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Tank Waste Remediation System Baseline Tank Waste Inventory Estimates for Fiscal Year 1995

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Abstract: A set of tank-by-tank waste inventories is derived from historical waste models, flowsheet records, and analytical data to support the Tank Waste Remediation System flowsheet and retrieval sequence studies. Enabling assumptions and methodologies used to develop the inventories are discussed. These provisional inventories conform to previously established baseline inventories and are meant to serve as an interim basis until standardized inventory estimates are made available.

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TANK WASTE REMEDIATION SYSTEM BASELINE TANK WASTE INVENTORY ESTIMATES FOR FISCAL YEAR 1995

September 1996

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Westinghouse Hanford Company
Richland, Washington

Prepared for
U.S. Department of Energy
Richland, Washington

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LIST OF TERMS

CC	Complexant concentrate
DST	Double-shell tank
EIS	Environmental Impact Statement
ERDA	Energy Research and Development Administration
HDW	Hanford Defined Waste
HDW-EIS	Hanford Defense Waste Environmental Impact Statement
HDW-MDL	Hanford Defined Waste Model
HLW	High-level waste
HTCE	Historical tank content estimates
IDB	Integrated database
LANL	Los Alamos National Laboratory
LAW	Low-activity waste
LLW	Low-level waste
NCAW	Neutralized current aging waste
NCRW	Neutralized cladding removal waste
ORNL	Oak Ridge National Laboratories
OWVP	Operational Waste Volume Projection
PFP	Plutonium Finishing Plant
PUREX	Plutonium-Uranium Extraction (Process or Plant)
REDOX	Reduction and Oxidation (Process or Plant)
RIBD	Radioisotope Buildup and Decay
RHO	Rockwell Hanford Operations
SMM	Supernatant Mixing Model
SST	Single-shell tank
TLM	Tank Layer Model
TOC	Total organic carbon
TOR	Technical Options Report
TRAC	Track radioactive components
Tri-Party Agreement	*Hanford Federal Facility Agreement and Consent Order*
TWRS	Tank Waste Remediation System
TWRS-EIS	Tank Waste Remediation System Environmental Impact Statement
UR	Uranium recovery
WESF	Waste Encapsulation and Storage Facility
WSTRS	Waste status and transaction record summary

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TANK WASTE REMEDIATION SYSTEM BASELINE TANK WASTE INVENTORY ESTIMATES FOR FISCAL YEAR 1995

1.0 INTRODUCTION

1.1 BACKGROUND

Radioactive waste, produced from previous reprocessing of irradiated uranium fuel from plutonium production reactors at the Hanford Site from 1944 to 1988, is currently stored in 28 double-shell tanks (DST) and 149 single-shell tanks (SST). The underground storage tanks are located in 18 tank farms in the 200 East and 200 West Areas of the Hanford Site. There is approximately 56 Mgal of liquid and solid waste in these tanks. Terminal cleanout, decommissioning, and routine operations of facilities at the Hanford Site will, in the future, generate additional tank waste, mostly liquid.

Revision 1 of the *TWRS Process Flowsheet* (Orme 1995) for storage, treatment and immobilization of Hanford Site wastes utilizes a variety of simple separations to segregate the waste into a low-activity fraction containing the majority of the non-radioactive constituents, and a high-activity fraction. The low-activity waste (LAW) is vitrified and disposed of on the Hanford Site. The high-activity waste is also vitrified and stored, temporarily, on the Hanford Site before being shipped to a national geologic repository.

The Tank Waste Remediation System (TWRS) function includes characterization and retrieval of this tank waste for pretreatment. Hydraulic methods (sluicing and mixer pumps) are the preferred methods for retrieval of waste from both the SSTs and the DSTs. The order in which these tanks are retrieved is critical to developing a final waste form meeting all of the criteria spelled out in the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) (Ecology 1994). This is due to the high variance in waste composition from tank-to-tank combined with the need to maintain certain target feed compositions for the high-level waste (HLW) melter.

1.2 PURPOSE AND SCOPE

To support retrieval sequence studies and to provide a feed basis for the TWRS process flowsheet, a tank-by-tank inventory was derived from three principal sources:
(1) tank-by-tank estimates developed by the Hanford Defined Waste Model (HDW-MDL) created at the Los Alamos National Laboratory (LANL) (Agnew 1995), (2) global inventory assessments developed for the 1987 Hanford Defense Waste Environmental Impact Statement (HDW-EIS) (RHO 1985), (3) analytical data from tank sampling activities. This TWRS

inventory is divided into two fractions for each tank: (1) components that are in solution (soluble) and (2) components not in solution (insoluble).

The purpose of this report is to explain how the TWRS inventory was developed. Section 2.0 summarizes the development of earlier inventories, assesses their reliability, and explains how these inventory assumptions were used in the development of the current basis. Section 3.0 details the steps used to derive estimates of soluble and insoluble compositions for the SSTs. Section 4.0 does the same for DSTs.

It must be made clear at the outset that these tank-by-tank inventories were developed with the intent of making the combined inventory agree with previously established baselines. In doing so, difficulties in reconciling the total mass of a particular tank with available volume and density information often occur. The global and individual tank inventories presented here should be understood as an interim inventory basis until a more accurate assessment of the composition of the total waste inventory is made.

2.0 GLOBAL INVENTORY ASSUMPTIONS

2.1 PREVIOUS INVENTORY ASSUMPTIONS

There have been several attempts in the past to estimate chemical and radionuclide inventories of the Hanford Site's underground storage tanks. Values for key components from the various inventory estimates made to date are summarized in Table 2-1. The earliest estimates can be found in the *Final Environmental Statement, Waste Management Operations, Hanford Reservation* (ERDA 1975) and in *Estimated Inventory of Chemicals Added to Underground Waste Tanks, 1944 through 1975* (Allen 1976). Although these inventory estimates are over twenty years old, they should account for most of the SST inventory since the majority of waste generated after 1975 was received by DSTs. Brief descriptions of the origin and development of these different inventory bases is discussed below.

The ERDA (1975) inventory is limited to just six sodium salts and it does not explain how the inventory was compiled. Allen's (1976) estimates are based on studies of the major chemical processes at the Hanford Site--their flowsheet compositions and recorded waste volumes sent to underground storage. Allen's report, being one of the earliest, seems to be the basis for subsequent inventory estimates for many components. However, recent research into Allen's work has uncovered several questionable assumptions made by Allen particularly in regard to flowsheet compositions and cribbing operations that impact total inventory estimates.

The compositions reported in *Hanford Defense High-Level Waste Management Studies* (Kaiser 1977) were derived from a "limited number of sample analysis and detailed records of fuel elements processed and chemicals used" (Kaiser 1977). The inventory reported in *Technical Aspects of Long-Term Management Alternatives for High-Level Defense Waste at the Hanford Site* (RHO 1980) is considered to be an update of the Kaiser (1977) report with sodium being the component that underwent the biggest change.

Of particular interest for the TWRS flowsheet is the inventory shown for SSTs in the data package for the *1987 Hanford Defense Waste Environmental Impact Statement (HDW-EIS)* (RHO 1985). The chemical composition of Hanford Site wastes in this document were derived from records of fuel elements processed, flowsheet records, and a limited number of waste sample analyses. For the development of this inventory, an effort was made to reconcile previously developed inventory assumptions (in particular Allen 1976 and RHO 1980) with independent reviews of flowsheets and purchase records. Radionuclide inventories in the HDW-EIS were taken largely from the *Track Radioactive Components* (TRAC) data (Jungfleisch 1984) with activation products being derived from hand calculations. The inventory totals listed in the HDW-EIS were used in the *Technical Options Report* (TOR) (Boomer et al. 1993) which provided the basis for the current TWRS inventory.

The 1996 TWRS-EIS inventory is derived from the 1987 HDW-EIS for SSTs and available laboratory data for DSTs (Golberg and Guberski 1995). Unfortunately, the TWRS-EIS inventory and the TWRS flowsheet inventory for nonradioactive components are not identical. Adjustments made for aluminum, chloride, chromium, hydroxide, and phosphate in the TWRS inventory derived from the 1987 HDW-EIS were made after the 1995 TWRS-EIS data package was released. Changes in some of the DSTs made after receiving additional laboratory data also created minor differences between the TWRS-EIS and the TWRS flowsheet inventory. For radioactive components, the cumulative TWRS-EIS and TWRS inventory (DSTs plus SSTs) are identical. Golberg mentions several adjustments from the HDW-EIS in the distribution of ^{137}Cs, ^{99}Tc, $^{239/240}Pu$, and ^{241}Am between DSTs, SSTs, and cesium capsules. These changes for radionuclides are reflected in the current TWRS flowsheet inventory.

Perhaps the most comprehensive effort to assess waste compositions for all 177 underground storage tanks thus far has come from LANL. Created at LANL, the HDW-MDL is a detailed historical model that uses information from process flowsheets, purchase records, sample data, and historical transaction records to arrive at final tank compositions (Agnew 1995). The HDW-MDL, along with sample data, promises to be a very important tool for developing definitive tank compositions. The tank-by-tank composition estimates generated by the HDW-MDL for the SSTs provided the starting point for the current TWRS inventory in that the HDW-MDL estimates in every SST were adjusted in direct proportion to each other on a component by component basis so that the totals reported for SSTs were the same as those reported in the HDW-EIS.

Table 2-1. Comparison of Previous Inventory Estimates.

Report	Allen 1976	Kaiser 1977	RHO 1980	RHO 1985	Boomer 1993	Golberg 1995	Agnew 1995	TWRS 1995
Date	3/76	9/77	9/80	12/85	3/93	7/95	9/95	8/95
	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)	(MT)
Al^{+3}	1.08E+04	4.34E+03	4.64E+03	2.66E+03	4.64E+03	4.17E+03	7.07E+03	4.83E+03
Bi^{+3}	2.51E+02	2.82E+02	2.61E+02	2.61E+02	2.61E+02	2.64E+02	6.75E+02	2.61E+02
Ca^{+2}	1.04E+02	1.36E+02	1.28E+02	1.28E+02	1.45E+02	1.50E+02	6.45E+02	1.65E+02
Cl^{-}	4.30E+01	3.60E+01	4.00E+01	4.00E+02	4.86E+02	3.14E+02	6.24E+02	4.89E+02
Cr^{+3}	7.18E+02	3.63E+02	3.43E+02	9.60E+01	1.64E+02	1.83E+02	8.27E+02	1.65E+02
F^{-}	8.1E+02	N/A	N/A	8.23E+02	1.19E+03	1.18E+03	9.20E+02	1.17E+03
Fe^{+3}	1.26E+03	7.15E+02	7.09E+02	7.87E+02	8.21E+02	7.77E+02	2.79E+03	8.21E+02
Na^{+}	6.26E+04	5.88E+04	6.07E+04	6.18E+04	6.85E+04	6.91E+04	4.05E+04	6.83E+04
PO_{4-3}	8.66E+03	8.97E+03	8.90E+03	9.34E+03	8.96E+03	4.97E+03	4.64E+03	5.78E+03
Si^{+4}	4.18E+02	4.61E+02	4.47E+02	4.47E+02	5.06E+02	5.31E+02	4.83E+02	5.06E+02
SO_4	5.34E+03	6.90E+02	7.17E+02	1.77E+03	2.03E+03	2.040E+03	5.50E+03	2.04E+03
Zr^{+4}	2.46E+02	2.65E+02	2.77E+02	2.77E+02	5.99E+02	5.24E+02	3.06E+02	6.39E+02

2.2 CURRENT INVENTORY ASSUMPTIONS FOR SINGLE-SHELL TANKS

The current TWRS inventory still uses the SST totals shown in HDW-EIS with the following exceptions: aluminum was increased from 2.66E+06 kg to 2.96E+06 kg based on a study made by Borsheim (1994), chloride was increased from 4.00E+04 kg to 4.15E+05 to account for chloride impurities in NaOH, chromium was increased from 9.60E+04 kg to 2.68E+05 kg because of a error made while transcribing data from RHO 1980 to RHO 1985, hydroxide was increased from 9.14E+06 kg to 1.27E+07 kg to achieve a charge balance, and phosphate was decreased from 8.74E+06 kg to 4.73E+06 kg to account for mistaken assumptions about the amount of phosphate that was sent directly to the ground through cribbing operations (Boldt 1994).

The TRAC data served as the basis for the SST radionuclide inventory with some revision as outlined in the data package for the 1996 TWRS-EIS (Golberg 1995). The combined TWRS-EIS radionuclide values for SSTs and DSTs were adopted for the TWRS flowsheet inventory but the distribution between SSTs and DSTs were modified in light of more recent sample data for DSTs.

2.3 CURRENT INVENTORY ASSUMPTIONS FOR DOUBLE-SHELL TANKS

For DSTs, the previous flowsheet basis relied primarily on results obtained from the latest laboratory data along with some independent studies that attempt to reconcile laboratory data with process knowledge and flowsheet records. The TWRS inventory reflects the same approach as the previous basis but a larger set of DST sample data was available for use. Laboratory data were the primary sources of information for chemicals. This is also true largely for radionuclides although some flowsheet records and plant tracking data was used for several radioisotopes in some waste types. Also, some averaging was needed for ^{99}Tc in tanks lacking ^{99}Tc data.

Laboratory data for DSTs are more reliable than SSTs for two principal reasons. First, a larger percentage of DST waste is in the liquid phase thus reducing the error associated with the heterogeneity of solid waste. Secondly, the sludges in the DSTs are largely segregated (i.e., the mixing of waste types in the DSTs has not occurred to the same extent as the SSTs), therefore, the sludges in the DSTs are more representative of a single waste type and not subject to heterogeneity issues to the same degree as the SSTs.

2.4 COMPARISON OF CURRENT GLOBAL INVENTORY ESTIMATES

In addition to these discrepancies, there are several questionable component totals in the HDW-EIS and other inventory estimates compiled to date. The most important of these is sodium. Sodium is one of the most important components in the waste in that it will determine the size and processing rates for the (Low Activity Waste) LAW facility. The previous inventory basis (Boomer et al. 1993) quotes a SST sodium inventory of

5.13E+07 kg after the completion of saltwell pumping. Adding the saltwell liquid back to the SSTs increases this number to 5.73E+07 kg of sodium. For comparison, the HDW-MDL predicts a sodium inventory of only 3.00E+07 kg in the SSTs or 51 percent of the previous inventory basis. Preliminary aggregate sodium estimates made by the HDW-MDL for the DSTs were very close to the total sodium obtained by analysis of DST sample data.

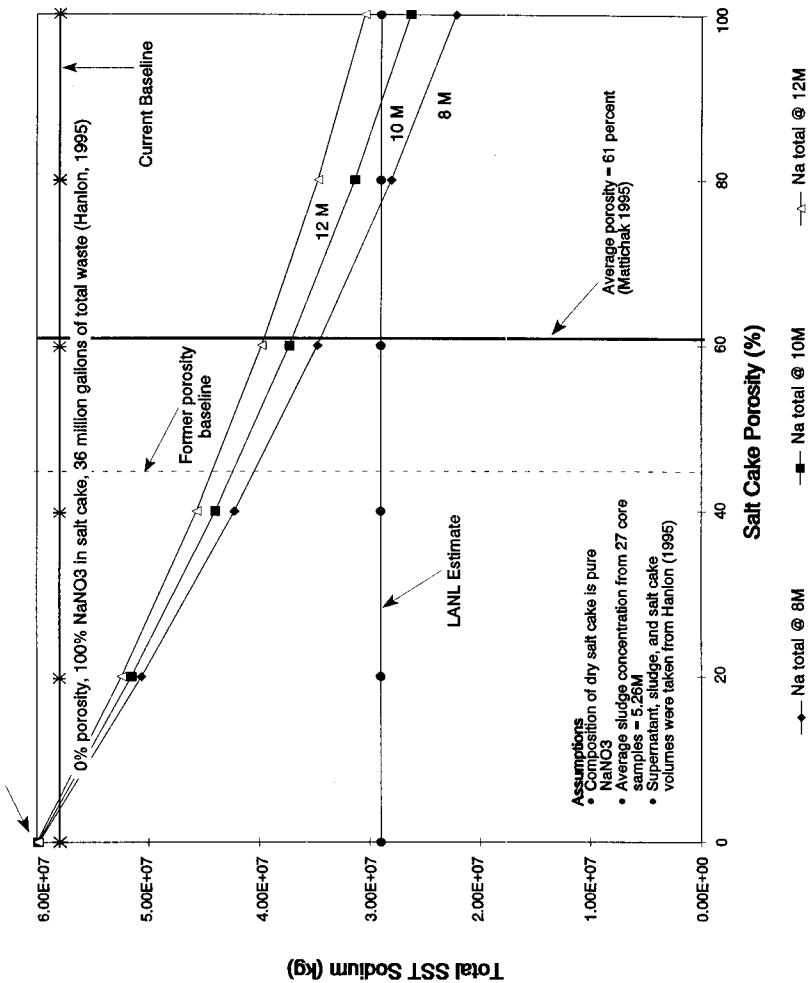
With a reported volume of 1.36E5 m^3 of SST waste (Hanlon 1996), the bulk sodium molarity in SSTs would be 18.5*M* using the 5.73E+07 kg value, but this assumes that the SST waste is monolithic. To be more accurate, it is necessary to look at the sludge, salt cake, and liquid fractions separately. There is an estimated 4.59E+04 m^3 of sludge, 8.80E+04 m^3 of salt cake, and 2.085E+03 m^3 of supernatant in the SSTs (Hanlon 1996). Assuming an average sodium molarity in the sludge of 5.26 (based on weighted average of 27 core samples) (Colton 1995), the corresponding salt cake molarity would have to be 25.6*M* sodium in order to arrive at 5.73E+07 kg of sodium.

Although unlikely, this situation is not physically impossible since a pure $NaNO_3$ salt cake with a bulk density of 2.26, has a sodium concentration close to 31*M*. However, the salt cake in the waste tanks contains considerable void spaces that may or may not contain liquid, liquid at a much lower sodium concentration than 25.6*M*, indeed sodium concentrations in the interstitial liquid are not expected to exceed 12*M* (Agnew and Watkin 1995). Porosity is the term used to describe the void spaces in the salt cake layer. It is defined as the percentage of salt cake volume not occupied by crystallized salts. The baseline porosity value used in the operational waste volume projection model at the time was 61 vol% - up from 45 percent used in previous waste volume projections (Strode 1995). Whether the average porosity of the salt cake is 61 vol% or 45 vol%, a total inventory of over 57,000 MT as stated in the previous basis, is very unlikely for the SSTs.

Figure 2-1 represents a more detailed analysis of SST sodium data. Salt cake, supernatant, and sludge volumes were taken from Hanlon (1996). The sodium concentration in the sludge was assumed to be 5.26*M* based on a weighted average of 27 core samples (Colton 1995). The dry salt cake was assumed to be 100 percent $NaNO_3$. The graph was generated by varying the porosity of the salt cake in the SSTs and the concentration of sodium in the liquid phase between 8*M* and 12*M*--boundaries determined by analysis of supernate samples (Agnew and Watkins 1995).

The bounding concentrations and bounding porosity values shown in Figure 2-1 indicates that the range for total sodium in SSTs is 3.50E+07 to 4.50E+07 kg for SSTs. The HDW-MDL predicts a SST sodium inventory of 2.97E+07 kg while the previous inventory basis for the TWRS flowsheet is 5.73E+07 kg.

Figure 2-1. Total Sodium in Single-Shell Tanks.
(at different salt cake porosities and supernate concentrations)



It appears that the sodium value in the previous TWRS inventory basis is biased high. Like many component inventory estimates, the sodium estimate is traceable back to Allen (1976). Allen apparently overstated the sodium inventory mostly by assuming 83 percent less sodium from the $BiPO_4$ process was sent to cribs and estimating an amount of sodium added through the uranium recovery process (UR) that is 45 percent higher than the HDW-MDL prediction.

Along with sodium, the nitrate inventory used previously may be overstated by more than a factor of two. The HDW-MDL predicts there to be 4.28E+07 kg of nitrate as opposed to 1.00E+08 kg in the previous inventory basis. Preliminary efforts at reconciliation of these two numbers suggest that the HDW-MDL is once again the more realistic figure (Kupfer 1996a).

Other components listed in the HDW-EIS with inventory values markedly different than the HDW-MDL that could impact immobilized waste form volumes and plant design include chromium, iron, and sulfate. A comparison of the differences for these components and other major components as well is shown in Table 2-2.

A managerial decision was made to retain the global inventories reported in the HDW-EIS because the HDW-MDL estimates and preliminary attempts to reconcile the HDW-MDL with other inventory estimates had not been validated or verified. It was, therefore, deemed more important to retain consistency with the past until a thorough review and verification process has established a new baseline.

The process for defining a standard inventory estimate began near the start of fiscal year (FY) 1996 (Kupfer 1996b). Substantial progress has already been made, but final global inventory estimates are not expected to be released until August 1997.

Section 3.0 details how tank-by-tank chemical compositions provided by the HDW-MDL were used to arrive at individual SST tank inventories.

Table 2-2. Comparison of Los Alamos National Laboratories SST Chemical Inventories with the 1987 Hanford Defense Waste Environmental Impact Statement.

Component	Los Alamos National Laboratory (LANL) (MT)	1987 Environmental Impact Statement (EIS) (MT)	LANL/1987 EIS
Al^{+3}	5.26E+03	2.96E+03[a]	1.78
Bi^{+3}	6.64E+02	2.61E+02	2.54
Cancrinite	1.94E+03	2.70E+03	0.718
Ca^{+2}	5.36E+02	1.28E+02	4.18
Cl^{-}	3.50E+02	4.15E+02	0.843
$CO3^{-2}$	2.73E+03	1.66E+03	1.64
Cr^{+3}	7.47E+02	2.68E+02[b]	2.79
F^{-}	5.39E+02	8.12E+02	0.663
Fe^{+3}	2.59E+03	6.31E+02	4.10
K^{+}	1.31E+02	5.53E+01	2.37
La^{+3}	4.01E+01	1.88E+00	21.3
Mn^{+4}	1.75E+01	1.20E+02	0.146
Na^{+}	2.97E+04	5.73E+04	0.513
Ni^{+3}	2.10E+02	2.03E+02	1.03
$NO2^{-}$	5.57E+03	6.52E+03	0.852
$NO3^{-}$	4.28E+04	1.00E+05	0.426
OH^{-}	1.70E+04	1.06E+04	1.60
Pb^{+4}	1.32E+01	2.83E+01	0.466
PO_4^{-3}	3.91E+03	4.73E+03	0.827
Si^{+4}	9.41E+01	1.45E+01	6.49
$SO4^{-2}$	4.32E+03	1.65E+03	2.62
Sr^{+2}	1.57E+02	3.60E+01	4.36
UO_2^{+2}	1.92E+03	1.61E+03	1.19
Zr^{+4}	9.36E+01	3.82E+02	0.245
TOC	2.99E+02	4.73E+02	0.633
TOTAL	1.22E+05	1.94E+05	0.629

[a]Adjusted from 2.21E+03 MT in the RHO (1985). Does not include aluminum found in cancrinite, $2NaAlSiO_4{:}0.52NaNO_3{:}0.68H_2O$.

[b]Adjusted from 9.59E+01 MT in the RHO (1985).

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3.0 DEVELOPMENT OF SINGLE-SHELL TANK ESTIMATES

3.1 CHEMICAL INVENTORIES FOR SINGLE-SHELL TANKS

3.1.1 Hanford Defined Waste Model

The tank-by-tank distribution of components in the HDW-MDL developed at LANL provided the starting point for the derivation of the current TWRS inventory. The HDW-MDL provides estimates for 35 chemicals and four radionuclides (^{137}Cs, $^{239/240}Pu$, ^{90}Sr, and ^{238}U). The emphasis in the HDW-MDL is on chemicals. Relatively simplistic assumptions and correlations were used to estimate radionuclide quantities. Therefore, only the distribution of chemicals in the HDW-MDL for the SSTs were used to develop the current TWRS inventory.

At the time the TWRS inventory was being developed, LANL had released the first revision of their inventory estimates for the SSTs to ICF Kaiser who later published them as the *Historical Tank Content Estimates (HTCE)* (Brevick et al. 1995a, b, c, Brevick 1995). At that time, supernatant estimates had not been made as their Supernatant Mixing Model (SMM) was not yet complete. Since supernatant occupies less than 2.0 vol% of the total SST waste volume, its omission does not greatly effect the inventory estimates. Nor did the HDW-MDL include any information about additions of diatamaceous earth to the SSTs.

3.1.2 Normalizing Hanford Defined Waste Model Estimates to the Tank Waste Remediation System Basis

In Table 2-2, the global inventory estimates for SSTs used in the HDW-EIS were compared with the respective totals calculated by Revision 1 of the HDW-MDL. For the current TWRS inventory development, the HDW-MDL estimates for each component in every SST were multiplied by the ratio of the HDW-EIS values (the previous baseline) to the HDW-MDL values shown in column four of Table 2-2 so that the sum of the SSTs equaled the previous baseline global inventories. This almost doubles both the sodium and nitrate numbers. Since sodium and nitrate comprise the bulk of the waste in the tanks, doubling them creates difficulties in reconciling tank masses with reported volumes when using typical bulk densities.

One component not reported by the HDW-MDL but included in Table 2-2 is cancrinite, $2NaAlSiO_4{:}0.52NaNO_3{:}0.68H_2O$. Cancrinite is used in the TWRS flowsheet to represent the water insoluble sodium aluminosilicates that are expected to be found in most tank sludges. In the HDW-MDL, the sodium, aluminum, silicon, and nitrate concentrations were reduced stoichiometrically in each tank to "form" cancrinite using silicon as the limiting species unless the aluminum was exhausted first. This method ignores the distribution of waste

between salt cake and sludge; cancrinite should not form from salt cake. However, silicon is expected to predominate in the sludge rather than the salt cake so the assumption has validity.

3.1.3 Water Solubility of the Bulk Inventory

The HDW-MDL provides bulk inventories only. After normalizing the HDW-MDL inventories to the HDW-EIS totals, an estimate of the effect of water-washing on the waste must be made in order to use this information in the TWRS flowsheet models. To do this, the waste in each tank must first be divided into salt cake and sludge partitions, then dissolution factors obtained from sludge washing data and water washing of salt cake are applied to the sludge and salt cake partitions.

The 50 waste types defined by LANL in Agnew (1995) are used to divide the content of each SST into a salt cake and sludge fraction. The defined waste list includes nine salt cake/salt-slurry types and 41 sludge types. Spreadsheets containing the compositions of these waste types and the volumes of each waste type in every tank were provided by LANL. For each tank the salt cake layers and sludge layers were summed separately and then the percentage of each component in a tank that is salt cake was calculated. For example, consider the excerpt from the spreadsheets obtained from LANL shown in Table 3-1.

Four of the 50 waste types are shown, three represent sludges and one (T2-SltCk) is a salt cake stream. Below these compositions are the volumes of each waste type that went into four tanks in 241-TX farm, 241-TX-101 through 241-TX-104. According to LANL these four waste types are the only types expected to be found in the four tanks. Based on Table 3-1, the percentage of sodium in the salt cake in Tank 241-TX-101 would be calculated as follows by dividing the amount of sodium in the salt cake streams by the total mass of sodium in all four streams:

$$\text{Percent Na in sltck} = [(8)*(13.5)/((3)*(4.8)+(70)*(2.3)+(3)*(3.4)+(8)*(13.5))]/100 = 36.8 \text{ percent}$$

Once obtained, the salt cake percentage calculated above for sodium is multiplied by the total sodium distributed to the tank by the HDW-MDL normalized to the HDW-EIS. The process is repeated for each component of interest in every SST. Table 3-2 shows the ratio of salt cake to the total inventory for each SST farm resulting from this process.

Table 3-1. Derivation of Salt Cake/Sludge Partitions for Single-Shell Tanks.[a]

Sludge, mol/L	MW 44-51[b]	R'52-58[c]	Z/PFP[d]	T2-SltCk[e]
Na	4.8	2.3	3.4	13.5
Al	0	4.6	3.3	1.1
Fe	0.32	0.51	0.49	0.016
Cr	0.0041	0.46	0.0083	0.12
NO_3	0.13	2.1	2.5	10.4
NO_2	0	0	0.012	1.07
PO_4	0.47	0	0.00012	0.035
Tank	MW 44-51 (kgal)	R'52-58 (kgal)	Z/PFP (kgal)	T2-SltCk (kgal)
TX-101	3	70	3	8
TX-102	2	0	0	111
TX-103	3	0	0	154
TX-104	18	0	0	46

[a]Taken from *Hanford Defined Wastes Spreadsheet* obtained electronically from LANL in August 1995.

[b]Metal Waste produced between 1944 and 1951.

[c]REDOX waste produced between 1952 and 1958.

[d]Derived from analysis of waste in DST 241-SY-102.

[e]Salt cake taken from 242-T, 1965-1976, TX-118 feed.

Table 3-2. Ratio of Salt Cake to Total Inventory in Single-Shell Tank Farms as Derived From the Hanford Defined Waste Model.

Component	A	AX	B	BX	BY	C	S	SX	T	TX	TY	U	Total
Al^{+3}	1.00	1.00	0.04	0.15	0.97	0.00	0.96	0.92	0.11	0.95	0.44	0.85	0.62
Bi^{+3}	1.00	1.00	0.04	0.00	0.01	0.00	1.00	1.00	0.00	0.09	0.02	0.11	0.03
Ca^{+2}	0.64	0.63	0.42	0.01	0.60	0.00	0.63	0.51	0.01	0.71	0.02	0.61	0.67
Cl^{-}	0.98	1.00	0.59	0.24	0.90	0.06	0.94	0.87	0.13	0.97	0.36	0.32	0.79
$CO3^{-2}$	0.97	0.97	0.63	0.14	0.82	0.02	0.98	0.94	0.12	0.92	0.26	0.86	0.84
Cr^{+3}	0.99	1.00	0.59	0.61	0.99	0.00	0.33	0.15	0.10	0.95	0.87	0.92	0.45
F^{-}	1.00	1.00	0.41	0.14	0.53	0.00	0.67	1.00	0.06	0.75	0.47	0.76	0.44
Fe^{+3}	0.06	0.04	0.02	0.00	0.05	0.00	0.08	0.04	0.00	0.20	0.00	0.08	0.03
K^{-}	1.00	1.00	0.02	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.91
Mn^{+4}	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.01	0.99
Na^{+}	0.96	0.96	0.56	0.25	0.87	0.01	0.96	0.92	0.11	0.95	0.44	0.92	0.85
Ni^{+2}	0.04	0.04	0.01	0.00	0.02	0.00	0.03	0.02	0.00	0.05	0.00	0.03	0.32
$NO2^{-}$	1.00	1.00	0.79	0.73	1.00	0.06	0.98	1.00	0.17	0.99	0.95	0.99	0.97
$NO3^{-}$	0.99	1.00	0.71	0.49	0.96	0.01	0.94	0.89	0.17	0.99	0.66	0.98	0.93
OH^{-}	0.94	0.90	0.06	0.07	0.74	0.00	0.68	0.50	0.01	0.82	0.16	0.78	0.55
Pb^{+2}	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	1.00	0.06
$PO4^{-2}$	0.99	1.00	0.48	0.05	0.50	0.00	1.00	1.00	0.07	0.55	0.22	0.43	0.36
Si^{+4}	0.00	0.00	0.04	0.00	0.09	0.00	0.00	0.00	0.01	0.00	0.15	0.00	0.03
SO_{4-2}	0.90	0.79	0.83	0.13	0.55	0.00	0.99	0.98	0.44	0.95	0.21	0.73	0.67
Sr^{+2}	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
$UO2^{+2}$	0.59	0.39	0.04	0.03	0.35	0.00	0.38	0.36	0.01	0.73	0.07	0.05	0.23
Zr^{+4}	1.00	1.00	0.73	0.10	0.96	0.00	0.06	1.00	0.15	0.64	0.32	0.67	0.21
TOC	0.81	0.96	0.03	0.89	0.54	0.00	1.00	1.00	0.00	1.00	0.09	1.00	0.76
TOTAL	0.95	0.94	0.54	0.27	0.88	0.00	0.91	0.84	0.10	0.96	0.47	0.91	0.83

For use in the TWRS flowsheet, the resulting salt cake sludge partitions are further partitioned into soluble/insoluble fractions using mass weighted average water-washing solubility factors. Solubility factors for sludge, shown in Table 3-3, have been calculated for sludges for selected components through an analysis of data taken from 27 core samples (Colton 1995). For salt cake, a 99 wt% solubility for all components was assumed. This assumption is supported by work done by W. W. Schulz (1978). Schulz dissolved salt cake taken from seven SSTs. The percentage of salt cake dissolved for these tanks is presented in Table 3-4. Normally, complete dissolution of the salts should occur. That complete dissolution does not occur is probably an indication of sludge particles embedded in the salt cake samples.

Solving these equations for x gives the result x = .187T, i.e., the amount of aluminum needed in the salt cake in order to make the overall solubility equal to 25 wt% is 18.7 wt% of the total aluminum. The HDW-MDL places 61.6 wt% of the aluminum in the salt cake. The ratio 18.7/61.6, or .304 is, therefore, the relative salt cake reduction factor used to reassign aluminum from the salt cake to the sludge. In other words, the initial salt cake inventory is multiplied by 0.304 and the result becomes the new salt cake inventory and the balance is reassigned to the sludge. Similar treatment was performed on the other components with unreasonably high solubilities. These components were calcium, manganese, uranium, and zirconium.

The average sludge solubility for sodium from Colton (1995) is 76 wt%. Applying the 76 wt% to the normalized HDW-MDL distribution of sodium in the sludge and 99 wt% to the salt cake combined with sodium already in the supernatant yields an overall 96 wt% solubility corresponding to 31 wt% Na_2O in the residual sludges on a waste oxide basis. Laboratory data, however, indicate that residual sludges after water washing have Na_2O contents between 10 and 20 wt% (Colton 1995). Therefore, the sludge and salt cake solubilities were adjusted to so that the residual Na_2O composition for the composite waste stream was 14 percent corresponding to 99 wt% solubility for total sodium (includes sodium from cancrinite).[1]

High concentrations in the salt cake layers derived from the HDW-MDL for aluminum, calcium, manganese, nickel, uranium, and zirconium result in inordinately high solubilities that are inconsistent with the analytical data and known chemical behavior for these species. Analytical data on aluminum, for example, indicate that aluminum should not exceed 25 wt% soluble (LaFemina et al. 1995), and calcium, manganese, nickel, uranium, and zirconium are expected to be mostly insoluble, especially in an alkaline environment.

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[1]Cancrinite, $2NaAlSiO_4{:}0.52NaNO_3{:}0.68H_2O$, is an insoluble sodium aluminosilicate compound assumed by TWRS to represent all the insoluble sodium aluminosilicate compounds found in SSTs. There is an estimated 2.70E+03 MT of cancrinite in the TWRS inventory of which 4.44E+02 MT is sodium.

Table 3-3. Solubility Factors for Single-Shell Tanks (Percent Soluble after Washing Waste in Water).

Component	Sludge	Salt Cake
Ag^{+}	2.0	99
Al^{+3}	8.0	99
B^{+3}	59	99
Ba^{+2}	0.2	99
Bi^{+3}	0.7	99
Ca^{+2}	3.0	99
Cd^{+2}	11	99
Co^{+3}	13	99
Cr^{+3}	18	99
Cu^{+2}	3.7	99
Fe^{+3}	0.67	99
K^{+}	64	99
La^{+3}	0.24	99
Mg^{+2}	1.7	99
Mn^{+4}	0.92	99
$Na^{+(a)}$	96	99
Ni^{+3}	2.2	99
Pb^{+4}	6.8	99
PO_4^{-3}	40	99
Si^{+4}	2.5	99
Sr^{+2}	0.62	99
UO_2^{+2}	2.1	99
Zn^{+2}	3.2	99
Zr^{+4}	0.26	99

[a]The Na sludge wash factor for non-cancrinite Na was increased from 76 wt% to make the residual Na_2O agree with experimental data. Typically, residual Na_2O (including cancrinite) in washed sludges range from 10 to 20 wt%. 14 wt% was chosen as it corresponds to 98 percent removal of all Na, including the Na in cancrinite, from the sludge.

Table 3-4. Results of Salt Cake Dissolution Studies.[a]

Tank	Percent Sltck Dissolved
TX-116	98.3
B-105	99.0
S-105	99.8
S-109	98.8
S-110	100.0
SX-102	99.2
SX-103	99.7
Average	99.3

[a]Taken from RHO-SA-51, Removal of Radionuclides from Hanford Defense Waste Solutions, dated April 4, 1980.

This difficulty was resolved by reapportioning appropriate amounts of each component to the sludge while decreasing the amount in salt cake by an equal amount. Using aluminum as an example, the reapportioning was accomplished by solving the following simple system of equations:

$$x + y = T$$
$$.99x + .08y = .25T$$

where x = amount of aluminum in salt cake
y = amount of aluminum in sludge
T = total aluminum

The constants, .99 and .08, are the assumed solubility factors taken from Table 3-3 and .25 is the desired overall solubility, so the second equation represents the portion of aluminum that is expected to be water soluble.

A charge balance was enforced on each tank primarily by adjusting hydroxide.

The final results are shown in Table 3-5.

Table 3-5. Single-Shell Tank Chemical Inventory.

Component	Soluble (MT)	Insoluble (MT)	Total (MT)
Al^{+3}	7.39E+02	2.65E+03	2.96E+03
Bi^{+3}	9.58E+00	2.22E+02	2.62E+02
Ca^{+2}	6.42E+00	1.22E+02	1.28E+02
Cancrinite	0.00E+00	2.70E+03	2.70E+03
Cl^{-}	4.07E+02	7.63E+00	4.15E+02
$CO3^{-2}$	1.62E+03	3.86E+01	1.66E+03
Cr^{+3}	1.47E+02	1.21E+02	2.68E+02
F^{-}	7.86E+02	2.62E+01	8.12E+02
Fe^{+3}	2.37E+01	6.07E+02	6.31E+02
K^{+}	5.29E+01	2.43E+00	5.53E+01
Mn^{+4}	2.41E+00	1.18E+02	1.21E+02
Na^{+}	5.68E+04	5.42E+02	5.73E+04
Ni^{+3}	4.06E+00	1.99E+02	2.03E+02
$NO2^{-}$	6.47E+03	5.34E+01	6.52E+03
$NO3^{-}$	9.87E+04	9.42E+02	1.00E+05
OH^{-}	8.14E+03	4.55E+03	1.27E+04[a]
Pb^{+4}	3.29E+00	2.50E+01	2.83E+01
$PO4^{-3}$	2.90E+03	1.83E+03	4.73E+03
Si^{+4}	4.06E-01	1.41E+01	1.45E+01
SO_{4-2}	1.63E+03	2.19E+01	1.65E+03
Sr^{+2}	3.60E-01	3.57E+01	3.60E+01
$UO2^{+2}$	9.67E+01	1.50E+03	1.60E+03
Zr^{+4}	3.82E+00	3.78E+02	3.82E+02
TOC	4.58E+02	1.51E+01	4.73E+02
Total	1.80E+05	1.60E+04	1.96E+05

3.2 RADIONUCLIDE INVENTORIES FOR SINGLE-SHELL TANKS

The current TWRS inventory estimates are based on but not identical to the tank-by-tank distribution of radionuclides found in the TRAC database. The TRAC computer model (in combination with the RIBD computer code that calculates type and quantity of fission products) uses reactor fuel discharge records, process flowsheets, tank farm records, decay calculations, and solubility data to predict the various quantities of radionuclides that exited the reactors (with the exception of activation products) and the distribution of those radionuclides in the waste tanks. Activities of activation products (^{14}C, ^{3}H) were determined by hand calculations. The tank-by-tank estimates can be found in Appendix A (see Table A-3).

Data from TRAC formed the basis for radionuclides in the SSTs for many reports including the HDW-EIS, the TOR, and the TWRS-EIS. Adjustments were occasionally made in the distribution of radionuclides between DSTs and SSTs due mainly to new sample data for DSTs or different assumptions regarding the number of cesium and strontium capsules produced at the Waste Encapsulation Facility (WESF). However, the overall totals reported by TRAC were adhered to in these reports.

For the current TWRS inventory, the overall totals are the TRAC totals and the distribution between DSTs and SSTs follows closely that of the TWRS-EIS except for changes based on new sample data obtained for several DSTs.

Water solubility assumptions for radionuclides were taken from Table G1-1 of the TOR. These percent soluble factors are based on unpublished water-washing data taken from ten SSTs.

The cumulative results for the SSTs are shown in Table 3-6. The decay date for radionuclides is December 31, 1999.

Table 3-6. Single-Shell Tank Radionuclide Inventory.
(decayed to December 31, 1999)

Radionuclide	Soluble (Ci)	Insoluble (Ci)	Total (Ci)
^{14}C	2.98E+03	3.01E+01	3.01E+03
^{90}Sr[a]	4.12E+05	4.08E+07	4.12E+07
^{99}Tc	8.89E+03	8.89E+03	1.78E+04
^{137}Cs[a]	7.18E+06	2.29E+06	9.47E+06
^{237}Np	6.95E+00	6.25E+01	6.94E+01
^{239}Pu	3.44E+02	1.69E+04	1.72E+04
^{240}Pu	9.15E+01	4.18E+03	4.27E+03
^{241}Pu	2.29E+03	3.36E+04	3.59E+04
^{241}Am	2.65E+03	2.43E+04	2.69E+04
^{244}Cm	1.20E+00	1.19E+02	1.20E+02
Total	7.61E+06	4.32E+07	5.08E+07

[a] Does not include daughter products.

4.0 DOUBLE-SHELL TANK INVENTORIES

4.1 CHEMICAL INVENTORIES FOR DOUBLE-SHELL TANKS

4.1.1 Background

Estimates of DST compositions were derived primarily from sample data along with some independent studies that attempt to reconcile laboratory data with process knowledge and flowsheet records (Pajunen 1994, Schofield 1991).

There are uncharacterized solids in several DSTs. These tanks are 241-AN-104, 241-AN-106, 241-AW-102, and 241-AW-106. These solids may be sludges or precipitated salts. The bulk of the solids in these DSTs, however, are believed to be sodium salts that have precipitated from the concentrated liquid waste above since historical transaction records do not indicate that any wastes containing sludges were sent to any of these tanks. The salts assumed to be in these tanks are expected to dissolve upon retrieval. It was assumed that these solids have the same composition as the liquid above them and their volumes were added to the respective supernatant volumes.

The compositions and tank volumes used are representative of the period shortly before the beginning of the evaporator campaign in April 1994 when the DST inventory was relatively stable. Since that time, there have been additions to the DST system from saltwell pumping, from facility cleanout operations, from transfers of liquid wastes between DSTs, and from concentration of dilute waste in the 242A evaporator. All of these transactions have impacted the supernatant composition of a subset of the DSTs while the sludge has been largely unaffected.

4.1.2 Water Solubility of the Bulk Inventory

With the exception of tanks containing complexant concentrate (CC) waste, the amount of waste assumed to be soluble was determined from water-washing of sludge samples in the laboratory (Gray et al. 1993a and b, Herting 1994, Lumetta and Swanson 1993, Lumetta 1994, Peterson 1990). Values for the percent expected to be soluble are shown in Table 4-1. These values indicate the fraction of the total mass of a particular components expected to be soluble, i.e. these values include the amount already present in the supernatant.

Because of a lack of data for CC wastes, the values used for this waste type are assumed factors based on knowledge of the chemical behavior of alkaline wastes with high organic content. Although sludge washing data for 242-SY-101, a CC tank, were released, there was some question whether the results could be applied to the other tanks as well since the relatively low amount of TRU in 242-SY-101 supernatant indicates less complexing

ability than the other CC tanks. It was decided, therefore, to apply the data only to 242-SY-101 until sludge washing data for other CC wastes could be obtained.

The solubility factors for Neutralized Current Aging Waste (NCAW) in Table 4-1 are weighted averages of sludge washing data taken from both 241-AZ-101 and 241-AZ-102, the only DSTs containing NCAW. However, sludge washing results vary so much between these tanks that wash factors specific to each tank would yield more accurate results.

Table 4-1. Sludge Wash Factors for Double-Shell Tank Waste Tanks, Assumed Percent Soluble in Water.

	CC	NCAW	NCRW	PFP	SY-101	SST		CC	NCAW	NCRW	PFP	SY-101	SST
Ag+	0%	9%	0%	0%	N/A	0%	Ni2Fe(CN)6	0%	0%	0%	0%	N/A	0%
Al+3	95%	48%	9%	2%	97%	25%	NO2-	99%	97%	81%	99%	99%	99%
Am+3	95%	2%	0%	0%	19%	10%	NO3-	99%	99%	64%	99%	99%	99%
As+5	0%	36%	0%	0%	N/A	0%	Np+4	0%	15%	0%	0%	N/A	10%
B+3	95%	27%	0%	0%	95%	0%	OH-	93%	64%	18%	1%	93%	78%
Ba+2	90%	3%	0%	0%	90%	0%	Pb+4	0%	7%	0%	0%	N/A	0%
Be+2	0%	7%	0%	0%	N/A	0%	PO4-3	99%	92%	0%	60%	99%	50%
Bi+3	0%	0%	0%	0%	N/A	25%	P2O5:24WO2 :44H2O	0%	0%	0%	0%	N/A	0%
Cancrinite	0%	0%	0%	0%	0%	0%	Pu+4	95%	4%	0%	0%	19%	2%
^{14}C	0%	95%	20%	82%	0%	99%	Rb+	0%	96%	0%	0%	N/A	0%
Ca+2	90%	3%	2%	15%	92%	5%	Re+7	0%	11%	0%	0%	N/A	0%
Cd+2	0%	0%	0%	0%	N/A	50%	Rh+3	0%	14%	0%	0%	N/A	0%
Ce+3	0%	6%	0%	0%	N/A	1%	Ru+3	0%	9%	0%	0%	N/A	0%
Cl-	99%	96%	97%	95%	99%	95%	Sb+5	0%	3%	0%	0%	N/A	0%
Cm+3	0%	2%	0%	0%	19%	1%	Se+6	0%	39%	0%	0%	N/A	0%
Co+3	0%	6%	0%	0%	N/A	0%	Si+4	0%	43%	20%	3%	N/A	0%
CO3-2	99%	83%	80%	83%	99%	90%	Sm+3	0%	1%	0%	0%	N/A	1%
Cr+3	95%	91%	2%	48%	5.3%	10%	Sn+4	0%	0%	0%	0%	N/A	25%
Cs+	99%	97%	50%	95%	99%	75%	SO4-2	99%	99%	44%	31%	99%	98%
Cu+2	0%	5%	0%	0%	N/A	0%	Sr+2	95%	1%	0%	0%	57%	1%
F-	99%	97%	93%	91%	99%	95%	TcO4-	0%	81%	57%	99%	100%[a]	50%
Fe+3	95%	0%	0%	0%	6.5%	1%	Te+6	0%	8%	0%	0%	N/A	0%
Hg+2	0%	0%	0%	0%	N/A	99%	Th+4	0%	5%	0%	0%	N/A	1%
I-	0%	47%	20%	99%	N/A	99%	Ti+4	0%	3%	0%	0%	N/A	0%
K+	99%	93%	78%	99%	99%	0%	Tl+3	0%	6%	0%	0%	N/A	0%
La+3	90%	1%	0%	0%	N/A	1%	UO2+2	95%	61%	0%	52%	95%	5%
Li+	0%	8%	0%	65%	N/A	0%	V+5	0%	36%	0%	0%	N/A	0%
Mg+2	90%	2%	0%	0%	N/A	0%	W+6	0%	0%	0%	0%	N/A	0%
MnO2	95%	0%	0%	0%	90%	5%	Zn+2	90%	21%	0%	0%	90%	0%
Mo+6	95%	94%	0%	0%	95%	0%	Zr+4	0%	0%	0%	0%	N/A	0%
Na+	99%	97%	72%	91%	99%	99%	ZrO2:2H2O	90%	0%	0%	0%	N/A	5%
Nb+5	0%	0%	0%	0%	N/A	0%	TOC	99%	4.2%	50 %	21%	99%	90%
Ni+3	95%	0%	0%	0%	15%	0%							

The resulting soluble/insoluble split for the summation of the DST inventories are shown in Table 4-2.

Table 4-2. Double-Shell Tank Chemical Inventory.

Component	Soluble (MT)	Insoluble (MT)	Total (MT)
Al^{+3}	1.24E+03	3.32E+02	1.57E+03
Bi^{+3}	2.23E+00	0.00E+00	2.23E+00
Ca^{+2}	1.01E+01	1.56E+01	2.57E+01
Cl^{-}	2.71E+02	1.37E+00	2.72E+02
$CO3^{-2}$	1.48E+03	7.04E+01	1.55E+03
Cr^{+3}	4.63E+01	3.86E+01	8.49E+01
F^{-}	3.47E+02	4.20E+01	3.89E+02
Fe^{+3}	8.08E+00	1.54E+02	1.62E+02
K^{+}	5.37E+02	2.72E+01	5.64E+02
Mn^{+4}	7.69E+00	2.06E+01	2.83E+01
Na^{+}	1.10E+04	2.35E+02	1.12E+04
Ni^{+3}	4.07E+00	6.87E+00	1.09E+01
$NO2^{-}$	3.00E+03	8.40E+00	3.01E+03
$NO3^{-}$	7.45E+03	4.30E+01	7.49E+03
OH^{-}	2.92E+03	1.09E+03	4.01E+03
Pb^{+4}	1.89E+00	4.31E+00	6.20E+00
$PO4^{-3}$	2.13E+02	2.14E+01	2.37E+02
Si^{+4}	1.55E+01	2.18E+02	2.34E+02
$SO4^{-2}$	3.90E+02	3.61E+00	3.94E+02
Sr^{+2}	1.86E-02	6.00E-01	6.19E-01
$UO2^{+2}$	9.25E+00	3.36E+01	4.28E+01
Zr^{+4}	4.90E-01	3.05E+02	3.05E+02
TOC	5.97E+02	7.21E+01	6.69E+02
Total	2.96E+04	2.74E+03	3.23E+04

4.2 RADIONUCLIDE INVENTORIES FOR DOUBLE-SHELL TANKS

Radionuclide inventories for each DST are shown in Table A-4. The decay date is December 31, 1999. DST radionuclide estimates are again based primarily on sample data. Some adjustments (normalization) were necessary to maintain consistency with the Integrated Data Base (IDB). The IDB, maintained at the Oak Ridge National Laboratories (ORNL), is a compilation of historic data on inventories and characteristics of commercial and government spent nuclear fuel and radioactive wastes. The cumulative activities for SSTs, DSTs, and capsules reported in the IDB should agree with the TRAC output with most of the adjustments mentioned in Section 2.1.

The values for the Hanford Site DSTs shown in the IDB are based on an earlier set of DST sample data and assumptions. The estimates obtained from the more recent set of DST data used in this study compare well with the IDB values. A comparison by waste type is shown in Table 4-3. The large disparities between the ^{14}C numbers are caused by a conservative assumption in TRAC that ^{14}C losses were 90 wt% when it is more likely that ^{14}C were closer to 100 wt%.

The normalized (IDB) values were adopted for the current TWRS inventory. To do this, radionuclides in each DST was adjusted by waste type proportionately so that the totals by waste type were the same as those shown in the "IDB" column of Table 4-3. The decay date is December 31, 1999.

^{99}Tc concentrations were not reported by the laboratory for several DSTs. In that event, the technetium inventories were estimated by distributing the remaining total given in the IDB among the remaining DSTs in direct proportion to the sodium concentration for a given tank.

In the case of the NCAW, NCRW, and PFP tanks (241-AZ-101, 241-AZ-102, 241-AW-103, 241-AW-105, 241-SY-102), the plutonium and americium values in the IDB are based on "tracking data," i.e. a large number of samples of homogeneous batches of waste taken at PUREX prior to transfer to tank farms (Pajunen 1994).

Table 4-3. Comparison of Laboratory Data with Integrated Data Base Values for Double-Shell Tank Waste Types. (decayed to December 31, 1999)

Radio-nuclide	CC		DSSF		NCAW		NCRW		PFP		TOTAL	
	Sample (Ci)	IDB (Ci)	Sample (Ci)	IDB (Ci)	Sample (Ci)	IDB (Ci)	Sample (Ci)	IDB (Ci)	Sample (Ci)	IDB (Ci)	Sample (Ci)	IDB (Ci)
^{14}C	7.15E+00	1.98E+03	1.31E+01	1.29E+01	1.04E+01	3.50E+02	0.00E+000	0.00E+00	1.19E+00	0.00E+00	3.18E+01	2.34E+03
^{90}Sr	1.88E+06	4.05E+06	1.90E+06	1.02E+05	8.91E+06	8.46E+06	1.04E+05	5.11E+04	5.25E+04	5.25E+04	1.59E+07	1.24E+07
^{99}Tc	8.36E+03	8.38E+03	3.83E+03	3.79E+03	2.35E+03	2.10E+03	7.54E+01	0.00E+00	2.81E+01	0.00E+00	1.45E+04	1.43E+04
^{137}Cs	5.85E+06	4.88E+06	1.10E+07	1.04E+07	1.01E+07	9.80E+06	5.49E+05	3.04E+05	6.75E+04	6.75E+04	2.76E+07	2.54E+07
^{239}Pu	4.05E+03	3.99E+03	8.00E+02	1.57E+02	1.71E+03	1.75E+03	1.42E+03	1.22E+03	4.44E+03	2.08E+03	1.24E+04	9.20E+03
^{240}Pu	1.01E+03	1.00E+03	2.56E+01	2.41E+01	4.83E+02	3.21E+02	4.02E+02	3.44E+02	1.25E+03	7.49E+02	3.17E+03	2.44E+03
^{241}Pu	1.06E+03	1.03E+03	4.30E+01	7.11E+01	1.44E+04	9.34E+03	1.20E+04	1.02E+04	2.23E+04	1.84E+04	4.98E+04	3.91E+04
^{241}Am	1.88E+04	1.68E+04	3.39E+03	1.68E+02	7.05E+04	4.89E+04	6.72E+02	3.49E+02	3.46E+04	1.13E+04	1.28E+05	7.76E+04
Total	7.76E+06	8.95E+06	1.29E+07	1.05E+07	1.91E+07	1.83E+07	6.68E+05	3.67E+05	1.83E+05	1.53E+05	4.37E+07	3.55E+07

The cumulative results for the DSTs are shown in Table 4-4.

Table 4-4. Double-Shell Tank Radionuclide Inventory.[a]
(decayed to December 31, 1999)

Radionuclide	Soluble (Ci)	Insoluble (Ci)	Total (Ci)
^{14}C	3.46E+02	1.99E+03	2.34E+04
^{90}Sr	1.47E+06	1.09E+07	1.24E+07
^{99}Tc	1.39E+04	4.04E+02	1.43E+04
^{137}Cs	2.47E+07	7.16E+05	2.54E+07
^{237}Np	0.00E+00	0.00E+00	0.00E+00
^{239}Pu	1.31E+03	7.89E+03	9.20E+03
^{240}Pu	3.39E+02	2.10E+03	2.44E+03
^{241}Pu	2.50E+03	3.66E+04	3.91E+04
^{241}Am	5.31E+03	7.23E+04	7.76E+04
^{244}Cm	0.00E+00	0.00E+00	0.00E+00
Total	2.62E+07	1.17E+07	3.79E+07

[a]Does not include daughter products.

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5.0 CONTRIBUTIONS FROM FUTURE FACILITY WASTES

The Operational Waste Volume Projection (OWVP) document (Strode 1994) for FY 1994 reported that approximately 1.2E+07 L of waste from routine facility operations and facility decommissioning activities would be added to the DST system. Additionally, interim stabilization of SSTs would result in the transfer of 1.55E+07 L of saltwell liquids from the SSTs to the DSTs.

To account for these assumptions, compositions of the miscellaneous waste streams from the various facilities/areas listed in the OWVP were obtained from an earlier waste volume projection document (Strode 1988). Subsequent OWVP documents have not included composition data. Average saltwell liquid composition was taken from (RHO 1985). Table 5-1 shows the contribution to DSTs from facility operations and transfer of saltwell liquid from the SSTs. Saltwell liquid transfers do not result in a net gain to the underground tanks except for small volumes of flush water. Radionuclide data for facilities waste and saltwell liquids are not included due to a lack of reliable information.

Table 5-1. Waste Contributions from Facilities.

Component	Facilities (MT)	Saltwell Liquid	Total
Al^{+3}	7.56E+01	1.52E+02	2.28E+02
Ca^{+2}	7.17E+00		7.17E+00
Cd^{+2}	7.46E+00		7.46E+00
Cl^{-}	3.61E-03		3.61E-03
Co^{+3}	4.08E-02		4.08E-02
CO_3^{-2}		4.70E+01	4.70E+01
Cr^{+3}		1.17E+01	1.17E+01
F^{-}	4.09E+00	6.38E+00	1.05E+01
Fe^{+3}	4.51E+00		4.51E+00
H_2O	1.46E+04	1.25E+04	1.71E+004
K^{+}	1.17E+02		1.17E+02
Mg^{+2}	7.38E+00		7.38E+00
Mn^{+4}	4.09E+01		4.09E+01
Na^{+}	2.81E+02	3.31E+03	3.59E+03
Ni^{+3}	7.00E-02		7.00E-02
NO_2^{-}	1.16E+01	1.48E+03	1.49E+03
NO_3^{-}	4.12E+02	2.04E+03	2.45E+03
OH^{-}	7.73E-01	3.67E+02	3.68E+02
Pb^{+4}	4.43E+00		4.43E+00
PO_4^{-3}	8.60E+01	9.70E+01	1.83E+02
Si^{+4}	3.19E-03		3.19E-03
SO_4^{-2}	1.30E+00		1.30E+00
TOC	1.81E+00	2.16E+02	2.18E+02
UO_2^{+2}	1.44E-02		1.44E-02
Total	1.57E+04	2.07E+04	3.64E+04

6.0 TOTAL INVENTORY FOR TANK WASTE REMEDIATION SYSTEM PROCESS FLOWSHEET

Tables A-1 through A-4 in Appendix A shows the chemical and radionuclide inventory estimates for single-shell and double-shell tanks recommended for use in the TWRS flowsheet. The amount of water shown for each tank is not the amount estimated to be in the tank presently but rather is the amount needed to make the soluble portion 5*M* Na or the insoluble portion 10 wt% solids, whichever is greater. This was the retrieval assumption used for the TWRS flowsheet. Also shown is the transfer of approximately 1.55E+07 L of saltwell liquid from SSTs to DSTs.

Consistency with previous estimates, i.e., the HDW-EIS, the TWRS-EIS, and the IDB has been largely maintained. Table 6-1, the sum of Tables 3-5, 4-2, and column two of Table 5-1 for chemicals, summarizes total single-shell and double-shell chemical inventories after facility wastes have been added and saltwell pumping has been completed. Table 6-2, the sum of Tables 3-6 and 4-3, does the same for radionuclides.

Reconciliation of previous estimates with the new estimates produced by LANL will no doubt result in changes to Table 6-1. Some of these changes may have a large impact on facilities design, retrieval schedules, and other design considerations.

Table 6-1. Chemical Inventory for Tank Waste Remediation Systems Reference Feed.

Component	Soluble			Insoluble		
	Total (MT)	SST (MT)	DST (MT)	Total (MT)	SST (MT)	DST (MT)
Total Mass Flow	7.26E+05	5.74e+05	1.52E+05	1.97e+04	1.68e+04	2.88e+03
Ag+	3.20E-01		3.20E-01	1.48E+00	2.80E-07	1.48E+00
Al(OH)4-	6.99E+03	2.07E+03	4.93E+03			
T Al+3				2.31E+03	2.20E+03	1.11E+02
As+5	4.05E-05		4.05E-05	2.26E-03		2.26E-03
B+3	3.43E-04		3.43E-04			
Ba+2	7.91E-05		7.91E-01	3.74E+00	5.89E-01	3.15E+00
Be+2	2.43E-05		2.43E-05	3.08E-03		3.08E-03
Bi+3	1.18E+01	9.58E+00	2.23E+00	2.52E+02	2.52E+02	
Ca+2	1.65E+01	6.42E+00	1.01E+01	1.45E+02	1.22E+02	2.28E+01
Cancrinite				2.70E+03	2.70E+03	
Cd+2	7.63E+00		7.63E+00	6.55E+00		6.55E+00
Ce+3	2.36E+00	2.34E+00	2.26E-04	2.35E+02	2.32E+02	2.78E+00
Cl-	6.78E+02	4.07E+02	2.71E+02	9.00E+00	7.63E+00	1.37E+00
CO3-2	3.10E+03	1.58E+03	1.53E+03	1.09E+02	3.86E+01	7.04E+01
Cr(OH)4-	4.46E+02	3.13E+02	1.33E+02			
Cr+3				1.60E+02	1.21E+02	3.87E+01
Cs+	1.88E+00	5.06E-01	1.37E+00	2.06E-01	1.76E-01	3.05E-02
Cu+2	9.89E-04		9.89E-04	1.88E-01		1.88E-01
F-	1.14E+03	7.80E+02	3.57E+02	6.82E+01	2.62E+01	4.20E+01
Fe+3	3.44E+01	2.37E+01	1.07E+01	7.62E+02	6.07E+02	1.56E+02
H2O	5.08E+05	3.99E+05	1.09E+05			
Hg+2	5.84E-04		5.84E-04	8.81E-02		8.81E-02
K+	7.07E+02	5.29E+01	6.54E+02	2.96E+01	2.42E+00	2.72E+01
La+3	2.39E-05	1.88E-02	2.20E-05	2.30E+01	1.86E+00	2.11E+01
Mg+2	1.46E-04		1.46E-04	8.25E+00		8.25E+00
Mn+4	1.08E+01	2.42E+00	8.39E+00	1.80E+02	1.18E+02	6.15E+01
Mo+6	7.23E-03		7.23E-03	3.21E-02		3.21E-02

Table 6-1. Chemical Inventory for Tank Waste Remediation Systems Reference Feed.

Component	Soluble			Insoluble		
	Total (MT)	SST (MT)	DST (MT)	Total (MT)	SST (MT)	DST (MT)
Na+	6.80E+04	5.34E+04	1.46E+04	7.77E+02	5.42E+02	2.35E+02
Ni+3	8.21E+00	4.07E+00	4.14E+00	2.06E+02	1.99E+02	6.87E+00
NO2-	9.47E+03	4.98E+03	4.49E+03	6.18E+01	5.34E+01	8.40E+00
NO3-	1.07E+05	9.66E+04	9.90E+03	9.85E+02	9.42E+02	4.31E+01
OH-	1.43E+04	9.25E+03	5.08E+03	5.63E+03	4.54E+03	1.09E+03
Pb+4	9.60E+00	3.29E+00	6.31E+00	2.93E+01	2.50E+01	4.31E+00
PO4-3	3.20E+03	2.80E+03	3.93E+02	1.85E+03	1.83E+03	2.15E+01
Se+6	1.35E-04		1.35E-04	3.31E+00		3.31E+00
Si+4	1.59E+01	4.06E-01	1.55E+01	2.32E+02	1.41E+01	2.18E+02
SO4-2	2.02E+03	1.63E+03	3.91E+02	2.56E+01	2.19E+01	3.65E+00
Sr+2	3.80E-01	3.62E-01	1.86E-02	3.66E+01	3.60E+01	6.00E-01
TcO4-	2.21E+00	2.00E-01	2.01E+00	9.07E-01	8.65E-01	4.20E-02
Th+4				2.79E+00		2.79E+00
Ti+4				1.55E-01		1.55E-01
TOC	1.06E+03	2.26E+02	8.31E+02	8.73E+01	1.51E+01	7.22E+01
UO2+2	1.06E+02	9.67E+01	9.27E+00	1.54E+03	1.50E+03	3.36E+01
Zn+2	7.78E-04		7.78E-04	5.06E-01		5.06E-01
ZrO2:2H2O	7.53E+00	6.68E+00	8.56E-05	1.20E+03	6.61E+02	5.34E+02

Table 6-2. Radionuclide Inventory for Tank Waste Remediation Systems Reference Feed.

Radionuclide	Soluble (Ci)	Insoluble (Ci)	Total (Ci)
^{14}C	3.33E+03	2.01E+03	5.34E+03
^{90}Sr*	1.88E+06	5.17E+07	5.36E+07
^{99}Tc	2.28E+04	9.29E+03	3.21E+04
^{137}Cs*	3.19E+07	3.01E+06	3.49E+06
^{237}Np	6.95E+00	6.25E+01	6.94E+01
^{239}Pu	1.65E+03	2.48E+04	2.64E+04
^{240}Pu	4.30E+02	6.28E+03	6.71E+03
^{241}Pu	4.79E+03	7.02E+04	7.50E+04
^{241}Am	7.96E+03	9.66E+04	1.05E+05
^{244}Cm	1.20E+00	1.19E+02	1.20E+02
Total	3.38E+07	5.49E+07	8.87E+07

*Does not include daughter products.

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APPENDIX A

CHEMICAL AND RADIONUCLIDE INVENTORY ESTIMATES FOR SINGLE- AND DOUBLE-SHELL TANKS

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Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	A-101	A-102	A-103	A-104	A-105	A-106	AX-101	AX-102
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	8.97E+04	3.01E+03	2.81E+04			2.97E+03	6.47E+04	2.67E+03
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	3.01E+02	1.08E+01	9.45E+01			2.36E+01	2.21E+02	8.19E+00
Ca+2	1.27E+02	4.52E+00	6.09E+01	2.69E-01	1.84E-01	1.05E+01	1.06E+02	5.13E+00
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3		1.52E+01	5.61E-01		1.06E-05			
Cl-	1.76E+04	6.56E+02	6.42E+03	7.03E+01	5.99E+00	1.69E+03	1.35E+04	5.51E+02
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	5.19E+04	1.97E+03	1.79E+04	4.16E+02	2.83E+02	5.51E+03	3.92E+04	2.05E+03
Cr(OH)4-	4.87E+03	1.75E+02	1.48E+03	5.78E+00	3.58E-01	3.87E+02	3.55E+03	1.30E+02
Cs+		5.39E+00	3.52E-01		6.44E-01			
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	1.51E+04	5.41E+02	4.85E+03			1.18E+03	1.11E+04	4.18E+02
Fe+3	3.54E+02	1.35E+01	1.67E+02	1.55E+01	3.88E+01	4.95E+01	3.09E+02	2.94E+01
H2O	1.31E+07	4.82E+05	4.93E+06	1.55E+05	2.76E+05	1.23E+06	1.02E+07	4.13E+05
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	2.87E+03	1.03E+02	9.37E+02			2.26E+02	2.13E+03	8.04E+01
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4	4.74E+01	1.70E+00	1.69E+01			3.74E+00	3.60E+01	1.42E+00
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.68E+06	6.17E+04	6.38E+05	1.77E+04	3.13E+04	1.57E+05	1.31E+06	5.34E+04
Ni+3	7.85E+01	2.77E+00	3.76E+01	4.21E-01	2.85E-01	6.54E+00	6.52E+01	3.03E+00
NO2-	3.19E+05	1.15E+04	1.01E+05	1.50E+00	3.09E+00	2.51E+04	2.34E+05	8.76E+03
NO3-	2.35E+06	8.40E+04	1.01E+06	8.71E+03	5.87E+02	1.93E+05	1.88E+06	8.30E+04
OH-	4.21E+05	1.64E+04	1.37E+05	1.14E+04	2.21E+04	5.09E+04	3.21E+05	1.14E+04
Pb+4	2.73E+02	9.81E+00	8.63E+01			2.14E+01	2.01E+02	7.48E+00
PO4-3	4.77E+04	1.71E+03	1.50E+04	8.31E+01		3.81E+03	3.50E+04	1.32E+03
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	5.06E+04	1.82E+03	2.44E+04	1.17E+02	8.18E+03	4.44E+03	4.63E+04	1.95E+03
Sr+2	1.64E-01	3.55E-01	9.62E-04	1.93E-01	1.57E-02		8.27E-03	9.46E-03
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	3.68E+04	2.39E+03	1.16E+04			1.25E+04	2.82E+04	1.01E+03
UO2+2	5.16E+02	1.62E+01	2.31E+02	1.88E+01	6.07E+02	3.66E+01	7.07E+02	1.80E+01
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2;2H2O								
Total	1.82E+07	6.68E+05	6.92E+06	1.94E+05	3.39E+05	1.69E+06	1.42E+07	5.80E+05

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	AX-103	AX-104	B-101	B-102	B-103	B-104	B-105	B-106
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	6.06E+03		9.16E+02	1.85E+02		4.17E+03	2.29E+02	
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	2.55E+01		1.42E+02	4.54E+01	1.06E+02	1.89E+02	5.37E+02	2.19E+02
Ca+2	1.65E+01	6.78E-02	3.16E+01	9.87E+00	2.30E+01	2.61E+01	1.14E+02	4.76E+01
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	1.77E+00	1.85E-02		2.65E-01	9.10E-01	2.02E+01	1.50E+00	1.75E-01
Cl-	1.73E+03	2.21E+00	9.77E+02	2.37E+02	5.48E+02	1.16E+03	2.80E+03	1.13E+03
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	5.02E+03	1.05E+02	4.68E+03	1.08E+03	2.09E+03	3.55E+03	9.17E+03	3.73E+03
Cr(OH)4-	4.00E+02	1.32E-01	1.51E+02	4.86E+01	1.12E+02	1.65E+02	5.64E+02	2.32E+02
Cs+	3.09E-01	2.09E+00		4.42E-02	1.79E-01	8.35E-02	6.95E-01	3.15E-02
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	1.31E+03		6.59E+03	2.11E+03	4.92E+03	1.54E+04	2.58E+04	1.02E+04
Fe+3	7.34E+01	1.43E+01	1.29E+02	2.80E+01	6.31E+01	1.46E+02	3.22E+02	1.30E+02
H2O	1.48E+06	1.02E+05	1.19E+06	3.49E+05	7.87E+05	2.38E+06	3.99E+06	1.59E+06
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	2.53E+02							
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4	4.56E+00							
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.89E+05	1.15E+04	1.45E+05	4.26E+04	9.61E+04	2.80E+05	4.87E+05	1.94E+05
Ni+3	1.03E+01	1.05E-01	2.16E+01	6.11E+00	1.42E+01	1.69E+01	7.07E+01	2.93E+01
NO2-	2.73E+04	1.14E+00	2.96E+03	9.72E+02	2.16E+03	5.21E+03	1.12E+04	4.48E+03
NO3-	2.69E+05	2.17E+02	1.38E+05	3.87E+04	8.96E+04	1.72E+05	4.53E+05	1.85E+05
OH-	4.98E+04	8.15E+03	3.66E+04	1.02E+04	2.24E+04	1.02E+05	1.13E+05	4.35E+04
Pb+4	2.33E+01		3.52E-04					
PO4-3	4.05E+03		4.70E+04	1.52E+04	3.51E+04	8.74E+04	1.80E+05	7.22E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4					3.70E+01			7.64E+01
SO4-2	1.26E+04	3.02E+03	7.26E+03	2.45E+03	5.22E+03	6.52E+03	2.43E+04	1.00E+04
Sr+2	1.26E-02	4.65E-01		1.62E-05	4.85E-04	4.00E-04	6.00E-05	
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	3.24E+03		6.54E+02					
UO2+2	5.10E+02	2.24E+02	2.34E+03	1.81E+02	1.72E+02	9.00E+00	2.70E+01	1.11E+01
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O						3.89E+01	5.15E+00	
Total	2.05E+06	1.25E+05	1.58E+06	4.63E+05	1.05E+06	3.06E+06	5.30E+06	2.11E+06

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	B-107	B-108	B-109	B-110	B-111	B-112	B-201	B-202
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	6.91E+03	1.40E+03	2.56E+03			6.35E+02		
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	4.74E+01	1.23E+02	1.59E+02	9.54E+01	8.77E+01	9.68E+00	1.06E+01	1.03E+01
Ca+2	5.81E-01	2.47E+01	3.46E+01	1.49E+00	1.55E+00	6.37E+00	2.73E-01	2.64E-01
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	9.21E+00	1.85E+00	1.06E+00		3.62E-02	1.25E+01		
Cl-	1.88E+03	6.47E+02	8.41E+02	8.61E+02	7.96E+02	2.73E+02	1.12E+02	1.09E+02
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	8.97E+02	2.12E+03	2.95E+03	2.30E+03	2.39E+03	7.75E+02	4.21E+02	4.07E+02
Cr(OH)4-	3.21E+01	1.27E+02	1.71E+02	4.73E+01	4.37E+01	2.03E+02	6.18E+00	5.97E+00
Cs+	8.14E-01	5.70E-01	2.30E-01	1.14E+00	1.02E+01	4.18E+00		
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	6.84E+03	6.68E+03	7.38E+03	1.23E+04	1.13E+04	9.29E+02	8.71E+03	8.42E+03
Fe+3	4.20E+01	7.58E+01	1.03E+02	1.18E+02	1.34E+02	2.39E+01	1.40E+01	1.36E+01
H2O	1.19E+06	1.06E+06	1.16E+06	1.77E+06	1.79E+06	3.44E+05	1.77E+05	1.71E+05
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+						3.42E+01	2.39E+02	2.31E+02
La+3							1.63E+00	1.58E+00
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4							3.19E-02	3.08E-02
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.37E+05	1.28E+05	1.43E+05	2.08E+05	2.09E+05	4.46E+04	2.15E+04	2.08E+04
Ni+3	7.57E-01	1.53E+01	2.15E+01	2.17E+00	2.17E+00	4.05E+00	4.21E-01	4.07E-01
NO2-	3.85E+03	3.12E+03	3.82E+03	3.25E-01	3.54E+00	3.84E+03		
NO3-	3.56E+04	1.03E+05	1.38E+05	1.27E+05	1.17E+05	7.67E+04	2.12E+04	2.05E+04
OH-	6.47E+04	3.56E+04	3.10E+04	8.56E+04	9.15E+04	7.47E+03	1.50E+03	1.45E+03
Pb+4					7.06E-05	4.32E+00		
PO4-3	4.01E+04	4.57E+04	5.24E+04	4.85E+04	4.46E+04	3.62E+03	7.72E+02	7.46E+02
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	9.55E+02	5.39E+03	7.28E+03	2.13E+03	6.80E+03	1.32E+03	1.29E+01	1.25E+01
Sr+2	1.19E-03	2.12E-03	2.76E-04	4.74E-03	1.03E-02	6.67E-03	3.11E+01	3.00E+01
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC					2.45E+00	1.64E+02	7.64E+02	7.39E+02
UO2+2	3.85E+00	6.53E+00	1.55E+02	6.46E+01	4.18E+02	2.26E+01		
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O	5.27E+01	1.09E+01						
Total	1.49E+06	1.40E+06	1.55E+06	2.26E+06	2.28E+06	4.85E+05	2.32E+05	2.25E+05

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	B-203	B-204	BX-101	BX-102	BX-103	BX-104	BX-105	BX-106
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-			3.37E+02	9.92E+02	1.59E+03			
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	1.90E+01	1.86E+01						
Ca+2	4.88E-01	4.78E-01	3.08E-01	1.97E-01	3.07E-01	1.57E-01	1.76E-01	1.19E-01
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3				7.71E+00		4.48E-04	6.33E+00	1.79E+02
Cl-	2.01E+02	1.97E+02	1.13E+02	2.12E+01	3.33E+01	1.61E+01	1.80E+01	1.22E+01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	7.52E+02	7.38E+02	3.46E+03	3.51E+03	5.43E+03	4.01E+03	4.49E+03	3.03E+03
Cr(OH)4-	1.10E+01	1.08E+01	3.52E+00	5.16E+00	8.03E+00	4.99E+00	5.59E+00	3.77E+00
Cs+				4.71E+00		1.13E+01	2.69E+00	1.00E+02
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	1.56E+04	1.53E+04						
Fe+3	2.51E+01	2.46E+01	1.76E+01	9.10E+00	1.43E+01	6.72E+00	7.53E+00	5.08E+00
H2O	3.16E+05	3.10E+05	6.71E+05	4.79E+05	7.31E+05	4.32E+05	4.92E+05	5.44E+05
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	4.27E+02	4.19E+02						
La+3	2.92E+00	2.86E+00						
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4	5.69E-02	5.59E-02						
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	3.84E+04	3.77E+04	3.06E+04	2.86E+04	4.42E+04	3.23E+04	3.62E+04	2.44E+04
Ni+3	7.51E-01	7.37E-01	1.26E+00	2.82E-01	4.42E-01	2.13E-01	2.39E-01	1.61E-01
NO2-			2.12E+01	2.19E+02	3.51E+02			
NO3-	3.79E+04	3.72E+04	9.65E+03	4.11E+03	6.45E+03	2.96E+03	3.32E+03	2.24E+03
OH-	2.68E+03	2.63E+03	1.70E+04	1.63E+04	2.52E+04	1.91E+04	2.14E+04	1.45E+04
Pb+4								
PO4-3	1.38E+03	1.35E+03	2.41E+03	2.88E+03	4.45E+03	3.38E+03	3.78E+03	2.56E+03
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	2.30E+01	2.26E+01	3.73E+03	4.31E+03	6.66E+03	5.05E+03	5.66E+03	3.82E+03
Sr+2	5.55E+01	5.44E+01		6.31E-03	1.23E-02	9.26E-04	1.99E-01	8.14E-02
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	1.36E+03	1.34E+03	2.76E+02					
UO2+2			2.55E+03	2.01E+03	3.10E+03	2.29E+03	2.56E+03	1.73E+03
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O								
Total	4.15E+05	4.07E+05	7.41E+05	5.42E+05	8.29E+05	5.02E+05	5.69E+05	5.97E+05

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	BX-107	BX-108	BX-109	BX-110	BX-111	BX-112	BY-101	BY-102
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	1.45E+04	1.10E+03	6.74E+03	8.82E+03	1.11E+04	5.55E+03	1.89E+04	1.69E+04
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	9.94E+01	7.52E+00	4.62E+01	5.58E+01	5.60E+01	9.87E+01	9.10E+01	8.12E+01
Ca+2	1.22E+00	9.23E-02	1.09E+01	1.70E+01	7.07E+01	1.36E+01	1.37E+02	1.23E+02
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	3.23E+01	7.13E-02	4.73E-03	1.98E+01	2.03E+01	1.56E+01	2.61E+01	7.55E+00
Cl-	6.13E+02	4.64E+01	8.73E+03	8.61E+02	2.56E+03	5.48E+02	4.88E+03	4.36E+03
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	1.88E+03	1.42E+02	2.90E+04	2.53E+03	7.40E+03	1.75E+03	1.77E+04	1.43E+04
Cr(OH)4-	6.74E+01	5.10E+00	1.57E+02	5.54E+02	2.25E+03	9.00E+01	4.37E+03	3.90E+03
Cs+	2.47E-01	8.09E-03	2.79E-01	6.63E+00	6.82E+00	1.23E-01	8.74E+00	2.53E+00
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	1.43E+04	1.09E+03	6.66E+03	7.05E+03	3.77E+03	8.31E+03	4.74E+03	4.23E+03
Fe+3	8.82E+01	6.67E+00	9.75E+02	8.53E+01	2.03E+02	6.96E+01	3.85E+02	3.41E+02
H2O	2.51E+06	1.90E+05	5.58E+06	1.79E+06	3.04E+06	1.40E+06	5.71E+06	4.99E+06
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+				8.95E+01	3.84E+02		7.47E+02	6.67E+02
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	2.87E+05	2.17E+04	6.97E+05	2.18E+05	4.03E+05	1.63E+05	7.62E+05	6.69E+05
Ni+3	1.59E+00	1.20E-01	1.62E+01	1.10E+01	4.42E+01	8.70E+00	8.59E+01	7.66E+01
NO2-	8.08E+03	6.11E+02	3.75E+03	1.37E+04	4.38E+04	4.34E+03	8.38E+04	7.48E+04
NO3-	7.47E+04	5.66E+03	8.76E+05	2.17E+05	7.91E+05	7.96E+04	1.53E+06	1.36E+06
OH-	1.37E+05	1.04E+04	1.94E+05	7.02E+04	4.76E+04	6.45E+04	8.49E+04	6.88E+04
Pb+4				1.13E+01	4.85E+01		9.43E+01	8.42E+01
PO4-3	8.42E+04	6.37E+03	5.13E+04	4.02E+04	1.70E+04	5.22E+04	2.08E+04	1.74E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	2.00E+03	1.52E+02	1.01E+05	4.16E+03	1.42E+04	3.54E+03	3.17E+04	2.65E+04
Sr+2	2.20E-03	2.41E-04	1.94E-02	1.08E-02	1.03E-02	2.20E-04	1.69E-02	6.92E-03
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC				4.10E+02	1.98E+03		3.93E+03	3.52E+03
UO2+2	8.07E+00	6.11E-01	1.21E+03	6.27E+01	2.54E+02	6.15E+00	2.55E+03	1.44E+03
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O	1.10E+02	8.36E+00	5.13E+01	4.99E+01	1.03E+01	4.24E+01		
Total	3.13E+06	2.37E+05	7.56E+06	2.37E+06	4.38E+06	1.78E+06	8.28E+06	7.26E+06

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	BY-103	BY-104	BY-105	BY-106	BY-107	BY-108	BY-109	BY-110
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	2.31E+04	9.38E+03	1.40E+04	2.67E+04	5.99E+03		2.09E+04	9.06E+03
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	1.02E+02	2.35E+02	2.48E+02	2.43E+02	1.19E+02	1.85E+02	1.01E+02	2.20E+02
Ca+2	1.54E+02	1.02E+02	1.34E+02	2.15E+02	5.99E+01	2.67E+01	1.52E+02	8.37E+01
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	1.35E+00	2.66E+01	2.07E+01	2.64E+01	9.65E+00	1.50E+01	8.46E+00	2.36E+01
Cl-	5.47E+03	4.42E+03	5.52E+03	8.18E+03	3.01E+03	1.93E+03	5.41E+03	3.96E+03
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	1.59E+04	1.31E+04	1.78E+04	2.36E+04	8.65E+03	5.42E+03	1.91E+04	1.12E+04
Cr(OH)4-	4.89E+03	3.21E+03	4.23E+03	6.80E+03	1.88E+03	8.08E+02	4.84E+03	2.63E+03
Cs+	4.20E-01	8.91E+00	6.92E+00	8.84E+00	3.23E+00	4.18E+00	2.82E+00	7.91E+00
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	5.30E+03	1.14E+04	1.21E+04	1.23E+04	6.03E+03	9.09E+03	5.25E+03	1.20E+04
Fe+3	4.30E+02	4.09E+02	4.93E+02	6.71E+02	2.69E+02	2.04E+02	4.26E+02	3.61E+02
H2O	6.12E+06	5.36E+06	6.67E+06	9.34E+06	3.24E+06	2.47E+06	6.29E+06	4.86E+06
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	8.36E+02	5.47E+02	7.21E+02	1.16E+03	3.18E+02	1.35E+02	8.28E+02	4.45E+02
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	8.22E+05	7.00E+05	8.75E+05	1.24E+06	4.25E+05	3.11E+05	8.41E+05	6.30E+05
Ni+3	9.61E+01	6.67E+01	8.66E+01	1.36E+02	4.01E+01	2.08E+01	9.52E+01	5.62E+01
NO2-	9.42E+04	6.14E+04	8.09E+04	1.30E+05	3.57E+04	1.51E+04	9.28E+04	5.08E+04
NO3-	1.71E+06	1.21E+06	1.56E+06	2.44E+06	7.51E+05	3.95E+05	1.69E+06	1.03E+06
OH-	7.58E+04	1.21E+05	1.40E+05	1.49E+05	7.02E+04	8.75E+04	9.18E+04	1.22E+05
Pb+4	1.06E+02	6.91E+01	9.11E+01	1.47E+02	4.02E+01	1.70E+01	1.05E+02	5.62E+01
PO4-3	1.99E+04	2.40E+04	2.89E+04	3.44E+04	1.38E+04	1.45E+04	2.27E+04	3.01E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4						2.46E+01		
SO4-2	3.05E+04	6.27E+04	6.87E+04	6.82E+04	3.65E+04	4.79E+04	3.46E+04	5.60E+04
Sr+2	3.46E-02	1.41E-02	1.19E-02	1.80E-02	7.73E-03	2.50E-03	4.97E-03	1.65E-02
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	4.42E+03	7.48E+03	8.15E+03	1.04E+04	5.98E+03	8.28E+03	4.35E+03	9.46E+03
UO2+2	6.54E+02	1.37E+03	2.32E+03	1.38E+03	9.47E+02	1.10E+03	2.55E+03	1.22E+03
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O					3.21E-01			1.19E+01
Total	8.93E+06	7.59E+06	9.49E+06	1.35E+07	4.61E+06	3.36E+06	9.13E+06	6.83E+06

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	BY-111	BY-112	C-101	C-102	C-103	C-104	C-105	C-106
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	2.34E+04	1.46E+04	6.77E+03	6.97E+04	6.33E+03	3.43E+04	2.49E+04	2.48E+03
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	1.13E+02	7.81E+01						
Ca+2	1.70E+02	1.08E+02	1.16E+00	4.84E+00	7.00E-01	3.12E+00	1.30E+00	2.09E+00
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	2.67E+01	4.89E+00	1.66E-03				7.16E-05	
Cl-	6.05E+03	3.91E+03	6.51E+02	1.08E+03	1.18E+02	1.45E+03	3.36E+02	9.29E+02
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	2.00E+04	1.19E+04	2.75E+03	8.38E+03	1.08E+03	6.94E+03	2.25E+03	4.81E+03
Cr(OH)4-	5.42E+03	3.43E+03	1.52E+01	7.75E+01	1.19E+01	4.24E+01	2.85E+01	2.99E+01
Cs+	8.94E+00	1.64E+00	3.06E+00				4.69E+00	
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	5.87E+03	4.03E+03		1.97E+04		4.04E+04		
Fe+3	4.75E+02	3.10E+02	8.94E+01	2.79E+02	3.74E+01	1.74E+02	7.48E+01	1.31E+02
H2O	6.95E+06	4.41E+06	8.32E+05	7.96E+06	9.76E+05	5.68E+06	2.41E+06	2.68E+06
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	9.27E+02	5.86E+02		8.04E+01		1.51E+02		
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	9.30E+05	5.90E+05	4.79E+04	1.49E+05	1.59E+04	1.61E+05	4.96E+04	8.83E+04
Ni+3	1.06E+02	6.75E+01	1.79E+00	7.67E+00	1.11E+00	4.32E+00	2.00E+00	6.03E+00
NO2-	1.04E+05	6.57E+04	1.49E+03	1.86E+04	1.67E+03	1.22E+04	1.32E+04	4.60E+03
NO3-	1.89E+06	1.21E+06	7.06E+04	1.84E+05	1.46E+04	1.16E+05	6.22E+04	7.78E+04
OH-	9.61E+04	5.97E+04	9.86E+03	1.52E+04	5.73E+03	3.73E+04	8.29E+03	4.04E+04
Pb+4	1.17E+02	7.40E+01				2.70E-02		
PO4-3	2.42E+04	1.50E+04	9.43E+02	1.25E+03	7.41E+01	8.22E+02	2.44E+02	7.78E+02
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	3.70E+04	2.45E+04	7.20E+03	4.69E+03	8.57E+01	9.48E+02	2.06E+03	4.42E+03
Sr+2	1.66E-02	3.75E-03	3.48E-03	5.19E-02	2.01E-02	1.23E-01	1.42E-01	2.73E-02
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	4.89E+03	3.28E+03		4.54E+00		1.77E+04		8.56E+02
UO2+2	2.06E+03	8.00E+02	8.45E+02	4.26E+03	4.30E+02	2.14E+03	1.16E+03	3.70E+03
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O				9.85E+02		2.04E+03		
Total	1.01E+07	6.41E+06	9.81E+05	8.43E+06	1.02E+06	6.11E+06	2.57E+06	2.91E+06

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	C-107	C-108	C-109	C-110	C-111	C-112	C-201	C-202
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	9.14E+03	7.59E+02	4.22E+02	7.88E+03	4.30E+03	3.81E+03		
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	7.09E+01	5.20E+00	2.89E+00	5.40E+01	1.04E+01	4.33E+00		
Ca+2	1.10E+00	7.96E-01	1.65E+00	6.63E-01	3.89E-01	2.75E+00	7.67E-03	3.84E-03
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	1.71E-01	3.57E-03	5.61E-01		3.46E-01	1.57E+00		
Cl-	6.86E+02	5.64E+02	4.08E+02	3.33E+02	1.19E+02	6.07E+02	7.85E-01	3.92E-01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	2.46E+03	1.96E+03	2.55E+03	1.02E+03	6.00E+02	4.26E+03	1.95E+02	9.76E+01
Cr(OH)4-	4.81E+01	1.11E+01	3.34E+00	3.66E+01	1.02E+01	6.43E+00	2.43E-01	1.22E-01
Cs+	1.43E-01	7.65E-05	9.20E-02		7.14E-02	6.17E-02	3.09E-05	
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	1.02E+04	7.51E+02	4.17E+02	7.79E+03	1.50E+03	6.24E+02		
Fe+3	7.45E+01	6.15E+01	2.31E+01	4.79E+01	1.40E+01	3.27E+01	3.28E-01	1.64E-01
H2O	1.93E+06	4.09E+05	5.04E+05	1.36E+06	5.04E+05	8.47E+05	2.11E+04	1.05E+04
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+			1.75E+01			7.48E+00		
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	2.23E+05	5.07E+04	3.66E+04	1.56E+05	3.82E+04	5.74E+04	1.57E+03	7.87E+02
Ni+3	1.13E+00	1.47E+00	7.08E+00	8.62E-01	1.04E+00	1.11E+01	1.04E-02	5.20E-03
NO2-	5.81E+03	5.21E+02	1.71E+03	4.39E+03	3.14E+03	3.33E+03		
NO3-	5.74E+04	5.82E+04	5.99E+04	4.06E+04	1.94E+04	9.41E+04	1.44E+02	7.22E+01
OH-	1.11E+05	1.52E+04	6.73E+03	7.47E+04	1.56E+04	9.10E+03	9.31E+02	4.65E+02
Pb+4			1.12E+03			4.78E+02		
PO4-3	6.00E+04	5.20E+03	3.41E+03	4.57E+04	8.91E+03	5.16E+03	1.65E+02	8.23E+01
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	1.79E+03	6.11E+03	2.29E+02	1.09E+03	2.27E+02	2.72E+02	2.46E+02	1.23E+02
Sr+2	4.23E-03	1.13E-03		6.16E-04	4.51E-03	1.89E-03		
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	9.39E+03	4.09E+02	6.99E+03		6.69E+02	1.00E+04		
UO2+2	5.75E+00	3.89E+02	6.78E+02	4.38E+00	1.62E+02	1.23E+03	1.11E+02	5.57E+01
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O	7.88E+01	5.78E+00	3.21E+00	6.00E+01	1.15E+01	4.81E+00		
Total	2.42E+06	5.50E+05	6.25E+05	1.70E+06	5.97E+05	1.04E+06	2.44E+04	1.22E+04

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	C-203	C-204	S-101	S-102	S-103	S-104	S-105	S-106
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-			5.88E+04	6.65E+04	2.77E+04	4.68E+04	5.41E+04	6.66E+04
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3			3.92E+01	1.16E+02	4.56E+01		6.97E+01	7.84E+01
Ca+2	1.92E-02	1.15E-02	3.44E+01	7.02E+01	3.57E+01	1.99E+00	1.01E+02	1.21E+02
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3			5.94E+00					1.50E-03
Cl-	1.96E+00	1.18E+00	4.67E+03	1.02E+04	4.12E+03	1.54E+03	7.14E+03	8.08E+03
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	4.88E+02	2.93E+02	1.90E+04	4.01E+04	1.90E+04	3.07E+03	4.88E+04	5.55E+04
Cr(OH)4-	6.08E-01	3.65E-01	4.23E+03	3.25E+03	1.92E+03	5.79E+03	4.46E+03	4.98E+03
Cs+			1.59E+00			5.68E-01	1.56E+00	3.08E+00
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-			1.82E+03	5.40E+03	2.12E+03		3.24E+03	3.64E+03
Fe+3	8.19E-01	4.91E-01	1.46E+02	9.26E+01	9.74E+01	1.12E+02	2.77E+02	7.22E+02
H2O	5.27E+04	2.08E+04	3.59E+06	7.81E+06	3.38E+06	4.58E+06	7.13E+06	8.06E+06
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+			7.59E+02	2.11E+03	8.66E+02		1.56E+03	1.76E+03
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4			5.05E+01	1.40E+02	5.76E+01		1.04E+02	1.17E+02
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	3.94E+03	2.36E+03	4.71E+05	9.98E+05	4.34E+05	1.15E+05	9.27E+05	1.05E+06
Ni+3	2.60E-02	1.56E-02	2.20E+01	4.10E+01	2.20E+01	2.88E+00	6.24E+01	8.75E+01
NO2-			8.06E+04	2.18E+05	8.62E+04		1.37E+05	1.55E+05
NO3-	3.61E+02	2.17E+02	7.94E+05	1.38E+06	6.32E+05	2.59E+05	1.54E+06	1.74E+06
OH-	2.33E+03	1.38E+03	7.86E+04	2.51E+05	1.03E+05		1.83E+05	2.06E+05
Pb+4			1.14E-01	3.17E-01	1.30E-01		2.35E-01	2.64E-01
PO4-3	4.12E+02	2.47E+02	7.06E+03	2.06E+04	8.16E+03		1.31E+04	1.47E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	6.16E+02	3.69E+02	6.88E+03	1.68E+04	7.25E+03	5.62E+02	1.52E+04	1.71E+04
Sr+2	3.23E-05		2.55E-01	2.70E-03		4.54E-01	2.43E-03	2.63E-01
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC			4.43E+03	1.39E+04	5.43E+03		8.09E+03	9.07E+03
UO2+2	2.79E+02	1.47E-01	4.45E+02	1.61E+02	6.17E+01	1.09E+03	1.16E+02	5.58E+02
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O								
Total	6.11E+04	2.57E+04	5.12E+06	1.08E+07	4.71E+06	5.02E+06	1.01E+07	1.14E+07

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	S-107	S-108	S-109	S-110	S-111	S-112	SX-101	SX-102
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	4.37E+04	7.17E+04	6.82E+04	5.04E+04	6.58E+04	7.57E+04	6.66E+04	6.41E+04
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	2.05E+01	9.19E+01	8.52E+01	4.25E+01	6.85E+01	9.68E+01	2.38E+01	7.87E+01
Ca+2	4.10E+01	1.32E+02	1.27E+02	6.22E+01	9.64E+01	1.39E+02	2.15E+01	1.13E+02
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3		7.27E+00	1.01E+01	9.95E-01	1.10E+00	6.88E+01		2.70E-02
Cl-	3.18E+03	9.42E+03	8.73E+03	4.98E+03	7.39E+03	9.92E+03	4.04E+03	8.25E+03
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	9.84E+03	6.43E+04	5.98E+04	3.06E+04	4.85E+04	6.78E+04	1.29E+04	5.06E+04
Cr(OH)4-	4.56E+03	4.51E+03	5.41E+03	4.21E+03	4.73E+03	5.21E+03	5.50E+03	1.56E+04
Cs+		4.17E+00	2.35E+01	2.62E+01	2.41E+01	8.14E+01		7.23E-03
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	4.80E+04	4.27E+03	3.95E+03	1.97E+03	3.18E+03	4.49E+03	1.11E+03	3.65E+03
Fe+3	1.96E+02	1.97E+02	6.32E+02	1.98E+02	2.23E+02	2.79E+02	1.42E+02	7.51E+02
H2O	3.77E+06	9.41E+06	8.73E+06	4.62E+06	7.22E+06	9.91E+06	3.77E+06	7.69E+06
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	5.13E+02	2.06E+03	1.91E+03	9.53E+02	1.54E+03	2.17E+03	4.59E+02	1.70E+03
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4	1.68E+01	1.37E+02	1.27E+02	6.34E+01	1.02E+02	1.44E+02	3.05E+01	1.13E+02
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	4.40E+05	1.22E+06	1.13E+06	6.06E+05	9.41E+05	1.29E+06	3.57E+05	9.99E+05
Ni+3	2.96E+01	7.81E+01	8.39E+01	3.88E+01	5.56E+01	8.42E+01	1.45E+01	8.55E+01
NO2-	4.18E+04	1.80E+05	1.67E+05	8.32E+04	1.37E+05	1.90E+05	4.52E+04	1.53E+05
NO3-	8.00E+05	2.03E+06	1.88E+06	1.06E+06	1.59E+06	2.13E+06	7.17E+05	1.63E+06
OH-	3.23E+04	2.40E+05	2.24E+05	1.02E+05	1.76E+05	2.53E+05	2.59E+04	2.01E+05
Pb+4	3.80E-02	3.10E-01	2.87E-01	1.43E-01	2.31E-01	3.26E-01	6.90E-02	2.55E-01
PO4-3	3.33E+03	1.73E+04	1.60E+04	7.97E+03	1.29E+04	1.82E+04	4.28E+03	1.46E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	5.07E+03	2.00E+04	1.86E+04	9.49E+03	1.51E+04	2.11E+04	4.61E+03	1.61E+04
Sr+2	1.37E-01	3.74E-03	1.11E-01	2.92E-02	1.41E-01	9.68E-02	3.67E-02	1.04E-01
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ti+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	1.74E+03	1.07E+04	9.87E+03	4.74E+03	7.81E+03	1.12E+04	2.60E+03	9.31E+03
UO2+2	3.53E+02	1.65E+02	3.11E+02	1.49E+02	2.86E+02	2.08E+02	2.67E+02	4.67E+02
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O	2.35E+03							
Total	5.20E+06	1.33E+07	1.23E+07	6.59E+06	1.02E+07	1.40E+07	5.02E+06	1.09E+07

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	SX-103	SX-104	SX-105	SX-106	SX-107	SX-108	SX-109	SX-110
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	8.14E+04	7.90E+04	8.11E+04	5.80E+04	1.49E+04	1.66E+04	1.83E+04	3.84E+03
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	8.27E+01	6.82E+01	9.57E+01	1.10E+02				
Ca+2	1.21E+02	9.98E+01	1.42E+02	4.87E+01	8.37E-01	8.91E-01	8.54E+01	1.34E+01
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	4.67E+01	9.65E+00	1.60E+01	2.96E+01				
Cl-	9.09E+03	7.92E+03	1.02E+04	9.29E+03	6.69E+02	7.31E+02	1.09E+03	3.73E+02
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	5.87E+04	4.90E+04	6.66E+04	3.00E+04	1.29E+03	1.38E+03	5.95E+03	1.81E+03
Cr(OH)4-	6.76E+03	6.60E+03	8.16E+03	3.11E+03	3.92E+03	4.06E+03	8.66E+03	4.40E+03
Cs+	3.04E+01	2.07E+00	4.28E+00	4.18E+00				
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	3.84E+03	3.17E+03	4.44E+03	5.11E+03				
Fe+3	3.57E+02	3.14E+02	4.11E+02	8.75E+01	5.11E+01	5.40E+01	1.69E+02	6.19E+01
H2O	8.73E+06	7.38E+06	1.00E+07	6.61E+06	1.69E+06	1.84E+06	4.20E+06	9.19E+05
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	1.86E+03	1.53E+03	2.10E+03	1.90E+03				
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4	1.23E+02	1.02E+02	1.40E+02	1.26E+02				
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.14E+06	9.69E+05	1.31E+06	8.38E+05	4.33E+04	4.74E+04	5.87E+05	1.29E+05
Ni+3	7.48E+01	6.22E+01	8.78E+01	2.94E+01	1.21E+00	1.28E+00	4.15E+01	7.35E+00
NO2-	1.62E+05	1.34E+05	1.87E+05	2.04E+05				
NO3-	1.95E+06	1.69E+06	2.22E+06	1.08E+06	9.83E+04	1.08E+05	1.56E+06	3.37E+05
OH-	2.07E+05	1.64E+05	2.43E+05	2.28E+05				
Pb+4	2.79E-01	2.30E-01	3.16E-01	2.86E-01				
PO4-3	1.55E+04	1.28E+04	1.78E+04	1.92E+04				
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	1.83E+04	1.52E+04	2.12E+04	1.42E+04	2.39E+02	2.62E+02	3.82E+02	1.15E+02
Sr+2	3.58E-02	3.68E-03	1.88E-02	8.24E-03	9.16E-02	5.70E-02	1.71E-02	3.74E-02
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	9.38E+03	7.62E+03	1.09E+04	1.32E+04				
UO2+2	2.15E+02	2.31E+02	3.53E+02	1.37E+02	3.82E+02	3.89E+02	7.00E+02	4.87E+02
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O								
Total	1.24E+07	1.05E+07	1.42E+07	9.11E+06	1.85E+06	2.01E+06	6.38E+06	1.40E+06

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	SX-111	SX-112	SX-113	SX-114	SX-115	T-101	T-102	T-103
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	1.19E+04	1.06E+04	3.12E+02	7.05E+03	7.16E+02	6.98E+03	3.37E+03	3.71E+03
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3								5.85E-03
Ca+2	1.79E+01	7.99E+00	9.97E-03	7.11E+01	4.77E+00	4.47E-01	2.19E-01	1.74E+00
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3						8.02E+00	1.36E-01	2.76E-03
Cl-	7.31E+02	5.50E+02	1.13E+01	7.86E+02	7.15E+01	7.24E+01	2.62E+01	9.45E+01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	2.74E+03	1.64E+03	1.54E+01	5.44E+03	3.62E+02	8.74E+02	5.20E+02	5.46E+02
Cr(OH)4-	6.30E+03	3.93E+03	2.69E+01	8.96E+03	1.42E+03	6.62E+00	3.32E+00	1.00E+02
Cs+		5.05E-02	7.55E+00		1.53E+01	4.54E-01	7.69E-03	3.69E-02
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-								2.58E+01
Fe+3	9.29E+01	5.73E+01	5.29E-01	1.60E+02	2.80E+01	2.40E+01	1.17E+01	1.58E+01
H2O	1.36E+06	1.02E+06	2.71E+04	3.72E+06	1.83E+05	7.51E+05	3.62E+05	3.15E+05
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+								
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.91E+05	1.02E+05	7.49E+02	5.20E+05	2.57E+04	9.89E+03	5.14E+03	1.58E+04
Ni+3	1.01E+01	4.89E+00	1.37E-02	3.58E+01	3.65E+00	7.14E-01	3.50E-01	1.29E+00
NO2-						1.54E+03	7.42E+02	1.83E+03
NO3-	4.94E+05	2.59E+05	1.70E+03	1.39E+06	6.78E+04	1.43E+04	5.55E+03	3.37E+04
OH-						8.75E+02	9.87E+02	5.43E+02
Pb+4								
PO4-3						1.65E+02	1.64E+02	1.58E+02
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	2.44E+02	1.90E+02	4.35E+00	2.54E+02	2.20E+01	2.62E+02	2.52E+02	3.09E+02
Sr+2	5.24E-02	6.05E-02	1.60E-02	5.50E-02	3.94E-02	2.87E-01		1.07E-03
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC								1.98E+01
UO2+2	6.63E+02	4.00E+02	1.41E+00	8.80E+02	7.85E+01	5.93E+02	3.02E+02	2.54E+02
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O								1.81E-01
Total	2.07E+06	1.39E+06	2.99E+04	5.65E+06	2.79E+05	7.86E+05	3.79E+05	3.72E+05

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	T-104	T-105	T-106	T-107	T-108	T-109	T-110	T-111
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	1.52E+04	1.89E+01	2.11E+03	5.52E+03	8.69E--02			
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	1.01E+02	3.25E+01	1.61E+00	3.78E+01	5.06E--01	1.13E+02	1.51E+02	2.12E+02
Ca+2	1.34E+00	5.01E-01	8.60E-02	4.64E-01	9.75E--00	2.45E+01	2.42E+00	4.27E+00
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	1.17E+02		4.51E-01		1.24E-01	6.83E+00		
Cl-	8.63E+02	3.11E+02	3.59E+01	2.33E+02	2.57E--02	5.56E+02	1.34E+03	1.62E+03
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	2.06E+03	7.73E+02	1.33E+02	7.16E+02	8.61E--02	1.89E+03	3.74E+03	6.58E+03
Cr(OH)4-	9.62E+01	2.03E+01	4.14E+00	2.57E+01	4.91E--01	1.14E+02	7.75E+01	1.43E+02
Cs+	1.92E-01		1.08E-02		2.24E-02	9.42E-02		
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	1.64E+04	4.50E+03	3.22E+02	5.46E+03	2.94E--03	5.23E+03	2.10E+04	2.24E+04
Fe+3	8.90E+01	3.75E+01	4.46E+00	3.36E+01	3.18E--01	6.68E+01	1.84E+02	3.17E+02
H2O	2.80E+06	6.22E+05	2.21E+05	9.55E+05	4.72E--05	8.12E+05	2.61E+06	1.98E+06
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+							8.56E+01	3.07E+02
La+3							5.84E-01	2.10E+00
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4							1.14E-02	4.10E-02
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	3.23E+05	7.27E+04	1.05E+04	1.09E+05	5.65E--04	9.93E+04	3.07E+05	2.40E+05
Ni+3	1.65E+00	7.06E-01	1.20E-01	6.04E-01	6.06E--00	1.51E+01	3.55E+00	6.59E+00
NO2-	1.15E+04	7.52E+02	2.02E+03	3.08E+03	1.36E--03	2.20E+03		
NO3-	1.09E+05	4.24E+04	6.49E+03	2.84E+04	4.16E--04	9.42E+04	1.99E+05	2.36E+05
OH-	1.48E+05	2.93E+04	3.88E+03	5.24E+04	1.70E--04	2.25E+04	1.21E+05	6.78E+04
Pb+4								
PO4-3	9.01E+04	1.85E+04	1.59E+03	3.21E+04	1.98E--04	3.71E+04	7.07E+04	4.44E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4						1.11E+02		
SO4-2	2.86E+03	5.63E+02	7.57E+01	7.62E+02	2.16E--03	5.16E+03	1.91E+03	2.07E+03
Sr+2	2.03E-03	2.47E-04	7.71E-02	1.79E-03	1.79E-04		1.11E+01	3.99E+01
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC							2.55E+02	8.87E+02
UO2+2	2.42E+01	2.54E+00	9.85E+01	3.07E+00	2.64E--00	5.43E+00	1.17E+00	1.24E+00
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O	1.86E+02	8.80E+00	3.39E+00	6.51E+01	1.04E--01			
Total	3.52E+06	7.92E+05	2.48E+05	1.19E+06	6.16E--05	1.08E+06	3.34E+06	2.61E+06

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	T-112	T-201	T-202	T-203	T-204	TX-101	TX-102	TX-103
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-						1.18E+04	7.14E+03	9.95E+03
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	3.06E+01	1.06E+01	7.99E+00	1.33E+01	1.44E-01	9.25E-01	1.28E+01	1.79E+01
Ca+2	6.56E-01	2.73E-01	2.05E-01	3.41E-01	3.70E-01	2.82E+00	3.39E+01	4.72E+01
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3							4.29E-02	4.15E-01
Cl-	2.10E+02	1.12E+02	8.45E+01	1.40E+02	1.52E-02	5.50E+02	1.52E+03	2.12E+03
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	1.01E+03	4.21E+02	3.17E+02	5.26E+02	5.71E-02	1.11E+03	2.87E+03	4.02E+03
Cr(OH)4-	2.31E+01	6.18E+00	4.64E+00	7.71E+00	8.37E-00	1.09E+03	2.15E+03	3.00E+03
Cs+							3.77E-02	5.24E-02
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	8.74E+02	8.71E+03	6.55E+03	1.09E+04	1.18E-04	4.29E+01	5.96E+02	8.30E+02
Fe+3	4.98E+01	1.40E+01	1.06E+01	1.75E+01	1.90E-01	2.64E+01	9.28E+01	1.29E+02
H2O	1.61E+05	1.77E+05	1.33E+05	2.21E+05	2.40E-05	9.30E+05	1.84E+06	2.55E+06
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+		2.39E+02	1.80E+02	2.99E+02	3.24E-02			
La+3		1.63E+00	1.23E+00	2.04E+00	2.21E-00			
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4		3.19E-02	2.40E-02	3.98E-02	4.32E-02			
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	2.02E+04	2.15E+04	1.62E+04	2.69E+04	2.92E-04	4.82E+04	2.54E+05	3.54E+05
Ni+3	1.03E+00	4.21E-01	3.16E-01	5.25E-01	5.70E-01	2.02E+00	2.09E+01	2.91E+01
NO2-							2.41E+04	3.35E+04
NO3-	2.89E+04	2.12E+04	1.60E+04	2.65E+04	2.88E-04	1.15E+05	6.09E+05	8.72E+05
OH-	3.87E+03	1.50E+03	1.13E+03	1.88E+03	2.04E-03		6.47E+03	1.89E+03
Pb+4								
PO4-3	3.32E+03	7.72E+02	5.80E+02	9.63E+02	1.05E-03	3.68E+02	1.85E+03	2.60E+03
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	2.82E+02	1.29E+01	9.69E+00	1.61E+01	1.75E-01	8.10E+02	4.22E+03	5.90E+03
Sr+2	2.32E-04	3.11E+01	2.34E+01	3.88E+01	4.21E-01	4.33E-04	1.66E-05	3.69E-05
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC		7.64E+02	5.75E+02	9.54E+02	1.04E-03	3.21E+01	5.28E+02	7.36E+02
UO2+2	1.68E-01					2.27E+02	2.54E+02	3.66E+02
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O								
Total	2.20E+05	2.32E+05	1.75E+05	2.90E+05	3.15E+05	1.11E+06	2.76E+06	3.84E+06

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	TX-104	TX-105	TX-106	TX-107	TX-108	TX-109	TX-110	TX-111
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	2.96E+03	3.87E+04	2.95E+04	1.74E+03	8.24E--03	1.62E+04	2.84E+04	2.21E+04
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	5.32E+00	6.96E+01	5.18E+01	3.12E+00	1.48E--01	1.11E+02	5.63E+01	4.47E+01
Ca+2	1.41E+01	1.84E+02	1.37E+02	8.28E+00	3.34E--01	1.36E+00	1.30E+02	9.99E+01
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3		5.03E-01			2.55E--02	2.20E+02	1.71E+02	4.45E+01
Cl-	6.37E+02	8.25E+03	6.15E+03	3.72E+02	1.79E--03	6.86E+02	5.90E+03	4.57E+03
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	2.87E+03	1.56E+04	1.09E+04	1.69E+03	3.35E--03	2.10E+03	1.04E+04	8.04E+03
Cr(OH)4-	8.93E+02	1.17E+04	8.78E+03	5.24E+02	2.47E--03	7.54E+01	8.25E+03	6.34E+03
Cs+		3.66E-01	5.92E-01		2.19E--00	1.57E+01	6.61E+00	1.50E+00
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	2.47E+02	3.23E+03	2.40E+03	1.45E+02	6.88E--02	1.60E+04	3.56E+03	3.14E+03
Fe+3	4.13E+01	5.03E+02	3.99E+02	2.38E+01	3.30E--01	9.86E+01	3.61E+02	2.78E+02
H2O	8.76E+05	9.91E+06	7.34E+06	5.02E+05	2.13E--06	2.80E+06	7.18E+06	5.57E+06
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+								
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.19E+05	1.37E+06	1.02E+06	6.83E+04	2.95E--05	3.21E+05	9.92E+05	7.69E+05
Ni+3	8.76E+00	1.13E+02	8.47E+01	5.13E+00	1.56E--01	1.77E+00	8.03E+01	6.17E+01
NO2-	9.98E+03	1.31E+05	9.70E+04	5.86E+03	2.78E--04	9.03E+03	9.33E+04	7.21E+04
NO3-	2.61E+05	3.39E+06	2.53E+06	1.53E+05	7.27E--05	8.36E+04	2.41E+06	1.86E+06
OH-	8.52E+03	6.07E+03	1.58E+03	4.23E+03	1.17E--03	1.54E+05	1.24E+04	1.23E+04
Pb+4								
PO4-3	2.18E+03	9.80E+03	6.91E+03	1.07E+03	1.66E--03	9.42E+04	1.31E+04	1.18E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	3.86E+03	2.25E+04	1.61E+04	1.95E+03	5.34E--03	2.24E+03	1.55E+04	1.20E+04
Sr+2		1.62E-04			2.61E-04	7.48E-03	5.24E-03	2.47E-03
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	2.13E+02	2.87E+03	2.13E+03	1.26E+02	6.07E--02		1.99E+03	1.51E+03
UO2+2	1.06E+03	1.53E+03	6.28E+02	7.92E+02	3.38E--02	9.02E+00	5.48E+02	4.23E+02
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O						1.91E+02	1.40E+01	1.45E+01
Total	1.29E+06	1.49E+07	1.11E+07	7.41E+05	3.20E--06	3.50E+06	1.08E+07	8.35E+06

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	TX-112	TX-113	TX-114	TX-115	TX-116	TX-117	TX-118	TY-101
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	4.02E+04	3.46E+04	3.05E+04	4.06E+04	1.77E+04	2.66E+04	2.36E+04	
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	1.19E+02	1.02E+02	1.69E+02	7.31E+01	6.60E+02	4.31E+02	4.73E+01	1.33E+02
Ca+2	2.01E+02	1.30E+02	1.69E+02	1.93E+02	2.24E+02	2.12E+02	9.69E+01	2.00E+01
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	2.25E+02	1.45E+02	4.04E+01	6.25E+01	3.37E+01	1.37E+01	1.40E+02	5.67E+00
Cl-	8.80E+03	6.13E+03	7.04E+03	8.75E+03	7.03E+03	7.67E+03	4.79E+03	4.99E+02
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	1.59E+04	1.12E+04	1.33E+04	1.55E+04	1.74E+04	1.66E+04	8.58E+03	2.45E+03
Cr(OH)4-	1.22E+04	8.24E+03	9.29E+03	1.22E+04	6.21E+03	8.56E+03	5.99E+03	9.14E+01
Cs+	1.16E+00	3.98E-01	1.16E+00	6.48E-01	2.75E-01	1.12E-01	1.84E+01	1.07E-01
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	5.53E+03	9.89E+03	7.93E+03	3.39E+03	3.06E+04	2.00E+04	2.20E+03	8.83E+03
Fe+3	5.49E+02	4.00E+02	4.63E+02	5.36E+02	6.11E+02	5.78E+02	2.72E+02	7.18E+01
H2O	1.06E+07	8.26E+06	8.58E+06	1.04E+07	9.20E+06	9.65E+06	5.26E+06	1.72E+06
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+								
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.46E+06	1.11E+06	1.18E+06	1.44E+06	1.20E+06	1.29E+06	7.29E+05	2.00E+05
Ni+3	1.24E+02	8.06E+01	1.04E+02	1.19E+02	1.38E+02	1.31E+02	5.99E+01	1.43E+01
NO2-	1.37E+05	9.62E+04	1.05E+05	1.37E+05	7.47E+04	9.90E+04	6.72E+04	2.43E+03
NO3-	3.57E+06	2.43E+06	2.76E+06	3.57E+06	2.15E+06	2.70E+06	1.79E+06	8.06E+04
OH-	1.12E+04	7.43E+04	2.51E+04	3.43E+03	1.23E+05	7.57E+04	2.49E+03	8.62E+04
Pb+4								
PO4-3	2.49E+04	5.11E+04	4.53E+04	9.72E+03	2.11E+05	1.32E+05	8.52E+03	6.84E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								1.57E+02
SO4-2	2.45E+04	1.62E+04	2.21E+04	2.37E+04	3.90E+04	3.26E+04	1.16E+04	4.30E+03
Sr+2	3.92E-04	4.20E-04	3.93E-05	1.53E-03	1.99E-03	3.79E-03	3.90E-02	8.70E-04
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	2.98E+03	1.90E+03	2.23E+03	3.01E+03	1.31E+03	1.96E+03	1.44E+03	2.13E+03
UO2+2	8.04E+02	5.47E+02	6.12E+02	8.71E+02	3.99E+02	5.59E+02	3.96E+02	6.48E+00
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O		9.08E+01	1.95E+00					6.39E+01
Total	1.59E+07	1.21E+07	1.28E+07	1.57E+07	1.31E+07	1.41E+07	7.92E+06	2.18E+06

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	TY-102	TY-103	TY-104	TY-105	TY-106	U-101	U-102	U-103
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	2.18E+03	2.63E+03					2.48E+04	5.04E+04
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	6.04E+01	3.46E+01					4.92E+01	7.63E+01
Ca+2	2.29E+01	1.78E+01	5.96E-01	2.19E+00	2.22E-01	8.41E-02	7.43E+01	7.65E+01
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	4.42E+00	2.79E+00	2.29E+00	2.82E-02			4.98E+01	1.41E-04
Cl-	7.58E+02	1.47E+03	4.86E+02	1.78E+03	1.81E-02	8.60E+00	4.80E+03	7.01E+03
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	1.79E+03	4.22E+03	1.62E+03	5.94E+03	6.02E-02	2.14E+03	1.47E+04	4.19E+04
Cr(OH)4-	7.36E+02	1.06E+03	7.24E+00	2.66E+01	2.70E-00	2.66E+00	4.73E+03	3.75E+03
Cs+	1.23E+00	2.47E+00	2.81E-02	4.90E-01		1.06E+00	2.67E+00	4.37E-04
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	2.80E+03	3.35E+03					2.28E+03	3.54E+03
Fe+3	6.26E+01	1.34E+02	5.37E+01	1.97E+02	2.00E-01	3.59E+00	2.54E+02	2.14E+02
H2O	9.77E+05	1.92E+06	2.53E+05	9.31E+05	9.43E-04	2.31E+05	5.14E+06	6.58E+06
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+							4.08E+02	1.54E+03
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4							2.71E+01	1.02E+02
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.29E+05	2.45E+05	3.24E+04	1.19E+05	1.21E-04	1.73E+04	6.89E+05	8.45E+05
Ni+3	1.41E+01	1.30E+01	8.92E-01	3.28E+00	3.32E-01	1.14E-01	4.75E+01	4.73E+01
NO2-	8.70E+03	1.22E+04					9.14E+04	1.46E+05
NO3-	2.45E+05	3.75E+05	4.84E+04	1.78E+05	1.80E-04	1.58E+03	1.41E+06	1.26E+06
OH-	1.11E+04	5.37E+04	7.52E+03	2.76E+04	2.80E-03	1.02E+04	6.83E+04	1.96E+05
Pb+4							6.12E-02	2.31E-01
PO4-3	1.91E+04	2.72E+04	6.98E+02	2.57E+03	2.60E-02	1.81E+03	1.57E+04	1.65E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	3.83E+03	1.02E+04	5.73E+03	2.11E+04	2.13E-03	2.70E+03	1.58E+04	1.75E+04
Sr+2	6.16E-04	5.55E-03	3.14E-04	1.30E-02	4.78E-04	6.82E-04	2.61E-03	
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	1.61E+02	1.61E+03					4.12E+03	9.00E+03
UO2+2	4.76E+01	5.36E+02	3.28E+02	1.20E+03	1.22E+02	1.22E+03	2.78E+03	1.89E+03
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O		4.17E+01						
Total	1.40E+06	2.66E+06	3.51E+05	1.29E+06	1.31E+05	2.68E+05	7.49E+06	9.18E+06

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	U-112	U-201	U-202	U-203	U-204	TOTAL	SALTWELL LIQ. PUMPED	NET TOTAL
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-	3.68E+03	8.29E+02	8.29E+02	4.15E+02	4.15E+02	2.60E+06	5.36E+05	2.07E+06
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	9.24E+00					9.58E+03		9.58E+03
Ca+2	1.79E-01	2.07E-02	2.07E-02	1.03E-02	1.03E-02	6.42E+03		6.42E+03
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	3.51E+01	1.85E+00	1.84E+00	1.62E+00	3.70E-01	2.35E+03		2.35E+03
Cl-	1.05E+02	5.94E+00	5.94E+00	2.97E+00	2.97E+00	4.07E+05		4.07E+05
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	2.77E+02	3.19E+01	3.19E+01	1.60E+01	1.60E+01	1.62E+06	4.70E+04	1.57E+06
Cr(OH)4-	1.01E+02	7.75E-01	7.75E-01	3.87E-01	3.87E-01	3.39E+05	2.71E+04	3.12E+05
Cs+	1.73E+00	2.74E-01	2.87E-01	2.53E-01	6.72E-02	5.26E+02	1.85E+01	5.08E+02
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	1.33E+03					7.86E+05	6.38E+03	7.79E+05
Fe+3	1.15E+01	9.67E-01	9.67E-01	4.83E-01	4.83E-01	2.37E+04		2.37E+04
H2O	4.58E+05	8.28E+04	8.28E+04	4.23E+04	3.47E+04	4.05E+08	1.25E+07	3.99E+08
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+						5.29E+04		5.29E+04
La+3						1.88E+01		1.88E+01
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4						2.41E+03		2.41E+03
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	3.26E+04	2.20E+03	2.20E+03	1.10E+03	1.10E+03	5.68E+07	3.31E+06	5.35E+07
Ni+3	2.40E-01	2.99E-02	2.99E-02	1.49E-02	1.49E-02	4.06E+03		4.06E+03
NO2-	2.15E+03	9.34E+02	9.34E+02	4.67E+02	4.67E+02	6.45E+06	1.48E+06	4.97E+06
NO3-	1.72E+04	1.64E+03	1.64E+03	8.19E+02	8.19E+02	9.87E+07	2.04E+06	9.67E+07
OH-	1.33E+04	7.15E+02	7.15E+02	3.58E+02	3.55E+02	9.25E+06	3.67E+05	9.25E+06
Pb+4						3.29E+03		3.29E+03
PO4-3	7.82E+03					2.90E+06	9.70E+04	2.81E+06
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4						4.06E+02		4.06E+02
SO4-2	2.04E+02	1.80E+00	1.80E+00	8.99E-01	8.99E-01	1.63E+06		1.63E+06
Sr+2	5.21E-02	3.46E-02	3.46E-02	1.73E-02	1.73E-02	3.63E+02	1.20E+00	3.62E+02
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ti+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC						4.58E+05	2.16E+05	2.26E+05
UO2+2	6.58E+01	4.00E+01	4.00E+01	2.00E+01	3.11E-01	9.67E+04		9.67E+04
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O	1.03E+01					6.68E+03		6.68E+03
Total	5.37E+05	8.92E+04	8.92E+04	4.55E+04	3.78E+04	6.47E+08	2.07E+07	5.73E+08

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	A-101	A-102	A-103	A-104	A-105	A-106	AX-101	AX-102
Ag+								
Al+3	2.57E+02	8.64E+00	8.07E+01			8.53E+00	1.86E+02	6.51E+02
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	7.00E+01	9.76E+00	1.20E+01	1.87E+01	1.96E-01	3.80E+01	1.44E+01	1.92E+00
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	3.04E+00	1.09E-01	9.54E-01			2.39E-01	2.23E+00	8.28E-02
Ca+2	1.12E+02	3.27E+01	6.01E+01	3.42E+02	2.33E+02	5.55E+02	1.96E+02	4.47E+02
Cancrinite	5.37E+04	5.05E+03	2.96E+04			6.44E+04	6.26E+04	1.98E+03
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3		1.51E+03	5.56E+01		1.05E-03			
Cl-	1.78E+02	7.72E+00	6.52E+01	3.70E+00	3.15E-01	3.00E+01	1.37E+02	6.26E+00
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	5.32E+02	3.17E+01	1.85E+02	4.62E+01	3.15E+01	2.00E+02	4.23E+02	7.53E+01
Cr+3	2.23E+01	7.66E-01	7.72E+00	1.14E+01	7.07E-01	1.03E+01	1.59E+01	1.38E+00
Cs+		1.80E+00	1.17E-01		2.15E-01			
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	1.52E+02	5.47E+00	4.90E+01			1.20E+01	1.12E+02	4.22E+00
Fe+3	6.83E+02	1.19E+02	1.47E+02	1.53E+03	3.84E+03	2.17E+03	2.15E+03	1.62E+03
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	2.90E+01	1.04E+00	9.46E+00			2.28E+00	2.15E+01	8.12E-01
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4	9.34E+02	3.34E+01	3.34E+02			7.36E+01	7.09E+02	2.80E+01
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	6.79E+03	3.46E+02	2.63E+03	7.39E+02	1.30E+03	1.98E+03	5.96E+03	2.46E+02
Ni+3	1.14E+02	6.87E-01	6.22E+01	5.06E+02	3.42E+02	3.72E+02	1.97E+02	9.69E+01
NO2-	8.22E+02	1.16E+02		1.51E-02	3.12E-02	2.53E+02	2.37E+03	8.84E+01
NO3-	2.38E+04	8.48E+02	9.15E+03	8.80E+01	5.93E+00	1.94E+03	1.90E+04	8.39E+02
OH-		6.26E+02		3.95E+03	7.44E+03	3.01E+03	8.12E+02	2.75E+03
Pb+4	2.76E+00	9.91E-02	8.72E-01			2.17E-01	2.03E+00	1.66E-01
PO4-3	4.81E+02	1.73E+01	1.66E+02	1.25E+02		1.35E+02	3.54E+02	3.55E+01
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4				6.91E+02	5.80E+02			
SO4-2	5.12E+02	1.88E+01	2.47E+02	2.38E+00	1.67E+02	4.92E+01	5.13E+02	2.01E+01
Sr+2	1.62E+01	3.52E+01	9.52E-02	1.91E+01	1.55E+00		8.19E-01	9.36E-01
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ti+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	3.72E+02	1.34E+02	1.17E+02			1.12E+03	3.97E+02	1.16E+01
UO2+2	1.08E+03	1.64E-01	2.34E+00	3.57E+02	1.15E+04	3.69E-01	6.09E+03	1.82E-01
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O								
Total	9.06E+04	8.95E+03	4.30E+04	8.43E+03	2.55E+04	7.64E+04	1.02E+05	8.91E+03

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	AX-103	AX-104	B-101	B-102	B-103	B-104	B-105	B-106
Ag+								
Al+3	1.74E+01		2.76E+03	4.64E+02		1.33E+04	3.90E+02	
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	1.04E-02	2.50E+01	1.61E+01	1.23E+00	8.01E-01	1.16E-01	7.76E-01	6.62E-02
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	2.57E-01		1.43E+00	4.59E-01	1.07E+00	7.30E+03	9.33E+02	2.22E+00
Ca+2	1.79E+02	8.61E+01	1.03E+03	3.45E+01	2.37E+01	1.31E+03	2.10E+02	1.89E+01
Cancrinite	3.03E+04		3.83E+04	1.77E+03	2.07E+03	4.48E+04	2.56E+04	4.29E+03
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	1.75E+02	1.83E+00		2.62E+01	9.00E+01	2.00E+03	1.48E+02	1.73E+01
Cl-	1.77E+01	1.16E-01	2.02E+01	2.53E+00	5.59E+00	3.58E+01	3.13E+01	1.14E+01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	7.19E+01	1.16E+01	2.76E+02	4.25E+01	5.07E+01	1.96E+02		3.77E+01
Cr+3	2.27E+00	2.61E-01	1.78E+00	1.29E+00	1.21E+00	8.52E+01	1.33E+01	1.02E+00
Cs+	1.03E-01	6.97E-01		1.47E-02	5.95E-02	2.78E-02	2.32E-01	1.05E-02
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	1.32E+01		6.66E+01	2.13E+01	4.97E+01	5.83E+02	3.15E+02	1.03E+02
Fe+3	2.84E+03	1.42E+03	4.46E+03	1.16E+02	4.93E+01	7.65E+03	9.69E+02	1.31E+00
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	2.55E+00							
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4	8.99E+01							
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.60E+03	4.81E+02	1.58E+03	2.68E+02	4.74E+02	7.95E+03	2.85E+03	7.80E+02
Ni+3	2.55E+02	1.26E+02	3.16E+03	4.43E+01	2.22E+01	1.72E+03	2.34E+02	7.26E+00
NO2-	2.75E+02	1.15E-02	2.99E+01	9.82E+00	2.19E+01	5.27E+01		
NO3-	2.71E+03	2.19E+00	1.39E+03	3.91E+02	9.05E+02	1.73E+03		7.13E+02
OH-	4.09E+03	2.75E+03	1.71E+04	1.21E+03	1.07E+02	8.14E+02		
Pb+4	2.35E-01		5.51E-03					
PO4-3	4.09E+01		9.06E+02	5.22E+02	7.23E+02	7.44E+04	1.12E+04	7.30E+02
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4		2.14E+02			4.24E-01			7.72E-01
SO4-2	1.90E+02	6.17E+01	8.11E+01	2.85E+01	5.65E+01	7.84E+01	2.47E+02	1.01E+02
Sr+2	1.24E+00	4.61E+01		1.60E-03	4.81E-02	3.96E-02	5.94E-03	7.81E-04
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	3.27E+01		7.26E+01					
UO2+2	8.51E+03	4.26E+03	4.44E+04	3.39E+03	3.18E+03	6.01E+01	8.15E+00	1.12E-01
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O						3.85E+03	5.10E+02	
Total	5.15E+04	9.49E+03	1.16E+05	8.34E+03	7.83E+03	1.68E+05	4.37E+04	6.81E+03

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	B-107	B-108	B-109	B-110	B-111	B-112	B-201	B-202
Ag+					3.20E-05			
Al+3	2.26E+04	4.19E+03	7.73E+03			1.82E+00		
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	9.38E-01	7.00E-01	8.50E-01	1.65E+01	2.55E+00	6.74E+00		1.12E-01
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	4.69E+03	9.73E+02	1.61E+00	9.45E+03	8.69E+03	5.46E+02	1.05E+03	1.02E+03
Ca+2	7.39E+02	1.63E+02	2.20E+02	1.90E+03	1.97E+03	1.11E+02	3.47E+02	3.35E+02
Cancrinite	2.23E+04	9.02E+03	6.17E+03		1.09E+03	4.98E+03		
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	9.11E+02	1.83E+02	1.05E+02		3.59E+00	1.24E+03		
Cl-	9.89E+01	9.11E+00	9.32E+00	4.53E+01	4.19E+01	4.87E+00	5.92E+00	5.72E+00
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	9.96E+01	4.01E+01	5.51E+01				4.68E+01	4.52E+01
Cr+3	6.34E+01	1.36E+01	5.40E+00	9.32E+01	8.62E+01	6.26E+00	1.22E+01	1.18E+01
Cs+	2.71E-01	1.90E-01	7.65E-02	3.80E-01	3.39E+00	1.39E+00		
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	3.60E+02	1.28E+02	7.46E+01	6.49E+02	5.95E+02	3.97E+01	4.58E+02	4.43E+02
Fe+3	4.16E+03	8.63E+02	8.70E+02	1.17E+04	1.33E+04	6.51E+02	1.39E+03	1.34E+03
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+						3.45E-01	1.53E+02	1.48E+02
La+3							1.62E+02	1.56E+02
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4							6.16E+03	5.95E+03
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	5.71E+03	1.60E+03	6.76E+02	8.65E+03	8.71E+03	6.12E+02	8.97E+02	8.67E+02
Ni+3	9.09E+02	1.92E+02	3.19E+02	2.60E+03	2.61E+03	1.49E+02	5.05E+02	4.88E+02
NO2-	3.89E+01	3.15E+01	3.86E+01					
NO3-	3.60E+02	1.04E+03	1.39E+03				2.14E+02	2.07E+02
OH-	2.01E+04	3.01E+03	1.57E+04				2.99E+03	2.89E+03
Pb+4					1.11E-03	4.36E-02		
PO4-3	6.02E+04	1.28E+04	5.29E+02	7.27E+04	6.68E+04	4.21E+03	1.16E+03	1.12E+03
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4				1.13E+03	1.36E+03			
SO4-2	1.95E+01	5.65E+01	7.36E+01	4.34E+01	1.39E+02	1.41E+01	2.63E-01	2.54E-01
Sr+2	1.17E-01	2.10E-01	2.73E-02	4.69E-01	1.07E+00	6.60E-01	3.08E+03	2.97E+03
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC					2.72E-01	1.66E+00	8.49E+01	8.21E+01
UO2+2	7.31E+01	1.52E+01	2.79E+03	1.23E+03	7.95E+03	1.09E+00		
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O	5.21E+03	1.08E+03						
Total	1.49E+05	3.55E+04	3.68E+04	1.10E+05	1.13E+05	1.26E+04	1.87E+04	1.81E+04

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Soluble (kg)	U-104	U-105	U-106	U-107	U-108	U-109	U-110	U-111
Ag+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Al(OH)4-		3.80E+04	2.19E+04	4.38E+04	5.51E+04	5.27E+04	4.62E+03	3.88E+04
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3		7.69E+01	2.84E+01	7.25E+01	8.13E+01	7.79E+01	2.85E+01	4.28E+01
Ca+2	1.53E-01	4.45E+01	4.13E+01	2.15E+01	6.59E+01	5.72E+01	4.70E-01	3.90E+01
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3				1.06E+01	3.82E-04	9.70E-02	6.16E-03	2.85E+00
Cl-	1.57E+01	6.44E+03	2.83E+03	5.91E+03	7.23E+03	6.90E+03	3.82E+02	5.60E+03
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	3.91E+03	1.96E+04	2.24E+04	1.95E+04	3.54E+04	3.52E+04	1.55E+03	2.22E+04
Cr(OH)4-	4.86E+00	3.27E+03	1.81E+03	2.20E+03	3.49E+03	3.31E+03	4.38E+01	2.54E+03
Cs+		8.21E-04		1.50E+00	1.18E-03	3.67E-01	1.90E-02	4.00E-01
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-		3.57E+03	1.32E+03	3.37E+03	3.77E+03	3.62E+03	5.70E+03	3.42E+03
Fe+3	6.55E+00	1.43E+02	1.17E+02	5.12E+01	1.97E+02	9.88E+01	2.65E+01	9.22E+01
H2O	4.21E+05	5.14E+06	3.08E+06	4.51E+06	6.17E+06	6.08E+06	9.98E+05	4.42E+06
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+		1.13E+03	6.37E+02	1.18E+03	1.56E+03	1.48E+03		1.17E+03
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4		7.54E+01	4.24E+01	7.81E+01	1.03E+02	9.87E+01		7.80E+01
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	3.15E+04	6.62E+05	3.98E+05	5.68E+05	7.93E+05	7.77E+05	1.16E+05	5.65E+05
Ni+3	2.08E-01	2.82E+01	2.55E+01	1.07E+01	4.10E+01	3.01E+01	5.33E-01	2.34E+01
NO2-		1.42E+05	5.56E+04	1.43E+05	1.55E+05	1.53E+05	5.12E+03	1.22E+05
NO3-	2.89E+03	9.73E+05	6.27E+05	6.71E+05	1.16E+06	1.10E+06	5.04E+04	7.77E+05
OH-	1.86E+04	1.50E+05	8.66E+04	1.66E+05	1.86E+05	1.92E+05	5.08E+04	1.43E+05
Pb+4		1.70E-01	9.57E-02	1.77E-01	2.34E-01	2.23E-01		1.76E-01
PO4-3	3.29E+03	1.83E+04	7.47E+03	1.56E+04	1.48E+04	1.59E+04	2.89E+04	1.26E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	4.92E+03	1.46E+04	9.39E+03	1.35E+04	1.35E+04	1.54E+04	2.38E+03	9.42E+03
Sr+2				3.33E-01	2.16E-01	2.08E-01	1.58E-02	2.04E-03
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC		8.69E+03	3.27E+03	8.60E+03	9.66E+03	9.26E+03		7.66E+03
UO2+2	2.23E+03	1.99E+03	1.50E+03	2.60E+03	6.36E+02	1.68E+03	5.17E+02	9.31E+01
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O							3.87E+01	3.85E+00
Total	4.89E+05	7.19E+06	4.32E+06	6.17E+06	8.61E+06	8.45E+06	1.27E+06	6.13E+06

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	B-203	B-204	BX-101	BX-102	BX-103	BX-104	BX-105	BX-106
Ag+						3.45E-05	1.24E-05	4.27E-05
Al+3			1.10E+03	3.24E+03	5.20E+03			
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2			4.64E-01	1.31E+00	6.30E-01	3.36E+00	1.57E+00	1.63E+01
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	1.88E+03	1.84E+03						
Ca+2	6.20E+02	6.08E+02	3.91E+02	2.50E+02	3.91E+02	2.00E+02	2.24E+02	1.51E+02
Cancrinite			1.43E+04	6.50E+01	1.00E+02			
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3				7.64E+02		4.43E-02	6.27E+02	1.77E+04
Cl-	1.06E+01	1.04E+01	5.97E+00	1.12E+00	1.75E+00	8.48E-01	9.49E-01	6.41E-01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	8.36E+01	8.20E+01	3.85E+02	3.90E+02	6.04E+02	4.45E+02	4.99E+02	3.37E+02
Cr+3	2.17E+01	2.13E+01	6.95E+00	1.02E+01	1.58E+01	9.84E+00	1.10E+01	7.44E+00
Cs+				1.57E+00		3.75E+00	8.95E-01	3.35E+01
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	8.19E+02	8.03E+02						
Fe+3	2.48E+03	2.44E+03	1.74E+03	9.01E+02	1.41E+03	6.65E+02	7.45E+02	5.03E+02
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	2.73E+02	2.68E+02						
La+3	2.89E+02	2.83E+02						
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4	1.10E+04	1.08E+04						
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.60E+03	1.57E+03	1.27E+03	1.19E+03	1.84E+03	1.35E+03	1.51E+03	1.02E+03
Ni+3	9.02E+02	8.85E+02	1.51E+03	3.39E+02	5.30E+02	2.56E+02	2.87E+02	1.94E+02
NO2-			2.14E-01	2.21E+00	3.55E+00			
NO3-	3.83E+02	3.76E+02	9.74E+01	4.15E+01	6.51E+01	2.99E+01	3.35E+01	2.27E+01
OH-	5.34E+03	5.23E+03	9.47E+03	1.06E+04	1.63E+04	4.22E+03	4.96E+03	9.64E+03
Pb+4								
PO4-3	2.07E+03	2.03E+03	3.61E+03	4.32E+03	6.68E+03	5.07E+03	5.68E+03	3.84E+03
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4						1.39E+00	1.56E+00	1.05E+00
SO4-2	4.70E-01	4.61E-01	7.60E+01	8.80E+01	1.36E+02	1.03E+02	1.15E+02	7.80E+01
Sr+2	5.49E+03	5.39E+03		6.25E-01	1.22E+00	9.17E-02	1.97E+01	8.06E+00
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	1.52E+02	1.49E+02	3.07E+01					
UO2+2			4.85E+04	3.81E+04	5.90E+04	4.34E+04	4.86E+04	3.29E+04
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O								
Total	3.34E+04	3.28E+04	8.25E+04	6.03E+04	9.22E+04	5.58E+04	6.34E+04	6.64E+04

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	BX-107	BX-108	BX-109	BX-110	BX-111	BX-112	BY-101	BY-102
Ag+								
Al+3	4.74E+04	3.58E+03	2.20E+04	2.14E+04	4.44E+03	1.79E+04	5.42E+01	4.84E+01
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	4.12E-01	2.47E-01	1.65E+00	1.58E+00	1.41E+00	2.36E-01	4.23E+00	1.40E+00
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	9.84E+03	7.45E+02	4.57E+03	4.45E+03	9.18E+02	3.78E+03	9.19E-01	8.21E-01
Ca+2	1.55E+03	1.17E+02	1.39E+04	7.07E+02	1.73E+02	6.00E+02	2.35E+02	1.36E+02
Cancrinite	4.67E+04	3.54E+03	2.17E+04	2.53E+04	2.21E+04	2.03E+04	3.47E+04	3.09E+04
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	3.20E+03	7.06E+00	4.68E-01	1.96E+03	2.01E+03	1.55E+03	2.58E+03	7.47E+02
Cl-	3.23E+01	2.44E+00	4.60E+02	2.05E+01	2.83E+01	1.55E+01	5.00E+01	4.43E+01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	2.09E+02	1.58E+01	3.22E+03	1.11E+02	9.24E+01	9.06E+01	5.43E+02	3.22E+02
Cr+3	1.33E+02	1.01E+01	3.10E+02	6.23E+01	2.22E+01	5.13E+01	2.79E+01	2.14E+01
Cs+	8.22E-02	2.70E-03	9.29E-02	2.21E+00	2.27E+00	4.11E-02	2.91E+00	8.44E-01
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	7.54E+02	5.71E+01	3.51E+02	3.47E+02	9.50E+01	3.18E+02	4.78E+01	4.27E+01
Fe+3	8.73E+03	6.61E+02	9.66E+04	3.95E+03	8.18E+02	3.35E+03	6.03E+02	2.95E+02
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+				9.04E-01	3.88E+00		7.54E+00	6.74E+00
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.20E+04	9.06E+02	2.90E+04	5.81E+03	2.65E+03	4.84E+03	4.14E+03	3.21E+03
Ni+3	1.91E+03	1.44E+02	1.95E+04	8.64E+02	1.89E+02	7.33E+02	2.52E+02	1.31E+02
NO2-	8.16E+01	6.18E+00	3.79E+01	1.38E+02	4.42E+02	4.38E+01	8.46E+02	5.75E+02
NO3-	7.55E+02	5.71E+01	8.85E+03	2.19E+03	7.99E+03	8.04E+02	1.54E+04	1.38E+04
OH-	4.27E+04	3.15E+03	1.23E+05	1.92E+04	3.31E+03	1.59E+04	2.19E+03	
Pb+4				1.14E-01	4.90E-01		9.53E-01	8.51E-01
PO4-3	1.26E+05	9.56E+03	7.69E+04	5.71E+04	1.19E+04	4.86E+04	4.74E+03	2.39E+03
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	4.09E+01	3.09E+00	2.05E+03	5.14E+01	1.45E+02	4.37E+01	3.68E+02	2.91E+02
Sr+2	2.18E-01	2.38E-02	1.92E+00	1.07E+00	1.07E+00	2.18E-02	1.67E+00	6.85E-01
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC				4.14E+00	2.00E+01		3.97E+01	3.55E+01
UO2+2	1.53E+02	1.16E+01	2.30E+04	6.99E+01	1.69E+01	5.88E+01	3.91E+04	1.91E+04
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O	1.09E+04	8.28E+02	5.08E+03	4.94E+03	1.02E+03	4.19E+03		
Total	3.13E+05	2.34E+04	4.51E+05	1.49E+05	5.84E+04	1.23E+05	1.06E+05	7.21E+04

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	BY-103	BY-104	BY-105	BY-106	BY-107	BY-108	BY-109	BY-110
Ag+								
Al+3	5.35E+03	2.69E+01	4.02E+01	7.65E+01	1.19E+02		6.01E+01	3.62E+03
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	2.75E+00	3.68E+00	3.35E+00	2.76E+00	1.87E+00	1.81E+00	1.25E+00	2.75E+00
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	1.03E+00	1.67E+04	1.58E+04	1.01E+04	7.92E+03	1.67E+04	1.02E+00	1.64E+04
Ca+2	2.04E+02	2.39E+03	2.36E+03	1.52E+03	1.76E+03	2.39E+03	2.36E+02	2.39E+03
Cancrinite	3.87E+04	9.11E+04	9.58E+04	9.37E+04	4.62E+04	5.66E+04	3.84E+04	8.66E+04
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	1.34E+02	2.63E+03	2.04E+03	2.62E+03	9.55E+02	1.48E+03	8.37E+02	2.34E+03
Cl-	5.58E+01	8.11E+01	9.05E+01	1.09E+02	7.03E+01	6.44E+01	5.53E+01	8.47E+01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	1.78E+02	4.21E+02	6.12E+02	4.14E+02	3.55E+02	3.46E+02	5.48E+02	4.02E+02
Cr+3	2.46E+01	4.49E+01	5.16E+01	5.18E+01	3.97E+01	4.16E+01	2.98E+01	6.13E+01
Cs+	1.40E-01	2.97E+00	2.31E+00	2.95E+00	1.08E+00	1.39E+00	9.41E-01	2.64E+00
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	5.35E+01	4.52E+02	4.41E+02	3.34E+02	2.32E+02	4.42E+02	5.30E+01	5.10E+02
Fe+3	6.06E+02	1.30E+04	1.26E+04	8.05E+03	1.07E+04	1.34E+04	5.89E+02	1.33E+04
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	8.44E+00	5.53E+00	7.29E+00	1.17E+01	3.22E+00	1.36E+00	8.36E+00	4.50E+00
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	3.37E+03	9.33E+03	1.02E+04	9.20E+03	6.10E+03	8.14E+03	4.43E+03	1.01E+04
Ni+3	2.41E+02	4.75E+03	4.61E+03	3.68E+03	4.30E+03	6.38E+03	2.48E+02	6.21E+03
NO2-	9.51E+02	6.20E+02	8.17E+02	1.32E+03	3.61E+02	1.53E+02	9.38E+02	5.13E+02
NO3-	1.73E+04	1.22E+04	1.58E+04	2.46E+04	7.53E+03	3.99E+03	1.71E+04	1.04E+04
OH-	8.20E+03	1.58E+04	1.58E+04	7.76E+03	1.34E+04	1.87E+04	1.18E+03	1.77E+04
Pb+4	1.07E+00	6.98E-01	9.20E-01	1.48E+00	4.06E-01	1.72E-01	1.06E+00	5.68E-01
PO4-3	2.01E+02	1.65E+04	1.77E+04	1.04E+04	9.42E+03	1.70E+04	4.65E+03	2.94E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4						2.63E+02		
SO4-2	3.08E+02	1.07E+03	1.13E+03	9.56E+02	6.26E+02	9.27E+02	3.95E+02	9.77E+02
Sr+2	3.43E+00	1.40E+00	1.17E+00	1.78E+00	7.66E-01	2.48E-01	4.92E-01	1.63E+00
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	4.47E+01	5.41E+02	5.23E+02	5.39E+02	5.00E+02	8.49E+02	4.40E+01	8.20E+02
UO2+2	1.94E+03	1.91E+04	3.51E+04	1.16E+04	1.40E+04	1.92E+04	3.82E+04	1.77E+04
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O					3.18E+01			1.18E+03
Total	7.79E+04	2.07E+05	2.32E+05	1.87E+05	1.25E+05	1.67E+05	1.08E+05	2.21E+05

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	BY-111	BY-112	C-101	C-102	C-103	C-104	C-105	C-106
Ag+								
Al+3	6.73E+01	4.20E+01	2.21E+04	2.28E+05	2.07E+04	1.10E+05	8.13E+04	8.09E+03
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	2.32E+00	1.58E+00	1.50E+01	3.46E-01	1.48E+01	1.10E+00	4.53E+01	1.62E+01
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	1.14E+00	6.69E+02						
Ca+2	1.95E+02	2.54E+02	1.48E+03	6.15E+03	8.90E+02	3.97E+03	1.65E+03	2.65E+03
Cancrinite	4.30E+04	2.98E+04	1.86E+00	6.41E+02	3.27E+04	5.57E+04	1.46E+03	1.73E+05
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	2.64E+03	4.84E+02	1.64E-01				7.09E-03	
Cl-	6.16E+01	4.35E+01	3.42E+01	5.67E+01	6.23E+00	5.71E+01	1.77E+01	4.89E+01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	4.59E+02	2.10E+02	3.05E+02	9.32E+02	1.20E+02	6.93E+02	2.50E+02	5.35E+02
Cr+3	2.99E+01	1.93E+01	3.01E+01	1.53E+02	2.35E+01	8.36E+01	5.62E+01	5.91E+01
Cs+	2.98E+00	5.47E-01	1.02E+00				1.56E+00	
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	5.93E+01	5.42E+01		1.04E+03		2.13E+03		
Fe+3	4.27E+02	1.24E+03	8.85E+03	2.76E+04	3.70E+03	1.72E+04	7.41E+03	1.30E+04
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	9.36E+00	5.92E+00		5.14E+01		9.67E+01		
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	4.50E+03	2.95E+03	2.00E+03	6.21E+03	6.61E+02	6.34E+03	2.07E+03	3.68E+03
Ni+3	1.89E+02	3.68E+02	2.15E+03	9.22E+03	1.34E+03	5.18E+03	2.40E+03	7.24E+03
NO2-	1.05E+03	6.64E+02	1.51E+01	1.88E+02	1.68E+01	1.23E+02	1.33E+02	4.65E+01
NO3-	1.91E+04	1.22E+04	7.13E+02	1.85E+03	1.47E+02	1.17E+03	6.28E+02	7.86E+02
OH-	4.77E+02	2.34E+02	5.39E+04	4.75E+05	4.49E+04	2.35E+05	1.66E+05	4.25E+04
Pb+4	1.18E+00	7.48E-01				4.22E-01		
PO4-3	3.44E+03	1.66E+03	1.42E+03	1.88E+03	1.11E+02	6.60E+02	3.65E+02	1.17E+03
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	4.06E+02	2.79E+02	1.47E+02	9.57E+01	1.75E+00	1.92E+01	4.20E+01	9.01E+01
Sr+2	1.64E+00	3.72E-01	3.44E-01	5.14E+00	1.99E+00	1.22E+01	1.41E+01	2.70E+00
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ti+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	4.94E+01	5.18E+01		5.05E-01		1.97E+03		9.51E+01
UO2+2	2.76E+04	7.85E+03	1.60E+04	8.10E+04	8.17E+03	4.07E+04	2.21E+04	7.03E+04
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O				9.75E+04		2.02E+05		
Total	1.04E+05	5.91E+04	1.09E+05	9.37E+05	1.14E+05	6.83E+05	2.86E+05	3.23E+05

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	C-107	C-108	C-109	C-110	C-111	C-112	C-201	C-202
Ag+								
Al+3	2.99E+04	2.48E+03	1.38E+03	2.57E+04	1.41E+04	1.25E+04		
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	2.31E-01	4.60E-01	6.15E-01	7.57E-02	5.84E-01	3.06E-01	8.80E-04	1.08E-02
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	7.02E+03	5.15E+02	2.86E+02	5.35E+03	1.03E+03	4.29E+02		
Ca+2	1.40E+03	1.01E+03	2.09E+03	8.42E+02	4.94E+02	3.50E+03	9.75E+00	4.87E+00
Cancrinite	6.50E+04	2.45E+03	1.36E+03	2.54E+04	5.17E+03	2.04E+03		
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	1.69E+01	3.53E-01	5.56E+01		3.42E+01	1.55E+02		
Cl-	3.61E+01	2.97E+01	2.15E+01	1.75E+01	6.28E+00	3.20E+01	4.13E-02	2.06E-02
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	2.74E+02	2.18E+02	2.83E+02	1.14E+02	6.67E+01	4.73E+02	2.17E+01	1.08E+01
Cr+3	9.48E+01	2.19E+01	6.58E+00	7.22E+01	2.02E+01	1.27E+01	4.79E-01	2.40E-01
Cs+	4.77E-02	2.55E-05	3.07E-02		2.38E-02	2.06E-02	1.03E-05	
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	5.38E+02	3.95E+01	2.20E+01	4.10E+02	7.89E+01	3.29E+01		
Fe+3	7.38E+03	6.09E+03	2.29E+03	4.74E+03	1.39E+03	3.24E+03	3.24E+01	1.62E+01
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+			1.12E+01			4.78E+00		
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	9.31E+03	2.11E+03	1.53E+03	6.50E+03	1.59E+03	2.39E+03	6.56E+01	3.28E+01
Ni+3	1.36E+03	1.77E+03	8.51E+03	1.04E+03	1.25E+03	1.33E+04	1.25E+01	6.24E+00
NO2-	5.87E+01	5.26E+00	1.73E+01	4.43E+01	3.18E+01	3.36E+01		
NO3-	5.80E+02	5.88E+02	6.05E+02	4.10E+02	1.96E+02	9.51E+02	1.46E+00	7.29E-01
OH-	2.39E+04	9.58E+03	1.57E+04	2.26E+04	2.32E+04	3.79E+04	2.06E+02	1.03E+02
Pb+4			1.75E+04			7.49E+03		
PO4-3	9.01E+04	7.81E+03	5.12E+03	6.86E+04	1.34E+04	7.74E+03	2.47E+02	1.24E+02
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4							6.78E-02	3.39E-02
SO4-2	3.66E+01	1.25E+02	4.68E+00	2.22E+01	4.63E+00	5.54E+00	5.03E+00	2.51E+00
Sr+2	4.19E-01	1.12E-01	3.44E-04	6.09E-02	4.47E-01	1.87E-01	3.06E-05	
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	1.04E+03	4.55E+01	7.77E+02		7.43E+01	1.12E+03		
UO2+2	1.09E+02	7.39E+03	1.29E+04	8.33E+01	3.08E+03	2.34E+04	2.12E+03	1.06E+03
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O	7.80E+03	5.73E+02	3.18E+02	5.94E+03	1.14E+03	4.76E+02		
Total	2.46E+05	4.28E+04	7.08E+04	1.68E+05	6.63E+04	1.17E+05	2.72E+03	1.36E+03

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	C-107	C-108	C-109	C-110	C-111	C-112	C-201	C-202
Ag+								
Al+3	2.99E+04	2.48E+03	1.38E+03	2.57E+04	1.41E+04	1.25E+04		
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	2.31E-01	4.60E-01	6.15E-01	7.57E-02	5.84E-01	3.06E-01	8.80E-04	1.08E-02
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	7.02E+03	5.15E+02	2.86E+02	5.35E+03	1.03E+03	4.29E+02		
Ca+2	1.40E+03	1.01E+03	2.09E+03	8.42E+02	4.94E+02	3.50E+03	9.75E+00	4.87E+00
Cancrinite	6.50E+04	2.45E+03	1.36E+03	2.54E+04	5.17E+03	2.04E+03		
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	1.69E+01	3.53E-01	5.56E+01		3.42E+01	1.55E+02		
Cl-	3.61E+01	2.97E+01	2.15E+01	1.75E+01	6.28E+00	3.20E+01	4.13E-02	2.06E-02
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	2.74E+02	2.18E+02	2.83E+02	1.14E+02	6.67E+01	4.73E+02	2.17E+01	1.08E+01
Cr+3	9.48E+01	2.19E+01	6.58E+00	7.22E+01	2.02E+01	1.27E+01	4.79E-01	2.40E-01
Cs+	4.77E-02	2.55E-05	3.07E-02		2.38E-02	2.06E-02	1.03E-05	
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	5.38E+02	3.95E+01	2.20E+01	4.10E+02	7.89E+01	3.29E+01		
Fe+3	7.38E+03	6.09E+03	2.29E+03	4.74E+03	1.39E+03	3.24E+03	3.24E+01	1.62E+01
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+			1.12E+01			4.78E+00		
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	9.31E+03	2.11E+03	1.53E+03	6.50E+03	1.59E+03	2.39E+03	6.56E+01	3.28E+01
Ni+3	1.36E+03	1.77E+03	8.51E+03	1.04E+03	1.25E+03	1.33E+04	1.25E+01	6.24E+00
NO2-	5.87E+01	5.26E+00	1.73E+01	4.43E+01	3.18E+01	3.36E+01		
NO3-	5.80E+02	5.88E+02	6.05E+02	4.10E+02	1.96E+02	9.51E+02	1.46E+00	7.29E-01
OH-	2.39E+04	9.58E+03	1.57E+04	2.26E+04	2.32E+04	3.79E+04	2.06E+02	1.03E+02
Pb+4			1.75E+04			7.49E+03		
PO4-3	9.01E+04	7.81E+03	5.12E+03	6.86E+04	1.34E+04	7.74E+03	2.47E+02	1.24E+02
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4							6.78E-02	3.39E-02
SO4-2	3.66E+01	1.25E+02	4.68E+00	2.22E+01	4.63E+00	5.54E+00	5.03E+00	2.51E+00
Sr+2	4.19E-01	1.12E-01	3.44E-04	6.09E-02	4.47E-01	1.87E-01	3.06E-05	
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	1.04E+03	4.55E+01	7.77E+02		7.43E+01	1.12E+03		
UO2+2	1.09E+02	7.39E+03	1.29E+04	8.33E+01	3.08E+03	2.34E+04	2.12E+03	1.06E+03
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O	7.80E+03	5.73E+02	3.18E+02	5.94E+03	1.14E+03	4.76E+02		
Total	2.46E+05	4.28E+04	7.08E+04	1.68E+05	6.63E+04	1.17E+05	2.72E+03	1.36E+03

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	C-203	C-204	S-101	S-102	S-103	S-104	S-105	S-106
Ag+								
Al+3			1.12E+05	1.99E+03	7.94E+01	1.53E+05	1.16E+03	2.19E+04
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	1.04E-02		3.16E+00	3.05E+00	3.91E+00	2.68E+00	2.06E+00	2.10E+00
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3			3.96E-01	1.17E+00	4.60E-01		7.04E-01	7.92E-01
Ca+2	2.44E+01	1.46E+01	1.35E+03	1.12E+02	1.42E+01	2.53E+03	5.28E+01	2.73E+02
Cancrinite			1.13E+04	1.60E+04	6.72E+03	2.96E+04	1.31E+04	1.47E+04
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3			5.88E+02					1.48E-01
Cl-	1.03E-01	6.19E-02	9.31E+01	1.04E+02	4.16E+01	8.10E+01	7.26E+01	8.36E+01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	5.42E+01		3.57E+02	4.16E+02	1.92E+02	3.41E+02	4.94E+02	5.87E+02
Cr+3	1.20E+00	7.19E-01	4.92E+03	5.95E+02	8.40E+00	1.14E+04	7.24E+01	3.40E+01
Cs+			5.32E-01			1.89E-01	5.21E-01	1.03E+00
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-			1.84E+01	5.45E+01	2.14E+01		3.27E+01	3.68E+01
Fe+3	8.11E+01	4.86E+01	5.46E+03	2.10E+02	9.84E-01	1.11E+04	5.51E+01	1.75E+03
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+			7.67E+00	2.13E+01	8.75E+00		1.58E+01	1.78E+01
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4			9.95E+02	2.76E+03	1.13E+03		2.05E+03	2.30E+03
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.64E+02	9.84E+01	5.06E+03	4.12E+03	1.74E+03	4.78E+03	3.75E+03	4.90E+03
Ni+3	3.12E+01	1.87E+01	1.76E+03	1.22E+02	5.45E+00	3.46E+03	3.19E+01	3.79E+02
NO2-			8.14E+02	2.20E+03		6.88E+01	1.38E+03	1.57E+03
NO3-	3.65E+00		8.02E+03	1.39E+04	5.84E+03	2.89E+03	1.55E+04	1.76E+04
OH-	5.14E+02		2.24E+05	2.74E+03		3.18E+05		4.20E+04
Pb+4			1.15E-03	3.20E-03	1.31E-03		2.37E-03	2.67E-03
PO4-3	6.18E+02	3.71E+02	7.13E+01	2.08E+02	8.24E+01		1.32E+02	1.49E+02
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4	1.70E-01	1.02E-01						
SO4-2	1.26E+01	7.54E+00	7.38E+01	1.70E+02	7.32E+01	1.15E+01	1.54E+02	1.73E+02
Sr+2	3.20E-03		2.52E+01	2.67E-01		4.50E+01	2.40E-01	2.60E+01
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ti+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC			4.47E+01	1.40E+02	5.48E+01		8.17E+01	9.16E+01
UO2+2	5.29E+03	2.80E+00	7.43E+03	7.54E+02	6.24E-01	2.08E+04	2.80E+01	7.56E+03
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O								
Total	6.80E+03	5.62E+02	3.84E+05	4.67E+04	1.60E+04	5.59E+05	3.82E+04	1.16E+05

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	S-107	S-108	S-109	S-110	S-111	S-112	SX-101	SX-102
Ag+						2.34E-05		
Al+3	9.90E+04	2.46E+03	9.05E+03	5.72E+04	4.11E+04	3.49E+03	1.69E+05	2.87E+04
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	1.11E+00	2.01E+00	5.03E+00	4.63E+00	4.53E+00	1.20E+01	4.22E+00	3.72E+00
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	2.07E-01	9.28E-01	8.60E-01	4.29E-01	6.92E-01	9.77E-01	2.41E-01	7.95E-01
Ca+2	1.35E+03	1.58E+02	1.38E+02	7.38E+02	6.68E+02	1.66E+02	2.11E+03	4.62E+02
Cancrinite	1.19E+04	1.73E+04	1.60E+04	9.21E+03	1.51E+04	1.82E+04	7.26E+03	4.37E+04
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3		7.20E+02	1.00E+03	9.85E+01	1.09E+02	6.81E+03		2.67E+00
Cl-	7.44E+01	9.71E+01	8.90E+01	7.73E+01	9.18E+01	1.02E+02	1.20E+02	9.76E+01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	2.60E+02	6.63E+02	6.15E+02	3.96E+02	5.70E+02	6.98E+02	3.88E+02	5.58E+02
Cr+3	4.77E+03	7.64E+02	2.86E+01	3.00E+03	1.99E+03	5.31E+02	8.80E+03	4.59E+03
Cs+		1.39E+00	7.82E+00	8.73E+00	8.05E+00	2.71E+01		2.41E-03
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	1.62E+03	4.31E+01	3.99E+01	1.99E+01	3.21E+01	4.54E+01	1.12E+01	3.69E+01
Fe+3	6.52E+03	3.03E+02	5.86E+02	2.95E+03	2.08E+03	3.90E+02	8.68E+03	3.98E+03
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	5.18E+00	2.08E+01	1.93E+01	9.63E+00	1.55E+01	2.19E+01	4.64E+00	1.72E+01
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4	3.31E+02	2.70E+03	2.50E+03	1.25E+03	2.01E+03	2.84E+03	6.01E+02	2.23E+03
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	5.09E+03	5.05E+03	4.84E+03	4.03E+03	4.86E+03	5.28E+03	6.12E+03	4.85E+03
Ni+3	1.98E+03	1.63E+02	1.49E+02	9.39E+02	8.18E+02	1.79E+02	2.74E+03	6.84E+02
NO2-	4.22E+02	1.82E+03	1.69E+03	8.41E+02	1.38E+03	1.92E+03	4.57E+02	1.54E+03
NO3-	8.08E+03	2.05E+04	1.90E+04	1.07E+04	1.60E+04	2.16E+04	7.24E+03	1.65E+04
OH-	2.00E+05	3.10E+03	1.58E+04	1.14E+05	8.10E+04	7.00E+03	3.41E+05	6.13E+04
Pb+4	3.84E-04	3.13E-03	2.90E-03	1.45E-03	2.33E-03	3.30E-03	6.97E-04	2.58E-03
PO4-3	3.37E+01	1.74E+02	1.61E+02	8.05E+01	1.30E+02	1.83E+02	4.33E+01	1.47E+02
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	5.50E+01	2.02E+02	1.87E+02	9.84E+01	1.54E+02	2.13E+02	5.40E+01	1.64E+02
Sr+2	1.36E+01	3.71E-01	1.10E+01	2.89E+00	1.39E+01	9.58E+00	3.64E+00	1.03E+01
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	1.75E+01	1.08E+02	9.97E+01	4.78E+01	7.89E+01	1.13E+02	2.63E+01	9.40E+01
UO2+2	4.51E+03	9.03E+02	2.85E+03	1.51E+03	3.74E+03	1.30E+03	4.45E+03	2.24E+03
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O	2.33E+05							
Total	5.79E+05	5.72E+04	7.48E+04	2.07E+05	1.72E+05	7.11E+04	5.59E+05	1.72E+05

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	SX-103	SX-104	SX-105	SX-106	SX-107	SX-108	SX-109	SX-110
Ag+	1.14E-05							
Al+3	5.67E+04	8.55E+04	2.70E+04	6.16E+02	4.85E+04	5.41E+04	3.70E+04	8.70E+03
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	1.90E+01	4.33E+00	3.71E+00	2.35E-01	6.19E+00	6.04E+00	4.82E+00	1.32E+01
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	8.36E-01	6.89E-01	9.67E-01	1.11E+00				
Ca+2	7.56E+02	1.11E+03	5.85E+02	4.05E+01	1.06E+03	1.13E+03	1.31E+03	9.48E+02
Cancrinite	1.67E+04	1.46E+04	3.04E+04	1.40E+04	2.50E+04	2.51E+04	4.59E+04	3.49E+04
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	4.63E+03	9.55E+02	1.58E+03	2.93E+03				
Cl-	1.19E+02	1.20E+02	1.17E+02	9.42E+01	3.52E+01	3.85E+01	1.85E+01	1.02E+01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	6.80E+02	6.26E+02	7.37E+02	3.06E+02	1.43E+02	1.53E+02	1.56E+02	1.16E+02
Cr+3	2.99E+03	4.49E+03	3.70E+03	1.97E+02	7.72E+03	8.01E+03	8.59E+03	7.41E+03
Cs+	1.01E+01	6.91E-01	1.43E+00	1.39E+00				
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	3.88E+01	3.20E+01	4.49E+01	5.16E+01				
Fe+3	2.93E+03	4.41E+03	2.49E+03	7.40E+01	5.06E+03	5.35E+03	4.27E+03	3.64E+03
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+	1.88E+01	1.55E+01	2.12E+01	1.92E+01				
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4	2.43E+03	2.00E+03	2.75E+03	2.49E+03				
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	6.16E+03	6.27E+03	6.19E+03	3.39E+03	1.80E+03	1.97E+03	2.42E+03	1.76E+03
Ni+3	9.41E+02	1.40E+03	7.39E+02	3.66E+01	1.45E+03	1.54E+03	1.66E+03	1.10E+03
NO2-	1.64E+03	1.35E+03	1.89E+03	2.07E+03			5.68E+01	1.17E+01
NO3-	1.97E+04	1.71E+04	2.24E+04	1.09E+04	1.1[illegible]E+03	1.23E+03	1.84E+04	3.84E+03
OH-	1.14E+05	1.71E+05	5.58E+04	9.87E+02	1.07E+05	1.18E+05	8.12E+04	2.92E+04
Pb+4	2.82E-03	2.32E-03	3.19E-03	2.89E-03				
PO4-3	1.57E+02	1.29E+02	1.80E+02	1.94E+02				
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	1.87E+02	1.57E+02	2.15E+02	1.44E+02	4.87E+00	5.35E+00	3.46E+00	1.25E+00
Sr+2	3.54E+00	3.64E-01	1.86E+00	8.16E-01	9.07E+00	5.64E+00	1.70E+00	3.71E+00
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	9.47E+01	7.69E+01	1.10E+02	1.33E+02				
UO2+2	1.50E+03	2.26E+03	3.35E+03	2.18E+02	7.25E+03	7.40E+03	7.25E+03	8.41E+03
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O								
Total	2.32E+05	3.13E+05	1.60E+05	3.89E+04	2.06E+05	2.24E+05	2.08E+05	1.00E+05

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	SX-111	SX-112	SX-113	SX-114	SX-115	T-101	T-102	T-103
Ag+								
Al+3	3.19E+04	3.10E+04	1.02E+03	1.02E+04	1.65E+03	2.28E+04	1.10E+04	1.10E+04
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	9.34E+00	4.28E+00	4.34E+00	1.16E+01	8.25E+00	4.50E-01	2.36E-03	9.27E-02
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3								5.79E-01
Ca+2	1.53E+03	1.04E+03	1.27E+01	1.51E+03	9.89E+01	5.68E+02	2.78E+02	2.75E+02
Cancrinite	4.57E+04	2.69E+04	2.22E+01	6.11E+04	6.62E+03	3.72E+00	3.70E+00	1.32E+02
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3						7.94E+02	1.35E+01	2.74E-01
Cl-	2.35E+01	2.09E+01	5.93E-01	1.38E+01	1.61E+00	3.81E+00	1.38E+00	2.06E+00
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	1.90E+02	1.31E+02	1.71E+00	1.90E+02	1.25E+01	9.71E+01	5.78E+01	4.84E+01
Cr+3	1.07E+04	6.97E+03	5.31E+01	1.09E+04	1.15E+03	1.31E+01	6.55E+00	6.77E+00
Cs+		1.68E-02	2.52E+00		5.10E+00	1.51E-01	2.56E-03	1.23E-02
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-								1.36E+00
Fe+3	5.79E+03	4.10E+03	5.24E+01	4.59E+03	6.67E+02	2.37E+03	1.16E+03	1.15E+03
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+								
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	3.14E+03	2.16E+03	3.12E+01	3.93E+03	2.39E+02	4.12E+02	2.14E+02	2.28E+02
Ni+3	1.78E+03	1.24E+03	1.65E+01	1.67E+03	1.55E+02	8.58E+02	4.20E+02	4.16E+02
NO2-	1.60E+01	7.43E+00		5.20E+01	2.35E+00	1.55E+01	7.50E+00	1.85E+01
NO3-	5.71E+03	3.02E+03	2.27E+01	1.62E+04	7.65E+02	1.44E+02	5.60E+01	3.41E+02
OH-	7.97E+04	7.18E+04	2.06E+03	3.53E+04	5.00E+03	4.78E+04	2.29E+04	2.28E+04
Pb+4								
PO4-3						2.48E+02	2.46E+02	1.24E+02
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	2.77E+00	2.32E+00	8.88E-02	2.63E+00	2.35E-01	5.34E+00	5.15E+00	4.47E+00
Sr+2	5.19E+00	5.99E+00	1.58E+00	5.44E+00	3.90E+00	2.84E+01	2.15E-04	1.06E-01
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC								2.20E+00
UO2+2	1.15E+04	7.09E+03	2.69E+01	1.22E+04	5.30E+02	1.13E+04	5.74E+03	4.71E+03
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O								1.79E+01
Total	1.98E+05	1.55E+05	3.33E+03	1.58E+05	1.69E+04	8.74E+04	4.21E+04	4.14E+04

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	T-104	T-105	T-106	T-107	T-108	T-109	T-110	T-111
Ag+								
Al+3	4.98E+04	6.17E+01	6.91E+03	1.80E+04	2.69E+03			
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	1.77E-01	1.52E-01	6.12E-01	3.71E-01	3.46E-01	3.32E-01	2.47E-04	
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	9.97E+03	3.22E+03	1.59E+02	3.75E+03	6.00E+02	1.14E+00	1.49E+04	2.10E+04
Ca+2	1.70E+03	6.37E+02	1.09E+02	5.90E+02	9.82E+01	9.71E+00	3.08E+03	5.42E+03
Cancrinite	4.89E+04	1.96E+04	1.73E+03	1.78E+04	4.58E+03	2.10E+03		
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	1.15E+04		4.46E+01		1.23E+01	6.76E+02		
Cl-	4.54E+01	1.64E+01	1.89E+00	1.23E+01	4.18E+00	5.61E+00	7.05E+01	8.54E+01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	2.29E+02		1.47E+01	7.96E+01	2.03E+01	1.91E+01		7.32E+02
Cr+3	1.90E+02	4.00E+01	8.16E+00	5.06E+01	8.29E+00	4.98E-01	1.53E+02	2.82E+02
Cs+	6.40E-02		3.62E-03		7.48E-03	3.14E-02		
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	8.64E+02	2.37E+02	1.70E+01	2.87E+02	6.68E+01	5.28E+01	1.11E+03	1.18E+03
Fe+3	8.82E+03	3.71E+03	4.42E+02	3.32E+03	5.32E+02	6.74E-01	1.83E+04	3.13E+04
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+							5.47E+01	1.97E+02
La+3							5.78E+01	2.08E+02
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4							2.20E+03	7.92E+03
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.35E+04	3.03E+03	4.37E+02	4.56E+03	8.97E+02	3.99E+02	1.28E+04	9.98E+03
Ni+3	1.98E+03	8.48E+02	1.44E+02	7.26E+02	1.18E+02	3.74E+00	4.26E+03	7.91E+03
NO2-	1.16E+02		2.04E+01	3.11E+01	1.37E+01	2.22E+01		
NO3-	1.11E+03		6.56E+01	2.87E+02	4.21E+02	9.51E+02		2.38E+03
OH-	4.68E+04		1.29E+04	1.58E+04	2.08E+03	4.63E-01		2.16E+04
Pb+4								
PO4-3	1.35E+05	2.78E+04	2.39E+03	4.81E+04	7.84E+03	3.75E+02	1.06E+05	6.65E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4						1.12E+00	4.33E+03	4.11E+03
SO4-2	5.83E+01	1.15E+01	1.55E+00	1.56E+01	2.31E+01	5.21E+01	3.90E+01	4.22E+01
Sr+2	2.00E-01	2.44E-02	7.63E+00	1.77E-01	1.77E-02	3.58E-04	1.10E+03	3.95E+03
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC							2.84E+01	9.86E+01
UO2+2	4.60E+02	4.83E+01	1.87E+03	5.84E+01	9.36E+00	5.49E-02	2.23E+01	2.35E+01
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O	1.84E+04	8.71E+02	3.35E+02	6.45E+03	1.03E+03			
Total	3.50E+05	6.01E+04	2.76E+04	1.20E+05	2.10E+04	4.67E+03	1.68E+05	1.85E+05

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	T-112	T-201	T-202	T-203	T-204	TX-101	TX-102	TX-103
Ag+								
Al+3						3.68E+04	2.05E+01	2.85E+01
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	7.68E-04					2.22E+00	2.31E+00	5.75E-01
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	3.03E+03	1.05E+03	7.91E+02	1.31E+03	1.43E+03	9.34E-03	1.30E-01	1.81E-01
Ca+2	8.33E+02	3.47E+02	2.61E+02	4.33E+02	4.70E+02	4.78E+02	2.32E+01	3.34E+01
Cancrinite						2.14E+02	2.89E+03	4.03E+03
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3							4.24E+00	4.11E+01
Cl-	1.11E+01	5.92E+00	4.45E+00	7.39E+00	8.02E+00	2.43E+01	1.54E+01	2.15E+01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	1.12E+02	4.68E+01	3.52E+01	5.84E+01	6.35E+01	1.04E+02	4.87E+01	7.04E+01
Cr+3	4.55E+01	1.22E+01	9.15E+00	1.52E+01	1.65E+01	1.85E+03	9.88E+00	1.38E+01
Cs+							1.26E-02	1.75E-02
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	4.60E+01	4.58E+02	3.45E+02	5.72E+02	6.22E+02	4.34E-01	6.02E+00	8.39E+00
Fe+3	4.93E+03	1.39E+03	1.05E+03	1.74E+03	1.89E+03	1.95E+03	3.34E+01	5.01E+01
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+		1.53E+02	1.15E+02	1.91E+02	2.07E+02			
La+3		1.62E+02	1.22E+02	2.02E+02	2.19E+02			
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4		6.16E+03	4.63E+03	7.69E+03	8.35E+03			
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	8.43E+02	8.97E+02	6.74E+02	1.12E+03	1.22E+03	1.32E+03	1.08E+03	1.51E+03
Ni+3	1.24E+03	5.05E+02	3.80E+02	6.31E+02	6.85E+02	6.22E+02	1.77E+01	2.60E+01
NO2-						1.76E+01		
NO3-	2.92E+02	2.14E+02	1.61E+02	2.68E+02	2.91E+02	1.29E+03	4.04E+03	5.73E+03
OH-	5.26E+03	2.99E+03	2.25E+03	3.73E+03	4.05E+03	7.45E+04		
Pb+4								
PO4-3	4.99E+03	1.16E+03	8.70E+02	1.45E+03	1.57E+03	3.72E+02	2.64E+02	3.96E+02
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4	5.22E+02							
SO4-2	5.76E+00	2.63E-01	1.98E-01	3.28E-01	3.57E-01	1.36E+01	4.51E+01	6.34E+01
Sr+2	2.29E-02	3.08E+03	2.31E+03	3.84E+03	4.17E+03	4.29E-02	1.64E-03	3.65E-03
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC		8.49E+01	6.39E+01	1.06E+02	1.15E+02	3.24E-01	5.34E+00	7.44E+00
UO2+2	3.20E+00					4.11E+03	2.12E+03	3.19E+03
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O								
Total	2.22E+04	1.87E+04	1.41E+04	2.34E+04	2.54E+04	1.24E+05	1.06E+04	1.52E+04

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	TX-104	TX-105	TX-106	TX-107	TX-108	TX-109	TX-110	TX-111
Ag+								
Al+3	8.48E+00	1.11E+02	1.58E+03	4.98E+00	2.36E+01	5.30E+04	4.01E+03	4.02E+03
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	1.07E+00	3.83E+00	1.33E-01		1.22E+00	2.62E+00	1.29E+00	6.95E-01
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	5.37E-02	7.03E-01	5.23E-01	3.15E-02	1.50E-01	1.10E+04	7.05E+02	6.85E+02
Ca+2	9.33E+01	1.12E+02	7.68E+01	4.23E+01	3.24E+02	1.73E+03	1.80E+02	1.74E+02
Cancrinite	1.23E+03	1.57E+04	1.16E+04	7.13E+02	3.34E+03	5.23E+04	1.46E+04	1.21E+04
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3		4.98E+01			2.53E+04	2.17E+04	1.69E+04	4.41E+03
Cl-	6.74E+00	8.34E+01	6.29E+01	3.85E+00	2.63E+01	3.61E+01	6.29E+01	5.01E+01
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	2.07E+02	2.62E+02	1.20E+02	1.22E+02	1.49E+02	2.34E+02	1.21E+02	9.77E+01
Cr+3	8.21E+00	5.23E+01	1.18E+02	3.63E+00	1.90E+01	1.49E+02	5.29E+01	4.81E+01
Cs+		1.22E-01	1.97E-01		7.31E-01	5.25E+00	2.20E+00	4.99E-01
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	2.50E+00	3.26E+01	2.43E+01	1.46E+00	6.95E+00	8.44E+02	9.03E+01	9.05E+01
Fe+3	2.92E+02	1.35E+02	9.98E+01	1.30E+02	6.07E+02	9.76E+03	6.24E+02	6.04E+02
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+								
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.01E+03	5.78E+03	4.16E+03	5.34E+02	1.93E+03	1.34E+04	4.94E+03	4.11E+03
Ni+3	1.14E+02	7.81E+01	5.02E+01	5.12E+01	3.29E+02	2.13E+03	1.62E+02	1.57E+02
NO2-	1.01E+02			5.92E+01	2.80E+02	9.13E+01	9.42E+02	7.28E+02
NO3-	2.63E+03	2.30E+04	2.53E+04	1.54E+03	7.34E+03	8.44E+02	2.43E+04	1.87E+04
OH-	1.41E+03			1.31E+03	9.43E+03	5.44E+04	5.70E+03	2.02E+03
Pb+4								
PO4-3	2.23E+03	1.08E+03	1.62E+02	9.92E+02	8.82E+02	1.41E+05	1.01E+04	1.03E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								
SO4-2	6.19E+01	2.38E+02	1.64E+02	2.99E+01	7.81E+01	4.57E+01	1.59E+02	1.24E+02
Sr+2		1.61E-02			2.58E-02	7.40E-01	5.19E-01	2.45E-01
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	2.15E+00	2.90E+01	2.15E+01	1.27E+00	6.13E+00		2.01E+01	1.53E+01
UO2+2	1.91E+04	1.44E+04	8.49E+02	1.44E+04	5.13E+03	1.71E+02	5.69E+01	7.68E+01
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O						1.89E+04	1.38E+03	1.44E+03
Total	2.85E+04	6.12E+04	4.44E+04	1.99E+04	5.52E+04	3.82E+05	8.52E+04	6.00E+04

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	TX-112	TX-113	TX-114	TX-115	TX-116	TX-117	TX-118	TY-101
Ag+							1.56E-05	
Al+3	1.15E+02	2.67E+04	5.66E+02	1.17E+02	5.07E+01	7.64E+01	1.21E+04	
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	8.09E-01	3.63E-01	9.81E-01	1.80E-01	4.71E-01	4.64E-01	8.94E+00	3.78E-01
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	1.20E+00	5.23E+03	1.16E+02	7.38E-01	6.66E+00	4.35E+00	4.78E-01	4.30E+03
Ca+2	7.99E+01	8.74E+02	7.34E+01	2.17E+02	8.89E+01	8.41E+01	2.74E+02	7.94E+02
Cancrinite	1.81E+04	3.59E+04	1.72E+04	1.64E+04	3.18E+04	2.58E+04	8.48E+03	1.67E+03
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	2.23E+04	1.44E+04	4.00E+03	6.19E+03	3.34E+03	1.35E+03	1.39E+04	5.61E+02
Cl-	8.89E+01	7.58E+01	7.09E+01	9.22E+01	7.10E+01	7.74E+01	6.99E+01	7.54E+00
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	1.60E+02	2.14E+02	1.35E+02	1.87E+02	1.76E+02	1.68E+02	1.82E+02	
Cr+3	5.32E+01	1.06E+02	3.53E+01	5.62E+01	2.72E+01	3.74E+01	4.21E+01	2.72E+00
Cs+	3.87E-01	1.33E-01	3.86E-01	2.16E-01	9.18E-02	3.72E-02	6.12E+00	3.57E-02
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	5.58E+01	4.24E+02	8.70E+01	3.43E+01	3.09E+02	2.02E+02	2.22E+01	2.88E+02
Fe+3	5.55E+00	4.64E+03	1.05E+02	9.94E+02	6.17E+00	5.84E+00	8.19E+02	1.87E+03
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+								
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4								
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	5.88E+03	1.04E+04	4.77E+03	6.02E+03	4.83E+03	5.20E+03	3.62E+03	5.36E+03
Ni+3	3.07E+01	1.03E+03	4.34E+01	2.29E+02	3.42E+01	3.24E+01	3.15E+02	2.86E+03
NO2-	1.38E+03	9.71E+02					6.78E+02	
NO3-	3.60E+04	2.45E+04	2.15E+04	3.31E+04	1.52E+04	1.60E+04	1.81E+04	
OH-	1.97E+03	2.62E+04					2.61E+04	
Pb+4								
PO4-3	2.51E+02	6.71E+04	1.91E+03	2.92E+02	2.13E+03	1.34E+03	8.71E+01	5.87E+04
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4								8.81E+02
SO4-2	2.48E+02	1.75E+02	2.23E+02	2.50E+02	3.94E+02	3.29E+02	1.17E+02	4.55E+01
Sr+2	3.88E-02	4.16E-02	3.89E-03	1.52E-01	1.97E-01	3.75E-01	3.86E+00	8.61E-02
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	3.01E+01	1.92E+01	2.21E+01	3.04E+01	1.33E+01	1.98E+01	1.45E+01	2.37E+02
UO2+2	8.12E+00	8.69E+01	6.18E+00	1.17E+03	4.03E+00	5.65E+00	4.00E+00	4.14E+01
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O		8.99E+03	1.93E+02					6.32E+03
Total	8.68E+04	2.28E+05	5.11E+04	6.54E+04	5.85E+04	5.08E+04	8.50E+04	8.39E+04

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	TY-102	TY-103	TY-104	TY-105	TY-106	U-101	U-102	U-103
Ag+								
Al+3	6.25E+00	7.54E+00					7.11E+01	1.45E+02
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2	9.94E-01	1.65E+00	2.46E-01	1.55E+00	3.17E-01	7.90E-01	1.39E+00	2.39E+00
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3	6.10E-01	2.81E+03					4.97E-01	7.71E-01
Ca+2	9.11E+00	1.59E+03	7.57E+02	2.78E+03	2.82E+02	1.07E+02	1.89E+02	1.86E+02
Cancrinite	3.10E+03	1.39E+04					2.28E+04	1.23E+04
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3	4.38E+02	2.76E+02	2.27E+02	2.79E+00			4.93E+03	1.40E-02
Cl-	7.66E+00	4.58E+01	2.56E+01	9.39E+01	9.52E+00	4.53E-01	1.85E+02	2.70E+02
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	1.81E+01		1.80E+02	6.60E+02	6.69E+01	2.38E+02	5.26E+02	7.39E+02
Cr+3	3.22E+00	2.64E+01	1.43E+01	5.25E+01	5.32E+00	5.26E+00	6.54E+01	2.41E+01
Cs+	4.11E-01	8.22E-01	9.35E-03	1.63E-01		3.54E-01	8.90E-01	1.46E-04
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-	2.83E+01	1.64E+02					2.31E+01	3.58E+01
Fe+3	6.32E-01	8.77E+03	5.32E+03	1.95E+04	1.98E+03	3.55E+02	6.50E+02	5.20E+02
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+							4.12E+00	1.55E+01
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4							5.34E+02	2.01E+03
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	5.18E+02	5.63E+03	1.35E+03	4.96E+03	5.02E+02	7.19E+02	4.31E+03	4.34E+03
Ni+3	3.50E+00	3.39E+03	1.07E+03	3.94E+03	3.99E+02	1.37E+02	2.22E+02	2.11E+02
NO2-							9.24E+02	1.48E+03
NO3-	1.84E+03		4.89E+02	1.80E+03	1.82E+02	1.60E+01	1.42E+04	1.28E+04
OH-			6.67E+03	2.42E+04	2.45E+03	2.26E+03	7.36E+03	1.55E+03
Pb+4							6.19E-04	2.33E-03
PO4-3	1.93E+02	3.96E+04	1.05E+03	3.85E+03	3.90E+02	2.71E+03	7.30E+02	4.09E+03
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4						7.43E-01		
SO4-2	3.87E+01	1.88E+02	1.17E+02	4.30E+02	4.35E+01	5.51E+01	1.92E+02	2.18E+02
Sr+2	6.09E-02	5.49E-01	3.11E-02	1.29E+00	4.73E-02	6.75E-02	2.58E-01	1.06E-05
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC	1.63E+00	1.55E+02					4.16E+01	9.09E+01
UO2+2	4.81E-01	8.86E+03	6.23E+03	2.29E+04	2.32E+03	2.32E+04	5.18E+04	3.38E+04
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2;2H2O		4.13E+03						
Total	6.20E+03	8.96E+04	2.35E+04	8.52E+04	8.63E+03	2.98E+04	1.10E+05	7.48E+04

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	U-104	U-105	U-106	U-107	U-108	U-109	U-110	U-111
Ag+								
Al+3		1.09E+02	6.28E+01	2.48E+04	1.68E+04	1.56E+04	1.51E+04	8.51E+03
As+5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
B+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ba+2		4.17E-01	6.40E-01	6.88E-01	8.90E-01	5.07E-01	6.77E-01	1.57E+00
Be+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bi+3		7.77E-01	2.87E-01	7.33E-01	8.21E-01	7.87E-01	2.82E+03	2.32E+02
Ca+2	1.95E+02	1.50E+02	1.43E+02	6.43E+02	4.55E+02	4.82E+02	5.97E+02	1.54E+02
Cancrinite		1.51E+04	5.37E+03	1.47E+04	1.21E+04	1.47E+04	1.47E+04	1.01E+04
Cd+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ce+3				1.05E+03	3.78E-02	9.61E+00	6.10E-01	2.82E+02
Cl-	8.26E-01	2.48E+02	1.09E+02	2.29E+02	2.79E+02	2.67E+02	2.01E+01	2.17E+02
Co+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CO3-2	4.34E+02	5.04E+02	4.83E+02	6.36E+02	4.38E+02	6.36E+02	1.72E+02	2.42E+02
Cr+3	9.59E+00	2.69E+01	1.41E+01	3.23E+01	2.53E+01	2.88E+01	8.64E+01	3.60E+02
Cs+		2.74E-04		5.02E-01	3.94E-04	1.22E-01	6.35E-03	1.33E-01
Cu+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
F-		3.61E+01	1.33E+01	3.40E+01	3.81E+01	3.65E+01	3.00E+02	5.68E+01
Fe+3	6.48E+02	5.02E+02	4.23E+02	1.56E+03	1.79E+03	1.04E+03	2.62E+03	5.42E+02
Hg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
K+		1.15E+01	6.44E+00	1.19E+01	1.57E+01	1.50E+01		1.19E+01
La+3								
Mg+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mn+4		1.49E+03	8.35E+02	1.54E+03	2.04E+03	1.94E+03		1.54E+03
Mo+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Na+	1.31E+03	3.67E+03	2.37E+03	3.77E+03	3.50E+03	4.05E+03	4.84E+03	2.87E+03
Ni+3	2.50E+02	1.81E+02	1.69E+02	7.27E+02	6.56E+02	5.75E+02	6.40E+02	1.78E+02
NO2-		1.43E+03	5.62E+02	1.44E+03	1.57E+03	1.55E+03	5.17E+01	1.23E+03
NO3-	2.92E+01	9.82E+03	6.33E+03	6.77E+03	1.17E+04	1.11E+04	5.09E+02	7.85E+03
OH-	4.11E+03	3.65E+03	1.79E+03	5.26E+04	3.34E+04	3.19E+04	1.32E+04	1.43E+04
Pb+4		1.72E-03	9.67E-04	1.78E-03	2.36E-03	2.25E-03		1.78E-03
PO4-3	4.94E+03	1.35E+03	3.27E+03	4.82E+03	5.18E+02	3.10E+03	4.34E+04	4.19E+03
Rb+	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Re+7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rh+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ru+3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Se+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Si+4	1.36E+00							
SO4-2	1.00E+02	1.80E+02	1.28E+02	1.85E+02	1.40E+02	1.86E+02	4.85E+01	9.63E+01
Sr+2		1.65E-05		3.30E+01	2.14E+01	2.06E+01	1.57E+00	2.01E-01
Te+6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Th+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tl+4	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOC		8.78E+01	3.30E+01	8.68E+01	9.76E+01	9.35E+01		7.74E+01
UO2+2	4.23E+04	3.60E+04	2.75E+04	4.76E+04	9.97E+03	3.01E+04	9.83E+03	1.82E+02
Zn+2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ZrO2:2H2O							3.83E+03	3.81E+02
Total	5.44E+04	7.45E+04	4.97E+04	1.63E+05	9.56E+04	1.17E+05	1.13E+05	5.36E+04

Table A-1. Chemical Inventory Estimates for Single-Shell Tanks

Insoluble (kg)	U-112	U-201	U-202	U-203	U-204	Total	SALTWELL LIQ. PUMPED	NET TOTAL
Ag+						2.80E-04		2.80E-04
Al+3	1.20E+04	2.71E+03	2.71E+03	1.35E+03	1.35E+03	2.20E+06		2.20E+06
As+5	N/A	N/A	N/A	N/A	N/A			
B+3	N/A	N/A	N/A	N/A	N/A			
Ba+2	1.22E+00	1.74E-01	1.84E-01	1.62E-01	4.23E-02	5.89E+02		5.89E+02
Be+2	N/A	N/A	N/A	N/A	N/A			
Bi+3	9.15E+02					2.52E+05		2.52E+05
Ca+2	2.28E+02	2.63E+01	2.63E+01	1.32E+01	1.32E+01	1.22E+05		1.22E+05
Cancrinite	5.20E+03	5.14E+02	5.14E+02	2.57E+02		2.70E+06		2.70E+06
Cd+2	N/A	N/A	N/A	N/A	N/A			
Ce+3	3.48E+03	1.83E+02	1.82E+02	1.60E+02	3.67E+01	2.32E+05		2.32E+05
Cl-	5.54E+00	3.13E-01	3.13E-01	1.56E-01	1.56E-01	7.63E+03		7.63E+03
Co+3	N/A	N/A	N/A	N/A	N/A			
CO3-2	3.07E+01	3.55E+00	3.55E+00	1.77E+00	1.77E+00	3.86E+04		3.86E+04
Cr+3	2.00E+02	1.53E+00	1.53E+00	7.64E-01	7.64E-01	1.21E+05		1.21E+05
Cs+	5.78E-01	9.12E-02	9.58E-02	8.44E-02	2.24E-02	1.75E+02		1.75E+02
Cu+2	N/A	N/A	N/A	N/A	N/A			
F-	7.01E+01					2.62E+04		2.62E+04
Fe+3	1.14E+03	9.57E+01	9.57E+01	4.79E+01	4.79E+01	6.07E+05		6.07E+05
Hg+2	N/A	N/A	N/A	N/A	N/A			
K+						2.43E+03		2.43E+03
La+3						1.86E+03		1.86E+03
Mg+2	N/A	N/A	N/A	N/A	N/A			
Mn+4						1.18E+05		1.18E+05
Mo+6	N/A	N/A	N/A	N/A	N/A			
Na+	1.36E+03	9.18E+01	9.18E+01	4.59E+01	4.59E+01	5.42E+05		5.42E+05
Ni+3	2.89E+02	3.59E+01	3.59E+01	1.79E+01	1.79E+01	1.99E+05		1.99E+05
NO2-	2.18E+01	9.43E+00	9.43E+00	4.72E+00	4.72E+00	5.34E+04		5.34E+04
NO3-	1.74E+02	1.65E+01	1.65E+01	8.27E+00	8.27E+00	9.42E+05		9.42E+05
OH-	2.04E+04	5.46E+03	5.46E+03	2.76E+03	2.66E+03	4.55E+06		4.55E+06
Pb+4						2.50E+04		2.50E+04
PO4-3	1.17E+04					1.83E+06		1.83E+06
Rb+	N/A	N/A	N/A	N/A	N/A			
Re+7	N/A	N/A	N/A	N/A	N/A			
Rh+3	N/A	N/A	N/A	N/A	N/A			
Ru+3	N/A	N/A	N/A	N/A	N/A			
Se+6	N/A	N/A	N/A	N/A	N/A			
Si+4						1.41E+04		1.41E+04
SO4-2	4.16E+00	3.67E-02	3.67E-02	1.84E-02	1.84E-02	2.19E+04		2.19E+04
Sr+2	5.16E+00	3.42E+00	3.42E+00	1.71E+00	1.71E+00	3.59E+04		3.59E+04
Te+6	N/A	N/A	N/A	N/A	N/A			
Th+4	N/A	N/A	N/A	N/A	N/A			
Tl+4	N/A	N/A	N/A	N/A	N/A			
TOC						1.51E+04		1.51E+04
UO2+2	1.25E+03	7.60E+02	7.60E+02	3.80E+02	5.91E+00	1.50E+06		1.50E+06
Zn+2	N/A	N/A	N/A	N/A	N/A			
ZrO2:2H2O	1.02E+03					6.61E+05		6.61E+05
Total	5.96E+04	9.91E+03	9.91E+03	5.05E+03	4.20E+03	1.68E+07		1.68E+07

Table A-2. Radionuclide Inventory Estimates for Single-Shell Tanks

Soluble (Ci)	A-101	A-102	A-103	A-104	A-105	A-106	AX-102	AX-103	AX-104	AX101	B-101	B-102
C14		7.51E+01	5.35E+00	1.28E+02	9.57E-01	1.04E-02		1.61E+00	1.49E+01	2.41E-02	8.52E-01	2.60E-01
Sr90	1.98E+04	5.01E+04	1.36E+02	2.61E+04				1.39E+02	6.48E+04			2.28E+00
Y90	1.98E+04	5.01E+04	1.36E+02	2.61E+04				1.39E+02	6.48E+04			2.28E+00
Tc99		6.91E+01	2.07E+01		3.11E+00			3.96E+00	9.05E+00			2.86E-01
Cs137		7.35E+04	4.80E+03		8.79E+03			4.22E+03	2.85E+04			6.03E+02
Ba137		6.99E+04	4.56E+03		8.35E+03			4.01E+03	2.71E+04			5.73E+02
Np237		3.77E-02			4.52E-03			2.35E-03	2.97E-03			
Pu239	3.89E+01	5.38E+00	5.54E+00	9.08E+00		1.83E+01	2.07E+00		4.88E+00	4.43E+00	8.72E+00	8.32E-01
Pu240	1.06E+01	1.46E+00	1.61E+00	2.63E+00		5.20E+00	6.73E-01		1.51E+00	1.44E+00	2.73E+00	2.59E-01
Pu241	2.20E+02	2.85E+01	4.04E+01	5.78E+01		1.16E+02	2.81E+01		5.08E+01	5.68E+01	1.26E+02	1.19E+01
Am241	5.88E+01	2.02E+02	3.38E+01	5.03E+01		1.58E+01	3.33E-01	1.27E+00	5.11E+00	3.26E-01	5.78E+00	5.47E-01
Cm244		3.59E-02	2.73E-02						1.27E-03			
Total	3.98E+04	2.44E+05	9.72E+03	5.24E+04	1.71E+04	7.97E+01	1.20E+01	8.52E+03	1.85E+05	2.54E+01	6.09E+01	1.19E+03

Insoluble (Ci)	A-101	A-102	A-103	A-104	A-105	A-106	AX-102	AX-103	AX-104	AX101	B-101	B-102
C14		7.58E-01	5.41E-02	1.30E+00	9.67E-03			1.63E-02	1.50E-01		8.61E-03	2.63E-03
Sr90	1.96E+06	4.96E+06	1.34E+04	2.59E+06	1.96E-02	3.32E-03		1.38E+04	6.41E+06			2.26E+02
Y90	1.96E+06	4.96E+06	1.34E+04	2.59E+06	1.96E-02	3.32E-03		1.38E+04	6.41E+06			2.26E+02
Tc99		6.91E+01	2.07E+01		3.11E+00			3.96E+00	9.05E+00			2.86E-01
Cs137		2.35E+04	1.53E+03		2.81E+03			1.35E+03	9.11E+03			1.93E+02
Ba137		2.23E+04	1.46E+03		2.67E+03			1.28E+03	8.66E+03			1.83E+02
Np237	1.62E-03	3.40E-01	8.57E-03	2.50E-03	4.07E-02			2.11E-02	2.67E-02			3.50E-03
Pu239	1.91E+03	2.63E+02	2.72E+02	4.45E+02		8.97E+02	1.02E+02		2.39E+02	2.17E+02	4.27E+02	4.08E+01
Pu240	4.86E+02	6.66E+01	7.34E+01	1.20E+02		2.38E+02	3.07E+01		6.89E+01	6.57E+01	1.25E+02	1.18E+01
Pu241	3.23E+03	4.18E+02	5.93E+02	8.48E+02		1.70E+03	4.12E+02		7.46E+02	8.33E+02	1.85E+03	1.75E+02
Am241	5.39E+02	1.85E+03	3.10E+02	4.61E+02		1.45E+02	3.06E+00	1.16E+01	4.69E+01	2.99E+00	5.30E+01	5.02E+00
Cm244		3.55E+00	2.70E+00		2.75E-03			4.32E-02	1.26E-01			1.12E-03
Total	3.93E+06	9.96E+06	3.11E+04	5.17E+06	5.48E+03	3.02E+03	5.56E+02	3.02E+04	1.28E+07	1.14E+03	2.49E+03	1.06E+03

Table A-2. Radionuclide Inventory Estimates for Single-Shell Tanks

Soluble (Ci)	B-103	B-104	B-105	B-106	B-107	B-108	B-109	B-110	B-111	B-112	B-201	B-202
C14	6.20E-01	8.10E-02	2.02E+00	8.49E-02	2.41E+00	1.81E+00	1.27E+00	2.14E+01	4.52E+02	1.40E+01		
Sr90	6.84E+01	5.64E+01	8.47E+00	1.11E+00	1.67E+02	2.99E+02	3.89E+01	4.36E+02		9.40E+02		
Y90	6.84E+01	5.64E+01	8.47E+00	1.11E+00	1.67E+02	2.99E+02	3.89E+01	4.36E+02		9.40E+02		
Tc99	1.59E+00	5.57E-01	4.38E+00	2.07E-01	3.99E+00	8.36E+00	2.89E+00	9.27E+01	9.43E+02	6.37E+01		
Cs137	2.44E+03	1.14E+03	9.49E+03	4.29E+02	1.11E+04	7.77E+03	3.13E+03	1.56E+04	1.39E+05	5.71E+04		
Ba137	2.31E+03	1.08E+03	9.01E+03	4.08E+02	1.06E+04	7.38E+03	2.97E+03	1.48E+04	1.32E+05	5.42E+04		
Np237	1.89E-03		5.47E-03		6.86E-03	9.19E-03	3.23E-03	3.03E-03	1.42E+00	6.86E-02		
Pu239	2.85E+00	1.69E+00	1.69E-01	1.88E-02	6.67E-01	6.67E-02	7.40E-03	3.91E+00	5.38E-01	5.59E-02		3.11E+00
Pu240	8.83E-01	1.86E-01	1.86E-02	2.07E-03	6.02E-02	6.02E-03		8.36E-01	1.07E-01	1.10E-02		9.25E-01
Pu241	2.31E+01	8.41E-01	8.41E-02	9.32E-03	1.97E-01	1.97E-02	2.19E-03	2.68E+01	1.04E+00	1.05E-01		2.03E+01
Am241	3.61E+00	2.56E-01	2.62E-02	1.48E-02	7.33E-02	3.28E-01	1.21E-01	8.20E+01	2.48E-01	2.44E+00		2.26E+00
Cm244								1.02E-01	7.95E-03	5.24E-03		
Total	4.90E+03	2.34E+03	1.85E+04	8.40E+02	2.20E+04	1.58E+04	6.19E+03	3.14E+04	2.72E+05	1.13E+05		1.26E+01

Insoluble (Ci)	B-103	B-104	B-105	B-106	B-107	B-108	B-109	B-110	B-111	B-112	B-201	B-202
C14	6.26E-03		2.04E-02		2.44E-02	1.83E-02	1.29E-02	2.16E-01	4.57E+00	1.41E-01		
Sr90	6.78E+03	5.58E+03	8.38E+02	1.10E+02	1.65E+04	2.96E+04	3.85E+03	4.32E+04		9.30E+04		
Y90	6.78E+03	5.58E+03	8.38E+02	1.10E+02	1.65E+04	2.96E+04	3.85E+03	4.32E+04		9.30E+04		
Tc99	1.59E+00	5.57E-01	4.38E+00	2.07E-01	3.99E+00	8.36E+00	2.89E+00	9.27E+01	9.43E+02	6.37E+01		
Cs137	7.78E+02	3.64E+02	3.03E+03	1.37E+02	3.55E+03	2.48E+03	1.00E+03	4.97E+03	4.44E+04	1.82E+04		
Ba137	7.39E+02	3.46E+02	2.88E+03	1.30E+02	3.37E+03	2.36E+03	9.50E+02	4.72E+03	4.22E+04	1.73E+04		
Np237	1.71E-02	6.30E-03	4.93E-02	2.48E-03	6.18E-02	8.27E-02	2.90E-02	2.73E-02	1.27E+01	6.18E-01		
Pu239	1.40E+02	8.30E+01	8.30E+00	9.22E-01	3.27E+01	3.27E+00	3.63E-01	1.92E+02	2.63E+01	2.74E+00		1.53E+02
Pu240	4.03E+01	8.51E+00	8.51E-01	9.45E-02	2.75E+00	2.75E-01	3.07E-02	3.82E+01	4.91E+00	5.04E-01		4.22E+01
Pu241	3.39E+02	1.23E+01	1.23E+00	1.37E-01	2.89E+00	2.89E-01	3.21E-02	3.93E+02	1.52E+01	1.54E+00		2.98E+02
Am241	3.31E+01	2.35E+00	2.40E-01	1.35E-01	6.72E-01	3.01E+00	1.11E+00	7.52E+02	2.27E+00	2.23E+01		2.07E+01
Cm244	1.10E-02				3.16E-03	6.88E-02	2.18E-02	1.01E+01	7.87E-01	5.18E-01		
Total	1.56E+04	1.20E+04	7.60E+03	4.89E+02	4.01E+04	6.41E+04	9.65E+03	9.76E+04	8.75E+04	2.22E+05		5.20E+02

Table A-2. Radionuclide Inventory Estimates for Single-Shell Tanks

Soluble (Ci)	B-203	B-204	BX-101	BX-102	BX-103	BX-104	BX-105	BX-106	BX-107	BX-108	BX-109	BX-110
C14			4.25E+00	1.03E+02	1.61E+01	2.11E+02	1.43E+02	3.92E+02	4.55E-02	1.47E-02	1.24E+00	2.21E+01
Sr90				8.90E+02	1.74E+03	1.31E+02	2.81E+04	1.15E+04	3.10E+02	3.39E+01	2.74E+03	1.53E+03
Y90				8.90E+02	1.74E+03	1.31E+02	2.81E+04	1.15E+04	3.10E+02	3.39E+01	2.74E+03	1.53E+03
Tc99				1.99E+02		1.02E+03	4.79E+02	7.44E+02	1.64E+00	3.81E-02	1.40E+00	1.01E+02
Cs137				6.43E+04		1.54E+05	3.66E+04	1.37E+06	3.36E+03	1.10E+02	3.80E+03	9.05E+04
Ba137				6.10E+04		1.46E+05	3.48E+04	1.30E+06	3.20E+03	1.05E+02	3.61E+03	8.59E+04
Np237				1.05E-01		1.13E+00	1.22E-01	4.89E-01	2.11E-03		2.87E-03	1.09E-01
Pu239	1.05E-02	1.05E-01	7.64E+00	4.31E-01		1.00E+00			7.40E-01	7.40E-02	9.29E-01	2.85E-01
Pu240	2.69E-03	2.69E-02	2.46E+00	1.57E-01		3.10E-01			8.11E-02	8.11E-03	1.34E-01	4.26E-02
Pu241	3.08E-02	3.08E-01	1.01E+02	7.04E+00		7.95E+00			3.83E-01	3.83E-02	8.41E-01	2.60E-01
Am241	6.71E-03	6.71E-02	6.14E+00	4.40E+01		1.12E+00	2.26E+02	1.59E+02	1.82E-01	1.82E-02	1.57E+00	3.92E+00
Cm244				2.47E-02		1.08E-02	1.03E-01	8.58E-02				8.29E-03
Total	2.93E-02	2.93E-01	5.21E+01	1.27E+05	3.49E+03	3.01E+05	1.28E+05	2.70E+06	7.18E+03	2.83E+02	1.29E+04	1.80E+05

Insoluble (Ci)	B-203	B-204	BX-101	BX-102	BX-103	BX-104	BX-105	BX-106	BX-107	BX-108	BX-109	BX-110
C14			4.29E-02	1.05E+00	1.63E-01	2.13E+00	1.45E+00	3.96E+00			1.25E-02	2.23E-01
Sr90				8.81E+04	1.72E+05	1.29E+04	2.78E+06	1.14E+06	3.07E+04	3.36E+03	2.71E+05	1.51E+05
Y90				8.81E+04	1.72E+05	1.29E+04	2.78E+06	1.14E+06	3.07E+04	3.36E+03	2.71E+05	1.51E+05
Tc99				1.99E+02		1.02E+03	4.79E+02	7.44E+02	1.64E+00	3.81E-02	1.40E+00	1.01E+02
Cs137				2.05E+04		4.90E+04	1.17E+04	4.38E+05	1.07E+03	3.53E+01	1.21E+03	2.89E+04
Ba137				1.95E+04		4.66E+04	1.11E+04	4.16E+05	1.02E+03	3.35E+01	1.15E+03	2.74E+04
Np237				9.45E-01		1.02E+01	1.10E+00	4.40E+00	1.90E-02		2.59E-02	9.78E-01
Pu239	5.13E-01	5.13E+00	3.74E+02	2.11E+01		4.92E+01		1.08E-03	3.63E+01	3.63E+00	4.55E+01	1.40E+01
Pu240	1.23E-01	1.23E+00	1.13E+02	7.16E+00		1.42E+01	1.54E-02	1.54E-02	3.70E+00	3.70E-01	6.12E+00	1.94E+00
Pu241	4.51E-01	4.51E+00	1.48E+03	1.03E+02		1.17E+02	1.09E-03	2.13E-03	5.61E+00	5.61E-01	1.23E+01	3.81E+00
Am241	6.15E-02	6.15E-01	5.63E+01	4.03E+02		1.03E+01	2.08E+03	1.46E+03	1.67E+00	1.67E-01	1.44E+01	3.60E+01
Cm244				2.44E+00		1.07E+00	1.02E+01	8.50E+00				8.21E-01
Total	1.15E+00	1.15E+01	2.04E+03	2.17E+05	3.44E+05	1.23E+05	5.58E+06	3.13E+06	6.35E+04	6.79E+03	5.45E+05	3.59E+05

Table A-2. Radionuclide Inventory Estimates for Single-Shell Tanks

Soluble (Ci)	BX-111	BX-112	BY-101	BY-102	BY-103	BY-104	BY-105	BY-106	BY-107	BY-108	BY-109	BY-110
C14	2.28E+01	5.93E-01	2.91E+01	8.44E+00	2.49E+00	3.04E+01	2.41E+01	2.95E+01	1.08E+01	1.11E+01	9.43E+00	2.64E+01
Sr90	1.52E+03	3.11E+01	2.38E+03	9.76E+02	4.89E+03	1.99E+03	1.67E+03	2.54E+03	1.09E+03	3.53E+02	7.01E+02	2.32E+03
Y90	1.52E+03	3.11E+01	2.38E+03	9.76E+02	4.89E+03	1.99E+03	1.67E+03	2.54E+03	1.09E+03	3.53E+02	7.01E+02	2.32E+03
Tc99	1.04E+02	6.27E-01	1.33E+02	3.86E+01	6.27E+00	1.36E+02	1.06E+02	1.35E+02	4.92E+01	5.95E+01	4.32E+01	1.21E+02
Cs137	9.30E+04	1.68E+03	1.19E+05	3.46E+04	5.73E+03	1.22E+05	9.44E+04	1.21E+05	4.41E+04	5.71E+04	3.85E+04	1.08E+05
Ba137	8.84E+04	1.60E+03	1.13E+05	3.28E+04	5.44E+03	1.15E+05	8.97E+04	1.15E+05	4.19E+04	5.42E+04	3.66E+04	1.02E+05
Np237	1.12E-01	1.22E-03	1.43E-01	4.15E-02	7.27E-03	1.46E-01	1.14E-01	1.45E-01	5.30E-02	8.45E-02	4.63E-02	1.30E-01
Pu239	2.85E-02	1.88E-01			1.47E+01	2.38E+00	1.41E+00	5.26E-01	5.23E-01	5.40E-01		8.09E-01
Pu240	4.29E-03	4.35E-02			4.09E+00	4.53E-01	2.89E-01	1.08E-01	1.06E-01	1.14E-01		1.73E-01
Pu241	2.60E-02	4.43E-01			1.06E+02	5.21E+00	3.02E+00	1.49E+00	1.38E+00	1.60E+00		2.26E+00
Am241	3.94E+00	1.50E-01	5.03E+00	1.45E+00	1.02E+01	1.38E+01	9.44E+00	7.48E+00	3.86E+00	5.62E+00	1.63E+00	7.89E+00
Cm244	8.53E-03		1.09E-02	3.17E-03		1.11E-02	8.66E-03	1.10E-02	4.04E-03	6.35E-03	3.54E-03	9.89E-03
Total	1.85E+05	3.39E+03	2.37E+05	6.94E+04	2.10E+04	2.41E+05	1.88E+05	2.40E+05	8.82E+04	1.12E+05	7.65E+04	2.15E+05

Insoluble (Ci)	BX-111	BX-112	BY-101	BY-102	BY-103	BY-104	BY-105	BY-106	BY-107	BY-108	BY-109	BY-110
C14	2.30E-01	5.99E-03	2.94E-01	8.53E-02	2.52E-02	3.07E-01	2.44E-01	2.98E-01	1.09E-01	1.12E-01	9.53E-02	2.66E-01
Sr90	1.51E+05	3.08E+03	2.36E+05	9.66E+04	4.84E+05	1.97E+05	1.65E+05	2.51E+05	1.08E+05	3.49E+04	6.94E+04	2.30E+05
Y90	1.51E+05	3.08E+03	2.36E+05	9.66E+04	4.84E+05	1.97E+05	1.65E+05	2.51E+05	1.08E+05	3.49E+04	6.94E+04	2.30E+05
Tc99	1.04E+02	6.27E-01	1.33E+02	3.86E+01	6.27E+00	1.36E+02	1.06E+02	1.35E+02	4.92E+01	5.95E+01	4.32E+01	1.21E+02
Cs137	2.97E+04	5.38E+02	3.81E+04	1.10E+04	1.83E+03	3.88E+04	3.02E+04	3.85E+04	1.41E+04	1.82E+04	1.23E+04	3.44E+04
Ba137	2.82E+04	5.11E+02	3.62E+04	1.05E+04	1.74E+03	3.69E+04	2.86E+04	3.66E+04	1.34E+04	1.73E+04	1.17E+04	3.27E+04
Np237	1.01E+00	1.10E-02	1.29E+00	3.73E-01	6.55E-02	1.31E+00	1.02E+00	1.31E+00	4.77E-01	7.60E-01	4.17E-01	1.17E+00
Pu239	1.40E+00	9.22E+00	3.04E-02	3.11E-03	7.22E+02	1.17E+02	6.90E+01	2.58E+01	2.56E+01	2.65E+01		3.96E+01
Pu240	1.96E-01	1.99E+00	6.93E-03	1.35E-03	1.87E+02	2.07E+01	1.32E+01	4.95E+00	4.86E+00	5.22E+00		7.92E+00
Pu241	3.81E-01	6.50E+00	9.94E-03	1.37E-03	1.55E+03	7.64E+01	4.44E+01	2.18E+01	2.03E+01	2.35E+01		3.31E+01
Am241	3.61E+01	1.38E+00	4.61E+01	1.33E+01	9.37E+01	1.26E+02	8.66E+01	6.86E+01	3.54E+01	5.16E+01	1.50E+01	7.24E+01
Cm244	8.45E-01		1.08E+00	3.14E-01	5.46E-02	1.10E+00	8.57E-01	1.09E+00	4.00E-01	6.28E-01	3.50E-01	9.79E-01
Total	3.59E+05	7.22E+03	5.46E+05	2.15E+05	9.73E+05	4.71E+05	3.90E+05	5.78E+05	2.44E+05	1.06E+05	1.63E+05	5.28E+05

Table A-2. Radionuclide Inventory Estimates for Single-Shell Tanks

Soluble (Ci)	BY-111	BY-112	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110
C14	3.01E+01	5.48E+00	3.90E+00		8.53E+01		9.15E+01	1.52E-01	6.26E-01	5.07E-02	3.46E-01	
Sr90	2.34E+03	5.29E+02	4.90E+02	7.32E+03	2.84E+03	2.63E+03	2.00E+04	3.85E+03	5.96E+02	1.60E+02	4.89E-01	8.68E+01
Y90	2.34E+03	5.29E+02	4.90E+02	7.32E+03	2.84E+03	2.63E+03	2.00E+04	3.85E+03	5.96E+02	1.60E+02	4.89E-01	8.68E+01
Tc99	1.37E+02	2.51E+01	1.48E+01				3.45E+02		6.69E-01		4.61E-01	
Cs137	1.22E+05	2.24E+04	4.18E+04				6.40E+04		1.95E+03	1.04E+00	1.25E+03	
Ba137	1.16E+05	2.13E+04	3.97E+04				6.08E+04		1.86E+03	9.92E-01	1.19E+03	
Np237	1.47E-01	2.70E-02	2.33E-02				5.08E-03					
Pu239	3.68E-03		1.94E+00	3.23E+01	4.76E+00	1.11E+01	2.43E+01	4.90E+00	3.98E+00	1.41E+00	1.60E-02	1.89E+00
Pu240			5.42E-01	9.60E+00	1.41E+00	3.33E+00	6.56E+00	1.31E+00	1.12E+00	3.94E-01	1.45E-03	4.59E-01
Pu241	1.01E-02		1.13E+01	2.85E+02	3.82E+01	1.32E+02	1.31E+02	2.73E+01	2.36E+01	8.15E+00	4.84E-03	7.37E+00
Am241	5.16E+00	9.44E-01	2.98E+00	6.55E+01	8.31E+00	5.11E+01	6.24E+02	2.39E+01	7.12E+00	2.08E+00	8.25E-03	1.28E+00
Cm244	1.12E-02	2.06E-03					4.81E-01					
Total	2.43E+05	4.47E+04	8.24E+04	1.48E+04	5.79E+03	5.36E+03	1.66E+05	7.73E+03	5.02E+03	3.29E+02	2.45E+03	1.80E+02

Insoluble (Ci)	BY-111	BY-112	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110
C14	3.04E-01	5.53E-02	3.94E-02		8.62E-01		9.25E-01	1.54E-03	6.32E-03		3.50E-03	
Sr90	2.32E+05	5.24E+04	4.85E+04	7.24E+05	2.81E+05	2.60E+05	1.98E+06	3.81E+05	5.90E+04	1.58E+04	4.84E+01	8.59E+03
Y90	2.32E+05	5.24E+04	4.85E+04	7.24E+05	2.81E+05	2.60E+05	1.98E+06	3.81E+05	5.90E+04	1.58E+04	4.84E+01	8.59E+03
Tc99	1.37E+02	2.51E+01	1.48E+01				3.45E+02		6.69E-01		4.61E-01	
Cs137	3.90E+04	7.15E+03	1.33E+04				2.04E+04		6.24E+02	3.33E-01	4.01E+02	
Ba137	3.70E+04	6.79E+03	1.27E+04				1.94E+04		5.93E+02	3.17E-01	3.81E+02	
Np237	1.32E+00	2.43E-01	2.09E-01	4.40E-03		2.78E-03	4.58E-02	1.14E-03	7.97E-03		6.56E-03	
Pu239	1.80E-01		9.49E+01	1.58E+03	2.33E+02	5.44E+02	1.19E+03	2.40E+02	1.95E+02	6.93E+01	7.82E-01	9.27E+01
Pu240	4.47E-02	1.09E-03	2.48E+01	4.38E+02	6.44E+01	1.52E+02	3.00E+02	5.99E+01	5.13E+01	1.80E+01	6.62E-02	2.10E+01
Pu241	1.48E-01		1.65E+02	4.19E+03	5.60E+02	1.94E+03	1.92E+03	4.01E+02	3.46E+02	1.19E+02	7.10E-02	1.08E+02
Am241	4.73E+01	8.66E+00	2.73E+01	6.01E+02	7.62E+01	4.68E+02	5.73E+03	2.20E+02	6.53E+01	1.91E+01	7.57E-02	1.18E+01
Cm244	1.11E+00	2.04E-01	1.11E-02				4.77E+01		4.72E-03			
Total	5.39E+05	1.19E+05	1.23E+05	1.46E+06	5.63E+05	5.23E+05	4.01E+06	7.62E+05	1.20E+05	3.19E+04	8.80E+02	1.74E+04

Table A-2. Radionuclide Inventory Estimates for Single-Shell Tanks

Soluble (Ci)	C-111	C-112	C-201	C-202	C-203	C-204	S-101	S-102	S-103	S-104	S-105	S-106
C14	1.28E-01	3.69E-01					8.34E+00			9.67E-01	2.62E+00	5.28E+00
Sr90	6.36E+02	2.67E+02	4.36E-02		4.56E+00	1.88E-03	4.16E+03	3.80E+02		3.45E+03	3.42E+02	9.04E+01
Y90	6.36E+02	2.67E+02	4.36E-02		4.56E+00	1.88E-03	4.16E+03	3.80E+02		3.45E+03	3.42E+02	9.04E+01
Tc99	3.52E-01	2.91E-01					6.21E+01			3.20E+00	9.16E+00	1.78E+01
Cs137	9.74E+02	8.42E+02	4.22E-01			1.82E-02	2.18E+04			7.75E+03	2.13E+04	4.20E+04
Ba137	9.26E+02	8.00E+02	4.01E-01			1.73E-02	2.07E+04			7.36E+03	2.03E+04	3.99E+04
Np237							1.58E-02			4.46E-03	1.26E-02	2.44E-02
Pu239	1.04E+00	9.76E-01					3.04E+00	3.04E-01	3.40E-02	2.88E+00	2.11E-01	2.35E-02
Pu240	2.63E-01	2.70E-01					7.31E-01	7.31E-02	8.13E-03	6.92E-01	5.27E-02	5.86E-03
Pu241	4.25E+00	5.21E+00					9.97E+00	9.97E-01	1.11E-01	8.67E+00	6.25E-01	6.97E-02
Am241	1.26E+00	1.40E+00		1.91E-03			2.49E+01	6.86E-01	7.64E-02	6.35E+00	5.78E-01	9.49E-02
Cm244							8.10E-03					
Total	3.18E+03	2.18E+03	9.12E-01	1.53E-02	9.11E+00	3.93E-02	5.09E+04	7.62E+02	1.83E-01	2.20E+04	4.23E+04	8.21E+04

Insoluble (Ci)	C-111	C-112	C-201	C-202	C-203	C-204	S-101	S-102	S-103	S-104	S-105	S-106
C14	1.30E-03	3.72E-03					8.43E-02			9.77E-03	2.64E-02	5.33E-02
Sr90	6.30E+04	2.64E+04	4.32E+00		4.51E+02	1.86E-01	4.12E+05	3.76E+04		3.42E+05	3.39E+04	8.95E+03
Y90	6.30E+04	2.64E+04	4.32E+00		4.51E+02	1.86E-01	4.12E+05	3.76E+04		3.42E+05	3.39E+04	8.95E+03
Tc99	3.52E-01	2.91E-01					6.21E+01			3.20E+00	9.16E+00	1.78E+01
Cs137	3.11E+02	2.69E+02	1.35E-01			5.82E-03	6.95E+03			2.47E+03	6.82E+03	1.34E+04
Ba137	2.96E+02	2.55E+02	1.28E-01			5.52E-03	6.60E+03			2.35E+03	6.48E+03	1.27E+04
Np237	5.26E-03	4.40E-03					1.42E-01			4.01E-02	1.13E-01	2.20E-01
Pu239	5.07E+01	4.78E+01	1.58E-02	4.34E-02	4.34E-03		1.49E+02	1.49E+01	1.66E+00	1.41E+02	1.03E+01	1.15E+00
Pu240	1.20E+01	1.23E+01	1.38E-03	3.79E-03			3.34E+01	3.34E+00	3.71E-01	3.16E+01	2.41E+00	2.68E-01
Pu241	6.23E+01	7.65E+01	1.53E-03	4.21E-03			1.46E+02	1.46E+01	1.63E+00	1.27E+02	9.17E+00	1.02E+00
Am241	1.16E+01	1.28E+01	6.29E-03	1.75E-02	1.75E-03		2.28E+02	6.29E+00	7.00E-01	5.82E+01	5.30E+00	8.71E-01
Cm244							8.02E-01				1.51E-03	6.94E-03
Total	1.27E+05	5.35E+04	8.93E+00	2.94E-01	9.02E+02	3.84E-01	8.38E+05	7.53E+04	4.59E+00	6.88E+05	8.11E+04	4.41E+04

Table A-2. Radionuclide Inventory Estimates for Single-Shell Tanks

Soluble (Ci)	S-107	S-108	S-109	S-110	S-111	S-112	SX-101	SX-102	SX-103	SX-104	SX-105	SX-106
C14		1.14E+01	5.35E+01	3.73E+01	3.48E+01	2.28E+02		4.52E-02	1.10E+02	1.23E+01	2.68E+01	4.04E+00
Sr90	4.70E+03	5.28E+02	6.04E+02	4.12E+03	5.18E+03	1.02E+04	5.18E+03	1.46E+04	5.04E+03	5.19E+02	2.65E+03	1.16E+03
Y90	4.70E+03	5.28E+02	6.04E+02	4.12E+03	5.18E+03	1.02E+04	5.18E+03	1.46E+04	5.04E+03	5.19E+02	2.65E+03	1.16E+03
Tc99		5.19E+01	1.80E+02	1.19E+02	1.11E+02	7.77E+02		3.57E-01	6.75E+02	9.43E+01	2.12E+02	7.98E+01
Cs137		5.68E+04	3.20E+05	3.57E+05	3.29E+05	1.11E+06		9.86E+01	4.15E+05	2.83E+04	5.85E+04	5.71E+04
Ba137		5.40E+04	3.04E+05	3.39E+05	3.13E+05	1.06E+06		9.37E+01	3.94E+05	2.69E+04	5.55E+04	5.42E+04
Np237		2.66E-02	1.46E-01	3.38E-02	3.32E-02	4.44E-01			1.96E-01	2.37E-02	5.14E-02	5.49E-02
Pu239	1.77E+01	4.36E-01	4.83E-02	1.47E+00	1.47E-01	1.63E-02	3.11E+00	3.09E-01	3.44E-02	3.07E+00	2.59E-01	
Pu240	4.43E+00	1.08E-01	1.20E-02	3.68E-01	3.68E-02	4.21E-03	6.85E-01	6.81E-02	7.80E-03	6.32E-01	5.57E-02	
Pu241	9.71E+01	2.22E+00	2.47E-01	4.41E+00	4.41E-01	4.91E-02	9.71E+00	9.71E-01	1.08E-01	9.00E+00	8.02E-01	
Am241	2.39E+01	9.80E+00	1.27E+01	3.82E+00	8.98E-01	6.60E+01	9.13E+00	1.02E+00	1.77E+02	3.60E+01	6.29E+01	2.70E+01
Cm244		4.08E-03	5.33E-03	1.58E-03	1.56E-03	3.64E-02			8.02E-02	1.24E-02	2.83E-02	5.49E-03
Total	9.49E+03	1.12E+05	6.26E+05	7.05E+05	6.53E+05	2.19E+06	1.04E+04	2.95E+04	8.21E+05	5.64E+04	1.20E+05	1.14E+05

Insoluble (Ci)	S-107	S-108	S-109	S-110	S-111	S-112	SX-101	SX-102	SX-103	SX-104	SX-105	SX-106
C14		1.15E-01	5.41E-01	3.77E-01	3.52E-01	2.30E+00			1.11E+00	1.24E-01	2.71E-01	4.08E-02
Sr90	4.65E+05	5.23E+04	5.98E+04	4.08E+05	5.13E+05	1.01E+06	5.13E+05	1.45E+06	4.99E+05	5.13E+04	2.62E+05	1.15E+05
Y90	4.65E+05	5.23E+04	5.98E+04	4.08E+05	5.13E+05	1.01E+06	5.13E+05	1.45E+06	4.99E+05	5.13E+04	2.62E+05	1.15E+05
Tc99		5.19E+01	1.80E+02	1.19E+02	1.11E+02	7.77E+02		3.57E-01	6.75E+02	9.43E+01	2.12E+02	7.98E+01
Cs137		1.82E+04	1.02E+05	1.14E+05	1.05E+05	3.55E+05		3.15E+01	1.33E+05	9.04E+03	1.87E+04	1.82E+04
Ba137		1.72E+04	9.71E+04	1.08E+05	9.99E+04	3.37E+05		2.99E+01	1.26E+05	8.59E+03	1.77E+04	1.73E+04
Np237	2.22E-03	2.39E-01	1.31E+00	3.04E-01	2.99E-01	3.99E+00	1.24E-03		1.76E+00	2.13E-01	4.63E-01	4.94E-01
Pu239	8.68E+02	2.14E+01	2.37E+00	7.19E+01	7.19E+00	7.98E-01	1.53E+02	1.51E+01	1.69E+00	1.50E+02	1.27E+01	
Pu240	2.02E+02	4.95E+00	5.49E-01	1.68E+01	1.68E+00	1.92E-01	3.13E+01	3.11E+00	3.56E-01	2.89E+01	2.54E+00	
Pu241	1.42E+03	3.26E+01	3.62E+00	6.47E+01	6.47E+00	7.20E-01	1.42E+02	1.42E+01	1.58E+00	1.32E+02	1.18E+01	
Am241	2.20E+02	8.99E+01	1.17E+02	3.51E+01	8.23E+00	6.06E+02	8.38E+01	9.37E+00	1.63E+03	3.30E+02	5.77E+02	2.48E+02
Cm244		4.04E-01	5.27E-01	1.57E-01	1.55E-01	3.60E+00		4.72E-03	7.94E+00	1.23E+00	2.80E+00	5.43E-01
Total	9.33E+05	1.40E+05	3.19E+05	1.04E+06	1.23E+06	2.71E+06	1.03E+06	2.90E+06	1.26E+06	1.21E+05	5.61E+05	2.66E+05

Table A-2. Radionuclide Inventory Estimates for Single-Shell Tanks

Soluble (Ci)	SX-107	SX-108	SX-109	SX-110	SX-111	SX-112	SX-113	SX-114	SX-115	T-101	T-102	T-103
C14						7.28E-02	1.19E+01		2.32E+01	1.34E+01	2.27E-01	1.27E+00
Sr90	1.29E+04	8.03E+03	2.42E+03	5.28E+03	7.39E+03	8.54E+03	2.25E+03	7.75E+03	5.55E+03	1.80E+01	3.06E-01	1.51E+02
Y90	1.29E+04	8.03E+03	2.42E+03	5.28E+03	7.39E+03	8.54E+03	2.25E+03	7.75E+03	5.55E+03	1.80E+01	3.06E-01	1.51E+02
Tc99						2.31E-01	3.82E+01		7.44E+01	2.39E+01	4.05E-01	2.24E+00
Cs137	1.65E-03	3.18E-03	3.39E-03			6.89E+02	1.03E+05		2.09E+05	6.19E+03	1.05E+02	5.03E+02
Ba137	1.57E-03	3.02E-03	3.22E-03			6.54E+02	9.78E+04		1.98E+05	5.88E+03	9.96E+01	4.78E+02
Np237							5.46E-02		2.91E-02	8.86E-03		
Pu239	4.29E+00	4.64E+00	2.83E+00	4.39E+00	5.61E+00	3.21E+00	1.02E+00	7.10E+00	1.82E+00			1.76E-03
Pu240	1.07E+00	1.13E+00	6.45E-01	1.18E+00	1.49E+00	7.99E-01	2.25E-01	1.81E+00	4.74E-01			
Pu241	2.11E+01	2.26E+01	1.20E+01	3.12E+01	4.51E+01	1.52E+01	3.02E+00	3.73E+01	9.00E+00			3.20E-03
Am241	2.96E+01	3.19E+01	1.31E+01	4.57E+01	5.88E+01	1.84E+01	2.49E+00	4.90E+01	1.01E+01	5.88E+00	1.00E-01	5.62E-01
Cm244										3.19E-03		
Total	2.59E+04	1.61E+04	4.86E+03	1.06E+04	1.49E+04	1.84E+04	2.05E+05	1.56E+04	4.18E+05	1.22E+04	2.06E+02	1.29E+03

Insoluble (Ci)	SX-107	SX-108	SX-109	SX-110	SX-111	SX-112	SX-113	SX-114	SX-115	T-101	T-102	T-103
C14							1.21E-01		2.35E-01	1.35E-01	2.29E-03	1.29E-02
Sr90	1.28E+06	7.95E+05	2.39E+05	5.23E+05	7.32E+05	8.45E+05	2.23E+05	7.67E+05	5.50E+05	1.78E+03	3.03E+01	1.50E+04
Y90	1.28E+06	7.95E+05	2.39E+05	5.23E+05	7.32E+05	8.45E+05	2.23E+05	7.67E+05	5.50E+05	1.78E+03	3.03E+01	1.50E+04
Tc99						2.31E-01	3.82E+01		7.44E+01	2.39E+01	4.05E-01	2.24E+00
Cs137		1.01E-03	1.08E-03			2.20E+02	3.29E+04		6.66E+04	1.98E+03	3.35E+01	1.61E+02
Ba137			1.03E-03			2.09E+02	3.12E+04		6.33E+04	1.88E+03	3.18E+01	1.53E+02
Np237	2.59E-03	2.85E-03	1.03E-03	2.46E-03	4.79E-03	2.09E-03	4.91E-01	3.13E-03	2.62E-01	7.97E-02	1.35E-03	6.65E-03
Pu239	2.10E+02	2.28E+02	1.39E+02	2.15E+02	2.75E+02	1.57E+02	4.99E+01	3.48E+02	8.91E+01			8.62E-02
Pu240	4.91E+01	5.18E+01	2.94E+01	5.40E+01	6.80E+01	3.65E+01	1.03E+01	8.28E+01	2.17E+01			1.24E-02
Pu241	3.10E+02	3.32E+02	1.76E+02	4.58E+02	6.62E+02	2.23E+02	4.43E+01	5.47E+02	1.32E+02			4.69E-02
Am241	2.72E+02	2.92E+02	1.20E+02	4.19E+02	5.39E+02	1.68E+02	2.28E+01	4.49E+02	9.23E+01	5.39E+01	9.18E-01	5.16E+00
Cm244							9.23E-03		5.87E-02	3.16E-01	5.35E-03	3.01E-02
Total	2.56E+06	1.59E+06	4.79E+05	1.05E+06	1.46E+06	1.69E+06	5.10E+05	1.54E+06	1.23E+06	7.50E+03	1.27E+02	3.03E+04

Table A-2. Radionuclide Inventory Estimates for Single-Shell Tanks

Soluble (Ci)	T-104	T-105	T-106	T-107	T-108	T-109	T-110	T-111	T-112	T-201	T-202	T-203
C14	3.02E-02		1.87E-02		2.49E-02	2.23E-02						
Sr90	2.86E+02	3.48E+01	1.78E+00	2.52E+02	2.53E+01	5.09E-01	2.59E+01	2.20E+01	3.26E+01			
Y90	2.86E+02	3.48E+01	1.78E+00	2.52E+02	2.53E+01	5.09E-01	2.59E+01	2.20E+01	3.26E+01			
Tc99	1.08E+00		5.62E-02		9.96E-02	6.21E-01						
Cs137	2.62E+03		1.48E+02		3.06E+02	1.29E+03						
Ba137	2.49E+03		1.41E+02		2.91E+02	1.22E+03						
Np237	1.56E-03											
Pu239	2.12E+00	2.76E+00	3.07E-01	7.38E-01	7.38E-02	8.18E-03	2.81E+00	1.88E+00	3.11E+00		4.46E-03	4.46E-02
Pu240	4.22E-01	4.99E-01	5.54E-02	6.35E-02	6.35E-03		3.27E-01	4.04E-01	7.28E-01		1.14E-03	1.14E-02
Pu241	4.71E+00	6.28E+00	6.97E-01	2.01E-01	2.01E-02	2.24E-03	1.66E+00	4.06E+00	9.45E+00		1.29E-02	1.29E-01
Am241	1.33E+00	1.38E+00	1.54E-01	1.19E-01	1.20E-02	1.34E-03	4.52E-01	9.39E-01	1.92E+00		2.85E-03	2.85E-02
Cm244												
Total	5.69E+03	7.67E+01	2.93E+02	5.05E+02	6.48E+02	2.51E+03	5.59E+01	4.84E+01	7.42E+01		1.24E-02	1.24E-01

Insoluble (Ci)	T-104	T-105	T-106	T-107	T-108	T-109	T-110	T-111	T-112	T-201	T-202	T-203
C14												
Sr90	2.83E+04	3.44E+03	1.76E+02	2.49E+04	2.50E+03	5.04E+01	2.56E+03	2.17E+03	3.23E+03			
Y90	2.83E+04	3.44E+03	1.76E+02	2.49E+04	2.50E+03	5.04E+01	2.56E+03	2.17E+03	3.23E+03			
Tc99	1.08E+00		5.62E-02		9.96E-02	6.21E-01						
Cs137	8.37E+02		4.73E+01		9.78E+01	4.10E+02						
Ba137	7.95E+02		4.49E+01		9.29E+01	3.90E+02						
Np237	1.40E-02				2.20E-03	7.30E-03						
Pu239	1.04E+02	1.35E+02	1.50E+01	3.62E+01	3.62E+00	4.01E-01	1.37E+02	9.22E+01	1.53E+02		2.18E-01	2.18E+00
Pu240	1.93E+01	2.28E+01	2.53E+00	2.90E+00	2.90E-01	3.22E-02	1.49E+01	1.85E+01	3.33E+01		5.22E-02	5.22E-01
Pu241	6.91E+01	9.22E+01	1.02E+01	2.94E+00	2.94E-01	3.28E-02	2.43E+01	5.96E+01	1.39E+02		1.89E-01	1.89E+00
Am241	1.22E+01	1.27E+01	1.41E+00	1.09E+00	1.10E-01	1.23E-02	4.14E+00	8.61E+00	1.76E+01		2.62E-02	2.62E-01
Cm244												
Total	5.84E+04	7.18E+03	4.77E+02	4.99E+04	5.20E+03	9.02E+02	5.31E+03	4.53E+03	6.82E+03		4.88E-01	4.88E+00

Table A-2. Radionuclide Inventory Estimates for Single-Shell Tanks

Soluble (Ci)	T-204	TX-101	TX-102	TX-103	TX-104	TX-105	TX-106	TX-107	TX-108	TX-109	TX-110	TX-111
C14		3.00E+00	4.98E-01	1.44E-01		4.67E+00	9.41E-01		2.64E+00	5.65E+01	2.03E+01	2.18E+00
Sr90		6.11E+01	2.34E+00	5.20E+00		2.29E+01			3.68E+01	1.05E+03	7.39E+02	3.49E+02
Y90		6.11E+01	2.34E+00	5.20E+00		2.29E+01			3.68E+01	1.05E+03	7.39E+02	3.49E+02
Tc99			3.32E+00	4.77E-01		3.05E+01	3.01E+00		1.14E+01	2.90E+02	1.04E+02	1.54E+01
Cs137			5.15E+02	7.14E+02		4.99E+03	8.07E+03		2.99E+04	2.15E+05	9.02E+04	2.04E+04
Ba137			4.89E+02	6.79E+02		4.74E+03	7.67E+03		2.84E+04	2.04E+05	8.57E+04	1.94E+04
Np237			2.76E-03			2.60E-02	4.46E-03		9.44E-03	2.66E-01	9.78E-02	1.62E-02
Pu239									9.62E-03	2.38E+00	1.78E-01	1.87E-02
Pu240									2.68E-03	4.90E-01	3.48E-02	3.73E-03
Pu241									4.68E-02	5.44E+00	3.47E-01	3.76E-02
Am241				6.81E-03					6.09E-02	8.67E+00	2.95E+00	3.02E-01
Cm244										8.34E-03	3.19E-03	
Total		1.25E+02	1.01E+03	1.40E+03		9.81E+03	1.57E+04		5.84E+04	4.21E+05	1.78E+05	4.06E+04

Insoluble (Ci)	T-204	TX-101	TX-102	TX-103	TX-104	TX-105	TX-106	TX-107	TX-108	TX-109	TX-110	TX-111
C14		3.03E-02	5.03E-03	1.46E-03		4.71E-02	9.51E-03		2.66E-02	5.70E-01	2.05E-01	2.20E-02
Sr90		6.04E+03	2.32E+02	5.15E+02		2.27E+03			3.64E+03	1.04E+05	7.32E+04	3.45E+04
Y90		6.04E+03	2.32E+02	5.15E+02		2.27E+03			3.64E+03	1.04E+05	7.32E+04	3.45E+04
Tc99			3.32E+00	4.77E-01		3.05E+01	3.01E+00		1.14E+01	2.90E+02	1.04E+02	1.54E+01
Cs137			1.64E+02	2.28E+02		1.59E+03	2.58E+03		9.56E+03	6.86E+04	2.88E+04	6.53E+03
Ba137			1.56E+02	2.17E+02		1.51E+03	2.45E+03		9.08E+03	6.52E+04	2.74E+04	6.20E+03
Np237			2.48E-02	4.66E-03		2.34E-01	4.01E-02		8.50E-02	2.39E+00	8.80E-01	1.46E-01
Pu239									4.71E-01	1.17E+02	8.70E+00	9.17E-01
Pu240									1.22E-01	2.24E+01	1.59E+00	1.70E-01
Pu241						1.85E-03			6.86E-01	7.97E+01	5.09E+00	5.52E-01
Am241				6.25E-02		1.96E-03			5.58E-01	7.95E+01	2.70E+01	2.77E+00
Cm244			3.70E-03			3.49E-02	1.13E-03		3.40E-02	8.26E-01	3.16E-01	3.20E-02
Total		1.21E+04	7.87E+02	1.48E+03	3.15E-03	7.67E+03	5.03E+03	1.56E-03	2.59E+04	3.43E+05	2.03E+05	8.18E+04

Table A-2. Radionuclide Inventory Estimates for Single-Shell Tanks

Soluble (Ci)	TX-112	TX-113	TX-114	TX-115	TX-116	TX-117	TX-118	TY-101	TY-102	TY-103	TY-104	TY-105
C14	3.52E-01	2.36E+00	6.59E-01	1.27E+00	1.72E-01	2.01E+00	1.93E+02	5.18E-01	1.22E+01	3.25E+01	4.54E-02	2.75E+00
Sr90	5.52E+01	5.92E+01	5.55E+00	2.16E+02	2.81E+02	5.34E+02	5.50E+03	1.23E+02	8.68E+01	7.82E+02	4.43E+01	1.84E+03
Y90	5.52E+01	5.92E+01	5.55E+00	2.16E+02	2.81E+02	5.34E+02	5.50E+03	1.23E+02	8.68E+01	7.82E+02	4.43E+01	1.84E+03
Tc99	7.87E+00	2.62E+00	7.34E+00	3.50E+00	1.77E+00	7.18E-01	2.73E+02	6.59E-01	7.77E+01	2.16E+02	1.42E-01	3.03E+00
Cs137	1.58E+04	5.43E+03	1.58E+04	8.84E+03	3.76E+03	1.52E+03	2.51E+05	1.46E+03	1.68E+04	3.36E+04	3.83E+02	6.68E+03
Ba137	1.51E+04	5.16E+03	1.50E+04	8.40E+03	3.57E+03	1.45E+03	2.38E+05	1.39E+03	1.60E+04	3.20E+04	3.64E+02	6.35E+03
Np237	9.82E-03	3.30E-03	9.15E-03	3.15E-03	2.21E-03		2.52E-01		6.55E-02	1.79E-01		3.81E-03
Pu239	1.02E-03	7.45E-01	7.45E-02	8.28E-03			1.45E+01	2.88E+00	5.42E-02	4.10E+00	1.28E-01	1.09E+00
Pu240		1.38E-01	1.38E-02	1.54E-03			4.01E+00	7.32E-01	1.05E-02	6.64E-01	2.85E-02	1.46E-01
Pu241		1.14E+00	1.14E-01	1.27E-02			1.56E+02	1.14E+01	1.54E-01	8.54E+00	4.40E-01	8.80E-01
Am241	1.77E-02	3.79E-01	3.79E-02	4.27E-03		1.01E-03	1.04E+02	2.80E+00	1.40E-02	2.26E+00	1.40E-01	1.52E+00
Cm244							9.51E-03			2.43E-03		
Total	3.10E+04	1.07E+04	3.08E+04	1.77E+04	7.89E+03	4.04E+03	5.00E+05	3.11E+03	3.31E+04	6.74E+04	8.36E+02	1.67E+04

Insoluble (Ci)	TX-112	TX-113	TX-114	TX-115	TX-116	TX-117	TX-118	TY-101	TY-102	TY-103	TY-104	TY-105
C14	3.55E-03	2.38E-02	6.66E-03	1.29E-02	1.74E-03	2.03E-02	1.95E+00	5.24E-03	1.23E-01	3.28E-01		2.78E-02
Sr90	5.47E+03	5.86E+03	5.49E+02	2.14E+04	2.78E+04	5.28E+04	5.45E+05	1.21E+04	8.59E+03	7.74E+04	4.39E+03	1.82E+05
Y90	5.47E+03	5.86E+03	5.49E+02	2.14E+04	2.78E+04	5.28E+04	5.45E+05	1.21E+04	8.59E+03	7.74E+04	4.39E+03	1.82E+05
Tc99	7.87E+00	2.62E+00	7.34E+00	3.50E+00	1.77E+00	7.18E-01	2.73E+02	6.59E-01	7.77E+01	2.16E+02	1.42E-01	3.03E+00
Cs137	5.06E+03	1.73E+03	5.05E+03	2.82E+03	1.20E+03	4.87E+02	8.00E+04	4.67E+02	5.37E+03	1.07E+04	1.22E+02	2.13E+03
Ba137	4.81E+03	1.65E+03	4.79E+03	2.68E+03	1.14E+03	4.62E+02	7.60E+04	4.43E+02	5.10E+03	1.02E+04	1.16E+02	2.03E+03
Np237	8.83E-02	2.97E-02	8.24E-02	2.83E-02	1.99E-02	8.11E-03	2.27E+00	7.81E-03	5.90E-01	1.61E+00	1.62E-03	3.43E-02
Pu239	5.00E-02	3.65E+01	3.65E+00	4.06E-01			7.09E+02	1.41E+02	2.66E+00	2.01E+02	6.27E+00	5.33E+01
Pu240	6.57E-03	6.30E+00	6.30E-01	7.02E-02			1.83E+02	3.34E+01	4.82E-01	3.03E+01	1.30E+00	6.66E+00
Pu241	1.26E-02	1.67E+01	1.67E+00	1.86E-01			2.28E+03	1.67E+02	2.26E+00	1.25E+02	6.45E+00	1.29E+01
Am241	1.62E-01	3.47E+00	3.48E-01	3.92E-02	5.68E-03	9.23E-03	9.51E+02	2.56E+01	1.28E-01	2.08E+01	1.29E+00	1.40E+01
Cm244	1.98E-03			2.23E-03			9.41E-01		8.39E-02	2.40E-01		
Total	2.08E+04	1.53E+04	1.10E+04	4.83E+04	5.79E+04	1.07E+05	1.25E+06	2.56E+04	2.77E+04	1.76E+05	9.03E+03	3.68E+05

Table A-2. Radionuclide Inventory Estimates for Single-Shell Tanks

Soluble (Ci)	TY-106	U-101	U-102	U-103	U-104	U-105	U-106	U-107	U-108	U-109	U-110	U-111
C14	2.32E-02	1.88E+00	4.67E+00			1.30E-03		1.40E+00	1.84E-03	5.70E-01	3.93E-02	3.49E-01
Sr90	6.74E+01	9.61E+01	3.67E+02	1.51E-02		2.35E-02		5.50E+02	3.59E+02	6.38E+00	2.23E+03	2.87E+02
Y90	6.74E+01	9.61E+01	3.67E+02	1.51E-02		2.35E-02		5.50E+02	3.59E+02	6.38E+00	2.23E+03	2.87E+02
Tc99		5.78E+00	1.46E+01	2.28E-03		4.20E-03		2.88E+01	6.16E-03	1.79E+00	9.96E-02	7.55E+00
Cs137		1.45E+04	3.64E+04	5.96E+00		1.12E+01		2.05E+04	1.61E+01	5.01E+03	2.60E+02	5.45E+03
Ba137		1.38E+04	3.46E+04	5.66E+00		1.06E+01		1.95E+04	1.53E+01	4.76E+03	2.47E+02	5.18E+03
Np237		9.05E-03	1.95E-02					1.97E-02		1.34E-03		5.28E-03
Pu239	1.21E-01	2.52E-02							1.98E-01		3.49E+00	3.82E-02
Pu240	1.63E-02	6.38E-03							6.12E-02		7.42E-01	8.14E-03
Pu241	9.78E-02	1.08E-01				2.82E-03			1.65E+00	2.84E-03	1.08E+01	1.01E-01
Am241	1.69E-01	5.47E-01	3.44E-01			1.11E-02		9.75E+00	4.97E-01	1.71E-02	5.73E+00	2.82E+00
Cm244								1.98E-03				
Total	1.35E+02	2.85E+04	7.18E+04	1.17E+01		2.19E+01		4.12E+04	7.52E+02	9.79E+03	4.98E+03	1.12E+04

Insoluble (Ci)	TY-106	U-101	U-102	U-103	U-104	U-105	U-106	U-107	U-108	U-109	U-110	U-111
C14		1.90E-02	4.71E-02					1.41E-02		5.76E-03		3.53E-03
Sr90	6.68E+03	9.52E+03	3.64E+04	1.50E+00		2.32E+00	1.49E-03	5.44E+04	3.56E+04	6.32E+02	2.21E+05	2.84E+04
Y90	6.68E+03	9.52E+03	3.64E+04	1.50E+00		2.32E+00	1.49E-03	5.44E+04	3.56E+04	6.32E+02	2.21E+05	2.84E+04
Tc99		5.78E+00	1.46E+01	2.28E-03		4.20E-03		2.88E+01	6.16E-03	1.79E+00	9.96E-02	7.55E+00
Cs137		4.63E+03	1.16E+04	1.90E+00		3.58E+00		6.56E+03	5.16E+00	1.60E+03	8.30E+01	1.74E+03
Ba137		4.40E+03	1.10E+04	1.81E+00		3.40E+00		6.23E+03	4.90E+00	1.52E+03	7.88E+01	1.65E+03
Np237		8.15E-02	1.75E-01					1.78E-01		1.20E-02	2.04E-03	4.75E-02
Pu239	5.92E+00	1.24E+00				3.59E-02			9.68E+00	4.67E-02	1.71E+02	1.87E+00
Pu240	7.43E-01	2.91E-01				8.91E-03			2.80E+00	9.68E-03	3.39E+01	3.72E-01
Pu241	1.43E+00	1.58E+00				4.14E-02			2.42E+01	4.17E-02	1.59E+02	1.48E+00
Am241	1.55E+00	5.02E+00	3.16E+00			1.02E-01		8.94E+01	4.56E+00	1.57E-01	5.25E+01	2.58E+01
Cm244		5.40E-03	1.45E-02					1.96E-01		1.47E-03		4.99E-02
Total	1.34E+04	2.81E+04	9.54E+04	6.73E+00		1.18E+01	3.07E-03	1.22E+05	7.12E+04	4.39E+03	4.42E+05	6.03E+04

Table A-2. Radionuclide Inventory Estimates for Single-Shell Tanks

Soluble (Ci)	U-112	U-201	U-202	U-203	U-204	Total
C14	3.02E+00	4.89E-01	5.06E-01	4.45E-01	1.17E-01	2.98E+03
Sr90	1.97E+01	1.25E-01	1.15E-01	1.06E-01	3.31E-02	4.12E+05
Y90	1.97E+01	1.25E-01	1.15E-01	1.06E-01	3.31E-02	4.12E+05
Tc99	9.85E+00	1.54E+00	1.61E+00	1.42E+00	3.74E-01	8.89E+03
Cs137	2.37E+04	3.73E+03	3.92E+03	3.46E+03	9.16E+02	7.18E+06
Ba137	2.25E+04	3.55E+03	3.72E+03	3.28E+03	8.70E+02	6.82E+06
Np237	1.44E-02	2.27E-03	2.39E-03	2.09E-03		6.95E+00
Pu239	4.24E-03					3.44E+02
Pu240						9.15E+01
Pu241	1.12E-02					2.29E+03
Am241	2.92E-02					2.65E+03
Cm244						1.20E+00
Total	4.62E+04	7.28E+03	7.65E+03	6.74E+03	1.79E+03	1.48E+07

Insoluble (Ci)	U-112	U-201	U-202	U-203	U-204	Total
C14	3.05E-02	4.94E-03	5.11E-03	4.50E-03	1.18E-03	3.01E+01
Sr90	1.95E+03	1.24E+01	1.14E+01	1.05E+01	3.28E+00	4.08E+07
Y90	1.95E+03	1.24E+01	1.14E+01	1.05E+01	3.28E+00	4.08E+07
Tc99	9.85E+00	1.54E+00	1.61E+00	1.42E+00	3.74E-01	8.89E+03
Cs137	7.56E+03	1.19E+03	1.25E+03	1.10E+03	2.93E+02	2.29E+06
Ba137	7.18E+03	1.13E+03	1.19E+03	1.05E+03	2.78E+02	2.18E+06
Np237	1.30E-01	2.04E-02	2.15E-02	1.88E-02	5.00E-03	6.25E+01
Pu239	2.08E-01					1.69E+04
Pu240	4.13E-02					4.18E+03
Pu241	1.64E-01					3.36E+04
Am241	2.68E-01					2.43E+04
Cm244	2.57E-03					1.19E+02
Total	1.87E+04	2.35E+03	2.47E+03	2.18E+03	5.78E+02	8.61E+07

Table A-3. Chemical Inventory Estimates for Double-Shell Tanks

Soluble (kg)	AN-101	AN-102	AN-103	AN-104	AN-105	AN-106	AN-107	AP-101
Ag+	4.57E+00		5.75E+01			2.89E-01		
Al(OH)4-	1.97E+04	1.94E+05	7.29E+05	5.45E+05	7.09E+05	2.60E+03	7.33E+04	9.42E+00
As+5								
B+3								
Ba+2	1.32E+00	5.88E+02	5.75E+01			8.82E-01	2.09E+01	9.07E-01
Be+2								
Bi+3	1.93E-02		1.72E+03			1.15E+01		
Ca+2	1.61E+01	2.08E+03	3.10E+02			7.17E+00	2.06E+03	8.06E+01
Cd+2	4.24E+00		5.75E+01			3.94E+00		5.74E-01
Ce+3								
Cl-	1.57E+03	2.55E+04	3.45E+04	3.10E+04	3.65E+04	1.96E+02	1.28E+04	8.83E+01
Co+3		1.77E-05						
CO3-2	1.40E+04	1.90E+05	3.22E+04	1.17E+05	9.33E+04	1.56E+03	2.08E+05	3.81E+03
Cr(OH)4-		4.94E+03	8.39E+03	7.69E+03	7.98E+03	1.23E+02	3.14E+03	4.35E-01
Cs+	1.22E+01	6.89E+01	1.44E+02	1.63E+02	1.16E+02	7.92E-01	5.22E+01	7.01E-03
Cu+2								
F-	3.78E+03	1.54E+04	2.64E+03			4.89E+00	2.72E+03	2.75E+02
Fe+3	4.00E+01	6.94E+02	2.53E+02	4.61E+01	4.79E+01	5.50E-01	1.99E+03	1.13E+00
H2O	5.24E+05	6.25E+06	9.49E+06	8.60E+06	8.81E+06	5.54E+04	5.99E+06	1.53E+05
Hg+2	1.34E-02		5.75E+01			3.97E-03		2.01E-02
K+	1.50E+03	7.17E+03	5.46E+04	2.95E+04	2.63E+04	8.58E+01	7.97E+03	
La+3								
Mg+2								
Mn+4	2.52E+00	3.78E+03	1.03E+02			4.41E+00	1.44E+03	6.02E-02
Mo+6								
Na+	6.72E+04	8.42E+05	1.21E+06	1.14E+06	1.18E+06	7.18E+03	8.12E+05	1.79E+04
Ni+3	1.10E+01	1.44E+03	8.62E+01				1.60E+03	
NO2-	2.13E+04	2.09E+05	4.96E+05	3.65E+05	5.14E+05	2.35E+03	1.52E+05	4.45E+03
NO3-	5.29E+04	7.74E+05	5.75E+05	7.93E+05	8.29E+05	5.37E+03	8.60E+05	6.34E+03
OH-	1.28E+04	4.13E+05	4.52E+05	6.96E+05	5.97E+05	1.20E+03	4.70E+05	7.61E+03
Pb+4	5.36E+00		2.59E+02			3.66E+01		1.79E+00
PO4-3	5.26E+03	3.09E+04	3.33E+03	1.15E+04	8.14E+03	1.46E+03	1.64E+03	4.01E+01
Rb+								
Re+7								
Rh+3								
Ru+3								
Se+6								
Si+4	4.18E-02		2.65E+03					
SO4-2	4.08E+03	3.79E+04	5.75E+03	2.70E+04	2.81E+04	1.71E+02	4.32E+04	3.46E+02
Sr+2	6.04E-03	3.12E+00	2.82E-01	2.41E-01	8.44E-02	9.76E-04	2.48E+00	1.38E-05
Te+6								
Th+4								
Tl+4								
TOC	2.12E+03	1.54E+05	2.64E+04	1.90E+04	1.67E+04	1.67E+04	1.78E+05	9.51E+01
UO2+2	5.79E+00		5.66E+02			1.71E-03		5.30E+01
Zn+2								
ZrO2:2H2O	8.82E-02		2.37E+02			6.08E+00		
Total	7.31E+05	9.15E+06	1.31E+07	1.24E+07	1.29E+07	9.45E+04	8.83E+06	1.95E+05

Table A-3. Chemical Inventory Estimates for Double-Shell Tanks

Soluble (kg)	AP-102	AP-103	AP-104	AP-105	AP-106	AP-107	AP-108	AW-101
Ag+	5.22E-01	1.71E-01	6.62E-03	4.31E-01	2.72E+01	2.07E-01	7.20E+00	1.36E+02
Al(OH)4-	1.71E+05	3.71E+03	2.33E-01	1.28E+05	3.17E+03	1.57E+01	3.11E+04	4.00E+05
As+5								4.06E-02
B+3								
Ba+2	1.19E+00	2.78E-01	3.30E-02	1.98E+00	6.87E-01	1.04E-01	2.08E+00	3.80E+01
Be+2								
Bi+3			1.98E-01				3.04E-02	4.93E+02
Ca+2			5.95E-02	2.07E+02		8.44E+01	2.53E+01	1.35E+02
Cd+2	6.14E+00	4.75E-01	1.32E-02	5.49E+00	2.53E+01	8.40E-02	6.69E+00	4.93E+00
Ce+3								
Cl-	1.21E+04	2.12E+02	2.49E+00	7.32E+03	2.40E+02	9.24E+01	2.48E+03	2.11E+04
Co+3								5.90E-05
CO3-2	1.12E+05	1.10E+04		6.98E+04	1.10E+04	6.22E+03	2.20E+04	
Cr(OH)4-	7.12E+03	5.18E+01	3.10E-01	1.59E+03	5.57E+01	3.57E-01	1.15E+03	1.80E+03
Cs+	5.15E-01	1.51E+00		3.81E+01	1.05E+00	2.79E-05	1.72E+01	1.01E+02
Cu+2								9.86E+01
F-	7.01E+02	5.52E+02	1.13E+00	4.72E+03	7.39E+02	5.97E+02	5.95E+03	3.11E+02
Fe+3	1.59E+01	5.27E+00	1.52E-01	2.05E+01	2.94E+01	2.31E-01	6.30E+01	1.79E+02
H2O	3.27E+06	1.71E+05	6.37E+03	3.95E+06	1.80E+05	7.75E+04	8.28E+05	7.49E+06
Hg+2	2.09E-02	2.14E-02		7.76E-02	1.07E-02	1.26E-02	2.11E-02	6.40E-01
K+	5.39E+03	6.51E+03	6.62E-01	9.62E+04	3.49E+03		2.36E+03	1.70E+05
La+3								
Mg+2								
Mn+4		1.85E-01	7.97E-03			3.25E-01	3.96E+00	1.06E+02
Mo+6								
Na+	4.26E+05	2.27E+04	7.70E+02	5.18E+05	2.36E+04	9.58E+03	1.06E+05	9.90E+05
Ni+3	1.11E+02		1.32E-02	3.38E+01	1.74E+00		1.73E+01	
NO2-	1.59E+05	5.57E+03		1.50E+05	4.95E+03	4.20E+03	3.35E+04	4.15E+05
NO3-	3.26E+05	1.73E+04		5.12E+05	1.81E+04	4.29E+03	8.31E+04	9.21E+05
OH-	6.29E+04	5.69E+03		1.73E+05	7.57E+03	4.07E+02	2.41E+04	3.24E+05
Pb+4	1.37E+01	1.71E+00	2.64E-01	1.67E+01	6.62E+00	1.38E+00	8.44E+00	1.23E+03
PO4-3	4.84E+04	5.95E+02	1.10E+03	1.37E+03	9.01E+02	4.20E+01	9.59E+02	8.59E+03
Rb+								
Re+7								
Rh+3								
Ru+3								
Se+6								1.35E-01
Si+4			4.30E-01	1.22E+03			1.43E+02	1.36E+03
SO4-2	1.88E+04	1.50E+03	1.08E+02	7.51E+03	5.98E+02	8.53E+02	6.42E+03	4.20E+03
Sr+2	3.68E-02	6.86E-05		3.96E-03	1.80E-05		8.51E-03	2.50E-02
Te+6								
Th+4								
Tl+4								
TOC	1.37E+04	4.79E+02	1.29E+01	8.54E+03	2.07E+03	2.18E+02	3.34E+03	1.00E+04
UO2+2	1.89E+01	2.02E+01	1.92E-02	1.68E+02	2.03E+01	1.27E-01	9.12E+00	1.24E+03
Zn+2								
ZrO2:2H2O			9.08E-01				1.39E-01	3.64E+02
Total	4.63E+06	2.47E+05	8.37E+03	5.63E+06	2.57E+05	1.04E+05	1.15E+06	1.08E+07

Table A-3. Chemical Inventory Estimates for Double-Shell Tanks

Soluble (kg)	AW-102	AW-103	AW-104	AW-105	AW-106	AY-101	AY-102	AZ-101
Ag+	3.31E+00		7.16E+00		2.02E+01		2.82E+01	8.00E+00
Al(OH)4-	6.38E+03	3.47E+03	3.08E+04	9.51E+02	2.48E+04	1.91E+04	2.32E+01	7.17E+04
As+5								
B+3								
Be+2	4.82E+00		2.70E+00		7.26E+00	1.83E+01	2.06E+00	6.74E+00
Be+2								
Bi+3			3.02E-02					
Ca+2		3.00E+01	2.51E+01	6.60E+00		6.60E+02	1.25E+01	1.50E+01
Cd+2	1.48E+00		6.64E+00		1.25E+01	3.07E+01	3.89E-01	
Ce+3								1.46E+01
Cl-	1.72E+03	5.82E+02	2.46E+03	5.82E+02	2.24E+03	1.41E+03	2.74E+03	5.09E+02
Co+3								9.49E-05
CO3-2	4.84E+04		2.19E+04	1.20E+04	1.54E+05	5.17E+04		1.07E+05
Cr(OH)4-	1.09E+02	3.22E+01		1.75E+01	2.66E+02	9.77E+01	1.51E+02	5.59E+03
Cs+	2.58E+00	1.88E+00	2.14E+01	5.03E+00	1.15E+01	8.67E+00	3.36E-01	2.75E+02
Cu+2								
F-	1.49E+04	1.21E+05	5.91E+03	1.19E+05	2.74E+04	1.70E+03	6.58E+02	5.56E+03
Fe+3	1.17E+02				3.14E+02	3.16E+01	1.22E+00	
H2O	5.31E+05	4.22E+06	8.19E+05	2.69E+06	1.42E+06	8.34E+06	6.48E+05	2.87E+06
Hg+2	1.85E-02				4.38E-02			
K+		2.65E+04	2.34E+03	3.74E+04		1.02E+03	1.81E+02	1.49E+04
La+3						1.95E+02	1.73E-01	1.15E+01
Mg+2								
Mn+4	3.60E+00		3.93E+00		2.81E+01	7.85E+02		
Mo+6								
Na+	6.22E+04	2.02E+05	1.05E+05	1.49E+05	1.67E+05	1.73E+05	9.47E+03	3.73E+05
Ni+3			1.72E+01			1.98E+02	3.96E-01	
NO2-		1.38E+03	3.32E+04	2.43E+03		3.56E+04	3.45E+03	1.22E+05
NO3-		7.68E+03	8.26E+04	7.04E+03		1.55E+05	7.52E+02	3.60E+05
OH-		5.13E+04	1.99E+04	1.76E+04		6.55E+04	7.48E+03	5.17E+04
Pb+4	2.96E+01					2.30E+02		8.46E+00
PO4-3	6.48E+02		8.23E+03		3.06E+03	2.96E+03	3.85E+02	5.18E+03
Rb+								
Re+7								
Rh+3								
Ru+3								
Se+6								
Si+4		1.63E+03	6.54E-02	7.04E+02		1.05E+02	1.85E+03	1.89E+03
SO4-2	8.65E+03		6.38E+03	9.86E+02	1.44E+04	1.91E+04	3.87E+02	6.16E+04
Sr+2	8.68E-04		1.06E-02		7.57E-04	6.46E+00	6.12E-01	1.90E+00
Te+6								
Th+4								
Tl+4								
TOC	1.82E+03	8.15E+02	3.31E+03	4.60E+03	4.41E+03	1.75E+04	1.19E+03	2.36E+02
UO2+2	7.31E-05		9.05E+00			7.68E+01	1.81E+03	2.12E+03
Zn+2								
ZrO2:2H2O			1.38E-01			2.47E+02	5.20E-01	
Total	6.76E+05	4.63E+06	1.14E+06	3.04E+06	1.82E+06	8.89E+06	6.79E+05	4.06E+06

Table A-3. Chemical Inventory Estimates for Double-Shell Tanks

Soluble (kg)	AZ-102	SY-101	SY-102	SY-103	FACILITY WASTE	SALTWELL LIQ. RECV'D	TOTAL
Ag+	1.94E+01		4.85E-02		5.78E-02		3.20E+02
Al(OH)4-	4.00E+04	6.52E+05	1.07E+04	4.98E+05	2.66E+04	5.36E+05	4.93E+06
As+5							4.06E-02
B+3			3.43E+01				3.43E+01
Ba+2	4.83E+00		9.50E-01	2.93E+01			7.91E+02
Be+2			2.43E-02				2.43E-02
Bi+3							2.23E+03
Ca+2	2.65E+01	3.68E+03	4.30E+01	5.65E+02			1.01E+04
Cd+2			6.57E+00		7.46E+03		7.63E+03
Ce+3	8.00E+00						2.26E+01
Cl-	2.52E+02	4.82E+04	1.81E+03	2.28E+04	3.61E+00		2.71E+05
Co+3	9.10E-05		1.46E+00				1.46E+00
CO3-2	1.26E+05			6.97E+04		4.70E+04	1.53E+06
Cr(OH)4-	9.20E+03	2.72E+03	7.80E+03	3.56E+04	2.53E+02	2.71E+04	1.33E+05
Cs+	1.51E+02	8.62E+01	3.54E+00	6.73E+01		1.85E+01	1.37E+03
Cu+2			4.39E-01				9.90E+01
F-	3.14E+03	6.95E+02	3.42E+03	4.83E+03	4.09E+03	6.38E+03	3.57E+05
Fe+3		1.43E+02	1.19E+00	4.03E+03	2.68E+03		1.07E+04
H2O	1.53E+06	9.61E+06	1.40E+06	6.85E+06	1.46E+07	1.25E+07	1.39E+08
Hg+2							5.84E+01
K+	4.88E+03	1.90E+04	8.33E+03	1.07E+04	1.17E+05		6.54E+05
La+3	1.29E+01						2.20E+02
Mg+2			1.46E-01				1.46E-01
Mn+4				1.42E+03	7.10E+02		8.39E+03
Mo+6			7.23E+00				7.23E+00
Na+	1.87E+05	1.19E+06	1.17E+05	8.70E+05	2.81E+05	3.31E+06	1.46E+07
Ni+3		1.70E+02	2.14E+00	3.84E+02	7.00E+01		4.14E+03
NO2-	1.47E+04	2.28E+05	2.36E+04		1.16E+04	1.48E+06	4.49E+06
NO3-	2.17E+04	2.65E+05	1.15E+05	6.54E+05	4.12E+05	2.04E+06	9.90E+06
OH-	4.35E+04	7.26E+05	3.85E+04	3.72E+05	7.73E+04	3.67E+05	5.08E+06
Pb+4	2.33E+01		1.02E+00		4.43E+03		6.31E+03
PO4-3	5.48E+02	4.07E+04	1.10E+04	1.57E+04	8.60E+04	9.70E+04	3.96E+05
Rb+							
Re+7			9.73E-02				9.73E-02
Rh+3			8.27E-01				8.27E-01
Ru+3			1.17E+00				1.17E+00
Se+6							1.35E-01
Si+4	3.58E+03		4.03E+02		3.19E+00		1.55E+04
SO4-2	4.98E+04	2.54E+04	5.01E+03	1.15E+04	1.26E+03		3.91E+05
Sr+2	1.18E+00	3.27E-01		6.24E-01		1.20E+00	1.86E+01
Te+6			8.27E-01				8.27E-01
Th+4							
Tl+4							
TOC	2.44E+02	9.44E+04	7.97E+02	3.31E+04	1.81E+03	2.16E+05	8.31E+05
UO2+2	3.13E+03				1.44E+01		9.26E+03
Zn+2			7.78E-01				7.78E-01
ZrO2:2H2O							8.56E+02
Total	2.04E+06	1.29E+07	1.74E+06	9.45E+06	1.56E+07	2.07E+07	1.83E+08

Table A-3. Chemical Inventory Estimates for Double-Shell Tanks

Insoluble (kg)	AN-101	AN-102	AN-103	AN-104	AN-105	AN-106	AN-107	AP-101
Ag+								
Al+3		2.90E+03					1.10E+03	
As+5								
B+3								
Ba+2		6.53E+01					2.32E+00	
Be+2								
Bi+3								
Ca+2		2.31E+02					2.29E+02	
Cancrinite								
Cd+2		2.43E+02					1.91E+01	
Ce+3		1.61E+02					6.44E+01	
Cl-		2.58E+02					1.29E+02	
Co+3								
CO3-2		1.92E+03					2.11E+03	
Cr+3		1.13E+02					7.15E+01	
Cs+		6.94E-01					5.28E-01	
Cu+2								
F-		1.56E+02					2.75E+01	
Fe+3		3.65E+01					1.04E+02	
Hg+2								
K+		7.24E+01					8.05E+01	
La+3		5.99E+02					1.91E+01	
Mg+2								
Mn+4		1.99E+02					7.57E+01	
Mo+6								
Na+		8.51E+03					8.20E+03	
Ni+3		7.58E+01					8.42E+01	
NO2-		2.11E+03					1.53E+03	
NO3-		7.82E+03					8.69E+03	
OH-		1.24E+04					4.43E+03	
Pb+4		8.25E+02					1.95E+02	
PO4-3		3.12E+02					1.66E+01	
Rb+								
Re+7								
Rh+3								
Ru+3								
Se+6								
Si+4		1.62E+03					5.17E+00	
SO4-2		3.83E+02					4.36E+02	
Sr+2		1.63E-01					1.30E-01	
Te+6								
Th+4								
Tl+4								
TOC		1.56E+03					1.80E+03	
UO2+2								
Zn+2								
ZrO2;2H2O		3.84E+02					1.53E+02	
Total		4.30E+04					2.96E+04	

Table A-3. Chemical Inventory Estimates for Double-Shell Tanks

Insoluble (kg)	AP-102	AP-103	AP-104	AP-105	AP-106	AP-107	AP-108	AW-101
Ag+								
Al+3								4.69E+03
As+5								
B+3								
Ba+2								
Be+2								
Bi+3								
Ca+2								4.85E+02
Cancrinite								
Cd+2								
Ce+3								
Cl-								3.27E+01
Co+3								
CO3-2								7.26E+02
Cr+3								
Cs+								5.22E+00
Cu+2								
F-								2.32E+04
Fe+3								
Hg+2								8.83E+01
K+								1.73E+03
La+3								
Mg+2								
Mn+4								
Mo+6								
Na+								
Ni+3								
NO2-								7.48E+01
NO3-								4.79E+03
OH-								1.91E+04
Pb+4								
PO4-3								
Rb+								
Re+7								
Rh+3								
Ru+3								
Se+6								
Si+4								
SO4-2								
Sr+2								2.48E-02
Te+6								
Th+4								
Tl+4								
TOC								
UO2+2								
Zn+2								
ZrO2:2H2O								3.41E+04
Total								8.90E+04

Table A-3. Chemical Inventory Estimates for Double-Shell Tanks

Insoluble (kg)	AW-102	AW-103	AW-104	AW-105	AW-106	AY-101	AY-102	AZ-101
Ag+							1.04E+03	8.09E+01
Al+3		9.98E+03		2.73E+03		1.74E+04	5.49E+03	2.21E+04
As+5								
B+3								
Ba+2		6.80E+02		8.00E-01		1.68E+03	2.88E+02	2.18E+02
Be+2								
Bi+3								
Ca+2		1.47E+03		3.23E+02		4.12E+03	2.04E+03	4.86E+02
Cancrinite								
Cd+2						5.03E+02	6.03E+01	1.11E+03
Ce+3						2.20E+03		2.29E+02
Cl-		1.80E+01		1.80E+01			1.57E+02	2.12E+01
Co+3								1.49E-03
CO3-2				3.00E+03				2.19E+04
Cr+3		6.83E+02		3.72E+02		8.70E+03	4.87E+02	2.39E+02
Cs+		1.88E+00		5.03E+00		1.53E+00	1.20E+00	8.50E+00
Cu+2								
F-		9.10E+03		8.96E+03			1.86E+02	1.72E+02
Fe+3		1.40E+03		5.20E+02		6.06E+04	1.22E+04	2.77E+04
Hg+2								
K+		7.48E+03		1.06E+04			1.47E+02	1.13E+03
La+3		9.00E+02		4.50E+02		1.60E+04	5.75E+02	1.13E+03
Mg+2								
Mn+4		9.50E+02				1.18E+04	1.28E+03	5.96E+02
Mo+6								
Na+		7.84E+04		5.78E+04		2.83E+04	2.79E+03	1.15E+04
Ni+3		3.60E+02		7.00E+01		1.04E+03	4.39E+02	1.48E+03
NO2-		3.24E+02		5.70E+02			3.49E+01	1.23E+03
NO3-		4.32E+03		3.96E+03			2.69E+01	3.64E+03
OH-		9.37E+04		5.35E+04		5.88E+05	3.77E+04	7.19E+04
Pb+4						1.51E+03		1.12E+02
PO4-3		5.73E+01		4.00E+02		1.32E+04	3.89E+00	4.50E+02
Rb+								
Re+7								
Rh+3								
Ru+3								
Se+6				2.59E+03				5.20E+02
Si+4		6.51E+03		2.82E+03		1.86E+05	3.95E+03	2.50E+03
SO4-2				1.25E+03			2.00E+01	6.22E+02
Sr+2		8.23E-01		5.39E-01		7.73E+01	1.20E+02	1.87E+02
Te+6								
Th+4								
Tl+4								
TOC		8.15E+02		4.60E+03		4.24E+04	5.64E+03	5.44E+03
UO2+2		1.92E+04		1.01E+04			8.89E+02	7.94E+02
Zn+2								
ZrO2:2H2O		2.78E+05		1.73E+05		4.45E+03	5.26E-03	2.90E+04
Total		5.14E+05		3.38E+05		9.88E+05	7.55E+04	2.06E+05

Table A-3. Chemical Inventory Estimates for Double-Shell Tanks

Insoluble (kg)	AZ-102	SY-101	SY-102	SY-103	FACILITY WASTE	SALTWELL LIQ. RECV'D	TOTAL
Ag+	1.96E+02		1.58E+02				1.48E+03
Al+3	1.23E+04	5.08E+03	1.95E+04	7.45E+03			1.11E+05
As+5			2.26E+00				2.26E+00
B+3							
Be+2	1.56E+02		6.20E+01	3.26E+00			3.16E+03
Be+2			3.08E+00				3.08E+00
Bi+3							
Ca+2	8.58E+02	3.06E+02	5.04E+03	6.28E+01	7.17E+03		2.28E+04
Cancrinite							
Cd+2	4.28E+03		3.26E+02				6.55E+03
Ce+3	1.25E+02						2.78E+03
Cl-	1.05E+01	4.87E+02	5.76E+00	2.31E+02			1.37E+03
Co+3					4.08E+01		4.08E+01
CO3-2	2.59E+04		1.42E+04	7.04E+02			7.04E+04
Cr+3	3.94E+02	2.12E+04	5.51E+03	8.12E+02			3.86E+04
Cs+	4.66E+00	8.72E-01	5.30E-02	6.79E-01			3.08E+01
Cu+2			1.88E+02				1.88E+02
F-	9.71E+01	7.02E+00	1.40E+01	4.88E+01			4.20E+04
Fe+3	3.11E+04	2.06E+03	1.80E+04	2.12E+02	1.83E+03		1.56E+05
Hg+2							8.83E+01
K+	3.67E+02	1.92E+02	5.36E+03	1.08E+02			2.72E+04
La+3	1.28E+03		5.32E+01	9.89E+01			2.11E+04
Mg+2			8.71E+02		7.38E+03		8.25E+03
Mn+4	8.26E+02		4.79E+03	7.47E+01	4.09E+04		6.15E+04
Mo+6			3.21E+01				3.21E+01
Na+	5.80E+03	1.20E+04	1.32E+04	8.78E+03			2.35E+05
Ni+3	1.92E+03	9.30E+02	4.53E+02	2.02E+01			6.87E+03
NO2-	1.48E+02	2.30E+03	6.34E+01				8.40E+03
NO3-	2.19E+02	2.68E+03	2.83E+02	6.61E+03			4.30E+04
OH-	5.86E+04	4.02E+04	8.19E+04	2.83E+04			1.09E+06
Pb+4	3.09E+02		1.36E+03				4.31E+03
PO4-3	4.77E+01	4.11E+02	6.37E+03	1.58E+02			2.14E+04
Rb+							
Re+7							
Rh+3			1.93E+02				1.93E+02
Ru+3							
Se+6	2.00E+02						3.31E+03
Si+4	4.75E+03		5.98E+03	3.70E+03			2.18E+05
SO4-2	5.03E+02	2.57E+02	1.90E+01	1.16E+02	4.08E+01		3.65E+03
Sr+2	1.16E+02	2.48E-01	9.75E+01	3.27E-03			6.00E+02
Te+6							
Th+4			2.79E+03				2.79E+03
Tl+4			1.54E+02				1.54E+02
TOC	5.63E+03	9.54E+02	2.97E+03	3.34E+02			7.21E+04
UO2+2	2.60E+03				5.70E+03		3.93E+04
Zn+2			5.06E+02				5.06E+02
ZrO2:2H2O	1.43E+04		5.72E+02	2.38E+02			5.34E+05
Total	1.73E+05	8.90E+04	1.91E+05	5.81E+04	6.31E+04		2.86E+06

Table A-4. Radionuclide Inventory Estimates for Double-Shell Tanks

Soluble (Ci)	AN-101	AN-102	AN-103	AN-104	AN-105	AN-106	AN-107	AP-101	AP-102	AP-103	AP-104	AP-105
C14	2.88E-01		7.09E+00			2.66E-02		1.87E-02	1.75E+00	1.91E-02		6.75E-01
Sr90	8.52E+02	4.38E+05	3.97E+04	3.39E+04	1.19E+04	1.38E+02	3.49E+05	1.95E+00	5.19E+03	9.67E+00	1.78E-03	5.58E+02
Y90	8.52E+02	4.38E+05	3.97E+04	3.39E+04	1.19E+04	1.38E+02	3.49E+05	1.95E+00	5.19E+03	9.67E+00	1.78E-03	5.58E+02
Tc99	8.77E+01	1.74E+03	6.03E+02	7.21E+02	7.49E+02	5.50E+00	1.76E+03	1.23E-01	3.58E+02	4.63E+00	3.46E-03	2.17E+02
Cs137	1.97E+05	1.14E+06	2.31E+06	2.62E+06	1.87E+06	1.27E+04	8.69E+05	1.13E+02	8.28E+03	2.43E+04	3.20E-02	6.12E+05
Ba137	1.87E+05	1.08E+06	2.19E+06	2.49E+06	1.77E+06	1.21E+04	8.26E+05	1.07E+02	7.86E+03	2.31E+04	3.04E-02	5.81E+05
Np237												
Pu239	6.66E-01	7.54E+02	6.74E+00	4.16E+01	4.45E+01	1.46E-03	3.07E+02	8.55E-01	3.13E-01	2.99E-02		4.91E-01
Pu240	1.09E-01	2.05E+02	1.11E+00	6.83E+00	7.30E+00		8.35E+01	1.40E-01	5.14E-02	4.90E-03		8.06E-02
Pu241	9.74E-01	1.15E+03	9.85E+00	6.08E+01	6.50E+01	2.13E-03	4.68E+02	1.25E+00	4.58E-01	4.36E-02		7.18E-01
Am241	7.22E-01	2.51E+03	8.08E+00	6.06E+00	6.48E+00	4.74E-02	1.46E+03	5.41E-01	1.74E+00	4.84E-02		1.26E+00
Cm244	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	3.86E+05	3.11E+06	4.58E+06	5.18E+06	3.67E+06	2.51E+04	2.40E+06	2.29E+02	2.69E+04	4.74E+04	7.00E-02	1.19E+06

Insoluble (Ci)	AN-101	AN-102	AN-103	AN-104	AN-105	AN-106	AN-107	AP-101	AP-102	AP-103	AP-104	AP-105
C14		8.72E+01					1.88E+03					
Sr90		2.30E+04					1.83E+04					
Y90		2.30E+04					1.83E+04					
Tc99												
Cs137		1.15E+04					8.78E+03					
Ba137		1.09E+04					8.34E+03					
Np237												
Pu239		3.97E+01					1.62E+01					
Pu240		1.01E+01					4.09E+00					
Pu241		3.47E+00					1.42E+00					
Am241		1.32E+02					7.68E+01					
Cm244		N/A					N/A					
Total		6.87E+04					5.57E+04					

Table A-4. Radionuclide Inventory Estimates for Double-Shell Tanks

Soluble (Ci)	AP-106	AP-107	AP-108	AW-101	AW-102	AW-103	AW-104	AW-105	AW-106	AY-101	AY-102	AZ-101
C14	3.31E-02	1.34E-02	4.06E-01	1.50E+00			5.05E-01		3.13E-01			1.94E+02
Sr90	2.54E+00	4.29E-01	1.20E+03	3.50E+03	1.22E+02		1.49E+03		1.07E+02	3.58E+05	3.70E+03	5.48E+04
Y90	2.54E+00	4.29E-01	1.20E+03	3.50E+03	1.22E+02		1.49E+03		1.07E+02	3.58E+05	3.70E+03	5.48E+04
Tc99	5.73E+01	8.64E-02	1.24E+02	6.14E+02			1.54E+02		7.05E+01	4.30E+02	2.47E+01	1.10E+03
Cs137	1.69E+04	4.49E-01	2.77E+05	1.74E+06	4.15E+04	4.12E+04	3.45E+05	1.10E+05	1.84E+05	1.44E+05	5.40E+03	6.14E+06
Ba137	1.61E+04	4.27E-01	2.63E+05	1.65E+06	3.94E+04	3.91E+04	3.28E+05	1.05E+05	1.75E+05	1.37E+05	5.13E+03	5.83E+06
Np237												
Pu239	5.81E-01	2.25E+00	9.39E-01	5.44E+01	1.28E+00		1.17E+00		4.15E-01	2.40E+01	4.61E-01	2.17E+01
Pu240	9.54E-02	3.70E-01	1.54E-01	8.93E+00	2.10E-01		1.92E-01		6.82E-02	6.52E+00	1.25E-01	6.56E+00
Pu241	8.49E-01	3.29E+00	1.37E+00	7.95E+01	1.87E+00		1.71E+00		6.07E-01	3.51E+01	6.73E-01	5.87E+02
Am241		2.66E+00	1.02E+00	1.37E+02	8.95E-01		1.27E+00		8.93E-02	9.83E+01	3.60E-01	5.76E+02
Cm244	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	3.30E+04	8.60E+00	5.43E+05	3.40E+06	8.12E+04	8.04E+04	6.76E+05	2.15E+05	3.60E+05	9.97E+05	1.80E+04	1.21E+07

Insoluble (Ci)	AP-106	AP-107	AP-108	AW-101	AW-102	AW-103	AW-104	AW-105	AW-106	AY-101	AY-102	AZ-101
C14											1.81E-01	1.02E+01
Sr90						3.15E+04		1.96E+04		3.96E+05	1.98E+06	5.42E+06
Y90						3.15E+04		1.96E+04		3.96E+05	1.98E+06	5.42E+06
Tc99											4.54E+00	2.58E+02
Cs137				7.21E+04		4.12E+04		1.10E+05		1.32E+05	1.92E+04	1.90E+05
Ba137				6.85E+04		3.91E+04		1.05E+05		1.26E+05	1.82E+04	1.80E+05
Np237												
Pu239				3.61E+01		7.97E+02		4.19E+02		2.79E+03	6.56E+02	5.20E+02
Pu240						2.25E+02		1.18E+02		6.95E+02		1.47E+02
Pu241				6.95E+00		6.47E+03		3.41E+03		4.73E+02		4.21E+03
Am241				9.54E+01		1.75E+02		1.74E+02		1.21E+04	3.25E+03	2.82E+04
Cm244				N/A		N/A		N/A		N/A	N/A	N/A
Total				1.41E+05		1.51E+05		2.58E+05		1.07E+06	3.99E+06	1.12E+07

Table A-4. Radionuclide Inventory Estimates for Double-Shell Tanks

Soluble (Ci)	AZ-102	SY-101	SY-102	SY-103	Total Curies
C14	1.39E+02		9.74E-01		3.46E+02
Sr90	2.98E+04	4.62E+04	7.88E+03	8.80E+04	1.47E+06
Y90	2.98E+04	4.62E+04	7.88E+03	8.80E+04	1.47E+06
Tc99	6.00E+02	2.57E+03		1.88E+03	1.39E+04
Cs137	3.37E+06	1.43E+06	6.64E+04	1.12E+06	2.47E+07
Ba137	3.20E+06	1.36E+06	6.31E+04	1.06E+06	2.35E+07
Np237					
Pu239	2.09E+01	8.81E+00		1.14E+01	1.31E+03
Pu240	6.32E+00	2.39E+00		3.11E+00	3.39E+02
Pu241	2.71E+00	1.29E+01		1.74E+01	2.50E+03
Am241	3.36E+02	8.03E+01		8.21E+01	5.31E+03
Cm244	N/A	N/A	N/A	N/A	N/A
Total	6.63E+06	2.89E+06	1.45E+05	2.36E+06	5.11E+07

Insoluble (Ci)	AZ-102	SY-101	SY-102	SY-103	Total Curies
C14	7.31E+00		2.14E-01		1.99E+03
Sr90	2.95E+06	3.50E+04	4.46E+04	4.61E+02	1.09E+07
Y90	2.95E+06	3.50E+04	4.46E+04	4.61E+02	1.09E+07
Tc99	1.41E+02				4.04E+02
Cs137	1.04E+05	1.45E+04	9.93E+02	1.13E+04	7.16E+05
Ba137	9.89E+04	1.37E+04	9.43E+02	1.07E+04	6.80E+05
Np237					
Pu239	5.01E+02	3.76E+01	2.08E+03	6.02E-01	7.89E+03
Pu240	1.41E+02	9.51E+00	7.47E+02	1.52E-01	2.10E+03
Pu241	4.23E+03	1.64E+01	1.77E+04	5.27E-02	3.66E+04
Am241	1.65E+04	3.42E+02	1.13E+04	4.32E+00	7.23E+04
Cm244	N/A	N/A	N/A	N/A	N/A
Total	6.13E+06	9.87E+04	1.24E+05	2.29E+04	2.34E+07

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