
H-3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ce-144	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07
Pr-144	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07
Pm-147	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04
Eu-154	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04
Th-232	3.62E-10	3.62E-10	3.62E-10	3.69E-10	3.69E-10	3.62E-10	3.62E-10	3.69E-10	3.69E-10	3.62E-10	3.62E-10	3.62E-10	3.62E-10	3.62E-10	3.62E-10
U-232	1.29E-10	1.28E-10	1.28E-10	8.01E-11	8.01E-11	7.57E-10	7.55E-10	8.01E-11	8.01E-11	7.80E-11	7.80E-11	1.28E-10	1.28E-10	1.28E-10	1.29E-10
U-233	1.22E-08	1.22E-08	1.22E-08	1.37E-08	1.37E-08	1.22E-08	1.22E-08	1.37E-08	1.37E-08	1.22E-08	1.22E-08	1.22E-08	1.22E-08	1.22E-08	1.22E-08
U-234	3.92E-09	3.92E-09	3.92E-09	4.13E-09	4.13E-09	3.92E-09	3.92E-09	4.13E-09	4.13E-09	7.40E-09	7.34E-09	3.92E-09	3.92E-09	3.92E-09	3.92E-09
U-235	3.06E-10	3.06E-10	3.06E-10	1.99E-10	1.99E-10	9.98E-10	8.28E-10	1.99E-10	1.99E-10	2.29E-10	2.28E-10	3.06E-10	3.06E-10	3.06E-10	3.07E-10
U-236	5.56E-10	5.56E-10	5.56E-10	5.78E-10	5.77E-10	5.56E-10	5.56E-10	5.77E-10	5.77E-10	1.09E-09	1.08E-09	5.56E-10	5.56E-10	5.56E-10	5.56E-10
U-238	1.63E-08	1.62E-08	1.62E-08	6.00E-09	6.00E-09	7.94E-08	5.07E-08	6.00E-09	6.00E-09	5.94E-09	5.94E-09	1.62E-08	1.62E-08	1.62E-08	1.63E-08
Np-237	8.47E-09	8.47E-09	8.47E-09	9.01E-09	9.00E-09	6.91E-08	4.31E-08	9.00E-09	9.00E-09	1.15E-08	1.15E-08	8.47E-09	8.47E-09	8.47E-09	8.47E-09
Pu-238	3.24E-04	3.24E-04	3.24E-04	2.41E-04	2.41E-04	2.38E-04	2.38E-04	2.41E-04	2.41E-04	3.34E-04	3.33E-04	3.24E-04	3.24E-04	3.23E-04	3.25E-04
Pu-239	1.63E-05	1.63E-05	1.63E-05	4.15E-06	4.15E-06	1.29E-05	1.13E-05	4.15E-06	4.15E-06	4.39E-06	4.39E-06	1.63E-05	1.63E-05	1.62E-05	1.64E-05
Pu-240	4.63E-06	4.63E-06	4.63E-06	1.93E-06	1.93E-06	3.87E-06	3.52E-06	1.93E-06	1.93E-06	2.10E-06	2.10E-06	4.62E-06	4.63E-06	4.61E-06	4.65E-06
Pu-241	2.03E-04	2.03E-04	2.03E-04	1.31E-04	1.31E-04	1.81E-04	1.71E-04	1.31E-04	1.31E-04	1.46E-04	1.46E-04	2.03E-04	2.03E-04	2.03E-04	2.04E-04
Pu-242	4.28E-09	4.28E-09	4.28E-09	3.73E-09	3.73E-09	4.12E-09	4.05E-09	3.73E-09	3.73E-09	7.39E-09	7.32E-09	4.28E-09	4.28E-09	4.28E-09	4.28E-09
Am-241	2.69E-05	2.69E-05	2.69E-05	2.75E-05	2.75E-05	1.19E-04	1.20E-04	2.75E-05	2.75E-05	2.74E-05	2.74E-05	2.69E-05	2.69E-05	2.69E-05	2.69E-05
Am-242m	2.53E-08	2.53E-08	2.53E-08	2.60E-08	2.60E-08	1.51E-07	1.51E-07	2.60E-08	2.60E-08	2.59E-08	2.59E-08	2.53E-08	2.53E-08	2.53E-08	2.53E-08
Cm-242	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cm-244	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05
Cm-245	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09
Total Alpha	4.00E-04	3.99E-04	3.99E-04	3.02E-04	3.02E-04	4.02E-04	4.01E-04	3.02E-04	3.02E-04	3.96E-04	3.94E-04	3.99E-04	3.99E-04	3.99E-04	4.00E-04

Table 11: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
no sludge; 20% of interstitial supernate remaining

	Concentration (M)														
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00
Al(OH)4	3.21E-01	3.29E-01	3.21E-01	3.99E-01	4.00E-01	3.20E-01	3.19E-01	3.89E-01	3.95E-01	4.00E-01	3.94E-01	3.18E-01	3.16E-01	3.12E-01	3.22E-01
CO3	2.20E-01	2.19E-01	2.18E-01	1.33E-01	1.31E-01	2.23E-01	2.26E-01	1.31E-01	1.31E-01	1.35E-01	1.34E-01	2.20E-01	2.22E-01	2.17E-01	2.24E-01
C2O4	2.21E-02	2.20E-02	2.20E-02	1.41E-02	1.39E-02	2.25E-02	2.21E-02	1.39E-02	1.40E-02	1.42E-02	1.40E-02	2.19E-02	2.20E-02	2.19E-02	2.22E-02
NO2	1.19E-01	1.20E-01	1.24E-01	7.46E-01	7.56E-01	1.02E-01	1.17E-01	7.52E-01	7.48E-01	7.44E-01	7.40E-01	1.21E-01	1.24E-01	1.22E-01	1.09E-01
NO3	3.76E+00	3.75E+00	3.76E+00	2.65E+00	2.63E+00	3.83E+00	3.78E+00	2.62E+00	2.63E+00	2.67E+00	2.66E+00	3.74E+00	3.74E+00	3.74E+00	3.80E+00
OH	1.02E+00	1.02E+00	9.85E-01	1.85E+00	1.87E+00	9.20E-01	9.75E-01	1.94E+00	1.89E+00	1.86E+00	1.86E+00	1.05E+00	1.07E+00	9.69E-01	9.45E-01
PO4	1.53E-03	1.53E-03	1.62E-03	1.57E-02	1.56E-02	1.37E-03	1.37E-03	1.57E-02	1.55E-02	1.57E-02	1.57E-02	1.44E-03	1.45E-03	1.51E-03	1.37E-03
SO4	3.21E-01	3.20E-01	3.21E-01	1.83E-01	1.80E-01	3.28E-01	3.22E-01	1.80E-01	1.80E-01	1.85E-01	1.82E-01	3.19E-01	3.20E-01	3.19E-01	3.24E-01
Ag	1.21E-08	7.10E-08	5.23E-08	2.65E-08	2.26E-08	2.49E-08	2.45E-08	2.26E-08	2.26E-08	2.92E-08	2.27E-08	2.43E-08	2.44E-08	2.43E-08	2.46E-08
As	2.13E-06	1.93E-06	2.51E-06	3.45E-06	3.55E-05	1.72E-05	4.37E-05	6.17E-05	4.44E-05	2.38E-06	2.94E-05	7.38E-05	8.09E-05	4.45E-05	3.08E-05
Ba	2.11E-09	2.11E-08	1.58E-08	1.39E-07	----	----	----	----	----	4.99E-09	----	----	----	----	----
Ca	4.98E-05	4.97E-05	4.98E-05	3.17E-05	3.05E-05	5.19E-05	4.99E-05	3.05E-05	3.05E-05	3.20E-05	3.06E-01	4.96E-05	4.97E-05	4.95E-05	5.04E-05
Cd	5.80E-08	5.53E-08	7.34E-08	9.08E-08	9.57E-07	2.06E-07	1.24E-06	1.97E-06	1.30E-06	4.88E-08	7.17E-07	2.40E-06	2.68E-06	1.27E-06	7.37E-07
Cl	4.23E-02	4.22E-02	4.23E-02	3.84E-02	3.79E-02	4.29E-02	4.23E-02	3.80E-02	3.79E-02	3.87E-02	3.81E-02	4.21E-02	4.23E-02	4.20E-02	4.24E-02
Co	3.09E-07	3.15E-07	2.60E-07	1.37E-07	2.02E-07	1.32E-07	2.41E-07	3.11E-07	2.39E-07	1.33E-07	1.77E-07	3.65E-07	3.95E-07	2.44E-07	1.88E-07
Cr	1.28E-05	7.79E-06	2.59E-05	1.06E-04	1.42E-04	1.75E-04	1.50E-04	1.21E-04	1.35E-04	1.34E-04	1.48E-04	1.24E-04	1.19E-04	1.48E-04	1.61E-04
Cu	1.11E-04	1.15E-04	8.39E-05	2.00E-05	5.68E-05	1.23E-05	7.33E-05	1.17E-04	7.71E-05	1.71E-05	4.25E-05	1.42E-04	1.59E-04	7.54E-05	4.38E-05
Fe	9.34E-07	9.32E-07	7.26E-07	5.60E-07	2.58E-06	6.30E-07	3.32E-06	5.23E-06	3.48E-06	1.30E-06	1.96E-06	6.37E-06	7.08E-06	3.41E-06	2.02E-06
F	7.04E-02	7.02E-02	7.03E-02	3.61E-02	3.56E-02	7.17E-02	7.06E-02	3.56E-02	3.56E-02	3.63E-02	3.57E-02	7.00E-02	7.02E-02	6.98E-02	7.09E-02
Hg	7.23E-07	7.21E-07	7.22E-07	1.36E-06	8.20E-06	8.61E-06	9.01E-06	8.74E-06	8.38E-06	6.83E-07	8.12E-06	9.57E-06	9.73E-06	8.95E-06	8.79E-06
K	6.61E-03	6.74E-03	6.60E-03	4.99E-03	5.38E-03	5.01E-03	5.84E-03	6.64E-03	5.53E-03	4.65E-03	4.88E-03	7.01E-03	7.31E-03	5.93E-03	5.55E-03
Mg	----	----	6.80E-09	8.76E-08	3.49E-08	1.08E-07	2.19E-08	----	6.92E-09	9.24E-08	5.53E-08	----	----	1.78E-08	6.32E-08
Mn	3.96E-08	4.74E-08	6.32E-08	7.43E-08	1.34E-07	6.99E-08	1.63E-07	2.26E-07	1.65E-07	3.99E-08	1.12E-07	2.69E-07	2.94E-07	1.66E-07	1.18E-07
Nd	----	----	----	2.91E-06	----	3.91E-06	----	----	----	3.17E-06	1.07E-06	----	----	----	1.35E-06
Ni	7.40E-07	7.57E-07	6.09E-07	2.88E-07	4.63E-07	2.68E-07	5.59E-07	7.52E-07	5.61E-07	2.76E-07	3.95E-07	8.91E-07	9.69E-07	5.67E-07	4.17E-07
Pb	2.03E-06	1.67E-06	2.31E-06	3.35E-06	----	----	----	----	----	1.98E-06	----	----	----	----	----
Ru	1.17E-05	1.21E-05	9.07E-06	2.78E-06	6.36E-06	2.10E-06	8.04E-06	1.22E-05	8.34E-06	2.51E-06	4.97E-06	1.48E-05	1.64E-05	8.24E-06	5.16E-06
Se	1.51E-05	1.15E-05	1.94E-05	4.05E-05	1.09E-04	1.46E-04	1.13E-04	7.90E-05	9.89E-05	3.90E-05	1.17E-04	7.68E-05	6.90E-05	1.10E-04	1.28E-04
Si	7.17E-05	6.28E-05	3.68E-04	1.21E-05	----	----	----	----	----	9.51E-05	----	----	----	----	----
Sr	----	----	----	1.96E-06	----	2.71E-06	----	----	----	2.16E-06	5.35E-07	----	----	----	7.27E-07
Zn	1.35E-04	1.39E-04	1.05E-04	3.51E-05	7.48E-05	2.79E-05	9.39E-05	1.40E-04	9.69E-05	3.20E-05	5.94E-05	1.69E-04	1.86E-04	9.61E-05	6.19E-05
Zr	3.55E-06	3.66E-06	2.70E-06	7.09E-07	1.85E-06	4.76E-07	2.37E-06	3.72E-06	2.48E-06	6.19E-07	1.41E-06	4.52E-06	5.03E-06	2.44E-06	1.46E-06
Insol.Sol.mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 11: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration no sludge; 20% of interstitial supernate remaining (continued)

Radionuclide Composition (Ci/gal)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
C-14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ni-59	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ni-63	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Co-60	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Se-79	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Tc-99	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ru-106	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Rh-106	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Sb-125	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Sn-126	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I-129	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cs-134	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cs-135	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cs-137	6.22E-02	5.89E-02	6.47E-02	5.57E-02	1.52E-01	1.47E-03	5.06E-02	2.80E-01	2.03E-01	3.71E-03	3.40E-02	7.64E-02	7.24E-02	9.31E-02	3.90E-02
Ba-137m	5.88E-02	5.57E-02	6.12E-02	5.27E-02	1.44E-01	1.39E-03	4.78E-02	2.65E-01	1.92E-01	3.51E-03	3.21E-02	7.23E-02	6.85E-02	8.81E-02	3.69E-02
Sr-90	4.20E-05	4.19E-05	4.20E-05	1.50E-04	1.47E-04	1.63E-04	1.60E-04	1.47E-04	1.47E-04	3.97E-05	3.90E-05	4.18E-05	4.19E-05	4.17E-05	4.23E-05
Y-90	4.20E-05	4.19E-05	4.20E-05	1.50E-04	1.47E-04	1.63E-04	1.60E-04	1.47E-04	1.47E-04	3.97E-05	3.90E-05	4.18E-05	4.19E-05	4.17E-05	4.23E-05
H-3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ce-144	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Pr-144	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Pm-147	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Eu-154	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Th-232	----	----	----	7.33E-12	7.21E-12	----	----	7.21E-12	7.21E-12	----	----	----	----	----	----
U-232	5.05E-11	5.04E-11	5.04E-11	2.08E-12	2.05E-12	6.79E-10	6.77E-10	2.05E-12	2.05E-12	----	----	5.02E-11	5.03E-11	5.01E-11	5.09E-11
U-233	----	----	----	1.50E-09	1.48E-09	----	----	1.48E-09	1.48E-09	----	----	----	----	----	----
U-234	----	----	----	2.12E-10	2.09E-10	----	----	2.09E-10	2.09E-10	3.49E-09	3.43E-09	----	----	----	----
U-235	1.13E-10	1.13E-10	1.13E-10	5.80E-12	5.70E-12	8.04E-10	6.34E-10	5.70E-12	5.70E-12	3.52E-11	3.45E-11	1.12E-10	1.13E-10	1.12E-10	1.14E-10
U-236	----	----	----	2.19E-11	2.15E-11	----	----	2.15E-11	2.15E-11	5.32E-10	5.22E-10	----	----	----	----
U-238	1.03E-08	1.03E-08	1.03E-08	6.78E-11	6.66E-11	7.35E-08	4.48E-08	6.66E-11	6.66E-11	4.94E-12	4.85E-12	1.03E-08	1.03E-08	1.02E-08	1.04E-08
Np-237	----	----	----	5.45E-10	5.36E-10	6.06E-08	3.46E-08	5.36E-10	5.36E-10	3.04E-09	2.99E-09	----	----	----	----
Pu-238	8.55E-05	8.53E-05	8.54E-05	2.08E-06	2.05E-06	----	----	2.05E-06	2.05E-06	9.60E-05	9.43E-05	8.51E-05	8.52E-05	8.49E-05	8.61E-05
Pu-239	1.22E-05	1.22E-05	1.22E-05	5.39E-08	5.31E-08	8.80E-06	7.23E-06	5.31E-08	5.31E-08	2.96E-07	2.90E-07	1.22E-05	1.22E-05	1.21E-05	1.23E-05
Pu-240	2.73E-06	2.72E-06	2.73E-06	2.23E-08	2.19E-08	1.97E-06	1.62E-06	2.19E-08	2.19E-08	1.95E-07	1.92E-07	2.72E-06	2.72E-06	2.71E-06	2.75E-06
Pu-241	7.33E-05	7.31E-05	7.32E-05	4.84E-07	4.76E-07	5.12E-05	4.12E-05	4.76E-07	4.76E-07	1.63E-05	1.61E-05	7.29E-05	7.30E-05	7.27E-05	7.38E-05
Pu-242	5.62E-10	5.60E-10	5.61E-10	1.48E-11	1.46E-11	4.05E-10	3.35E-10	1.46E-11	1.46E-11	3.67E-09	3.60E-09	5.59E-10	5.60E-10	5.58E-10	5.66E-10
Am-241	----	----	----	6.13E-07	6.03E-07	9.22E-05	9.27E-05	6.03E-07	6.03E-07	5.12E-07	5.03E-07	----	----	----	----
Am-242m	----	----	----	7.48E-10	7.36E-10	1.26E-07	1.26E-07	7.36E-10	7.36E-10	6.38E-10	6.26E-10	----	----	----	----
Cm-242	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cm-244	1.06E-09	1.06E-09	1.06E-09	1.79E-09	1.77E-09	4.89E-08	4.73E-08	1.77E-09	1.77E-09	8.65E-09	8.50E-09	1.06E-09	1.06E-09	1.05E-09	1.07E-09
Cm-245	4.18E-16	4.17E-16	4.18E-16	2.21E-13	2.18E-13	1.93E-14	1.94E-14	2.18E-13	2.18E-13	5.32E-13	5.23E-13	4.16E-16	4.17E-16	4.15E-16	4.21E-16
Total Alpha	1.00E-04	1.00E-04	1.00E-04	2.78E-06	2.73E-06	1.03E-04	1.02E-04	2.73E-06	2.73E-06	9.70E-05	9.53E-05	1.00E-04	1.00E-04	9.97E-05	1.01E-04

Table 12: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
600 mg/L sludge; 10% of interstitial supernate remaining

	Concentration (M)														
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00
Al(OH)4	3.22E-01	3.25E-01	3.22E-01	3.99E-01	4.00E-01	3.21E-01	3.20E-01	3.94E-01	3.97E-01	4.00E-01	3.96E-01	3.20E-01	3.19E-01	3.17E-01	3.22E-01
CO3	2.22E-01	2.22E-01	2.21E-01	1.33E-01	1.32E-01	2.23E-01	2.25E-01	1.33E-01	1.32E-01	1.34E-01	1.34E-01	2.22E-01	2.23E-01	2.20E-01	2.24E-01
C2O4	2.23E-02	2.23E-02	2.23E-02	1.42E-02	1.41E-02	2.25E-02	2.23E-02	1.41E-02	1.41E-02	1.42E-02	1.41E-02	2.22E-02	2.23E-02	2.22E-02	2.24E-02
NO2	1.11E-01	1.11E-01	1.14E-01	7.44E-01	7.49E-01	1.02E-01	1.10E-01	7.47E-01	7.45E-01	7.43E-01	7.41E-01	1.12E-01	1.13E-01	1.12E-01	1.06E-01
NO3	3.80E+00	3.80E+00	3.80E+00	2.66E+00	2.65E+00	3.84E+00	3.81E+00	2.65E+00	2.65E+00	2.67E+00	2.67E+00	3.79E+00	3.79E+00	3.79E+00	3.82E+00
OH	9.63E-01	9.65E-01	9.47E-01	1.85E+00	1.86E+00	9.14E-01	9.42E-01	1.89E+00	1.87E+00	1.85E+00	1.85E+00	9.80E-01	9.90E-01	9.39E-01	9.27E-01
PO4	1.42E-03	1.42E-03	1.46E-03	1.57E-02	1.57E-02	1.34E-03	1.34E-03	1.57E-02	1.56E-02	1.57E-02	1.57E-02	1.37E-03	1.38E-03	1.41E-03	1.34E-03
SO4	3.25E-01	3.25E-01	3.25E-01	1.84E-01	1.83E-01	3.29E-01	3.26E-01	1.83E-01	1.83E-01	1.85E-01	1.83E-01	3.24E-01	3.25E-01	3.24E-01	3.27E-01
Ag	6.13E-09	3.60E-08	2.65E-08	1.33E-08	1.14E-08	1.25E-08	1.24E-08	1.14E-08	1.14E-08	1.46E-08	1.15E-08	1.24E-08	1.24E-08	1.23E-08	1.24E-08
As	1.08E-06	9.79E-07	1.27E-06	1.73E-06	1.80E-05	8.63E-06	2.21E-05	3.13E-05	2.25E-05	1.19E-06	1.48E-05	3.75E-05	4.11E-05	2.26E-05	1.56E-05
Ba	1.07E-09	1.07E-08	8.02E-09	6.97E-08	----	----	----	----	----	2.50E-09	----	----	----	----	----
Ca	5.05E-05	5.04E-05	5.05E-05	3.15E-05	3.09E-05	5.15E-05	5.06E-05	3.09E-05	3.09E-05	3.17E-05	3.09E-01	5.04E-05	5.04E-05	5.03E-05	5.08E-05
Cd	2.94E-08	2.81E-08	3.72E-08	4.56E-08	4.85E-07	1.03E-07	6.26E-07	9.98E-07	6.59E-07	2.44E-08	3.62E-07	1.22E-06	1.36E-06	6.47E-07	3.72E-07
Cl	4.27E-02	4.27E-02	4.27E-02	3.86E-02	3.83E-02	4.30E-02	4.27E-02	3.84E-02	3.83E-02	3.87E-02	3.84E-02	4.26E-02	4.27E-02	4.26E-02	4.28E-02
Co	1.57E-07	1.60E-07	1.32E-07	6.91E-08	1.03E-07	6.64E-08	1.22E-07	1.58E-07	1.21E-07	6.66E-08	8.95E-08	1.86E-07	2.00E-07	1.24E-07	9.49E-08
Cr	6.50E-06	3.95E-06	1.31E-05	5.35E-05	7.19E-05	8.77E-05	7.59E-05	6.12E-05	6.83E-05	6.72E-05	7.48E-05	6.31E-05	6.03E-05	7.51E-05	8.15E-05
Cu	5.62E-05	5.82E-05	4.25E-05	1.01E-05	2.88E-05	6.17E-06	3.71E-05	5.91E-05	3.91E-05	8.57E-06	2.15E-05	7.23E-05	8.05E-05	3.84E-05	2.21E-05
Fe	4.73E-07	4.73E-07	3.68E-07	2.82E-07	1.31E-06	3.16E-07	1.68E-06	2.65E-06	1.76E-06	6.51E-07	9.88E-07	3.24E-06	3.59E-06	1.74E-06	1.02E-06
F	7.12E-02	7.11E-02	7.12E-02	3.62E-02	3.60E-02	7.19E-02	7.13E-02	3.60E-02	3.60E-02	1.65E+00	1.64E+00	3.23E+00	3.23E+00	3.22E+00	3.25E+00
Hg	3.66E-07	3.66E-07	3.66E-07	6.82E-07	4.16E-06	4.32E-06	4.56E-06	4.43E-06	4.25E-06	3.42E-07	4.10E-06	4.86E-06	4.94E-06	4.55E-06	4.44E-06
K	5.74E-03	5.81E-03	5.74E-03	4.74E-03	4.94E-03	4.93E-03	5.35E-03	5.57E-03	2.28E-01	2.07E-01	2.13E-01	2.70E-01	2.77E-01	2.45E-01	2.37E-01
Mg	----	----	3.45E-09	4.40E-08	1.77E-08	5.43E-08	1.11E-08	----	3.51E-09	4.63E-08	2.79E-08	----	----	9.03E-09	3.19E-08
Mn	2.01E-08	2.40E-08	3.21E-08	3.73E-08	6.77E-08	3.51E-08	8.26E-08	1.15E-07	8.36E-08	2.00E-08	5.66E-08	1.37E-07	1.49E-07	8.44E-08	5.95E-08
Nd	----	----	----	1.46E-06	----	1.96E-06	----	----	----	1.59E-06	5.41E-07	----	----	----	6.81E-07
Ni	3.75E-07	3.84E-07	3.09E-07	1.45E-07	2.34E-07	1.34E-07	2.83E-07	3.81E-07	2.84E-07	1.38E-07	2.00E-07	4.52E-07	4.92E-07	2.88E-07	2.11E-07
Pb	1.03E-06	8.50E-07	1.17E-06	1.68E-06	----	----	----	----	----	9.93E-07	----	----	----	----	----
Ru	5.94E-06	6.12E-06	4.60E-06	1.40E-06	3.22E-06	1.06E-06	4.07E-06	6.18E-06	4.23E-06	1.26E-06	2.51E-06	7.51E-06	8.30E-06	4.19E-06	2.61E-06
Se	7.63E-06	5.85E-06	9.85E-06	2.03E-05	5.53E-05	7.32E-05	5.70E-05	4.00E-05	5.01E-05	1.96E-05	5.91E-05	3.90E-05	3.50E-05	5.60E-05	6.47E-05
Si	3.64E-05	3.19E-05	1.86E-04	6.09E-06	----	----	----	----	----	4.76E-05	----	----	----	----	----
Sr	----	----	----	9.83E-07	----	1.36E-06	----	----	----	1.08E-06	2.71E-07	----	----	----	3.67E-07
Zn	6.83E-05	7.04E-05	5.34E-05	1.76E-05	3.79E-05	1.40E-05	4.75E-05	7.09E-05	4.91E-05	1.60E-05	3.00E-05	8.58E-05	9.46E-05	4.89E-05	3.12E-05
Zr	1.80E-06	1.86E-06	1.37E-06	3.56E-07	9.39E-07	2.39E-07	1.20E-06	1.88E-06	1.26E-06	3.10E-07	7.12E-07	2.30E-06	2.55E-06	1.24E-06	7.35E-07
Insol.Sol.mg/L	600	600	600	600	600	600	600	600	600	600	600	600	600	600	600

Table 12: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
600 mg/L sludge; 10% of interstitial supernate remaining (continued)

Radionuclide Composition (Ci/gal)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
C-14	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09	3.37E-09
Ni-59	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06	1.94E-06
Ni-63	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09	3.01E-09
Co-60	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04	3.09E-04
Se-79	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06	1.14E-06
Tc-99	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05	1.94E-05
Ru-106	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06
Rh-106	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06	7.18E-06
Sb-125	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04	1.84E-04
Sn-126	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06	1.53E-06
I-129	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10	1.79E-10
Cs-134	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06	8.05E-06
Cs-135	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08
Cs-137	3.56E-02	3.40E-02	3.69E-02	3.20E-02	8.11E-02	4.81E-03	2.97E-02	1.46E-01	1.07E-01	5.93E-03	2.12E-02	4.29E-02	4.08E-02	5.14E-02	2.37E-02
Ba-137m	3.37E-02	3.21E-02	3.49E-02	3.03E-02	7.67E-02	4.55E-03	2.81E-02	1.38E-01	1.01E-01	5.61E-03	2.01E-02	4.06E-02	3.86E-02	4.87E-02	2.25E-02
Sr-90	6.73E-02	6.73E-02	6.73E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.73E-02	6.73E-02	6.73E-02	6.73E-02	6.73E-02	6.73E-02
Y-90	6.73E-02	6.73E-02	6.73E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.74E-02	6.73E-02	6.73E-02	6.73E-02	6.73E-02	6.73E-02	6.73E-02
H-3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ce-144	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06
Pr-144	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06	3.70E-06
Pm-147	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03	3.88E-03
Eu-154	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04	7.56E-04
Th-232	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09	2.17E-09
U-232	4.94E-10	4.94E-10	4.94E-10	4.69E-10	4.69E-10	8.09E-10	8.11E-10	4.69E-10	4.69E-10	4.68E-10	4.68E-10	4.94E-10	4.94E-10	4.94E-10	4.94E-10
U-233	7.35E-08	7.35E-08	7.35E-08	7.42E-08	7.42E-08	7.35E-08	7.35E-08	7.42E-08	7.42E-08	7.35E-08	7.35E-08	7.35E-08	7.35E-08	7.35E-08	7.35E-08
U-234	2.35E-08	2.35E-08	2.35E-08	2.36E-08	2.36E-08	2.35E-08	2.35E-08	2.36E-08	2.36E-08	2.53E-08	2.52E-08	2.35E-08	2.35E-08	2.35E-08	2.35E-08
U-235	1.22E-09	1.22E-09	1.22E-09	1.16E-09	1.16E-09	1.56E-09	1.48E-09	1.16E-09	1.16E-09	1.18E-09	1.18E-09	1.22E-09	1.22E-09	1.22E-09	1.22E-09
U-236	3.34E-09	3.34E-09	3.34E-09	3.35E-09	3.35E-09	3.34E-09	3.34E-09	3.35E-09	3.35E-09	3.60E-09	3.60E-09	3.34E-09	3.34E-09	3.34E-09	3.34E-09
U-238	4.09E-08	4.08E-08	4.08E-08	3.57E-08	3.57E-08	7.25E-08	5.83E-08	3.57E-08	3.57E-08	3.56E-08	3.56E-08	4.08E-08	4.08E-08	4.08E-08	4.09E-08
Np-237	5.08E-08	5.08E-08	5.08E-08	5.11E-08	5.11E-08	8.12E-08	6.83E-08	5.11E-08	5.11E-08	5.23E-08	5.23E-08	5.08E-08	5.08E-08	5.08E-08	5.08E-08
Pu-238	1.47E-03	1.47E-03	1.47E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.43E-03	1.48E-03	1.48E-03	1.47E-03	1.47E-03	1.47E-03	1.47E-03
Pu-239	3.08E-05	3.08E-05	3.08E-05	2.46E-05	2.46E-05	2.90E-05	2.83E-05	2.46E-05	2.46E-05	2.47E-05	2.47E-05	3.08E-05	3.08E-05	3.08E-05	3.08E-05
Pu-240	1.28E-05	1.28E-05	1.28E-05	1.14E-05	1.14E-05	1.24E-05	1.22E-05	1.14E-05	1.14E-05	1.15E-05	1.15E-05	1.28E-05	1.28E-05	1.28E-05	1.28E-05
Pu-241	8.17E-04	8.17E-04	8.17E-04	7.80E-04	7.80E-04	8.06E-04	8.01E-04	7.80E-04	7.80E-04	7.88E-04	7.88E-04	8.17E-04	8.17E-04	8.17E-04	8.17E-04
Pu-242	2.26E-08	2.26E-08	2.26E-08	2.23E-08	2.23E-08	2.25E-08	2.25E-08	2.23E-08	2.23E-08	2.41E-08	2.41E-08	2.26E-08	2.26E-08	2.26E-08	2.26E-08
Am-241	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	2.08E-04	2.08E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04	1.62E-04
Am-242m	1.52E-07	1.52E-07	1.52E-07	1.52E-07	1.52E-07	2.15E-07	2.16E-07	1.52E-07	1.52E-07	1.52E-07	1.52E-07	1.52E-07	1.52E-07	1.52E-07	1.52E-07
Cm-242	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cm-244	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04	1.66E-04
Cm-245	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08	1.24E-08
Total Alpha	1.85E-03	1.85E-03	1.85E-03	1.80E-03	1.80E-03	1.85E-03	1.85E-03	1.80E-03	1.80E-03	1.84E-03	1.84E-03	1.85E-03	1.85E-03	1.85E-03	1.85E-03

Table 13: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
350 mg/L sludge; 10% of interstitial supernate remaining

	Concentration (M)														
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00
Al(OH)4	3.22E-01	3.25E-01	3.22E-01	3.99E-01	4.00E-01	3.21E-01	3.20E-01	3.94E-01	3.97E-01	4.00E-01	3.96E-01	3.20E-01	3.19E-01	3.17E-01	3.22E-01
CO3	2.22E-01	2.22E-01	2.21E-01	1.33E-01	1.32E-01	2.23E-01	2.25E-01	1.33E-01	1.32E-01	1.34E-01	1.34E-01	2.22E-01	2.23E-01	2.20E-01	2.24E-01
C2O4	2.23E-02	2.23E-02	2.23E-02	1.42E-02	1.41E-02	2.25E-02	2.23E-02	1.41E-02	1.41E-02	1.42E-02	1.41E-02	2.22E-02	2.23E-02	2.22E-02	2.24E-02
NO2	1.11E-01	1.11E-01	1.14E-01	7.44E-01	7.49E-01	1.02E-01	1.10E-01	7.47E-01	7.45E-01	7.43E-01	7.41E-01	1.12E-01	1.13E-01	1.12E-01	1.06E-01
NO3	3.80E+00	3.80E+00	3.80E+00	2.66E+00	2.65E+00	3.84E+00	3.81E+00	2.65E+00	2.65E+00	2.67E+00	2.67E+00	3.79E+00	3.79E+00	3.79E+00	3.82E+00
OH	9.63E-01	9.65E-01	9.47E-01	1.85E+00	1.86E+00	9.14E-01	9.42E-01	1.89E+00	1.87E+00	1.85E+00	1.85E+00	9.80E-01	9.90E-01	9.39E-01	9.27E-01
PO4	1.42E-03	1.42E-03	1.46E-03	1.57E-02	1.57E-02	1.34E-03	1.34E-03	1.57E-02	1.56E-02	1.57E-02	1.57E-02	1.37E-03	1.38E-03	1.41E-03	1.34E-03
SO4	3.25E-01	3.25E-01	3.25E-01	1.84E-01	1.83E-01	3.29E-01	3.26E-01	1.83E-01	1.83E-01	1.85E-01	1.83E-01	3.24E-01	3.25E-01	3.24E-01	3.27E-01
Ag	6.13E-09	3.60E-08	2.65E-08	1.33E-08	1.14E-08	1.25E-08	1.24E-08	1.14E-08	1.14E-08	1.46E-08	1.15E-08	1.24E-08	1.24E-08	1.23E-08	1.24E-08
As	1.08E-06	9.79E-07	1.27E-06	1.73E-06	1.80E-05	8.63E-06	2.21E-05	3.13E-05	2.25E-05	1.19E-06	1.48E-05	3.75E-05	4.11E-05	2.26E-05	1.56E-05
Ba	1.07E-09	1.07E-08	8.02E-09	6.97E-08	----	----	----	----	----	2.50E-09	----	----	----	----	----
Ca	5.05E-05	5.04E-05	5.05E-05	3.15E-05	3.09E-05	5.15E-05	5.06E-05	3.09E-05	3.09E-05	3.17E-05	3.09E-01	5.04E-05	5.04E-05	5.03E-05	5.08E-05
Cd	2.94E-08	2.81E-08	3.72E-08	4.56E-08	4.85E-07	1.03E-07	6.26E-07	9.98E-07	6.59E-07	2.44E-08	3.62E-07	1.22E-06	1.36E-06	6.47E-07	3.72E-07
Cl	4.27E-02	4.27E-02	4.27E-02	3.86E-02	3.83E-02	4.30E-02	4.27E-02	3.84E-02	3.83E-02	3.87E-02	3.84E-02	4.26E-02	4.27E-02	4.26E-02	4.28E-02
Co	1.57E-07	1.60E-07	1.32E-07	6.91E-08	1.03E-07	6.64E-08	1.22E-07	1.58E-07	1.21E-07	6.66E-08	8.95E-08	1.86E-07	2.00E-07	1.24E-07	9.49E-08
Cr	6.50E-06	3.95E-06	1.31E-05	5.35E-05	7.19E-05	8.77E-05	7.59E-05	6.12E-05	6.83E-05	6.72E-05	7.48E-05	6.31E-05	6.03E-05	7.51E-05	8.15E-05
Cu	5.62E-05	5.82E-05	4.25E-05	1.01E-05	2.88E-05	6.17E-06	3.71E-05	5.91E-05	3.91E-05	8.57E-06	2.15E-05	7.23E-05	8.05E-05	3.84E-05	2.21E-05
Fe	4.73E-07	4.73E-07	3.68E-07	2.82E-07	1.31E-06	3.16E-07	1.68E-06	2.65E-06	1.76E-06	6.51E-07	9.88E-07	3.24E-06	3.59E-06	1.74E-06	1.02E-06
F	7.12E-02	7.11E-02	7.12E-02	3.62E-02	3.60E-02	7.19E-02	7.13E-02	3.60E-02	3.60E-02	3.63E-02	3.60E-02	7.11E-02	7.11E-02	7.09E-02	7.15E-02
Hg	3.66E-07	3.66E-07	3.66E-07	6.82E-07	4.16E-06	4.32E-06	4.56E-06	4.43E-06	4.25E-06	3.42E-07	4.10E-06	4.86E-06	4.94E-06	4.55E-06	4.44E-06
K	5.74E-03	5.81E-03	5.74E-03	4.74E-03	4.94E-03	4.93E-03	5.35E-03	5.57E-03	5.01E-03	4.56E-03	4.68E-03	5.95E-03	6.10E-03	5.40E-03	5.20E-03
Mg	----	----	3.45E-09	4.40E-08	1.77E-08	5.43E-08	1.11E-08	----	3.51E-09	4.63E-08	2.79E-08	----	----	9.03E-09	3.19E-08
Mn	2.01E-08	2.40E-08	3.21E-08	3.73E-08	6.77E-08	3.51E-08	8.26E-08	1.15E-07	8.36E-08	2.00E-08	5.66E-08	1.37E-07	1.49E-07	8.44E-08	5.95E-08
Nd	----	----	----	1.46E-06	----	1.96E-06	----	----	----	1.59E-06	5.41E-07	----	----	----	6.81E-07
Ni	3.75E-07	3.84E-07	3.09E-07	1.45E-07	2.34E-07	1.34E-07	2.83E-07	3.81E-07	2.84E-07	1.38E-07	2.00E-07	4.52E-07	4.92E-07	2.88E-07	2.11E-07
Pb	1.03E-06	8.50E-07	1.17E-06	1.68E-06	----	----	----	----	----	9.93E-07	----	----	----	----	----
Ru	5.94E-06	6.12E-06	4.60E-06	1.40E-06	3.22E-06	1.06E-06	4.07E-06	6.18E-06	4.23E-06	1.26E-06	2.51E-06	7.51E-06	8.30E-06	4.19E-06	2.61E-06
Se	7.63E-06	5.85E-06	9.85E-06	2.03E-05	5.53E-05	7.32E-05	5.70E-05	4.00E-05	5.01E-05	1.96E-05	5.91E-05	3.90E-05	3.50E-05	5.60E-05	6.47E-05
Si	3.64E-05	3.19E-05	1.86E-04	6.09E-06	----	----	----	----	----	4.76E-05	----	----	----	----	----
Sr	----	----	----	9.83E-07	----	1.36E-06	----	----	----	1.08E-06	2.71E-07	----	----	----	3.67E-07
Zn	6.83E-05	7.04E-05	5.34E-05	1.76E-05	3.79E-05	1.40E-05	4.75E-05	7.09E-05	4.91E-05	1.60E-05	3.00E-05	8.58E-05	9.46E-05	4.89E-05	3.12E-05
Zr	1.80E-06	1.86E-06	1.37E-06	3.56E-07	9.39E-07	2.39E-07	1.20E-06	1.88E-06	1.26E-06	3.10E-07	7.12E-07	2.30E-06	2.55E-06	1.24E-06	7.35E-07
Insol.Sol.mg/L	350	350	350	350	350	350	350	350	350	350	350	350	350	350	350

Table 13: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
350 mg/L sludge; 10% of interstitial supernate remaining (continued)

Radionuclide Composition (Ci/gal)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
C-14	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09	1.97E-09
Ni-59	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06	1.13E-06
Ni-63	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09	1.76E-09
Co-60	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04	1.80E-04
Se-79	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07	6.67E-07
Tc-99	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05	1.13E-05
Ru-106	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06
Rh-106	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06	4.19E-06
Sb-125	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04	1.07E-04
Sn-126	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07	8.92E-07
I-129	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10	1.04E-10
Cs-134	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06	4.70E-06
Cs-135	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09	7.98E-09
Cs-137	3.39E-02	3.23E-02	3.52E-02	3.04E-02	7.94E-02	3.11E-03	2.80E-02	1.44E-01	1.05E-01	4.23E-03	1.95E-02	4.12E-02	3.91E-02	4.97E-02	2.20E-02
Ba-137m	3.21E-02	3.05E-02	3.33E-02	2.87E-02	7.51E-02	2.94E-03	2.65E-02	1.36E-01	9.96E-02	4.00E-03	1.85E-02	3.90E-02	3.70E-02	4.71E-02	2.09E-02
Sr-90	3.93E-02	3.93E-02	3.93E-02	3.94E-02	3.93E-02	3.94E-02	3.94E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02
Y-90	3.93E-02	3.93E-02	3.93E-02	3.94E-02	3.93E-02	3.94E-02	3.94E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02	3.93E-02
H-3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ce-144	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06
Pr-144	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06	2.16E-06
Pm-147	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03	2.26E-03
Eu-154	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04	4.41E-04
Th-232	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09	1.27E-09
U-232	2.99E-10	2.99E-10	2.99E-10	2.74E-10	2.74E-10	6.14E-10	6.16E-10	2.74E-10	2.74E-10	2.73E-10	2.73E-10	2.99E-10	2.99E-10	2.99E-10	2.99E-10
U-233	4.29E-08	4.29E-08	4.29E-08	4.36E-08	4.36E-08	4.29E-08	4.29E-08	4.36E-08	4.36E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08	4.29E-08
U-234	1.37E-08	1.37E-08	1.37E-08	1.38E-08	1.38E-08	1.37E-08	1.37E-08	1.38E-08	1.38E-08	1.55E-08	1.54E-08	1.37E-08	1.37E-08	1.37E-08	1.37E-08
U-235	7.34E-10	7.34E-10	7.34E-10	6.80E-10	6.80E-10	1.08E-09	9.98E-10	6.80E-10	6.80E-10	6.95E-10	6.95E-10	7.34E-10	7.34E-10	7.34E-10	7.35E-10
U-236	1.95E-09	1.95E-09	1.95E-09	1.96E-09	1.96E-09	1.95E-09	1.95E-09	1.96E-09	1.96E-09	2.21E-09	2.21E-09	1.95E-09	1.95E-09	1.95E-09	1.95E-09
U-238	2.60E-08	2.60E-08	2.60E-08	2.08E-08	2.08E-08	5.77E-08	4.34E-08	2.08E-08	2.08E-08	2.08E-08	2.08E-08	2.60E-08	2.60E-08	2.60E-08	2.60E-08
Np-237	2.96E-08	2.96E-08	2.96E-08	2.99E-08	2.99E-08	6.00E-08	4.71E-08	2.99E-08	2.99E-08	3.12E-08	3.11E-08	2.96E-08	2.96E-08	2.96E-08	2.96E-08
Pu-238	8.78E-04	8.78E-04	8.78E-04	8.36E-04	8.36E-04	8.35E-04	8.35E-04	8.36E-04	8.36E-04	8.83E-04	8.82E-04	8.78E-04	8.78E-04	8.78E-04	8.78E-04
Pu-239	2.05E-05	2.05E-05	2.05E-05	1.44E-05	1.44E-05	1.88E-05	1.80E-05	1.44E-05	1.44E-05	1.45E-05	1.45E-05	2.05E-05	2.05E-05	2.05E-05	2.06E-05
Pu-240	8.05E-06	8.05E-06	8.05E-06	6.68E-06	6.68E-06	7.65E-06	7.48E-06	6.68E-06	6.68E-06	6.76E-06	6.76E-06	8.05E-06	8.05E-06	8.04E-06	8.05E-06
Pu-241	4.92E-04	4.92E-04	4.92E-04	4.55E-04	4.55E-04	4.81E-04	4.76E-04	4.55E-04	4.55E-04	4.63E-04	4.63E-04	4.92E-04	4.92E-04	4.92E-04	4.92E-04
Pu-242	1.33E-08	1.33E-08	1.33E-08	1.30E-08	1.30E-08	1.32E-08	1.32E-08	1.30E-08	1.30E-08	1.49E-08	1.48E-08	1.33E-08	1.33E-08	1.33E-08	1.33E-08
Am-241	9.42E-05	9.42E-05	9.42E-05	9.45E-05	9.45E-05	1.40E-04	1.41E-04	9.45E-05	9.45E-05	9.45E-05	9.45E-05	9.42E-05	9.42E-05	9.42E-05	9.42E-05
Am-242m	8.85E-08	8.85E-08	8.85E-08	8.89E-08	8.89E-08	1.52E-07	1.52E-07	8.89E-08	8.89E-08	8.89E-08	8.89E-08	8.85E-08	8.85E-08	8.85E-08	8.85E-08
Cm-242	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cm-244	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.69E-05	9.69E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05	9.68E-05
Cm-245	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09	7.21E-09
Total Alpha	1.10E-03	1.10E-03	1.10E-03	1.05E-03	1.05E-03	1.10E-03	1.10E-03	1.05E-03	1.05E-03	1.10E-03	1.09E-03	1.10E-03	1.10E-03	1.10E-03	1.10E-03

Table 14: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
100 mg/L sludge; 10% of interstitial supernate remaining

Concentration (M)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00
Al(OH)4	3.22E-01	3.25E-01	3.22E-01	3.99E-01	4.00E-01	3.21E-01	3.20E-01	3.94E-01	3.97E-01	4.00E-01	3.96E-01	3.20E-01	3.19E-01	3.17E-01	3.22E-01
CO3	2.22E-01	2.22E-01	2.21E-01	1.33E-01	1.32E-01	2.23E-01	2.25E-01	1.33E-01	1.32E-01	1.34E-01	1.34E-01	2.22E-01	2.23E-01	2.20E-01	2.24E-01
C2O4	2.23E-02	2.23E-02	2.23E-02	1.42E-02	1.41E-02	2.25E-02	2.23E-02	1.41E-02	1.41E-02	1.42E-02	1.41E-02	2.22E-02	2.23E-02	2.22E-02	2.24E-02
NO2	1.11E-01	1.11E-01	1.14E-01	7.44E-01	7.49E-01	1.02E-01	1.10E-01	7.47E-01	7.45E-01	7.43E-01	7.41E-01	1.12E-01	1.13E-01	1.12E-01	1.06E-01
NO3	3.80E+00	3.80E+00	3.80E+00	2.66E+00	2.65E+00	3.84E+00	3.81E+00	2.65E+00	2.65E+00	2.67E+00	2.67E+00	3.79E+00	3.79E+00	3.79E+00	3.82E+00
OH	9.63E-01	9.65E-01	9.47E-01	1.85E+00	1.86E+00	9.14E-01	9.42E-01	1.89E+00	1.87E+00	1.85E+00	1.85E+00	9.80E-01	9.90E-01	9.39E-01	9.27E-01
PO4	1.42E-03	1.42E-03	1.46E-03	1.57E-02	1.57E-02	1.34E-03	1.34E-03	1.57E-02	1.56E-02	1.57E-02	1.57E-02	1.37E-03	1.38E-03	1.41E-03	1.34E-03
SO4	3.25E-01	3.25E-01	3.25E-01	1.84E-01	1.83E-01	3.29E-01	3.26E-01	1.83E-01	1.83E-01	1.85E-01	1.83E-01	3.24E-01	3.25E-01	3.24E-01	3.27E-01
Ag	6.13E-09	3.60E-08	2.65E-08	1.33E-08	1.14E-08	1.25E-08	1.24E-08	1.14E-08	1.14E-08	1.46E-08	1.15E-08	1.24E-08	1.24E-08	1.23E-08	1.24E-08
As	1.08E-06	9.79E-07	1.27E-06	1.73E-06	1.80E-05	8.63E-06	2.21E-05	3.13E-05	2.25E-05	1.19E-06	1.48E-05	3.75E-05	4.11E-05	2.26E-05	1.56E-05
Ba	1.07E-09	1.07E-08	8.02E-09	6.97E-08	----	----	----	----	----	2.50E-09	----	----	----	----	----
Ca	5.05E-05	5.04E-05	5.05E-05	3.15E-05	3.09E-05	5.15E-05	5.06E-05	3.09E-05	3.09E-05	3.17E-05	3.09E-01	5.04E-05	5.04E-05	5.03E-05	5.08E-05
Cd	2.94E-08	2.81E-08	3.72E-08	4.56E-08	4.85E-07	1.03E-07	6.26E-07	9.98E-07	6.59E-07	2.44E-08	3.62E-07	1.22E-06	1.36E-06	6.47E-07	3.72E-07
Cl	4.27E-02	4.27E-02	4.27E-02	3.86E-02	3.83E-02	4.30E-02	4.27E-02	3.84E-02	3.83E-02	3.87E-02	3.84E-02	4.26E-02	4.27E-02	4.26E-02	4.28E-02
Co	1.57E-07	1.60E-07	1.32E-07	6.91E-08	1.03E-07	6.64E-08	1.22E-07	1.58E-07	1.21E-07	6.66E-08	8.95E-08	1.86E-07	2.00E-07	1.24E-07	9.49E-08
Cr	6.50E-06	3.95E-06	1.31E-05	5.35E-05	7.19E-05	8.77E-05	7.59E-05	6.12E-05	6.83E-05	6.72E-05	7.48E-05	6.31E-05	6.03E-05	7.51E-05	8.15E-05
Cu	5.62E-05	5.82E-05	4.25E-05	1.01E-05	2.88E-05	6.17E-06	3.71E-05	5.91E-05	3.91E-05	8.57E-06	2.15E-05	7.23E-05	8.05E-05	3.84E-05	2.21E-05
Fe	4.73E-07	4.73E-07	3.68E-07	2.82E-07	1.31E-06	3.16E-07	1.68E-06	2.65E-06	1.76E-06	6.51E-07	9.88E-07	3.24E-06	3.59E-06	1.74E-06	1.02E-06
F	7.12E-02	7.11E-02	7.12E-02	3.62E-02	3.60E-02	7.19E-02	7.13E-02	3.60E-02	3.60E-02	3.63E-02	3.60E-02	7.11E-02	7.11E-02	7.09E-02	7.15E-02
Hg	3.66E-07	3.66E-07	3.66E-07	6.82E-07	4.16E-06	4.32E-06	4.56E-06	4.43E-06	4.25E-06	3.42E-07	4.10E-06	4.86E-06	4.94E-06	4.55E-06	4.44E-06
K	5.74E-03	5.81E-03	5.74E-03	4.74E-03	4.94E-03	4.93E-03	5.35E-03	5.57E-03	5.01E-03	4.56E-03	4.68E-03	5.95E-03	6.10E-03	5.40E-03	5.20E-03
Mg	----	----	3.45E-09	4.40E-08	1.77E-08	5.43E-08	1.11E-08	----	3.51E-09	4.63E-08	2.79E-08	----	----	9.03E-09	3.19E-08
Mn	2.01E-08	2.40E-08	3.21E-08	3.73E-08	6.77E-08	3.51E-08	8.26E-08	1.15E-07	8.36E-08	2.00E-08	5.66E-08	1.37E-07	1.49E-07	8.44E-08	5.95E-08
Nd	----	----	----	1.46E-06	----	1.96E-06	----	----	----	1.59E-06	5.41E-07	----	----	----	6.81E-07
Ni	3.75E-07	3.84E-07	3.09E-07	1.45E-07	2.34E-07	1.34E-07	2.83E-07	3.81E-07	2.84E-07	1.38E-07	2.00E-07	4.52E-07	4.92E-07	2.88E-07	2.11E-07
Pb	1.03E-06	8.50E-07	1.17E-06	1.68E-06	----	----	----	----	----	9.93E-07	----	----	----	----	----
Ru	5.94E-06	6.12E-06	4.60E-06	1.40E-06	3.22E-06	1.06E-06	4.07E-06	6.18E-06	4.23E-06	1.26E-06	2.51E-06	7.51E-06	8.30E-06	4.19E-06	2.61E-06
Se	7.63E-06	5.85E-06	9.85E-06	2.03E-05	5.53E-05	7.32E-05	5.70E-05	4.00E-05	5.01E-05	1.96E-05	5.91E-05	3.90E-05	3.50E-05	5.60E-05	6.47E-05
Si	3.64E-05	3.19E-05	1.86E-04	6.09E-06	----	----	----	----	----	4.76E-05	----	----	----	----	----
Sr	----	----	----	9.83E-07	----	1.36E-06	----	----	----	1.08E-06	2.71E-07	----	----	----	3.67E-07
Zn	6.83E-05	7.04E-05	5.34E-05	1.76E-05	3.79E-05	1.40E-05	4.75E-05	7.09E-05	4.91E-05	1.60E-05	3.00E-05	8.58E-05	9.46E-05	4.89E-05	3.12E-05
Zr	1.80E-06	1.86E-06	1.37E-06	3.56E-07	9.39E-07	2.39E-07	1.20E-06	1.88E-06	1.26E-06	3.10E-07	7.12E-07	2.30E-06	2.55E-06	1.24E-06	7.35E-07
Insol.Sol.mg/L	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Table 14: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration
100 mg/L sludge; 10% of interstitial supernate remaining (continued)

Radionuclide Composition (Ci/gal)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
C-14	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10	5.62E-10
Ni-59	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07	3.23E-07
Ni-63	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10	5.02E-10
Co-60	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05	5.14E-05
Se-79	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07	1.91E-07
Tc-99	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06	3.24E-06
Ru-106	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06
Rh-106	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06	1.20E-06
Sb-125	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05	3.07E-05
Sn-126	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07	2.55E-07
I-129	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11	2.98E-11
Cs-134	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06	1.34E-06
Cs-135	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09	2.28E-09
Cs-137	3.22E-02	3.06E-02	3.35E-02	2.87E-02	7.77E-02	1.42E-03	2.63E-02	1.42E-01	1.04E-01	2.53E-03	1.78E-02	3.95E-02	3.74E-02	4.80E-02	2.04E-02
Ba-137m	3.05E-02	2.89E-02	3.17E-02	2.71E-02	7.35E-02	1.34E-03	2.49E-02	1.35E-01	9.80E-02	2.40E-03	1.69E-02	3.74E-02	3.54E-02	4.55E-02	1.93E-02
Sr-90	1.12E-02	1.12E-02	1.12E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.12E-02	1.12E-02	1.12E-02	1.12E-02	1.12E-02	1.12E-02
Y-90	1.12E-02	1.12E-02	1.12E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.13E-02	1.12E-02	1.12E-02	1.12E-02	1.12E-02	1.12E-02	1.12E-02
H-3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ce-144	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07
Pr-144	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07	6.17E-07
Pm-147	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04	6.46E-04
Eu-154	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04	1.26E-04
Th-232	3.62E-10	3.62E-10	3.62E-10	3.65E-10	3.65E-10	3.62E-10	3.62E-10	3.65E-10	3.65E-10	3.62E-10	3.62E-10	3.62E-10	3.62E-10	3.62E-10	3.62E-10
U-232	1.04E-10	1.04E-10	1.04E-10	7.91E-11	7.91E-11	4.19E-10	4.21E-10	7.91E-11	7.91E-11	7.80E-11	7.80E-11	1.04E-10	1.04E-10	1.04E-10	1.04E-10
U-233	1.22E-08	1.22E-08	1.22E-08	1.30E-08	1.30E-08	1.22E-08	1.22E-08	1.30E-08	1.30E-08	1.22E-08	1.22E-08	1.22E-08	1.22E-08	1.22E-08	1.22E-08
U-234	3.92E-09	3.92E-09	3.92E-09	4.02E-09	4.02E-09	3.92E-09	3.92E-09	4.02E-09	4.02E-09	5.66E-09	5.65E-09	3.92E-09	3.92E-09	3.92E-09	3.92E-09
U-235	2.51E-10	2.51E-10	2.51E-10	1.96E-10	1.96E-10	5.97E-10	5.14E-10	1.96E-10	1.96E-10	2.11E-10	2.11E-10	2.51E-10	2.51E-10	2.50E-10	2.51E-10
U-236	5.56E-10	5.56E-10	5.56E-10	5.67E-10	5.67E-10	5.56E-10	5.56E-10	5.67E-10	5.67E-10	8.22E-10	8.20E-10	5.56E-10	5.56E-10	5.56E-10	5.56E-10
U-238	1.12E-08	1.12E-08	1.12E-08	5.97E-09	5.97E-09	4.28E-08	2.86E-08	5.97E-09	5.97E-09	5.94E-09	5.94E-09	1.12E-08	1.12E-08	1.11E-08	1.12E-08
Np-237	8.47E-09	8.47E-09	8.47E-09	8.74E-09	8.74E-09	3.89E-08	2.60E-08	8.74E-09	8.74E-09	9.99E-09	9.97E-09	8.47E-09	8.47E-09	8.47E-09	8.47E-09
Pu-238	2.82E-04	2.82E-04	2.82E-04	2.40E-04	2.40E-04	2.38E-04	2.38E-04	2.40E-04	2.40E-04	2.87E-04	2.86E-04	2.82E-04	2.82E-04	2.82E-04	2.82E-04
Pu-239	1.03E-05	1.03E-05	1.03E-05	4.13E-06	4.13E-06	8.52E-06	7.76E-06	4.13E-06	4.13E-06	4.25E-06	4.25E-06	1.03E-05	1.03E-05	1.03E-05	1.03E-05
Pu-240	3.29E-06	3.29E-06	3.29E-06	1.92E-06	1.92E-06	2.89E-06	2.72E-06	1.92E-06	1.92E-06	2.00E-06	2.00E-06	3.28E-06	3.29E-06	3.28E-06	3.29E-06
Pu-241	1.67E-04	1.67E-04	1.67E-04	1.30E-04	1.30E-04	1.56E-04	1.51E-04	1.30E-04	1.30E-04	1.38E-04	1.38E-04	1.67E-04	1.67E-04	1.67E-04	1.67E-04
Pu-242	4.00E-09	4.00E-09	4.00E-09	3.73E-09	3.73E-09	3.92E-09	3.89E-09	3.73E-09	3.73E-09	5.56E-09	5.54E-09	4.00E-09	4.00E-09	4.00E-09	4.00E-09
Am-241	2.69E-05	2.69E-05	2.69E-05	2.72E-05	2.72E-05	7.32E-05	7.38E-05	2.72E-05	2.72E-05	2.72E-05	2.72E-05	2.69E-05	2.69E-05	2.69E-05	2.69E-05
Am-242m	2.53E-08	2.53E-08	2.53E-08	2.57E-08	2.57E-08	8.85E-08	8.91E-08	2.57E-08	2.57E-08	2.56E-08	2.56E-08	2.53E-08	2.53E-08	2.53E-08	2.53E-08
Cm-242	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cm-244	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05	2.77E-05
Cm-245	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09	2.06E-09
Total Alpha	3.50E-04	3.50E-04	3.50E-04	3.00E-04	3.00E-04	3.51E-04	3.51E-04	3.00E-04	3.00E-04	3.48E-04	3.47E-04	3.50E-04	3.50E-04	3.50E-04	3.50E-04

Table 15: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration no sludge ; 10% of interstitial supernate remaining

	Concentration (M)														
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Na	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00	6.44E+00
Al(OH)4	3.22E-01	3.25E-01	3.22E-01	3.99E-01	4.00E-01	3.21E-01	3.20E-01	3.94E-01	3.97E-01	4.00E-01	3.96E-01	3.20E-01	3.19E-01	3.17E-01	3.22E-01
CO3	2.22E-01	2.22E-01	2.21E-01	1.33E-01	1.32E-01	2.23E-01	2.25E-01	1.33E-01	1.32E-01	1.34E-01	1.34E-01	2.22E-01	2.23E-01	2.20E-01	2.24E-01
C2O4	2.23E-02	2.23E-02	2.23E-02	1.42E-02	1.41E-02	2.25E-02	2.23E-02	1.41E-02	1.41E-02	1.42E-02	1.41E-02	2.22E-02	2.23E-02	2.22E-02	2.24E-02
NO2	1.11E-01	1.11E-01	1.14E-01	7.44E-01	7.49E-01	1.02E-01	1.10E-01	7.47E-01	7.45E-01	7.43E-01	7.41E-01	1.12E-01	1.13E-01	1.12E-01	1.06E-01
NO3	3.80E+00	3.80E+00	3.80E+00	2.66E+00	2.65E+00	3.84E+00	3.81E+00	2.65E+00	2.65E+00	2.67E+00	2.67E+00	3.79E+00	3.79E+00	3.79E+00	3.82E+00
OH	9.63E-01	9.65E-01	9.47E-01	1.85E+00	1.86E+00	9.14E-01	9.42E-01	1.89E+00	1.87E+00	1.85E+00	1.85E+00	9.80E-01	9.90E-01	9.39E-01	9.27E-01
PO4	1.42E-03	1.42E-03	1.46E-03	1.57E-02	1.57E-02	1.34E-03	1.34E-03	1.57E-02	1.56E-02	1.57E-02	1.57E-02	1.37E-03	1.38E-03	1.41E-03	1.34E-03
SO4	3.25E-01	3.25E-01	3.25E-01	1.84E-01	1.83E-01	3.29E-01	3.26E-01	1.83E-01	1.83E-01	1.85E-01	1.83E-01	3.24E-01	3.25E-01	3.24E-01	3.27E-01
Ag	6.13E-09	3.60E-08	2.65E-08	1.33E-08	1.14E-08	1.25E-08	1.24E-08	1.14E-08	1.14E-08	1.46E-08	1.15E-08	1.24E-08	1.24E-08	1.23E-08	1.24E-08
As	1.08E-06	9.79E-07	1.27E-06	1.73E-06	1.80E-05	8.63E-06	2.21E-05	3.13E-05	2.25E-05	1.19E-06	1.48E-05	3.75E-05	4.11E-05	2.26E-05	1.56E-05
Ba	1.07E-09	1.07E-08	8.02E-09	6.97E-08	----	----	----	----	----	2.50E-09	----	----	----	----	----
Ca	5.05E-05	5.04E-05	5.05E-05	3.15E-05	3.09E-05	5.15E-05	5.06E-05	3.09E-05	3.09E-05	3.17E-05	3.09E-01	5.04E-05	5.04E-05	5.03E-05	5.08E-05
Cd	2.94E-08	2.81E-08	3.72E-08	4.56E-08	4.85E-07	1.03E-07	6.26E-07	9.98E-07	6.59E-07	2.44E-08	3.62E-07	1.22E-06	1.36E-06	6.47E-07	3.72E-07
Cl	4.27E-02	4.27E-02	4.27E-02	3.86E-02	3.83E-02	4.30E-02	4.27E-02	3.84E-02	3.83E-02	3.87E-02	3.84E-02	4.26E-02	4.27E-02	4.26E-02	4.28E-02
Co	1.57E-07	1.60E-07	1.32E-07	6.91E-08	1.03E-07	6.64E-08	1.22E-07	1.58E-07	1.21E-07	6.66E-08	8.95E-08	1.86E-07	2.00E-07	1.24E-07	9.49E-08
Cr	6.50E-06	3.95E-06	1.31E-05	5.35E-05	7.19E-05	8.77E-05	7.59E-05	6.12E-05	6.83E-05	6.72E-05	7.48E-05	6.31E-05	6.03E-05	7.51E-05	8.15E-05
Cu	5.62E-05	5.82E-05	4.25E-05	1.01E-05	2.88E-05	6.17E-06	3.71E-05	5.91E-05	3.91E-05	8.57E-06	2.15E-05	7.23E-05	8.05E-05	3.84E-05	2.21E-05
Fe	4.73E-07	4.73E-07	3.68E-07	2.82E-07	1.31E-06	3.16E-07	1.68E-06	2.65E-06	1.76E-06	6.51E-07	9.88E-07	3.24E-06	3.59E-06	1.74E-06	1.02E-06
F	7.12E-02	7.11E-02	7.12E-02	3.62E-02	3.60E-02	7.19E-02	7.13E-02	3.60E-02	3.60E-02	3.63E-02	3.60E-02	7.11E-02	7.11E-02	7.09E-02	7.15E-02
Hg	3.66E-07	3.66E-07	3.66E-07	6.82E-07	4.16E-06	4.32E-06	4.56E-06	4.43E-06	4.25E-06	3.42E-07	4.10E-06	4.86E-06	4.94E-06	4.55E-06	4.44E-06
K	5.74E-03	5.81E-03	5.74E-03	4.74E-03	4.94E-03	4.93E-03	5.35E-03	5.57E-03	5.01E-03	4.56E-03	4.68E-03	5.95E-03	6.10E-03	5.40E-03	5.20E-03
Mg	----	----	3.45E-09	4.40E-08	1.77E-08	5.43E-08	1.11E-08	----	3.51E-09	4.63E-08	2.79E-08	----	----	9.03E-09	3.19E-08
Mn	2.01E-08	2.40E-08	3.21E-08	3.73E-08	6.77E-08	3.51E-08	8.26E-08	1.15E-07	8.36E-08	2.00E-08	5.66E-08	1.37E-07	1.49E-07	8.44E-08	5.95E-08
Nd	----	----	----	1.46E-06	----	1.96E-06	----	----	----	1.59E-06	5.41E-07	----	----	----	6.81E-07
Ni	3.75E-07	3.84E-07	3.09E-07	1.45E-07	2.34E-07	1.34E-07	2.83E-07	3.81E-07	2.84E-07	1.38E-07	2.00E-07	4.52E-07	4.92E-07	2.88E-07	2.11E-07
Pb	1.03E-06	8.50E-07	1.17E-06	1.68E-06	----	----	----	----	----	9.93E-07	----	----	----	----	----
Ru	5.94E-06	6.12E-06	4.60E-06	1.40E-06	3.22E-06	1.06E-06	4.07E-06	6.18E-06	4.23E-06	1.26E-06	2.51E-06	7.51E-06	8.30E-06	4.19E-06	2.61E-06
Se	7.63E-06	5.85E-06	9.85E-06	2.03E-05	5.53E-05	7.32E-05	5.70E-05	4.00E-05	5.01E-05	1.96E-05	5.91E-05	3.90E-05	3.50E-05	5.60E-05	6.47E-05
Si	3.64E-05	3.19E-05	1.86E-04	6.09E-06	----	----	----	----	----	4.76E-05	----	----	----	----	----
Sr	----	----	----	9.83E-07	----	1.36E-06	----	----	----	1.08E-06	2.71E-07	----	----	----	3.67E-07
Zn	6.83E-05	7.04E-05	5.34E-05	1.76E-05	3.79E-05	1.40E-05	4.75E-05	7.09E-05	4.91E-05	1.60E-05	3.00E-05	8.58E-05	9.46E-05	4.89E-05	3.12E-05
Zr	1.80E-06	1.86E-06	1.37E-06	3.56E-07	9.39E-07	2.39E-07	1.20E-06	1.88E-06	1.26E-06	3.10E-07	7.12E-07	2.30E-06	2.55E-06	1.24E-06	7.35E-07
Insol.Sol.mg/L	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 15: Projected Feed Composition After Dissolution and Dilution to 6.44 M Total Sodium Concentration no sludge ; 10% of interstitial supernate remaining (continued)

Radionuclide Composition (Ci/gal)															
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
C-14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ni-59	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ni-63	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Co-60	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Se-79	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Tc-99	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ru-106	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Rh-106	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Sb-125	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Sn-126	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
I-129	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cs-134	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cs-135	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cs-137	3.15E-02	2.99E-02	3.28E-02	2.80E-02	7.70E-02	7.37E-04	2.56E-02	1.42E-01	1.03E-01	1.86E-03	1.72E-02	3.88E-02	3.68E-02	4.74E-02	1.97E-02
Ba-137m	2.98E-02	2.83E-02	3.10E-02	2.65E-02	7.29E-02	6.97E-04	2.42E-02	1.34E-01	9.74E-02	1.76E-03	1.62E-02	3.67E-02	3.48E-02	4.48E-02	1.86E-02
Sr-90	2.13E-05	2.13E-05	2.13E-05	7.52E-05	7.46E-05	8.16E-05	8.09E-05	7.46E-05	7.46E-05	1.99E-05	1.97E-05	2.12E-05	2.13E-05	2.12E-05	2.14E-05
Y-90	2.13E-05	2.13E-05	2.13E-05	7.52E-05	7.46E-05	8.16E-05	8.09E-05	7.46E-05	7.46E-05	1.99E-05	1.97E-05	2.12E-05	2.13E-05	2.12E-05	2.14E-05
H-3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ce-144	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Pr-144	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Pm-147	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Eu-154	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Th-232	----	----	----	3.68E-12	3.65E-12	----	----	3.65E-12	3.65E-12	----	----	----	----	----	----
U-232	2.56E-11	2.55E-11	2.56E-11	1.05E-12	1.04E-12	3.41E-10	3.43E-10	1.04E-12	1.04E-12	----	----	2.55E-11	2.55E-11	2.55E-11	2.57E-11
U-233	----	----	----	7.55E-10	7.49E-10	----	----	7.49E-10	7.49E-10	----	----	----	----	----	----
U-234	----	----	----	1.07E-10	1.06E-10	----	----	1.06E-10	1.06E-10	1.75E-09	1.73E-09	----	----	----	----
U-235	5.72E-11	5.72E-11	5.72E-11	2.91E-12	2.89E-12	4.04E-10	3.21E-10	2.89E-12	2.89E-12	1.76E-11	1.74E-11	5.71E-11	5.71E-11	5.70E-11	5.74E-11
U-236	----	----	----	1.10E-11	1.09E-11	----	----	1.09E-11	1.09E-11	2.66E-10	2.64E-10	----	----	----	----
U-238	5.23E-09	5.22E-09	5.22E-09	3.41E-11	3.38E-11	3.69E-08	2.27E-08	3.38E-11	3.38E-11	2.47E-12	2.45E-12	5.22E-09	5.22E-09	5.21E-09	5.25E-09
Np-237	----	----	----	2.74E-10	2.72E-10	3.04E-08	1.75E-08	2.72E-10	2.72E-10	1.52E-09	1.51E-09	----	----	----	----
Pu-238	4.33E-05	4.33E-05	4.33E-05	1.05E-06	1.04E-06	----	----	1.04E-06	1.04E-06	4.81E-05	4.76E-05	4.32E-05	4.33E-05	4.32E-05	4.35E-05
Pu-239	6.19E-06	6.18E-06	6.19E-06	2.71E-08	2.69E-08	4.42E-06	3.66E-06	2.69E-08	2.69E-08	1.48E-07	1.47E-07	6.17E-06	6.18E-06	6.17E-06	6.21E-06
Pu-240	1.38E-06	1.38E-06	1.38E-06	1.12E-08	1.11E-08	9.87E-07	8.18E-07	1.11E-08	1.11E-08	9.79E-08	9.70E-08	1.38E-06	1.38E-06	1.38E-06	1.39E-06
Pu-241	3.71E-05	3.71E-05	3.71E-05	2.43E-07	2.41E-07	2.57E-05	2.08E-05	2.41E-07	2.41E-07	8.18E-06	8.11E-06	3.70E-05	3.71E-05	3.70E-05	3.73E-05
Pu-242	2.85E-10	2.84E-10	2.84E-10	7.44E-12	7.38E-12	2.03E-10	1.70E-10	7.38E-12	7.38E-12	1.84E-09	1.82E-09	2.84E-10	2.84E-10	2.84E-10	2.86E-10
Am-241	----	----	----	3.08E-07	3.05E-07	4.63E-05	4.69E-05	3.05E-07	3.05E-07	2.56E-07	2.54E-07	----	----	----	----
Am-242m	----	----	----	3.76E-10	3.73E-10	6.32E-08	6.39E-08	3.73E-10	3.73E-10	3.19E-10	3.16E-10	----	----	----	----
Cm-242	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cm-244	5.37E-10	5.37E-10	5.37E-10	9.02E-10	8.95E-10	2.45E-08	2.40E-08	8.95E-10	8.95E-10	4.33E-09	4.29E-09	5.36E-10	5.37E-10	5.36E-10	5.40E-10
Cm-245	2.12E-16	2.12E-16	2.12E-16	1.11E-13	1.10E-13	9.66E-15	9.81E-15	1.10E-13	1.10E-13	2.67E-13	2.64E-13	2.11E-16	2.12E-16	2.11E-16	2.13E-16
Total Alpha	5.09E-05	5.08E-05	5.09E-05	1.39E-06	1.38E-06	5.18E-05	5.15E-05	1.38E-06	1.38E-06	4.86E-05	4.81E-05	5.08E-05	5.08E-05	5.07E-05	5.11E-05

Table 16: Projected Feed Volumes After Dissolution and Dilution to 6.44 M Total Sodium Concentration: 30% interstitial supernate remaining

Volume of Saltcake Components After Dilution To 6.44 M Na								
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36
Salt Volume (gal)	1.11E+06	4.63E+05	1.03E+06	1.00E+06	1.01E+06	2.27E+05	2.12E+05	1.09E+06
Salt Mass (lb)	1.34E+07	5.60E+06	1.25E+07	1.21E+07	1.23E+07	2.75E+06	2.56E+06	1.32E+07
Salt Volume (L)	4.19E+06	1.75E+06	3.91E+06	3.79E+06	3.84E+06	8.59E+05	8.03E+05	4.14E+06
Intst. Supr. Vol. (L)	2.77E+05	1.16E+05	2.58E+05	2.50E+05	2.53E+05	5.67E+04	5.30E+04	2.73E+05
Dilution Volume (L)	1.06E+07	4.47E+06	9.94E+06	1.05E+07	1.10E+07	2.08E+06	2.02E+06	1.19E+07
Dilution Mass (lb)	2.34E+07	9.85E+06	2.19E+07	2.30E+07	2.42E+07	4.58E+06	4.46E+06	2.62E+07
Total Volume (L)	1.29E+07	5.41E+06	1.20E+07	1.23E+07	1.28E+07	2.57E+06	2.46E+06	1.38E+07
Total Volume (gal)	3.41E+06	1.43E+06	3.18E+06	3.25E+06	3.38E+06	6.78E+05	6.50E+05	3.64E+06
Total Mass (lb)	3.68E+07	1.54E+07	3.44E+07	3.51E+07	3.65E+07	7.33E+06	7.02E+06	3.94E+07
Solution Sp. G.	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00

Volume of Saltcake Components After Dilution To 6.44 M Na							
	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Salt Volume (gal)	9.73E+05	8.86E+05	1.23E+06	9.89E+05	1.13E+06	3.19E+05	8.68E+05
Salt Mass (lb)	1.18E+07	1.07E+07	1.49E+07	1.20E+07	1.37E+07	3.86E+06	1.05E+07
Salt Volume (L)	3.68E+06	3.35E+06	4.66E+06	3.74E+06	4.28E+06	1.21E+06	3.29E+06
Intst. Supr. Vol. (L)	2.43E+05	2.21E+05	3.08E+05	2.47E+05	2.82E+05	7.97E+04	2.17E+05
Dilution Volume (L)	1.06E+07	9.12E+06	1.32E+07	9.61E+06	1.09E+07	3.11E+06	8.19E+06
Dilution Mass (lb)	2.33E+07	2.01E+07	2.91E+07	2.12E+07	2.41E+07	6.86E+06	1.80E+07
Total Volume (L)	1.23E+07	1.08E+07	1.54E+07	1.16E+07	1.32E+07	3.75E+06	1.00E+07
Total Volume (gal)	3.24E+06	2.85E+06	4.07E+06	3.06E+06	3.49E+06	9.91E+05	2.64E+06
Total Mass (lb)	3.50E+07	3.08E+07	4.39E+07	3.31E+07	3.77E+07	1.07E+07	2.85E+07
Solution Sp. G.	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00

Table 17: Projected Feed Volumes After Dissolution and Dilution to 6.44 M Total Sodium Concentration: 20% interstitial supernate remaining

600 mg/L Sludge- 20% Interstitial Supernate								
Volume of Saltcake Components After Dilution To 6.44 M Na								
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36
Salt Volume (gal)	1.11E+06	4.63E+05	1.03E+06	1.00E+06	1.01E+06	2.27E+05	2.12E+05	1.09E+06
Salt Mass (lb)	1.34E+07	5.60E+06	1.25E+07	1.21E+07	1.23E+07	2.75E+06	2.56E+06	1.32E+07
Salt Volume (L)	4.19E+06	1.75E+06	3.91E+06	3.79E+06	3.84E+06	8.59E+05	8.03E+05	4.14E+06
Intst. Supr. Vol. (L)	1.85E+05	7.71E+04	1.72E+05	1.67E+05	1.69E+05	3.78E+04	3.53E+04	1.82E+05
Dilution Volume (L)	1.04E+07	4.37E+06	9.72E+06	1.04E+07	1.08E+07	2.07E+06	1.99E+06	1.16E+07
Dilution Mass (lb)	2.30E+07	9.63E+06	2.14E+07	2.29E+07	2.38E+07	4.55E+06	4.37E+06	2.56E+07
Total Volume (L)	1.27E+07	5.33E+06	1.19E+07	1.22E+07	1.26E+07	2.56E+06	2.43E+06	1.36E+07
Total Volume (gal)	3.36E+06	1.41E+06	3.14E+06	3.23E+06	3.33E+06	6.75E+05	6.42E+05	3.60E+06
Total Mass (lb)	3.64E+07	1.52E+07	3.39E+07	3.50E+07	3.60E+07	7.30E+06	6.94E+06	3.89E+07
Solution Sp. G.	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00

Volume of Saltcake Components After Dilution To 6.44 M Na							
	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Salt Volume (gal)	9.73E+05	8.86E+05	1.23E+06	9.89E+05	1.13E+06	3.19E+05	8.68E+05
Salt Mass (lb)	1.18E+07	1.07E+07	1.49E+07	1.20E+07	1.37E+07	3.86E+06	1.05E+07
Salt Volume (L)	3.68E+06	3.35E+06	4.66E+06	3.74E+06	4.28E+06	1.21E+06	3.29E+06
Intst. Supr. Vol. (L)	1.62E+05	1.48E+05	2.05E+05	1.65E+05	1.88E+05	5.31E+04	1.45E+05
Dilution Volume (L)	1.04E+07	9.10E+06	1.30E+07	9.37E+06	1.07E+07	3.03E+06	8.06E+06
Dilution Mass (lb)	2.28E+07	2.00E+07	2.86E+07	2.06E+07	2.35E+07	6.68E+06	1.78E+07
Total Volume (L)	1.21E+07	1.08E+07	1.52E+07	1.14E+07	1.30E+07	3.69E+06	9.90E+06
Total Volume (gal)	3.20E+06	2.85E+06	4.02E+06	3.02E+06	3.44E+06	9.75E+05	2.62E+06
Total Mass (lb)	3.46E+07	3.08E+07	4.35E+07	3.26E+07	3.72E+07	1.05E+07	2.83E+07
Solution Sp. G.	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00

Table 18: Projected Feed Volumes After Dissolution and Dilution to 6.44 M Total Sodium Concentration: 10% interstitial supernate remaining

600 mg/L Sludge- 10% Interstitial Supernate								
Volume of Saltcake Components After Dilution To 6.44 M Na								
	Tank 25	Tank 27	Tank 28	Tank 29	Tank 31	Tank 33	Tank 34	Tank 36
Salt Volume (gal)	1.11E+06	4.63E+05	1.03E+06	1.00E+06	1.01E+06	2.27E+05	2.12E+05	1.09E+06
Salt Mass (lb)	1.34E+07	5.60E+06	1.25E+07	1.21E+07	1.23E+07	2.75E+06	2.56E+06	1.32E+07
Salt Volume (L)	4.19E+06	1.75E+06	3.91E+06	3.79E+06	3.84E+06	8.59E+05	8.03E+05	4.14E+06
Intst. Supr. Vol. (L)	9.23E+04	3.86E+04	8.59E+04	8.33E+04	8.44E+04	1.89E+04	1.77E+04	9.11E+04
Dilution Volume (L)	1.02E+07	4.27E+06	9.51E+06	1.03E+07	1.06E+07	2.06E+06	1.95E+06	1.14E+07
Dilution Mass (lb)	2.25E+07	9.41E+06	2.09E+07	2.27E+07	2.33E+07	4.53E+06	4.29E+06	2.51E+07
Total Volume (L)	1.26E+07	5.26E+06	1.17E+07	1.22E+07	1.25E+07	2.55E+06	2.40E+06	1.34E+07
Total Volume (gal)	3.32E+06	1.39E+06	3.09E+06	3.22E+06	3.29E+06	6.73E+05	6.34E+05	3.55E+06
Total Mass (lb)	3.59E+07	1.50E+07	3.34E+07	3.48E+07	3.56E+07	7.27E+06	6.85E+06	3.84E+07
Solution Sp. G.	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00

Volume of Saltcake Components After Dilution To 6.44 M Na							
	Tank 37	Tank 38	Tank 41	Tank 44	Tank 45	Tank 46	Tank 47
Salt Volume (gal)	9.73E+05	8.86E+05	1.23E+06	9.89E+05	1.13E+06	3.19E+05	8.68E+05
Salt Mass (lb)	1.18E+07	1.07E+07	1.49E+07	1.20E+07	1.37E+07	3.86E+06	1.05E+07
Salt Volume (L)	3.68E+06	3.35E+06	4.66E+06	3.74E+06	4.28E+06	1.21E+06	3.29E+06
Intst. Supr. Vol. (L)	8.10E+04	7.38E+04	1.03E+05	8.24E+04	9.41E+04	2.66E+04	7.23E+04
Dilution Volume (L)	1.01E+07	9.07E+06	1.28E+07	9.14E+06	1.04E+07	2.95E+06	7.94E+06
Dilution Mass (lb)	2.24E+07	2.00E+07	2.82E+07	2.01E+07	2.30E+07	6.50E+06	1.75E+07
Total Volume (L)	1.20E+07	1.08E+07	1.51E+07	1.12E+07	1.28E+07	3.63E+06	9.80E+06
Total Volume (gal)	3.16E+06	2.84E+06	3.98E+06	2.97E+06	3.39E+06	9.59E+05	2.59E+06
Total Mass (lb)	3.41E+07	3.07E+07	4.30E+07	3.21E+07	3.66E+07	1.04E+07	2.80E+07
Solution Sp. G.	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00	1.30E+00

4 Real Waste Salt Cake Samples

Since 1994, several salt cake samples were extracted from Tanks 37, 38, and 41.[5,6,7] These samples were obtained using a sampling cup that is driven into the surface of the salt cake. The material is held in the cup primarily by friction, but is aided by a retaining ring in some cases. These samples are nominally about 50 ml each. Though not necessarily representative of the entire tank contents, these samples offer significant insight to the composition of the salt cake. The results from these samples are presented as if the material is dissolved and diluted with water to 6.44 M total sodium concentration. The composition predicted by WCS is presented in the adjacent column for comparison.

The WCS predicted composition assumes 70% drainage of interstitial liquid. Additional projections are provided if better drainage can be achieved. However, the samples from all three tanks were not drained to a specified supernate level. The sample technique compresses the salt cake, which forces out interstitial liquid. As the sample is removed from the tank, the remaining interstitial liquid is allowed to drain from the sample before packaging and shipping to the laboratory. If possible, the void fraction is estimated for each sample along with an estimate of retained supernate.

The weight fraction of supernate can be calculated as follows:

$$w_{supr} = M_{supr}/M_{bulk} = M_{H2O}/(w_{H2O\text{-}sup}*M_{bulk})$$

$$= w_{H2O\text{-}bulk}/w_{H2O\text{-}sup} \quad (10)$$

where

M_{supr} = mass of supernate in sample
M_{bulk} = mass of sample
M_{H20} = mass of water in sample
v_{supr} = the volume fraction of the supernate in the sample
$w_{H2O\text{-}bulk}$ = the weight fraction of the water in the sample
$w_{H2O\text{-}sup}$ = the weight fraction of the water in the supernate, and
w_{supr} = the weight fraction of supernate in the sample.

The volume fraction of supernate in the sample can be calculated as follows:

$$v_{supr} = V_{supr}/V_{bulk} = (M_{supr}/\rho_{supr})/(M_{bulk}/\rho_{bulk})$$

$$= (M_{supr}/M_{bulk})*(\rho_{bulk}/\rho_{supr})$$

$$= w_{supr}*(\rho_{bulk}/\rho_{supr}) \quad (11)$$

where

ρ_{supr} and ρ_{bulk} = the densities of the supernate and bulk sample respectively.

Equation 10 is combined with equation 11 to yield

$$v_{supr} = (w_{H2O\text{-}bulk}/w_{H2O\text{-}sup})*(\rho_{bulk}/\rho_{supr}) \quad (12)$$

By analogy to equation 12,

$$v_{salt} = w_{salt}*(\rho_{bulk}/\rho_{salt}) \quad (13)$$

where

v_{salt} = the volume fraction of the salt in the sample, and

ρ_{salt} = the density of the salt.

Since $w_{supr} + w_{salt} = 1$, neglecting the contribution of air, then

$$v_{salt} = (1-w_{supr}) *(\rho_{bulk}/\rho_{salt}) \quad (14)$$

Combining equation 10 with equation 14 results in

$$v_{salt} = (1-w_{H2O\text{-}bulk}/w_{H2O\text{-}sup})*(\rho_{bulk}/\rho_{salt}) \quad (15)$$

The volume fraction of air in the bulk sample was assumed to be the balance of the sample volume. The void fraction is the fraction of sample volume not occupied by salt or $v_{supr} + v_{air}$. Using the sample density and weight fraction water data in Table 19 and assuming the crystalline solids density is 2.2,[3] the calculated sample void fractions are 0.59, 0.41, and 0.42 for the Tank 37, 38, and 41 samples respectively.

Samples from all three tanks show much higher total insoluble solids than is predicted. These high insoluble solids content may be due to solids settling from the free supernate over a long period. Waste is not routinely transferred from or to these tanks. After long periods of stagnation, fine particles may settle as well as dust and corrosion debris. Aluminum precipitation as gibbsite and sodium aluminosilicates is known to occur slowly. All these mechanisms can contribute to the unusually high insoluble content of these samples.

Table 19: Comparison of Real Salt Cake Sample Results with Predicted Compositions

			Tank 38 (avg. Sp.G. = 1.725)				Tank 41 - 4 Samples (Avg. Sp.G. = 1.53)				Tank 37 (Avg. Sp.G. = 1.524)			
	MW		Ave. Sample Weight %	Sample Conc (M)	Average Sample Conc @6.44 M Na (M)	WCS Projected Feed @6.44 M Na (M)	Average Sample Weight %	Sample Conc (M)	Average Sample Conc @6.44 M Na (M)	WCS Projected Feed @6.44 M Na (M)	Average Sample Weight %	Sample Conc (M)	Average Sample Conc @6.44 M Na (M)	WCS Projected Feed @6.44 M Na (M)
Na	22.98977		2.98E+01	2.24E+01	6.44E+00	6.44E+00	2.75E-01	1.83E+01	6.44E+00	6.44E+00	2.87E+01	1.91E+01	6.44E+00	6.44E+00
Al(OH)4	26.98154	<	2.01E-01	1.29E-01	3.70E-02	4.01E-01	9.60E-03	1.55E-01	5.45E-02	3.91E-01	7.40E-01	4.18E-01	1.41E-01	3.93E-01
CO3	60.0092		---	---	---	1.35E-01	7.03E-02	1.79E+00	6.31E-01	1.35E-01	---	---	---	1.30E-01
C2O4	88.0196		---	---	---	1.43E-02	1.00E-03	1.74E-02	6.13E-03	1.39E-02	---	---	---	1.40E-02
NO2	46.0055		---	---	---	7.45E-01	7.33E-03	2.44E-01	8.59E-02	7.39E-01	---	---	---	7.52E-01
NO3	62.0049		---	---	---	2.67E+00	4.41E-01	1.09E+01	3.83E+00	2.65E+00	---	---	---	2.61E+00
OH	17.0073		---	---	---	1.87E+00	1.45E-02	1.30E+00	4.60E-01	1.87E+00	---	---	---	1.91E+00
PO4	94.9714		---	---	---	1.58E-02	7.43E-03	1.20E-01	4.22E-02	1.58E-02	---	---	---	1.54E-02
SO4	96.0576		---	---	---	1.84E-01	5.57E-03	8.87E-02	3.13E-02	1.80E-01	---	---	---	1.78E-01
Ag	107.868		2.08E-03	3.33E-04	9.58E-05	4.38E-08	2.34E-06	3.32E-05	1.17E-05	3.37E-08	8.93E-03	1.26E-03	4.27E-04	3.34E-08
As	74.91		---	---	---	3.56E-06	1.95E-05	3.98E-04	1.40E-04	4.36E-05	---	---		6.58E-05
Ba	137.33	≤	9.41E-04	1.18E-04	3.40E-05	7.47E-09	1.58E-06	1.76E-05	6.21E-06	----	< 3.03E-03	3.37E-04	1.14E-04	----
Ca	40.08		6.08E-02	2.62E-02	7.54E-03	3.24E-05	4.21E-05	1.61E-03	5.67E-04	3.03E-01	< 2.47E-02	9.40E-03	3.18E-03	3.01E-05
Cd	112.41	≤	1.42E-03	2.18E-04	6.28E-05	7.30E-08	4.29E-07	5.84E-06	2.06E-06	1.06E-06	< 3.12E-03	4.23E-04	1.43E-04	1.93E-06
Cl	35.453		---	---	---	3.86E-02	2.10E-02	9.06E-01	3.19E-01	3.78E-02	---	---	---	3.75E-02
Co	58.9332	<	5.67E-03	1.66E-03	4.78E-04	1.99E-07	9.56E-07	2.48E-05	8.75E-06	2.63E-07	< 1.40E-02	3.62E-03	1.22E-03	3.54E-07
Cr	51.996	≤	7.06E-03	2.34E-03	6.75E-04	2.01E-04	7.18E-04	2.11E-02	7.44E-03	2.20E-04	< 1.70E-02	4.99E-03	1.69E-03	2.00E-04
Cu	63.546	<	1.89E-03	5.13E-04	1.48E-04	2.56E-05	1.97E-06	4.74E-05	1.67E-05	6.31E-05	< 6.64E-03	1.59E-03	5.38E-04	1.14E-04
Fe	55.847		3.17E-01	9.79E-02	2.82E-02	1.95E-06	2.51E-04	6.88E-03	2.42E-03	2.90E-06	5.00E-02	1.36E-02	4.61E-03	5.15E-06
F	18.9984		---	---	---	3.63E-02	----	----	----	3.53E-02	---	---	---	3.52E-02
Hg	200.59		---	---	---	1.02E-06	6.18E-07	4.71E-06	1.66E-06	1.20E-05	---	---	---	1.24E-05
K	39.0983		---	---	---	4.73E-03	2.64E-04	1.03E-02	3.64E-03	5.08E-03	---	---	---	6.03E-03
Mg	24.305		1.60E-02	1.14E-02	3.27E-03	1.38E-07	1.04E-05	6.52E-04	2.30E-04	8.20E-08	3.21E-03	2.01E-03	6.80E-04	1.02E-08
Mn	54.93805		2.82E-02	8.85E-03	2.55E-03	5.98E-08	3.21E-06	8.94E-05	3.15E-05	1.66E-07	< 2.15E-03	5.95E-04	2.01E-04	2.44E-07
Nd	144.27		---	---	---	4.75E-06	----	----	----	1.59E-06	---	---	---	----
Ni	58.69	≤	9.27E-03	2.72E-03	7.85E-04	4.13E-07	2.04E-06	5.32E-05	1.87E-05	5.87E-07	< 2.03E-02	5.28E-03	1.79E-03	8.30E-07
Pb	207.2	<	6.65E-02	5.54E-03	1.59E-03	2.97E-06	1.25E-05	9.23E-05	3.25E-05	----	< 1.56E-01	1.15E-02	3.88E-03	----
Ru	101.1		---	---	---	3.76E-06	----	----	----	7.38E-06	---	---	---	1.23E-05
Se	78.96		---	---	---	5.85E-05	1.19E-05	2.31E-04	8.13E-05	1.74E-04	---	---	---	1.46E-04
Si	28.0855		8.85E-02	5.44E-02	1.57E-02	1.42E-04	7.40E-05	4.03E-03	1.42E-03	----	5.21E-01	2.83E-01	9.55E-02	----
Sr	87.62	<	7.07E-04	1.39E-04	4.01E-05	3.23E-06	2.48E-07	4.33E-06	1.53E-06	7.95E-07	< 1.72E-03	3.00E-04	1.01E-04	----
Zn	65.39	<	2.88E-03	7.60E-04	2.19E-04	4.80E-05	8.80E-04	2.06E-02	7.26E-03	8.82E-05	< 4.65E-03	1.08E-03	3.66E-04	1.43E-04
Zr	91.224		2.05E-03	3.88E-04	1.12E-04	9.28E-07	1.86E-06	3.12E-05	1.10E-05	2.09E-06	9.57E-03	1.60E-03	5.40E-04	3.68E-06
Water	----		2.21E-01				1.18E-01				2.11E-01			
Insoluble Solids	----		0.795	13,700 mg/l	3,900 mg/l	600 mg/l	0.850	13,000 mg/l	4,580 mg/l	600 mg/l	0.678	25,794 mg/l	8,719 mg/l	600 mg/l

Tank 41 insoluble solids calculation base five sample average of 0.85 wt% insoluble solids at Sp. Gr. of 1.53 and 18.3M Na corrected to 6.44M Na.

Table 19: Comparison of Real Salt Cake Sample Results with Predicted Compositions (Continued)

		Tank 38 (avg. Sp.G. = 1.725)								Tank 41 (Avg. Sp. Gr. = 1.53)				
		ICP-MS Analysis			Gamma Scan Analysis			Highest Result		ICP-MS Analysis				
	Specific Activity (Ci/g)		wt%	Ci/gal	dpm/g	Ci/g	Ci/gal	Ci/gal @6.44M Na	WCS Projected Feed @6.44 M Na (Ci/gal)	µg/g	µCi/g	Ci/gal	Ci/gal @6.44M Na	WCS Projected Feed @6.44 M Na (Ci/gal)
C-14	---		---	---	---	---	---	---	3.37E-09	----	----	----	----	3.37E-09
Ni-59	---		---	---	---	---	---	---	1.94E-06	----	----	----	----	1.94E-06
Ni-63	---		---	---	---	---	---	---	3.01E-09	----	----	----	----	3.01E-09
Co-60	---		---	---	1.76E+04	7.93E-09	5.18E-05	1.49E-05	3.09E-04	----	----	----	----	3.09E-04
Se-79	---		---	---	---	---	---	---	1.14E-06	----	----	----	----	1.14E-06
Tc-99	---		---	---	---	---	---	---	1.94E-05	----	3.000E-02	1.737E-04	6.125E-05	1.94E-05
Ru-106	---		---	---	---	---	---	---	7.18E-06	----	5.700E-02	3.301E-04	1.164E-04	7.18E-06
Rh-106	---		---	---	---	---	---	---	7.18E-06	----	----	----	----	7.18E-06
Sb-125	---		---	---	1.02E+06	4.59E-07	3.00E-03	8.64E-04	1.84E-04	----	4.000E-02	2.317E-04	8.167E-05	1.84E-04
Sn-126	---		---	---	---	---	---	---	1.53E-06	----	1.800E-01	1.042E-03	3.675E-04	1.53E-06
I-129	---		---	---	---	---	---	---	1.79E-10	----	----	----	----	1.79E-10
Cs-134	---		---	---	5.17E+04	2.33E-08	1.52E-04	4.38E-05	8.05E-06	----	1.600E-02	9.267E-05	3.267E-05	8.05E-06
Cs-135	---		---	---	---	---	---	---	1.37E-08	----	----	----	----	1.37E-08
Cs-137	---		---	---	7.64E+07	3.44E-05	2.25E-01	6.47E-02	9.60E-03	----	1.010E+02	5.618E-01	1.980E-01	5.43E-02
Ba-137m	---		---	---	---	---	---	---	9.08E-03	----	----	----	----	5.14E-02
Sr-90	---		---	---	5.45E+07	2.45E-05	1.60E-01	4.62E-02	6.74E-02	----	1.200E-02	6.950E-05	2.450E-05	6.74E-02
Y-90	---		---	---	---	---	---	---	6.74E-02	----	----	----	----	6.74E-02
H-3	---		---	---	---	---	---	---	----	----	----	----	----	----
Ce-144	---		---	---	---	---	---	---	3.70E-06	----	----	----	----	3.70E-06
Pr-144	---		---	---	---	---	---	---	3.70E-06	----	----	----	----	3.70E-06
Pm-147	---		---	---	---	---	---	---	3.88E-03	----	----	----	----	3.88E-03
Eu-154	---		---	---	1.71E+05	7.70E-08	5.03E-04	1.45E-04	7.56E-04	----	2.200E-01	1.274E-03	4.492E-04	7.56E-04
Th-232	1.10E-07		1.29E-03	9.26E-09	---	---	---	2.67E-09	2.17E-09	----	----	----	----	2.17E-09
U-232	2.14E+01		1.29E-03	1.80E+00	---	---	---	5.19E-01	4.68E-10	----	----	----	----	4.68E-10
U-233	9.65E-03	<	5.61E-07	3.53E-07	---	---	---	1.02E-07	7.35E-08	1.920E-02	----	1.073E-06	3.782E-07	7.35E-08
U-234	6.26E-03		8.54E-04	3.49E-04	---	---	---	1.01E-04	2.87E-08	2.020E-01	----	7.324E-06	2.582E-06	2.86E-08
U-235	2.16E-06		1.57E-03	2.21E-07	---	---	---	6.38E-08	1.21E-09	5.730E-01	----	7.168E-09	2.527E-09	1.21E-09
U-236	6.47E-05		5.04E-04	2.13E-06	---	---	---	6.13E-07	4.13E-09	2.150E-01	----	8.053E-08	2.839E-08	4.11E-09
U-238	3.36E-07		1.09E-01	2.39E-06	---	---	---	6.88E-07	3.56E-08	3.800E+00	----	7.395E-09	2.607E-09	3.56E-08
Np-237	7.05E-04		7.75E-04	3.57E-05	---	---	---	1.03E-05	5.53E-08	1.070E-01	----	4.367E-07	1.539E-07	5.52E-08
Pu-238	1.71E+01		9.25E-05	1.03E-01	3.15E+07	1.42E-05	9.27E-02	2.98E-02	1.57E-03	2.850E-02	----	2.826E-03	9.962E-04	1.57E-03
Pu-239 **	6.13E-02		3.18E-04	1.27E-03	5.85E+05	2.64E-07	1.72E-03	4.96E-04	2.50E-05	1.030E-02	----	3.658E-06	1.290E-06	2.50E-05
Pu-240	2.26E-01		9.12E-05	1.34E-03	---			3.87E-04	1.17E-05	1.730E-03	----	2.260E-06	7.968E-07	1.17E-05
Pu-241	1.03E+02		9.51E-06	6.41E-02	2.05E+07	9.23E-06	6.03E-02	1.85E-02	8.05E-04	3.930E-04	----	2.351E-04	8.289E-05	8.04E-04
Pu-242	3.93E-03		2.52E-04	6.46E-05	---			1.86E-05	2.78E-08	1.750E-04	----	3.978E-09	1.402E-09	2.77E-08
Am-241	3.42E+00	<	-8.95E-06	-2.00E-03	4.56E+05	2.05E-07	1.34E-03	3.86E-04	1.62E-04	----	----	----	----	1.62E-04
Am-242m	---		---	---	---	---	---	---	1.53E-07	----	----	----	----	1.53E-07
Cm-242	---		---	---	---	---	---	---	----	----	----	----	----	----
Cm-244	8.09E+01	<	5.61E-07	2.96E-03	---	---	---	8.53E-04	1.66E-04	1.003E-04	----	4.698E-05	1.656E-05	1.66E-04
Cm-245	1.72E-01	<	5.61E-07	6.29E-06	---	---	---	1.81E-06	1.24E-08	----	----	----	----	1.24E-08

Table 19: Comparison of Real Salt Cake Sample Results with Predicted Compositions (continued)

		Tank 37 (Avg. Sp. Gr. = 1.524)						
		Based on wt%		Gamma Scan Analysis			Highest Result	
	Specific Activity (Ci/g)	wt%	Ci/gal	dpm/g	Ci/g	Ci/gal	Ci/gal @6.44M Na	WCS Projected Feed @6.44 M Na (Ci/gal)
C-14	---	---	---	---	---	---	---	3.37E-09
Ni-59	---	---	---	---	---	---	---	1.94E-06
Ni-63	---	---	---	---	---	---	---	3.01E-09
Co-60	---	---	---	---	---	---	---	3.09E-04
Se-79	---	---	---	---	---	---	---	1.14E-06
Tc-99	---	---	---	---	---	---	---	1.94E-05
Ru-106	---	---	---	---	---	---	---	7.18E-06
Rh-106	---	---	---	---	---	---	---	7.18E-06
Sb-125	---	---	---	---	---	---	---	1.84E-04
Sn-126	---	---	---	---	---	---	---	1.53E-06
I-129	---	---	---	---	---	---	---	1.79E-10
Cs-134	---	---	---	---	---	---	---	8.05E-06
Cs-135	---	---	---	---	---	---	---	1.37E-08
Cs-137	---	1.06E-03	5.32E+00	2.04E+09	9.19E-04	5.30E+00	1.80E+00	3.04E-01
Ba-137m	---	---	---	---	---	---	---	2.87E-01
Sr-90	---	---	---	---	---	---	---	6.75E-02
Y-90	---	---	---	---	---	---	---	6.75E-02
H-3	---	---	---	---	---	---	---	----
Ce-144	---	---	---	---	---	---	---	3.70E-06
Pr-144	---	---	---	---	---	---	---	3.70E-06
Pm-147	---	---	---	---	---	---	---	3.88E-03
Eu-154	---	---	---	---	---	---	---	7.56E-04
Th-232	1.10E-07	2.52E-05	1.60E-10	---	---	---	5.40E-11	2.18E-09
U-232	2.14E+01	---	---	---	---	---	---	4.71E-10
U-233	9.65E-03	bdl	---	---	---	---	---	7.57E-08
U-234	6.26E-03	3.35E-06	1.21E-06	---	---	---	4.09E-07	2.38E-08
U-235	2.16E-06	3.89E-05	5.86E-09	---	---	---	1.98E-09	1.17E-09
U-236	6.47E-05	1.50E-05	5.60E-08	---	---	---	1.89E-08	3.37E-09
U-238	3.36E-07	1.56E-03	3.02E-08	---	---	---	1.02E-08	3.57E-08
Np-237	7.05E-04	1.86E-06	7.56E-08	---	---	---	2.56E-08	5.16E-08
Pu-238	1.71E+01	4.33E-06	4.28E-03	1.64E+06	7.39E-07	4.26E-03	1.45E-03	1.43E-03
Pu-239 **	6.13E-02	1.47E-05	5.20E-05	3.17E+04	1.43E-08	8.24E-05	2.78E-05	2.47E-05
Pu-240	2.26E-01	4.52E-06	5.88E-05	---	---	---	1.99E-05	1.15E-05
Pu-241	1.03E+02	bdl	---	1.06E+06	4.77E-07	2.75E-03	9.31E-04	7.81E-04
Pu-242	3.93E-03	bdl	---	---	---	---	---	2.23E-08
Am-241	3.42E+00	bdl	---	---	---	---	---	1.62E-04
Am-242m	---	---	---	---	---	---	---	1.53E-07
Cm-242	---	---	---	---	---	---	---	----
Cm-244	8.09E+01	---	---	---	---	---	---	1.66E-04
Cm-245	1.72E-01	---	---	---	---	---	---	1.24E-08

5 References

1 B. J. Wiersma, “An Investigation of Density Driven Salt Dissolution Techniques”, WSRC-TR-96-0160, August 1996.

2 J. N. Brooke, J. F. Peters, and K. Staheli, “Hydrological Methods can Separate Cesium from Nuclear Waste Salt Cake”, WSRC-TR-99-00358, October 1999.

3 J. R. Hester, “High Level Waste Characterization System (WCS)”, WSRC-TR-96-0264, Rev. 0, December 1996.

4 F. A. Washburn, “SRS Soluble HLW Characterization”, HLW-SDT-2001-00310, Rev. 0, November, 2001.

5 L. N. Oji and R. F. Swingle, “Characterization of Tank 37H Salt Core Samples”, WSRC-TR-2001-00517, Rev. 0, November 12, 2001.

6 D. T. Hobbs and C. J. Coleman, “Final Report: Analysis of Tank 41H Saltcake Sample #2 and Comparison to Sample #1 (U)”, WSRC-TR-94-057, January 26, 1994.

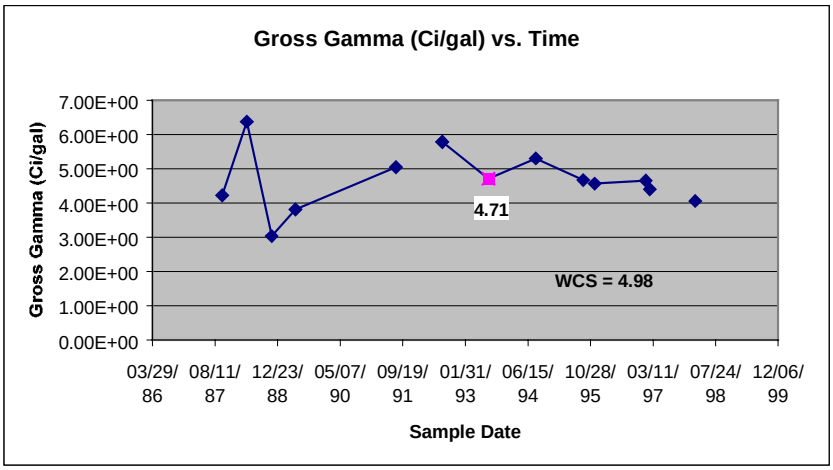
7 R. F. Swingle, “Characterization of Tank 38H Variable Depth & Core Samples”, WSRC-RP-2001-00574, Rev. 0, May 2001.

8 D. D. Walker, “Preparation of Simulated Waste Solutions”, WSRC-TR-99-00116, Rev. 0, April 1999.

APPENDIX A

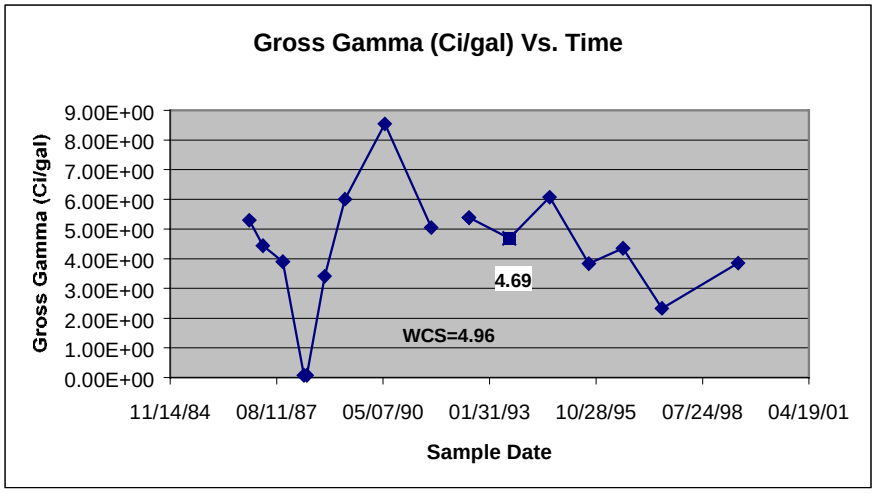
Tank 25

Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)	Samples Database Cs-137 (d/m/ml)	Samples Database Cs-137 (Ci/gal)	WCS Ci/gal
					4.98
02/12/98	2.38E+09	4.06E+00			
04/10/97			2.57E+09	4.38E+00	
02/13/97	2.58E+09	4.40E+00	2.57E+09	4.38E+00	Average (3)
01/13/97	2.73E+09	4.65E+00			4.37
12/01/95	2.68E+09	4.57E+00			
11/30/95					
08/31/95	2.74E+09	4.67E+00			Date Range
08/18/94	3.11E+09	5.30E+00			of Average
08/05/93	2.76E+09	4.71E+00	2.76E+09	4.71E+00	1/13/97-2/12/98
07/30/92	3.39E+09	5.78E+00	2.50E+09	4.26E+00	
07/30/92	3.39E+09	5.78E+00	3.39E+09	5.78E+00	
07/30/92			2.50E+09	4.26E+00	
07/26/91	2.96E+09	5.05E+00			
05/15/89	2.24E+09	3.82E+00			
11/04/88	1.78E+09	3.04E+00			
04/21/88	3.74E+09	6.38E+00	5.52E+08	9.41E-01	
10/07/87	2.48E+09	4.23E+00	4.23E+08	7.21E-01	
04/04/86					
08/19/85			5.10E+08	8.70E-01	
04/09/85			4.35E+08	7.42E-01	
03/19/85					
02/09/84					
03/18/83					
06/30/82					
11/10/81					
11/06/81					
10/16/81					
04/08/81					
09/22/80					



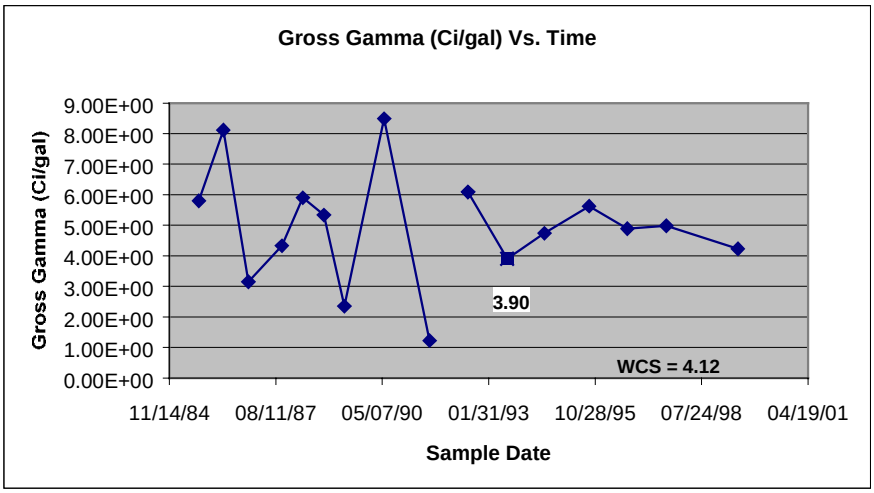
Tank 27

Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)	Samples Database Cs-137 (d/m/ml)	Samples Database Cs-137 (Ci/gal)	WCS Ci/gal
					4.96
06/24/99	2.26E+09	3.85E+00			
07/08/97	1.37E+09	2.34E+00			
07/09/96	2.55E+09	4.35E+00			Average (3)
08/21/95	2.25E+09	3.84E+00			3.51
08/18/94	3.56E+09	6.07E+00			
08/05/93	2.75E+09	4.69E+00	2.75E+09	4.69E+00	
07/21/92	3.16E+09	5.39E+00	3.16E+09	5.39E+00	Date Range
07/21/92	3.16E+09	5.39E+00	3.16E+09	5.39E+00	of Average
07/21/92			2.20E+09	3.75E+00	7/9/96-6/24/99
08/02/91	2.96E+09	5.05E+00			
05/24/90	5.01E+09	8.54E+00			
05/15/89	3.52E+09	6.00E+00			
11/04/88	2.00E+09	3.41E+00			
05/18/88	4.67E+07	7.96E-02	1.84E+06	3.14E-03	
04/21/88	4.67E+07	7.96E-02			
10/07/87	2.29E+09	3.90E+00	3.80E+08	6.48E-01	
04/03/87	2.60E+09	4.43E+00	4.48E+08	7.64E-01	
11/25/86	3.11E+09	5.30E+00	4.11E+08	7.01E-01	
10/20/84					
02/09/84					
08/23/83					
03/18/83					
03/25/82					
10/16/81					
08/19/80					
03/06/80					
02/01/80					
01/25/80					
01/24/80					



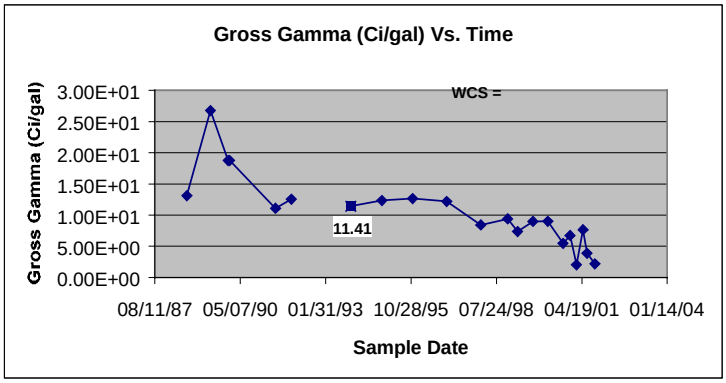
Tank 28

Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)	Samples Database Cs-137 (d/m/ml)	Samples Database Cs-137 (Ci/gal)	WCS Ci/gal 4.12
06/29/99	2.48E+09	4.23E+00			
08/26/97	2.92E+09	4.98E+00			
08/26/96	2.87E+09	4.89E+00			Average (3)
08/31/95	3.30E+09	5.63E+00			4.70
07/08/94	2.78E+09	4.74E+00			
07/23/93	2.29E+09	3.90E+00	2.29E+09	3.90E+00	
07/21/92	3.57E+09	6.09E+00	3.57E+09	6.09E+00	Date Range
07/21/92	3.57E+09	6.09E+00	3.57E+09	6.09E+00	of Average
07/21/92			2.60E+09	4.43E+00	8/26/96-6/29/99
07/26/91	7.21E+08	1.23E+00			
05/24/90	4.98E+09	8.49E+00			
05/15/89	1.38E+09	2.35E+00			
11/04/88	3.13E+09	5.34E+00			
04/21/88	3.46E+09	5.90E+00	4.52E+08	7.71E-01	
10/07/87	2.54E+09	4.33E+00	4.12E+08	7.02E-01	
11/26/86	1.85E+09	3.15E+00	2.39E+08	4.08E-01	
04/04/86	4.76E+09	8.12E+00			
08/19/85	3.40E+09	5.80E+00	4.61E+08	7.86E-01	
04/09/85			6.20E+08	1.06E+00	
03/19/85					
12/01/83					
03/18/83					
04/22/82					
02/03/81			2.38E+09	4.06E+00	
10/16/81					
04/08/81					
11/10/80					
09/08/80					
03/13/80					
02/01/80					



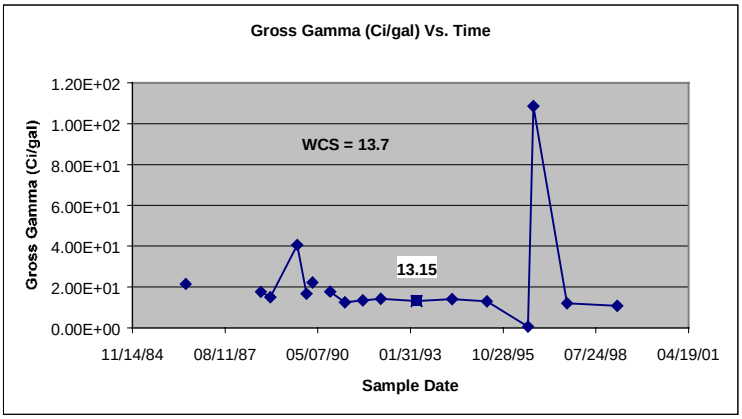
Tank 29

Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)	WCS Ci/gal 12.10
09/18/01	1.29E+09	2.20E+00	
06/19/01	2.27E+09	3.87E+00	
05/02/01	4.49E+09	7.66E+00	Average (3)
02/15/01	1.21E+09	2.06E+00	4.58
12/02/00	3.95E+09	6.74E+00	
09/10/00	3.21E+09	5.47E+00	
03/18/00	5.29E+09	9.02E+00	Date Range
09/24/99	5.27E+09	8.99E+00	of Average
03/29/99	4.32E+09	7.37E+00	5/2/01-9/18/01
12/02/98	5.51E+09	9.40E+00	
01/22/98	4.95E+09	8.44E+00	
12/18/96	7.15E+09	1.22E+01	
11/16/95	7.43E+09	1.27E+01	
11/22/94	7.24E+09	1.23E+01	
11/21/93	6.69E+09	1.14E+01	
11/28/92			
12/26/91	7.36E+09	1.25E+01	
06/23/91	6.51E+09	1.11E+01	
01/03/90	1.10E+10	1.88E+01	
12/15/89	1.10E+10	1.88E+01	
05/22/89	1.57E+10	2.68E+01	
08/22/88	7.70E+09	1.31E+01	
07/17/87			
07/17/87			
02/26/85			
01/11/85			
10/12/84			
09/17/84			
08/16/83			
09/10/82			
02/15/82			
09/09/81			
11/10/80			
06/20/80			
06/17/80			
06/10/80			
05/28/80			
05/19/80			
02/20/80			
01/18/80			
07/14/76			
08/01/71			



Tank 31

Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)	Samples Database Cs-137 (d/m/ml)	Samples Database Cs-137 (Ci/gal)	WCS Ci/gal
					13.70
03/12/99	6.30E+09	1.07E+01			
09/17/97	7.09E+09	1.21E+01			
09/19/96	6.37E+10	1.09E+02			Average (3)
07/23/96	3.69E+08	6.29E-01			43.82
05/04/95	7.62E+09	1.30E+01			
04/27/94	8.22E+09	1.40E+01			
04/07/93	7.71E+09	1.31E+01	7.62E+09	1.30E+01	Date Range
03/18/92	8.29E+09	1.41E+01	8.11E+09	1.38E+01	of Average
09/04/91	7.92E+09	1.35E+01	7.89E+09	1.35E+01	9/19/96-3/12/99
02/25/91	7.32E+09	1.25E+01			
09/18/90	1.04E+10	1.77E+01			
08/28/90					
03/09/90	1.30E+10	2.22E+01			
01/16/90					
01/03/90	9.77E+09	1.67E+01			
09/27/89	2.38E+10	4.06E+01			
12/11/88	8.83E+09	1.51E+01			
08/30/88	1.03E+10	1.76E+01			
02/09/87					
06/11/86	1.26E+10	2.15E+01	1.55E+09	2.64E+00	
09/17/84					
08/08/83					
09/13/82					
09/03/81					
04/22/81					
02/25/81			7.20E+08	1.23E+00	
11/10/80					
07/08/80					
06/10/80					
04/28/80					
04/11/80					
02/27/80					
02/27/80					
02/13/80					
02/07/80					
02/07/80					
01/31/80					
01/30/80					
01/19/80					
06/11/76			9.30E+09	1.59E+01	
04/01/72					



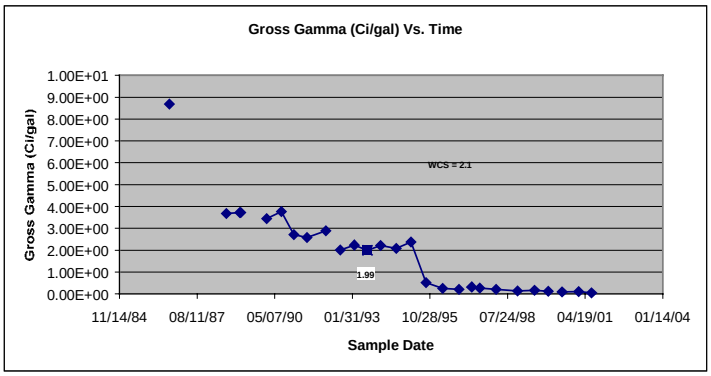
Tank 33

Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)
07/12/01	3.04E+07	5.18E-02
01/27/01	5.51E+07	9.40E-02
06/26/00	4.96E+07	8.46E-02
03/14/00		
03/14/00		
12/29/99	7.16E+07	1.22E-01
07/07/99	1.00E+08	1.71E-01
12/02/98	7.90E+07	1.35E-01
02/26/98	1.21E+08	2.06E-01
08/01/97	1.58E+08	2.70E-01
04/17/97	1.85E+08	3.15E-01
11/05/96	1.22E+08	2.08E-01
04/09/96	1.44E+08	2.46E-01
09/09/95	2.98E+08	5.08E-01
02/27/95	1.39E+09	2.37E+00
08/18/94	1.22E+09	2.08E+00
02/01/94	1.30E+09	2.22E+00
08/12/93	1.17E+09	1.99E+00
02/24/93	1.31E+09	2.23E+00
08/28/92	1.18E+09	2.01E+00
04/29/92		
02/26/92	1.69E+09	2.88E+00
06/26/91	1.51E+09	2.57E+00
01/09/91	1.59E+09	2.71E+00
08/01/90	2.21E+09	3.77E+00
01/24/90	2.02E+09	3.44E+00
08/15/89		
02/23/89	2.18E+09	3.72E+00
02/13/89	2.18E+09	3.72E+00
08/23/88	2.16E+09	3.68E+00
01/20/87		
01/08/87		
08/18/86	5.09E+09	8.68E+00
04/26/85		
08/06/84		
07/03/84		
02/10/84		
07/12/83		
12/27/82		
12/14/82		
11/16/81		
03/06/80		
11/29/79		
08/08/75		
05/01/74		

WCS
Ci/gal
2.10

Average (3)
0.08

Date Range
of Average
6/26/00-7/12/01



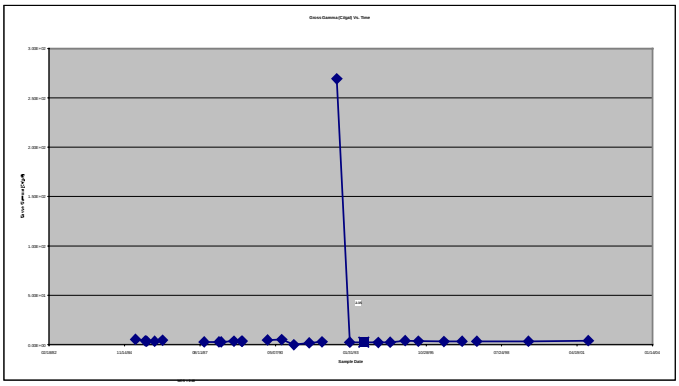
Tank 34

Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)
09/14/01	2.30E+09	3.92E+00
07/14/99	1.93E+09	3.29E+00
08/27/97	1.96E+09	3.34E+00
04/10/97		
02/13/97	1.93E+09	3.29E+00
06/18/96	1.84E+09	3.14E+00
07/18/95	2.08E+09	3.55E+00
01/20/95	2.36E+09	4.02E+00
07/09/94	1.50E+09	2.56E+00
01/29/94	1.27E+09	2.17E+00
07/23/93	1.38E+09	2.35E+00
01/18/93	1.45E+09	2.47E+00
07/30/92	1.58E+11	2.69E+02
04/30/92		
01/15/92	1.76E+09	3.00E+00
07/31/91	1.00E+09	1.71E+00
01/09/91	1.92E+07	3.27E-02
08/01/90	3.02E+09	5.15E+00
01/24/90	2.74E+09	4.67E+00
08/15/89		
02/23/89	2.14E+09	3.65E+00
02/13/89	2.14E+09	3.65E+00
02/13/89		
11/04/88	2.12E+09	3.61E+00
05/18/88	1.59E+09	2.71E+00
04/21/88	1.59E+09	2.71E+00
10/07/87	1.51E+09	2.57E+00
02/09/87		
04/04/86	2.62E+09	4.47E+00
12/20/85	2.01E+09	3.43E+00
11/26/85		
09/05/85	2.01E+09	3.43E+00
08/19/85	2.23E+09	3.80E+00
04/09/85	3.18E+09	5.42E+00
03/19/85		
07/03/84		
01/04/83		
07/22/82		
01/08/82		
08/25/81		
08/25/81		
04/07/81		
09/10/80		
09/10/80		
04/30/80		
01/25/80		
11/29/79		
01/12/76		
05/01/73		

WCS Ci/gal
2.48

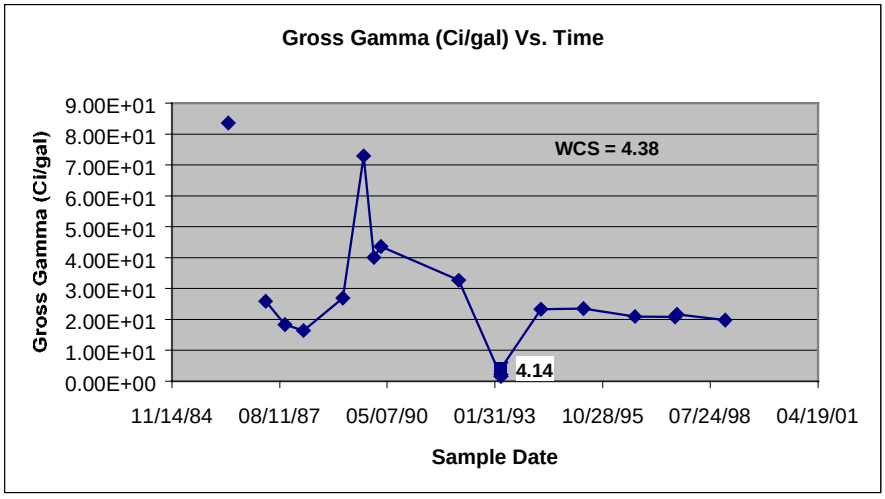
Average (3)
3.52

Date Range of Average
8/27/97-9/14/01



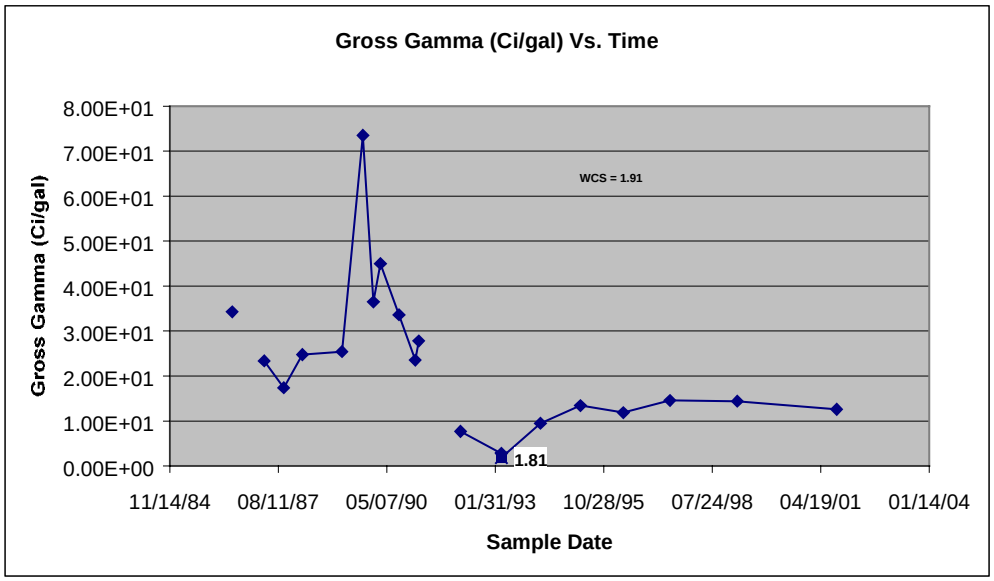
Tank 36

Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)	Samples Database Cs-137 (d/m/ml)	Samples Database Cs-137 (Ci/gal)	WCS Ci/gal 4.38
12/09/98	1.16E+10	1.98E+01			
09/17/97	1.27E+10	2.17E+01			
09/01/97	1.22E+10	2.08E+01			Average (3)
08/22/96	1.23E+10	2.10E+01			20.75
05/04/95	1.38E+10	2.35E+01			
04/04/94	1.37E+10	2.34E+01	1.37E+10	2.34E+01	
03/28/93	2.43E+09	4.14E+00	2.43E+09	4.14E+00	Date Range
03/28/93	9.06E+08	1.54E+00	8.89E+08	1.52E+00	of Average
03/02/92	1.92E+10	3.27E+01			9/1/97-12/9/98
03/09/90	2.56E+10	4.37E+01			
01/03/90	2.35E+10	4.01E+01			
09/29/89	4.28E+10	7.30E+01			
03/20/89	1.58E+10	2.69E+01			
03/21/88	9.64E+09	1.64E+01	1.41E+09	2.40E+00	
09/28/87	1.08E+10	1.84E+01	1.64E+09	2.80E+00	
04/02/87	1.52E+10	2.59E+01	2.02E+09	3.44E+00	
03/23/87					
04/21/86	4.90E+10	8.35E+01	1.47E+09	2.51E+00	
08/05/83					
07/17/82					
07/17/82					
09/03/81					
09/03/81					
02/14/81					
02/03/81					
11/19/80					
02/25/80					
05/17/79					



Tank 37

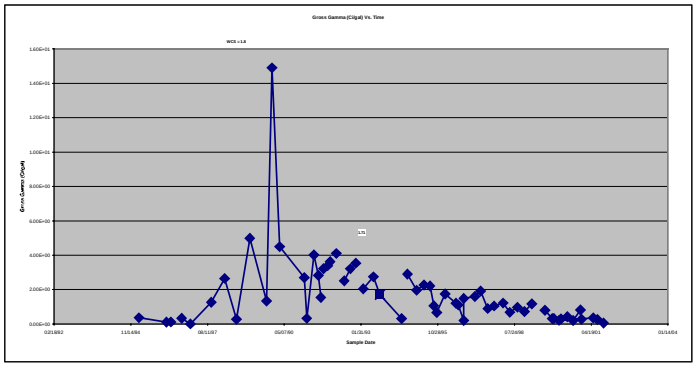
Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)	Samples Database Cs-137 (d/m/ml)	Samples Database Cs-137 (Ci/gal)	WCS Ci/gal 1.91
09/14/01	7.37E+09	1.26E+01			
03/12/99	8.42E+09	1.44E+01			
06/29/97	8.53E+09	1.45E+01			Average (3)
04/24/96	6.96E+09	1.19E+01			13.82
03/27/95	7.87E+09	1.34E+01			
03/24/94	5.55E+09	9.46E+00	5.55E+09	9.46E+00	
03/29/93	1.06E+09	1.81E+00	1.06E+09	1.81E+00	Date Range
03/29/93	1.63E+09	2.78E+00	1.62E+09	2.76E+00	of Average
03/18/92	4.50E+09	7.67E+00	4.32E+09	7.37E+00	6/29/97-9/14/01
09/04/91			3.35E+09	5.71E+00	
02/25/91	1.63E+10	2.78E+01			
01/23/91	1.38E+10	2.35E+01			
08/28/90	1.97E+10	3.36E+01			
03/09/90	2.64E+10	4.50E+01			
01/04/90	2.14E+10	3.65E+01			
09/29/89	4.31E+10	7.35E+01			
03/20/89	1.49E+10	2.54E+01			
03/21/88	1.45E+10	2.47E+01	1.88E+09	3.21E+00	
09/28/87	1.02E+10	1.74E+01	1.49E+09	2.54E+00	
04/01/87	1.37E+10	2.34E+01	1.92E+09	3.27E+00	
03/23/87					
06/11/86	2.01E+10	3.43E+01	2.51E+09	4.28E+00	
08/16/83					
07/17/82					
09/09/81					
02/27/81					
02/14/81					
02/03/81					
12/05/80					
11/19/80					
06/10/80					
02/25/80					
08/20/79					
05/18/79					



Tank 38

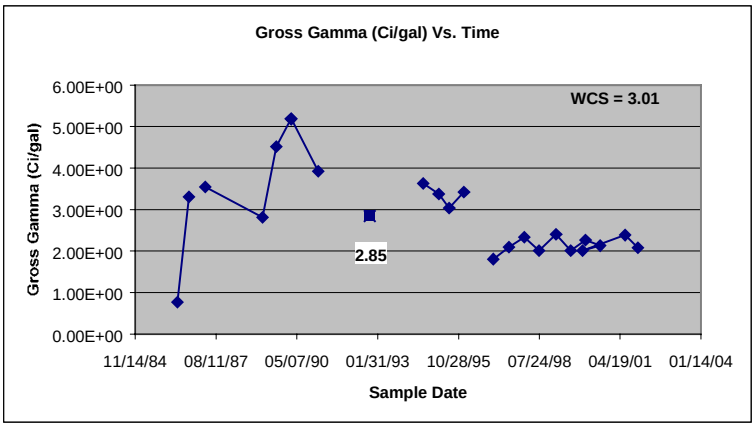
Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)
09/27/01	2.62E+07	4.47E-02
07/08/01	1.50E+08	2.56E-01
05/16/01	1.98E+08	3.38E-01
02/26/00	1.21E+08	2.06E-01
12/15/00	1.57E+08	2.68E-01
11/30/00	4.72E+08	8.05E-01
08/27/00	1.15E+08	1.96E-01
06/10/00	2.42E+08	4.13E-01
03/21/00	1.74E+08	2.97E-01
12/18/99	1.77E+08	3.02E-01
11/29/99	1.77E+08	3.02E-01
08/25/99	4.68E+08	7.98E-01
08/19/99		
03/07/99	6.79E+08	1.16E+00
11/30/98	4.20E+08	7.16E-01
08/30/98	5.68E+08	9.68E-01
05/26/98	3.92E+08	6.68E-01
02/25/98	7.07E+08	1.21E+00
11/01/97	6.10E+08	1.04E+00
08/09/97	5.26E+08	8.97E-01
05/09/97	1.12E+09	1.91E+00
02/25/97	9.36E+08	1.60E+00
10/03/96	8.67E+08	1.48E+00
10/03/96	1.17E+08	1.99E-01
07/23/96	6.45E+08	1.10E+00
06/20/96	7.04E+08	1.20E+00
02/01/96	1.02E+09	1.74E+00
10/15/95	3.90E+08	6.65E-01
09/07/95	6.20E+08	1.06E+00
07/18/95	1.29E+09	2.20E+00
05/03/95	1.33E+09	2.27E+00
01/26/95	1.15E+09	1.96E+00
09/28/94	1.70E+09	2.90E+00
09/28/94		
07/14/94	1.79E+08	3.05E-01
10/04/93	1.00E+09	1.71E+00
07/13/93	1.61E+09	2.75E+00
03/03/93	1.20E+09	2.05E+00
11/24/92		
11/24/92	2.07E+09	3.53E+00
09/14/92	1.88E+09	3.21E+00
06/25/92	1.47E+09	2.51E+00
06/20/92		
03/16/92	2.40E+09	4.09E+00
03/15/92		
12/26/91	2.12E+09	3.61E+00
12/20/91		
11/26/91	1.99E+09	3.39E+00
10/25/91		
10/01/91	1.89E+09	3.22E+00
09/30/91		
08/28/91	9.05E+08	1.54E+00
07/26/91	1.66E+09	2.83E+00
05/29/91	2.35E+09	4.01E+00
02/25/91	1.84E+08	3.14E-01
01/23/91	1.58E+09	2.69E+00
03/09/90	2.63E+09	4.48E+00
11/30/89	8.74E+09	1.49E+01
09/19/89	7.83E+08	1.34E+00

WCS Ci/gal
1.80
Average (3)
0.21
Date Range of Average
5/16/01-9/27/01



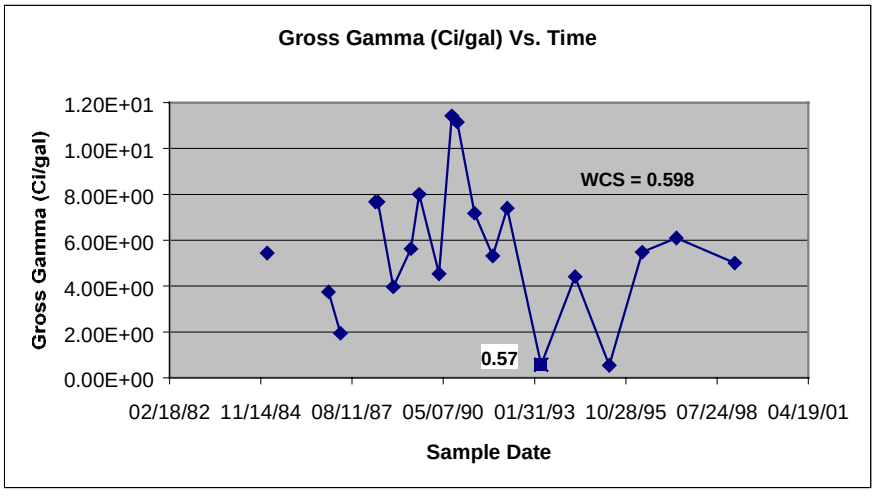
Tank 41

Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)	Samples Database Cs-137 (d/m/ml)	Samples Database Cs-137 (Ci/gal)	WCS Ci/gal 3.01
11/25/01	1.22E+09	2.08E+00			
06/19/01	1.40E+09	2.39E+00			
01/09/00	1.18E+09	2.01E+00			Average (3)
08/13/00	1.25E+09	2.13E+00			2.16
02/17/00	1.33E+09	2.27E+00			
08/18/99	1.18E+09	2.01E+00			
02/18/99	1.41E+09	2.40E+00			Date Range
07/19/98	1.18E+09	2.01E+00			of Average
01/19/98	1.37E+09	2.34E+00			1/9/00-11/25/01
07/15/97	1.23E+09	2.10E+00			
01/01/97	1.06E+09	1.81E+00			
07/26/96					
01/04/96	2.01E+09	3.43E+00			
07/06/95	1.78E+09	3.04E+00			
02/26/95	1.98E+09	3.38E+00			
08/19/94	2.13E+09	3.63E+00			
05/27/93					
10/27/92	1.67E+09	2.85E+00	1.67E+09	2.85E+00	
02/17/92			1.86E+09	3.17E+00	
08/24/91			5.38E+08	9.17E-01	
01/26/91	2.30E+09	3.92E+00			
03/01/90	3.04E+09	5.18E+00			
02/21/90	3.04E+09	5.18E+00			
08/23/89	2.65E+09	4.52E+00			
03/08/89	1.65E+09	2.81E+00			
04/01/87	2.08E+09	3.55E+00	2.78E+08	4.74E-01	
03/23/87					
03/20/87					
09/09/86	1.94E+09	3.31E+00	2.33E+08	3.97E-01	
04/21/86	4.55E+08	7.76E-01			
07/09/85					
08/13/84					
02/26/84					
08/09/83					
05/17/83					
05/17/83					
04/22/83					
04/22/83					
04/22/83					
03/09/82					



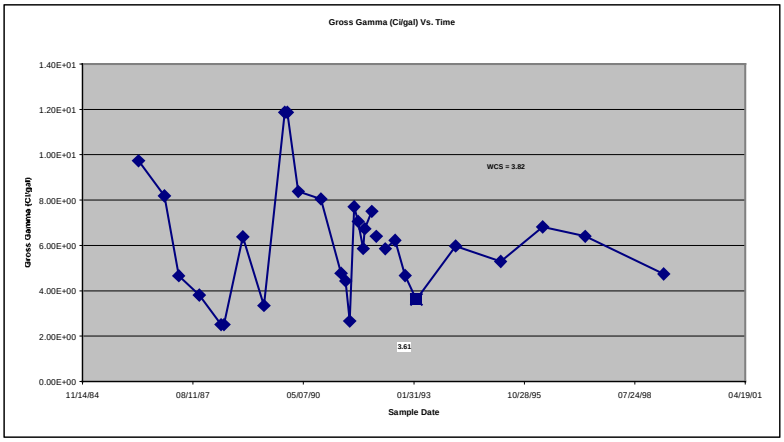
Tank 44

Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)	Samples Database Cs-137 (d/m/ml)	Samples Database Cs-137 (Ci/gal)	WCS Ci/gal 0.598
02/03/99	2.94E+09	5.01E+00			
05/01/97	3.58E+09	6.10E+00			
04/23/96	3.21E+09	5.47E+00			Average (3)
04/27/95	3.22E+08	5.49E-01			5.53
04/18/94	2.59E+09	4.42E+00	2.59E+09	4.42E+00	
04/12/93	3.32E+08	5.66E-01	3.32E+08	5.66E-01	
04/06/92	4.34E+09	7.40E+00	4.34E+09	7.40E+00	Date Range
10/30/91	3.12E+09	5.32E+00	3.12E+09	5.32E+00	of Average
04/12/91	4.21E+09	7.18E+00			4/23/96-2/3/99
10/04/90	6.54E+09	1.12E+01			
08/08/90	6.70E+09	1.14E+01			
03/21/90	2.66E+09	4.54E+00			
08/15/89	4.70E+09	8.01E+00			
05/15/89	3.30E+09	5.63E+00			
11/04/88	2.33E+09	3.97E+00			
05/18/88	4.50E+09	7.67E+00	5.69E+08	9.70E-01	
04/21/88	4.50E+09	7.67E+00			
08/06/87					
04/03/87	1.14E+09	1.94E+00	1.69E+08	2.88E-01	
11/25/86	2.20E+09	3.75E+00	3.02E+08	5.15E-01	
04/26/85					
01/22/85	3.19E+09	5.44E+00	4.23E+08	7.21E-01	
02/09/84					
08/23/83					
03/18/83					
03/25/82					



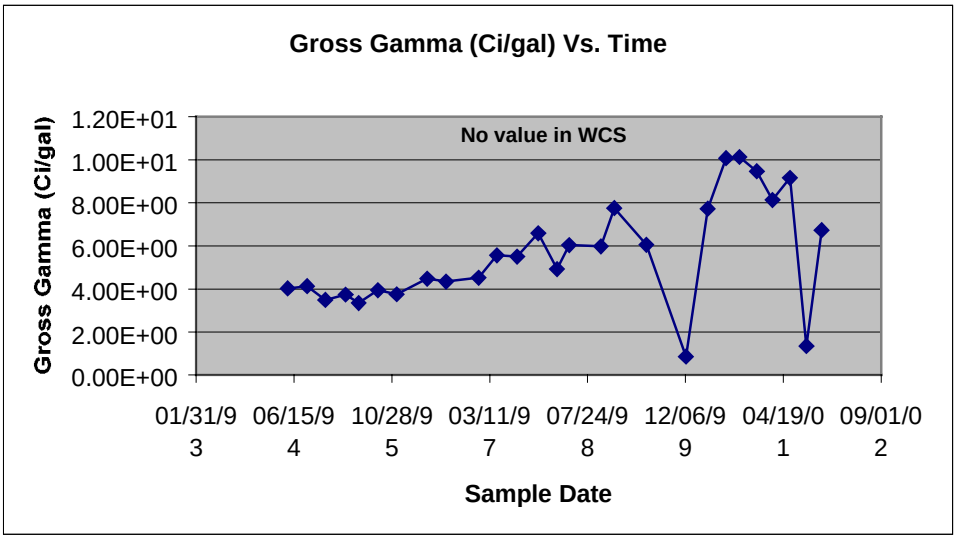
Tank 45

Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)	Samples Database Cs-137 (d/m/ml)	Samples Database Cs-137 (Ci/gal)	WCS Ci/gal 3.82
04/12/99	2.78E+09	4.74E+00			
05/01/97	3.75E+09	6.39E+00			
04/10/96	4.00E+09	6.82E+00			Average (3)
03/28/95	3.10E+09	5.29E+00			5.98
02/12/94	3.50E+09	5.97E+00	3.50E+09	5.97E+00	
02/24/93	2.12E+09	3.61E+00	2.12E+09	3.61E+00	
11/13/92	2.74E+09	4.67E+00			Date Range
08/14/92	3.65E+09	6.22E+00	3.65E+09	6.22E+00	of Average
05/19/92	3.43E+09	5.85E+00	3.43E+09	5.85E+00	4/10/96-4/12/99
05/19/92			7.40E+09	1.26E+01	
02/26/92	3.75E+09	6.39E+00	3.75E+09	6.39E+00	
02/26/92			2.50E+09	4.26E+00	
01/17/92	4.40E+09	7.50E+00	4.40E+09	7.50E+00	
11/13/91	3.95E+09	6.74E+00	3.95E+09	6.74E+00	
10/30/91	3.44E+09	5.87E+00	3.44E+09	5.87E+00	
09/15/91	4.14E+09	7.06E+00	4.14E+09	7.06E+00	
08/09/91	4.52E+09	7.71E+00			
07/01/91	1.56E+09	2.66E+00			
05/24/91	2.60E+09	4.43E+00			
04/12/91	2.80E+09	4.77E+00			
10/12/90	4.72E+09	8.05E+00			
03/21/90	4.91E+09	8.37E+00			
12/12/89	6.96E+09	1.19E+01			
11/17/89	6.96E+09	1.19E+01			
05/15/89	1.96E+09	3.34E+00			
11/04/88	3.74E+09	6.38E+00			
05/18/88	1.47E+09	2.51E+00	1.87E+08	3.19E-01	
04/21/88	1.47E+09	2.51E+00			
10/07/87	2.23E+09	3.80E+00	3.72E+08	6.34E-01	
04/03/87	2.73E+09	4.65E+00	4.59E+08	7.83E-01	
11/25/86	4.80E+09	8.18E+00	6.66E+08	1.14E+00	
04/04/86	5.71E+09	9.74E+00	8.50E+08	1.45E+00	
04/26/85					
02/09/84					
11/04/83					
08/23/83					
03/18/83					



Tank 46

Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)	Samples Database Cs-137 (d/m/ml)	Samples Database Cs-137 (Ci/gal)	WCS Ci/gal
					--
11/01/01	3.95E+09	6.74E+00			
08/15/01	7.93E+08	1.35E+00			
05/23/01	5.37E+09	9.16E+00			Average (3)
02/23/01	4.77E+09	8.13E+00			5.75
12/05/00	5.55E+09	9.46E+00			
09/07/00	5.94E+09	1.01E+01			
06/30/00	5.91E+09	1.01E+01			Date Range
03/29/00	4.53E+09	7.72E+00			of Average
12/08/99	5.00E+08	8.53E-01			5/23/01-11/01/01
05/20/99	3.55E+09	6.05E+00			
12/07/98	4.55E+09	7.76E+00	7.77 Ci/gal	7.77	
09/30/98	3.51E+09	5.98E+00			
04/21/98	3.54E+09	6.04E+00			
02/18/98	2.89E+09	4.93E+00			
11/14/97	3.86E+09	6.58E+00			
07/30/97	3.23E+09	5.51E+00			
04/17/97	3.26E+09	5.56E+00			
01/13/97	2.65E+09	4.52E+00			
08/01/96	2.55E+09	4.35E+00			
04/25/96	2.62E+09	4.47E+00			
11/21/95	2.20E+09	3.75E+00			
08/18/95	2.31E+09	3.94E+00			
05/11/95	1.96E+09	3.34E+00			
03/06/95	2.19E+09	3.73E+00			
11/23/94	2.05E+09	3.50E+00			
08/20/94	2.42E+09	4.13E+00			
05/13/94	2.36E+09	4.02E+00	2.36E+09	4.02	
01/18/93					



Tank 47

Sample Date	Samples DataBase GROSS GAMMA	Samples DataBase GROSS GAMMA (Ci/gal)	Samples Database Cs-137 (d/m/ml)	Samples Database Cs-137 (Ci/gal)	WCS Ci/gal 4.16
01/13/98	1.48E+09	2.52E+00			
01/13/97	1.50E+09	2.56E+00			
05/22/96	1.72E+09	2.93E+00			Average (3)
10/19/95	1.38E+09	2.35E+00			2.67
07/18/95	1.39E+09	2.37E+00			
04/27/95	1.66E+08	2.83E-01			
01/20/95	1.74E+09	2.97E+00			Date Range
10/06/94	1.76E+09	3.00E+00			of Average
11/13/91	2.31E+09	3.94E+00	2.31E+09	3.94E+00	5/22/96-1/13/98
05/24/91	3.70E+09	6.31E+00			
12/06/90	5.42E+09	9.24E+00			
05/24/90	5.95E+09	1.01E+01			
01/24/90	4.81E+09	8.20E+00			
05/15/89	5.12E+09	8.73E+00			
11/04/88					
04/21/88	3.67E+09	6.26E+00	4.13E+08	7.04E-01	
11/25/86	4.59E+00	7.83E-09	6.40E+08	1.09E+00	
04/04/86	3.31E+09	5.64E+00	4.58E+08	7.81E-01	
08/19/85	2.57E+09	4.38E+00			
04/09/85	8.82E+08	1.50E+00	1.08E+08	1.84E-01	
03/19/85					
10/20/84					
07/12/83					
01/14/83					
07/22/82					
05/09/82					
01/08/82					
10/16/81					
07/02/81					
07/02/81					
07/02/81