

**TOTAL INVENTORY OF SELECTED RADIONUCLIDES IN
OLD SOLVENT TANKS S1 THROUGH S22 (U)**

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Unclassified
Does Not Contain Unclassified Controlled Nuclear Information (UCNI)

January 21, 2000

**Westinghouse Savannah River Company
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WSRC-TR-2000-00011
Revision 0

Keywords:
Characterization
Radioactive
Solvent
Waste

Classification: U

Authorized Derivative Classifier

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Publication Date: January 21, 2000

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This document was prepared in conjunction with work accomplished under Contract No. DE-AC09-96SR18500 with the U.S. Department of Energy.

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ABSTRACT

The total inventory of fourteen radionuclides, three metals, and volatile organic compounds (VOCs) has been calculated for the twenty-two Old Solvent Tanks (OSTs). The inventory calculations are based upon extensive characterization data of the multiple liquid and sludge samples taken from the OSTs. In addition, the total inventory of sixteen actinides (including error) has been calculated. The actinide inventory will be useful for criticality safety considerations.

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LIST OF ACRONYMS USED

ADS	Analytical Development Section
COI	Contaminant of Interest
ORWBG	Old Radioactive Waste Burial Ground
OSTs	Old Solvent Tanks
PUREX	Plutonium-Uranium Extraction
SRS-ERD	Savannah River Site-Environmental Restoration Division
SRTC	Savannah River Technology Center
VOCs	Volatile Organic Compounds

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1.0 INTRODUCTION

The Old Radioactive Waste Burial Ground (ORWBG, 643-E) contains twenty-two buried old solvent tanks. These tanks, consisting of cylindrical, carbon-steel, single-wall vessels were used to store spent Plutonium-Uranium Extraction (PUREX) process solvent. Reference 1 provides a detailed description of the tanks and their associated history. The Analytical Development Section (ADS) of the Savannah River Technology Center (SRTC) developed a Sampling and Analysis Plan for the characterization of the material contained in the twenty-two tanks [2]. The purpose of this characterization was to obtain a sufficient database so that a viable path forward could be established for the closure of the tanks. Reference 3 contains the analytical results of the OST characterization study.

Due to various reasons, not all of the phases present in all of the tanks were sampled. As discussed in Reference 3, liquid samples were successfully obtained from fifteen out of twenty-two tanks. Of the remaining seven tanks, three were not sampled because of the presence of only very minimal amounts of liquid and four tanks contained no liquid phase. For the sludges, nine out of twenty-two tanks were successfully sampled while only very limited sludge samples were obtained from three other tanks. The Sampling and Analysis Plan did not require sampling in nine of the ten remaining tanks because they contained less than 50 gallons each of solid phase. Unsuccessful attempts were made; however, to sample the sludge in some of these remaining tanks. Thus, only one tank (Tank S5), which was required to be sampled by the Sampling and Analysis Plan, was not sampled.

The Savannah River Site-Environmental Restoration Division (SRS-ERD) has subsequently requested an estimate of the total inventory of eighteen Contaminants of Interest (COIs) for all twenty-two tanks. Included in the COI list are H-3, C-14, I-129, Cs-137, Pu-238, Pu-239, Pu-241, Sr-90, U-235, U-238, Co-60, Tc-99, Np-237, Cm-244, Cd, Pb, Hg, and total VOCs. Also, an estimate of the total inventory of sixteen actinides, including seven COIs, was calculated. The actinide list includes U-233, U-234, U-235,

U-236, U-238, Np-237, Pu-238, Pu-239, Pu-240, Pu-241, Pu-242, Am-241, Am-243, Cm-244, Cm-245, and Cm-246. The sixteen actinides are important for criticality considerations.

2.0 COI Inventory in OSTs

In order to accurately estimate the total inventory of the eighteen COIs contained in the OSTs, one must systematically categorize the contents of each tank. Based upon previous video and physical surveillances of the tanks, an estimated sludge mass and liquid volume was determined for each tank [4][5][6]. Once liquid samples were obtained and submitted to ADS for characterization, they were filtered to obtain separate fractions of liquid and suspended solids material. Each fraction was subsequently analyzed for the various COIs. Sludge samples were also independently analyzed by ADS. Analytical data was thus obtained, by phase, for many of the OSTs.

A methodology was therefore developed to accurately estimate the inventory of those tank phases that were not sampled. This methodology uses as its starting point the latest analytical data of the various phases present (e.g. aqueous liquid, suspended solids, and sludge) in each tank. For a specific phase (filtered liquid, filtered solid, or sludge), the methodology assumes that the concentration of a given COI in those tanks that were not sampled is equal to the average concentration of the COI in the tanks that were sampled and analyzed. Three general cases were identified and are delineated below:

- 1) COI detected in more than three samples of a given phase - the analytical data were averaged and the COI concentration in those tanks which were not sampled was assumed to be equal to this calculated average COI concentration.
- 2) COI detected in less than or equal to three samples of a given phase - the COI concentration in those tanks which were not sampled was assumed to be equal to the higher of the average detected COI concentration or the average detection limit value.
- 3) COI not detected in any samples of a given phase - the COI concentration in those tanks not sampled was assumed to be equal to the average detection limit value or average upper limit value of those tanks that were sampled.

Once the average COI concentrations were assigned, the total inventories could easily be calculated by taking the product of the activity concentration and the volume or mass of phase present in a given tank.

2.1 COI Inventory - Assumptions

The characterization of the material in the OSTs showed that at least two of the tanks (Tanks S11 and S20) contained an organic liquid phase [3]. In addition, Tank S20 contained both organic and aqueous liquid layers. For the purposes of these calculations, it was assumed that Tanks S1-S8, S10, S12-S14, S18, S19, S21 and S22 contained an aqueous liquid phase and no organic liquid phase. Furthermore, it was assumed that Tank S11 contained an organic liquid phase and no aqueous liquid phase. Finally, it was assumed that Tank S20 contained both an aqueous liquid phase and an organic liquid phase. It should be noted that only the total liquid volume in Tank S20 was estimated, thus the fraction that is aqueous and the fraction that is organic were not known. For the sake of conservatism, when performing the inventory calculations, it was assumed that the entire liquid volume was aqueous when performing the aqueous liquid calculations and subsequently it was assumed that the entire liquid volume was organic when performing the organic liquid calculations. It should be noted that several tanks in addition to Tanks S11 and S20 might also contain an organic liquid phase. This is discussed in detail in Reference 1. The assumptions used for the calculations in this present document regarding the aqueous/organic nature of the various liquids in the OSTs are based upon the analytical results (which are documented in Reference 3) of the latest samples obtained.

Two liquid samples were obtained from Tank S19 and both were analyzed. The analytical results indicated that both samples were aqueous; hence, the samples can be treated as duplicates. See Reference 3 for more details regarding this issue. Therefore, when averaging the aqueous liquid phases and associated suspended solids, only sample S19-O (taken at the higher depth) was included in the calculations.

The organic liquids contained in Tanks S11 and S20 were not included when calculating the average concentrations of the various COIs in the filtered aqueous liquids. Similarly, the suspended solids from the organic liquids in Tanks S11 and S20 were not included when calculating the average concentrations of the various COIs in the suspended solids from aqueous liquids. The sludge obtained from Tank S4 was not included when determining the average concentrations of the eighteen COIs due to the fact that it displayed the characteristics of a liquid rather than sludge.

The liquids contained in Tanks S10, S12, and S18 were not sampled. However, the total suspended solids content had to be estimated so that the COI content of the suspended solids could be calculated. The weight percent of total suspended solids for these three tanks was assumed to be equal to the average weight percent of total suspended solids for the aqueous phases of the other tanks. When performing these suspended solids calculations, the density of the filtered liquids in Tanks S10, S12, and S18 was assumed to be equal to 1.0 g/cm^3 .

Certain radionuclides were not detected; hence, the average concentration of these nuclides had to be calculated based upon detection limit or upper limit values. These radionuclides are listed below:

- 1) The average H-3 activity concentration in sludge is based upon upper limit values.
- 2) The average Co-60 activity concentration in sludge is based upon detection limit values.
- 3) The average C-14 activity concentration in the filtered liquids is based upon upper limit values.
- 4) The average C-14 activity concentration in the suspended solids is based upon upper limit values.
- 5) The average I-129 activity concentration in the suspended solids is based upon upper limit values.
- 6) The average Tc-99 activity concentration in the suspended solids is based upon detection limit values.

The C-14, I-129, Sr-90, and Tc-99 average concentrations in the sludge are based upon data obtained from the suspended solids. The implications of this assumption are discussed further in Section 4.0.

Since quantitative metals data were not obtained on the suspended solids, fifty times the average concentrations of Cd, Pb, and Hg in the sludge were used to calculate the content of these metals in the suspended solids. This issue is also discussed further in Section 4.0.

The VOC content of both the suspended solids material and sludge was based upon the filtered liquid data and corrected for the expected difference in density between the materials. For these calculations, it was assumed that the VOC average mass per unit volume for the suspended solids and sludge was equal to that of the filtered liquids. It was also assumed that the density of the sludge and suspended solids was 2 g/cm^3 . The average density of the filtered liquids was approximately 1 g/cm^3 .

2.2 COI Inventory - Calculations

The results of the COI inventory calculations are shown in Appendix 1. Results are listed by phase for each tank for the eighteen COIs. Values shown in bold black print are detection limit values. Values shown in bold red are explained in the notes of Appendix 1 and represent calculated upper limit values. Values shown in bold blue represent calculated values (using the methodology explained in Sections 2.0 and 2.1) for those phases that were not analyzed. The total activities for the radionuclides and total mass for the other COIs are shown on pages 13 and 16 respectively of Appendix 1.

2.3 COI Inventory - Example Calculation

The calculated H-3 activity in the Tank S1 filtered liquid will be used as an example.

The average aqueous H-3 concentration was calculated from the analytical results of Tanks S1, S2, S3, S4, S6, S7, S8, S13, S14, S19-O, S20-B, S21, and S22. The average H-3 concentration was determined to be 1.97×10^{-3} $\mu\text{Ci/mL}$. The estimated aqueous liquid volume in Tank S12 was determined to be 1.890×10^4 mL, thus,

$$1.97 \times 10^{-3} \mu\text{Ci/mL} \times 1.890 \times 10^4 \text{ mL} = 3.72 \times 10^1 \mu\text{Ci}.$$

3.0 Actinide Inventory in OSTs

The existing analytical data (for those tank phases that were analyzed) were used as a starting point for the actinide inventory calculations. For each specific phase (filtered liquid, filtered solid, or sludge), the calculation methodology assumes that the concentration of a given actinide in those tanks that were not sampled is equal to the average concentration of the actinide in the tanks that were sampled. As with the eighteen COIs, three general cases for the actinide calculations were identified and are listed below:

- 1) Radionuclide detected in more than three samples of a given phase - the analytical data were averaged and the radionuclide concentration in those tanks that were not sampled was assumed to be equal to this calculated average radionuclide concentration.
- 2) Radionuclide detected in less than or equal to three samples of a given phase - the radionuclide concentration in those tanks which were not sampled was assumed to be equal to the higher of either the average detected radionuclide concentration or the average detection limit value.
- 3) Radionuclide not detected in any samples of a given phase - the radionuclide concentration in those tanks not sampled was assumed to be equal to the average detection limit value or average upper limit value of those tanks that were sampled.

The error associated with the calculated average activity for each radionuclide was assigned as twice the standard deviation of the respective average. When detection limits were averaged, no errors were assigned since these numbers represent ~95% confidence limits.

Since the actinide inventory will be used for criticality safety calculations, conservatism was built into the calculation methodology. Firstly, for a radionuclide known or suspected to be in the OSTs but not detected in a sample, the activity was assumed to be equal to the detection limit or upper limit for that radionuclide for the measurement conditions used. Secondly, for those nuclides that were positively identified, the 2-sigma measurement error was added to the activity before performing the total activity and mass calculations. For those tanks in which a radionuclide was not measured for a given phase and an average radionuclide concentration was assigned, the calculated error (see previous paragraph) was

added to the calculated radionuclide activity concentration prior to performing the total activity and mass calculations.

3.1 Actinide Inventory - Assumptions

The assumptions for the actinide inventory calculations are similar to those used for the eighteen COIs described in Section 2.1. The characterization of the material in the OSTs showed that at least two of the tanks (Tanks S11 and S20) contained an organic liquid phase [3]. In addition, Tank S20 contained both organic and aqueous liquid layers. For the purposes of these calculations, it was assumed that Tanks S1-S8, S10, S12-S14, S18, S19, S21 and S22 contained an aqueous liquid phase and no organic liquid phase. Furthermore, it was assumed that Tank S11 contained an organic liquid phase and no aqueous liquid phase. Finally, it was assumed that Tank S20 contained both an aqueous liquid phase and an organic liquid phase. It should be noted that only the total liquid volume in Tank S20 was estimated, thus the fraction that is aqueous and the fraction that is organic were not known. For the sake of conservatism, when performing the inventory calculations, it was assumed that the entire liquid volume was aqueous when performing the aqueous liquid calculations and subsequently it was assumed that the entire liquid volume was organic when performing the organic liquid calculations. It should be noted that several tanks in addition to Tanks S11 and S20 might also contain an organic liquid phase. This is discussed in detail in Reference 1. The assumptions used for the calculations in this present document regarding the aqueous/organic nature of the various liquids in the OSTs are based upon the analytical results (which are documented in Reference 3) of the latest samples obtained.

Two liquid samples were obtained from Tank S19 and both were analyzed. The analytical results indicated that both samples were aqueous; hence, the samples can be treated as duplicates. See Reference 3 for more details regarding this issue. Therefore, when averaging the aqueous liquid phases and associated suspended solids, only sample S19-O (taken at the higher depth) was included in the calculations.

The organic liquids contained in Tanks S11 and S20 were not included when calculating the average concentrations of the various actinides in the filtered aqueous liquids. Similarly, the suspended solids from the organic liquids in Tanks S11 and S20 were not included when calculating the average concentrations of the various actinides in the suspended solids from aqueous liquids. The sludge obtained from Tank S4 was not included when determining the average concentrations of the sixteen actinides due to the fact that it displayed the characteristics of a liquid rather than sludge.

The liquids contained in Tanks S10, S12, and S18 were not sampled. However, the total suspended solids content had to be estimated so that the actinide content of the suspended solids could be calculated. The weight percent of total suspended solids for these three

tanks was assumed to be equal to the average weight percent of total suspended solids for the aqueous phases of the other tanks. When performing these suspended solids calculations, the density of the filtered liquids in Tanks S10, S12, and S18 was assumed to be equal to 1.0 g/cm^3 .

Certain radionuclides were not detected; hence, the average concentration of these nuclides had to be calculated based upon detection limit or upper limit values. These radionuclides are listed below:

- 1) The average Pu-242 activity concentration in sludge is based upon detection limit values.
- 2) The average Am-243 activity concentration in sludge is based upon detection limit values and one upper limit value, even though this nuclide was detected in three sludges. However, based upon rule 2 of Section 3.0, the higher average detection limit/upper limit value was used.
- 3) The average Cm-245 activity concentration in sludge is based upon detection limit values even though this nuclide was detected in one sludge. However, based upon rule 2 of Section 3.0, the higher average detection limit value was used.
- 4) The average Cm-246 activity concentration in the sludge is based upon detection limit values.
- 5) The average Pu-242 activity concentration in the filtered liquids is based upon detection limit values.
- 6) The average Cm-245 activity concentration in the filtered liquids is based upon detection limit values.
- 7) The average Cm-246 activity concentration in the filtered liquids is based upon detection limit values.
- 8) The average Cm-245 activity concentration in the suspended solids is based upon detection limit values even though this nuclide was detected in one suspended solids sample. However, based upon rule 2 of Section 3.0, the higher average detection limit value was used.
- 9) The average Cm-246 activity concentration in the suspended solids is based upon detection limit values even though this nuclide was detected in three suspended solids samples. However, based upon rule 2 of Section 3.0, the higher average detection limit value was used.

3.2 Actinide Inventory - Results

The results of the actinide inventory calculations are shown in Appendices 2 through 4. Results are listed by phase for each tank for the sixteen actinides. Values shown in bold black print are detection limit values. Values shown in bold blue represent calculated values (using the methodology explained in Sections 3.0 and 3.1) for those phases that were not analyzed.

3.3 Actinide Inventory - Example Calculation

The calculated U-234 activity and error in the Tank S1 sludge will be used as an example. The average U-234 concentration was calculated from the analytical results of Tanks S7, S19 and S22. The average U-234 concentration was determined to be 5.02×10^4 pCi/g (see page 40 of Appendix 4). The error was calculated to be 1.43×10^5 pCi/g. Since U-234 was found in only three of the sludge samples, the average U-234 detection limit in the other analyzed sludge samples was also calculated (see Section 3.0). Thus, the average U-234 detection limit calculated from Tanks S2, S8, S16, S20, and S21 was determined to be 1.32×10^4 pCi/g. Therefore, for the purposes of these calculations, the higher calculated activity concentration (5.02×10^4 pCi/g) was used.

Continuing on with the example calculation using U-234 in the sludge from Tank S1 we get:

$$\text{U-234 activity in sludge} = 5.02 \times 10^4 \pm 1.43 \times 10^5 \text{ pCi/g}$$

$$\text{Specific Activity of U-234} = 6.24 \times 10^{-3} \text{ Ci/g}$$

$$\text{Mass of sludge in the tank} = 34068.71 \text{ grams}$$

$$\text{Total U-234 in the tank including error} = (5.02 \times 10^4 + 1.43 \times 10^5) \times 34068.71 = 6.582 \times 10^9 \text{ pCi}$$

$$\text{Total U-234 in the tank including error} = 6.582 \times 10^9 \text{ pCi} \times \frac{1 \text{ Ci}}{1 \times 10^{12} \text{ pCi}} \approx 6.58 \times 10^{-3} \text{ Ci}$$

$$\text{U-234 activity concentration including error} = \frac{6.582 \times 10^{-3} \text{ Ci}}{34068.71 \text{ grams}} = 1.93 \times 10^{-7} \text{ Ci/g}$$

$$\text{Mass of U-234 in the tank including error} = \frac{6.582 \times 10^{-3} \text{ Ci}}{6.24 \times 10^{-3} \text{ Ci/g}} = 1.055 \times 10^0 \approx 1.06 \times 10^0 \text{ g}$$

$$\text{Mass of U-234 per gram of waste} = \frac{1.055 \times 10^0 \text{ grams}}{34068.71 \text{ grams}} = 3.097 \times 10^{-5} \approx 3.10 \times 10^{-5} \text{ g/g (waste)}$$

3.4 Total Inventory of Three Actinides in OSTs

Table 1 summarizes the results of the U-235, U-238, and Pu-239 mass calculations for the twenty-two OSTs. For each of these nuclides in a given tank, the contributions from the filtered liquid phase(s), suspended solids phase(s), and sludge phase have been summed to obtain the total.

Table 1. Total Estimated U-235, U-238, and Pu-239 Content of Old Solvent Tanks S1 through S22

Tank #	U-235 (g)	U-238 (g)	Pu-239 (g)
S1	6.18E+01	8.98E+03	<8.16E-01
S2	8.89E+00	1.45E+04	<1.25E+00
S3	1.07E+02	1.59E+04	1.30E+00
S4	<1.67E+02	3.43E+04	<1.04E+00
S5	1.08E+03	1.60E+05	1.80E+01
S6	7.84E+01	1.58E+04	<2.51E+00
S7	2.33E+02	4.88E+04	3.11E+00
S8	7.60E+00	1.16E+03	<5.22E-01
S9	1.18E+02	1.73E+04	1.92E+00
S10	2.86E+02	4.25E+04	4.76E+00
S11	1.15E+02	<1.69E+04	1.92E+00
S12	4.80E+01	7.30E+03	8.30E-01
S13	4.52E+02	6.74E+04	<7.18E+00
S14	1.11E+03	1.75E+05	1.78E+01
S15	1.31E+03	1.93E+05	2.14E+01
S16	1.02E+03	1.87E+05	2.86E+01
S17	6.33E+01	9.31E+03	1.03E+00
S18	2.09E+01	3.31E+03	3.88E-01
S19	3.68E+02 ^a	8.77E+04 ^a	4.24E+00 ^a
S20	<2.22E+02	<5.33E+04	<3.50E+00
S21	2.75E+01	8.78E+03	9.83E-01
S22	5.07E+01	<1.59E+04	<1.62E+00

a- This value was calculated using the results from sample 19-O.

4.0 GENERAL COMMENTS ON DATA

The various samples from the OSTs presented ADS with a unique analytical challenge. It is extremely difficult to determine the quantities of trace radionuclides in the presence of gross amounts of other radionuclides. This is especially pertinent to constituents such as C-14, I-129, Ni-59, and Ni-63. For example, the gross beta activity level in the Tanks S1 filtered liquid was determined to be 1.82 $\mu\text{Ci/mL}$ [3]. The C-14 upper limit value in this liquid was determined to be $3.50 \times 10^{-4} \mu\text{Ci/mL}$, which represents less than 0.02% of the total activity. It should also be emphasized that the finite sample size available for analysis hindered the achievement of lower detection limit numbers.

Carbon-14 was not actually detected in any of the OST samples that were analyzed for this constituent. In all cases but one, the C-14 analytical data had to be qualified as upper limit values due to the presence of alpha activity in the separated C-14 fractions. In the sole case where the data was not qualified as an upper limit, no C-14 was detected and a detection limit value was assigned. The average C-14 values calculated for the filtered liquid and suspended solids samples were based upon detection limit and upper limit numbers. Therefore, these data should be viewed as conservative upper limits only.

Extremely limited quantities of sludge samples severely restricted the analyses that could be performed on the samples. Because of the limited analytical data available on the sludges, C-14, I-129, Sr-90, and Tc-99 activity levels had to be based upon average activity concentrations of these radionuclides in the suspended solids. This assumption is most likely very conservative, since the activity per gram of these radionuclides is probably much higher in the suspended solids than in the sludge. The net result of this assumption is therefore most likely a gross overestimation of the inventories of these four radionuclides in the sludge phases. This assumption is supported by the data shown in Table 2 which compares the average activity concentrations of several radionuclides present in both the suspended solids and the sludge.

Table 2. Comparison of Activity Levels in Suspended Solids and Sludge

COI	Suspended Solids mCi/g	Sludge mCi/g	Ratio of Susp Solids/Sludge
H-3	7.29E-01	2.41E+00	3.02E-01
Cs-137	6.22E+00	1.57E+00	3.96E+00
Pu-238	1.61E+02	1.36E+01	1.18E+01
Pu-239	9.95E+00	4.69E-01	2.12E+01
Pu-241	5.07E+01	4.04E+00	1.25E+01
U-235	3.89E-03	6.19E-04	6.28E+00
U-238	7.92E-02	1.90E-02	4.17E+00
Co-60	2.13E-02	4.50E-04 ^a	4.73E+01
Np-237	1.08E-01	2.38E-03	4.54E+01
Cm-244	2.62E+02	4.34E+01	6.04E+00

- a- This value is based upon one data point only. Co-60 was not detected in any of the other sludge samples analyzed for this constituent.

Since no data exists for the metals (Cd, Pb, and Hg) content of the suspended solids material, their concentration can only be suggested from Table 2. Based upon the data in Table 2, the ratios of Suspended Solids to Sludge ranged from 0.302 to 47.3. The average of this ratio for the COIs listed in Table 2, excluding tritium, was 17.6 ± 17.2 . Tritium was omitted because it is believed to be entrenched in the sludge, and is therefore, not representative of Pb, Hg, and Cd. Thus, in order to be conservative, the Pb, Hg, and Cd concentrations in the suspended solids were assumed to be 50 times the concentrations of these respective metals in the sludge.

The VOC content of both the suspended solids material and sludge was based upon the filtered liquid data and corrected for the expected difference in density between the materials (e.g. sludge and suspended solids density was assumed 2 g/cm^3 while the liquid density was approximately 1 g/cm^3). It was also assumed that the average VOC mass per unit volume was the same for the sludge, suspended solids, and filtered liquids. It is unknown whether these assumptions are conservative or not.

5.0 REFERENCES

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6.0 APPENDICES

6.1 Appendix 1. COI Total Inventory of OSTs S1 through S22

6.2 Appendix 2. Solvent Tank Nuclide Inventory - Filtered Liquids

6.3 Appendix 3. Solvent Tank Nuclide Inventory - Suspended Solids

6.4 *Appendix 4. Solvent Tank Nuclide Inventory - Sludges*

	H-3	C-14	I-129	Cs-137	Pu-238	Pu-239	Pu-241	Sr-90	U-235	U-238	Co-60	Tc-99	Np-237	Cm-244
Tank #	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi
1-L	9.18E+01	1.55E+02	9.00E-01	5.67E+03	2.88E+05	6.16E+03	7.09E+04	2.77E+05	3.79E+01	8.38E+02	1.34E+01	8.24E+02	1.02E+02	9.04E+03
1-SS	4.46E+01	1.19E+02	3.67E+02	5.39E+01	3.62E+03	2.52E+02	1.38E+03	3.13E+03	8.84E-02	2.04E+00	2.43E+01	6.25E+00	2.85E+00	4.58E+03
1-S	8.20E+04	1.04E+05	4.34E+03	5.36E+04	4.63E+05	1.60E+04	1.38E+05	1.54E+06	2.11E+01	6.47E+02	1.44E+02	2.62E+03	8.10E+01	1.48E+06
2-L	3.05E+02	3.10E+01	6.76E+01	7.78E+03	6.00E+03	8.37E+02	2.42E+03	7.61E+02	5.79E+00	1.69E+03	7.91E-01	4.00E+01	4.36E+01	1.00E+03
2-SS	3.62E+01	2.60E+02	1.08E+01	5.54E+01	1.14E+04	4.01E+02	2.99E+03	2.32E+02	6.12E-01	1.53E+01	9.33E+00	4.51E+00	8.10E+00	2.15E+03
2-S	6.05E+05	7.69E+05	3.20E+04	5.83E+04	1.50E+07	7.67E+04	3.72E+06	1.54E+06	8.70E+00	2.07E+02	3.19E+03	1.93E+04	2.69E+02	1.87E+07
3-L	1.09E+03	1.97E+02	4.52E+00	4.35E+04	1.51E+04	1.58E+04	2.59E+04	5.15E+04	1.18E+02	2.79E+03	1.36E+01	4.74E+02	2.83E+02	1.64E+04
3-SS	2.50E+02	6.72E+03	1.58E+02	1.76E+04	7.93E+04	1.91E+04	2.22E+04	2.55E+05	1.47E+01	2.99E+02	1.15E+02	6.48E+01	1.49E+02	2.08E+05
3-S	6.74E+04	8.57E+04	3.57E+03	4.41E+04	3.81E+05	1.31E+04	1.13E+05	1.26E+06	1.73E+01	5.32E+02	1.18E+02	2.16E+03	6.66E+01	1.22E+06
4-L	3.77E+03	4.53E+02	2.23E+02	1.38E+05	2.32E+04	6.36E+04	1.59E+04	1.71E+04	2.93E+02	8.69E+03	2.93E+01	1.10E+03	3.35E+02	1.43E+03
4-SS	3.86E+02	1.54E+03	3.85E+01	7.18E+02	9.59E+03	9.50E+02	2.72E+03	2.72E+02	1.27E+00	2.59E+01	2.91E+00	2.32E+01	1.22E+00	9.74E+01
4-S	1.10E+03	1.34E+05	5.60E+03	2.42E+03	1.80E+03	8.69E+01	4.35E+03	2.18E+03	7.84E+00	2.03E+02	1.03E+00	3.38E+03	7.22E+00	5.20E+02
5-L	6.58E+04	4.77E+02	5.57E+01	3.97E+06	1.14E+06	7.91E+04	2.82E+05	1.52E+04	1.17E+02	3.17E+03	5.68E+03	1.88E+02	1.72E+02	8.67E+07
5-SS	3.23E+01	1.07E+01	4.44E-01	5.95E+00	4.49E+02	2.40E+01	3.23E+01	4.47E+00	3.46E-03	8.25E-02	1.13E-01	2.68E-01	7.73E-02	8.87E+03
5-S	2.04E+06	2.60E+06	1.08E+05	1.33E+06	1.15E+07	3.98E+05	3.42E+06	3.82E+07	5.25E+02	1.61E+04	3.58E+03	6.53E+04	2.02E+03	3.68E+07
6-L	5.02E+03	5.54E+02	1.47E+02	9.01E+04	1.29E+04	4.74E+04	2.90E+04	1.03E+03	3.84E+01	8.92E+02	1.52E+02	1.70E+03	2.34E+02	6.43E+02
6-SS	3.61E+02	1.35E+03	2.10E+03	1.32E+04	5.35E+05	9.08E+04	9.52E+04	5.46E+04	1.11E+02	3.66E+03	1.07E+02	1.27E+03	1.51E+02	1.80E+04
6-S	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
7-L	1.12E+03	3.28E+02	5.04E+01	1.81E+04	2.05E+05	1.22E+05	4.01E+05	1.86E+05	2.78E+02	1.34E+04	2.15E+01	3.95E+04	8.11E+02	2.62E+03
7-SS	3.94E+02	5.06E+03	3.18E+02	1.13E+03	8.73E+03	1.36E+04	3.07E+04	1.84E+04	1.00E+01	3.62E+01	2.29E+00	1.92E+02	8.95E+00	1.89E+02
7-S	2.73E+04	3.48E+04	1.45E+03	9.97E+02	2.29E+03	4.60E+03	3.77E+03	6.40E+03	6.60E+00	1.95E+02	1.59E+00	8.74E+02	9.36E+00	4.13E+02
8-L	9.44E+02	4.46E+02	8.29E+01	4.39E+05	1.37E+04	2.36E+04	2.59E+05	5.00E+03	1.32E+01	3.13E+02	1.85E+02	6.12E+02	2.69E+02	1.17E+03
8-SS	1.38E+02	3.54E+02	6.25E+01	2.04E+04	4.22E+04	5.69E+03	4.95E+03	5.40E+04	1.22E-01	2.65E+00	3.38E+00	3.78E+01	7.90E+00	4.42E+02
8-S	1.09E+05	1.39E+05	5.79E+03	4.91E+05	1.73E+04	1.66E+03	1.80E+03	3.36E+05	3.32E-01	7.54E+00	5.54E+01	3.50E+03	9.49E+00	7.59E+02
9-L	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9-SS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9-S	2.37E+05	3.01E+05	1.25E+04	1.55E+05	1.34E+06	4.62E+04	3.97E+05	4.43E+06	6.09E+01	1.87E+03	4.16E+02	7.58E+03	2.34E+02	4.27E+06
10-L	7.46E+01	1.23E+01	6.06E+00	3.49E+04	2.26E+04	1.86E+03	8.51E+03	2.96E+03	3.75E+00	1.52E+02	3.02E+00	1.27E+02	1.28E+01	1.90E+03
10-SS	6.15E+01	2.58E+02	1.08E+01	5.24E+02	1.35E+04	8.39E+02	4.28E+03	3.80E+03	3.28E-01	6.68E+00	1.79E+00	6.49E+00	9.14E+00	2.21E+04
10-S	5.65E+05	7.18E+05	2.99E+04	3.69E+05	3.19E+06	1.10E+05	9.48E+05	1.06E+07	1.45E+02	4.46E+03	9.92E+02	1.81E+04	5.58E+02	1.02E+07
11-L	3.31E+02	1.76E+01	8.65E+00	5.32E+04	1.36E+05	2.35E+03	6.17E+04	9.80E+02	1.09E-01	2.63E+00	3.42E+01	1.59E+02	2.68E-01	2.76E+05
11-SS	8.72E+01	1.16E+01	4.83E-01	2.43E+01	9.29E+01	5.65E+00	3.59E+01	2.11E+02	2.10E-04	5.69E-03	3.41E-02	2.92E-01	6.44E-03	2.58E+02
11-S	2.31E+05	2.94E+05	1.23E+04	1.51E+05	1.31E+06	4.51E+04	3.88E+05	4.33E+06	5.95E+01	1.83E+03	4.06E+02	7.40E+03	2.29E+02	4.17E+06
12-L	3.72E+01	6.13E+00	3.02E+00	1.74E+04	1.13E+04	9.28E+02	4.24E+03	1.48E+03	1.87E+00	7.56E+01	1.51E+00	6.32E+01	6.38E+00	9.50E+02
12-SS	3.08E+01	1.29E+02	5.38E+00	2.62E+02	6.77E+03	4.20E+02	2.14E+03	1.90E+03	1.64E-01	3.34E+00	8.96E-01	3.25E+00	4.57E+00	1.10E+04
12-S	9.11E+04	1.16E+05	4.83E+03	5.96E+04	5.15E+05	1.78E+05	1.53E+05	1.71E+06	2.34E+01	7.19E+02	1.60E+02	2.91E+03	9.00E+01	1.64E+06
13-L	4.06E+02	2.03E+02	1.23E+02	1.12E+05	6.21E+05	3.76E+04	1.68E+05	2.35E+04	1.11E+02	2.78E+03	8.59E+01	2.60E+03	4.06E+02	1.87E+04
13-SS	4.85E+02	1.39E+03	2.31E+01	3.53E+03	2.05E+05	1.19E+04	7.06E+04	2.26E+04	3.03E+00	4.62E+01	6.45E+00	1.39E+01	2.17E+01	2.10E+03
13-S	7.83E+05	9.96E+05	4.15E+04	5.12E+05	4.43E+06	1.53E+05	1.31E+06	1.47E+07	2.02E+02	6.18E+03	1.38E+03	2.51E+04	7.74E+02	1.41E+07
14-L	1.21E+03	4.50E+02	1.32E+01	5.92E+04	1.50E+05	1.21E+04	3.31E+04	8.13E+04	7.06E+01	5.10E+03	5.81E+01	1.55E+03	1.11E+03	9.18E+03
14-SS	1.86E+02	7.79E+02	5.62E+00	1.34E+02	6.31E+04	3.99E+02	7.00E+01	4.23E+04	4.58E-02	1.14E+00	8.60E+00	1.96E+01	8.68E-01	3.46E+04
Tank #	H-3 uCi	C-14 uCi	I-129 uCi	Cs-137 uCi	Pu-238 uCi	Pu-239 uCi	Pu-241 uCi	Sr-90 uCi	U-235 uCi	U-238 uCi	Co-60 uCi	Tc-99 uCi	Np-237 uCi	Cm-244 uCi

14-S	2.16E+06	2.74E+06	1.14E+05	1.41E+06	1.22E+07	4.20E+05	3.62E+06	4.04E+07	5.55E+02	1.70E+04	3.79E+03	6.90E+04	2.13E+03	3.89E+07
15-L	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E+00	0.00E+00
15-SS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
15-S	2.64E+06	3.36E+06	1.40E+05	1.73E+06	1.49E+07	5.15E+05	4.44E+06	4.95E+07	6.80E+02	2.09E+04	4.64E+03	8.46E+04	2.61E+03	4.77E+07
16-L	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
16-SS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
16-S	4.97E+06	6.33E+06	2.64E+05	2.29E+05	1.53E+06	1.48E+06	1.99E+06	2.33E+06	1.83E+03	5.25E+04	2.36E+03	1.59E+05	6.51E+03	3.58E+06
17-L	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
17-SS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
17-S	1.28E+05	1.62E+05	6.76E+03	8.34E+04	7.20E+05	2.49E+04	2.14E+05	2.39E+06	3.28E+01	1.01E+03	2.24E+02	4.08E+03	1.26E+02	2.30E+06
18-L	3.72E+01	6.13E+00	3.02E+00	1.74E+04	1.13E+04	9.28E+02	4.24E+03	1.48E+03	1.87E+00	7.56E+01	1.51E+00	6.32E+01	6.38E+00	9.50E+02
18-SS	3.08E+01	1.29E+02	5.38E+00	2.62E+02	6.77E+03	4.20E+02	2.14E+03	1.90E+03	1.64E-01	3.34E+00	8.96E-01	3.25E+00	4.57E+00	1.10E+04
18-S	3.64E+04	4.63E+04	1.93E+03	2.38E+04	2.06E+05	7.10E+03	6.11E+04	6.82E+05	9.37E+00	2.88E+02	6.40E+01	1.17E+03	3.60E+01	6.57E+05
19-L	3.84E+03	7.04E+02	5.30E+02	1.27E+05	4.38E+06	1.29E+04	1.12E+06	6.84E+04	6.62E+01	1.66E+04	7.27E+02	2.93E+03	4.91E+02	1.76E+04
19-SS	1.66E+02	8.72E+03	8.49E+01	1.63E+03	2.62E+05	6.30E+03	8.15E+04	4.93E+04	5.41E+00	1.31E+02	1.87E+02	3.39E+02	2.59E+03	3.36E+05
19-S	6.84E+05	6.23E+05	2.60E+04	5.70E+04	4.89E+06	1.97E+05	1.34E+06	1.28E+06	5.91E+02	8.41E+03	1.82E+03	1.57E+04	9.71E+02	1.54E+07
20-T-L	1.43E+06	2.33E+03	1.21E+03	5.99E+01	1.06E+04	2.34E+03	3.60E+03	1.29E+04	1.59E+01	6.97E+01	3.36E+01	5.88E+03	9.06E+01	8.08E+04
20-T-SS	5.49E+02	3.40E+04	3.63E+02	7.71E+02	9.59E+03	3.42E+03	1.85E+03	6.97E+03	2.54E-01	6.72E+00	5.39E+02	6.81E+01	3.90E+01	1.40E+04
20-B-L	1.02E+04	1.51E+03	1.23E+03	1.18E+05	4.22E+06	9.14E+04	1.05E+06	1.75E+06	3.47E+02	1.16E+04	5.81E+01	5.20E+03	1.85E+03	3.23E+05
20-B-SS	5.83E+02	4.86E+03	1.81E+02	3.30E+03	1.40E+05	4.92E+03	3.37E+04	2.44E+04	2.24E+00	5.92E+01	5.76E+02	1.30E+02	4.06E+01	1.28E+05
20-S	3.37E+05	2.09E+05	8.69E+03	4.57E+04	3.93E+05	5.55E+04	1.22E+05	1.00E+06	3.41E+01	3.25E+03	2.33E+02	5.2		

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Sludge															
		(uCi/g)	(uCi/g)	(uCi/g)	(uCi/g)	(uCi/g)	(uCi/g)	(uCi/g)	(uCi/g)	(uCi/g)	(uCi/g)	(uCi/g)	(uCi/g)	(uCi/g)	(uCi/g)
	Std Dev	2.17E+00	2.87E+00	1.91E-02	3.73E+00	2.19E+01	3.70E-01	5.80E+00	5.12E+01	9.80E-04	2.00E-02	0.00E+00	5.52E-02	2.23E-03	
	Ave	2.41E+00	3.06E+00	1.28E-01	1.57E+00	1.36E+01	4.69E-01	4.04E+00	4.51E+01	6.19E-04	1.90E-02	4.23E-03	7.70E-02	2.38E-03	
Tank	Mass	H-3	C-14	I-129	Cs-137	Pu-238	Pu-239	Pu-241	Sr-90	U-235	U-238	Co-60	Tc-99	Np-237	
#	grams	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	
1	3.407E+04	8.20E+04	1.04E+05	4.34E+03	5.36E+04	4.63E+05	1.60E+04	1.38E+05	1.54E+06	2.11E+01	6.47E+02	1.44E+02	2.62E+03	8.10E+01	
2	2.514E+05	6.05E+05	7.69E+05	3.20E+04	3.96E+05	3.42E+06	1.18E+05	1.01E+06	1.13E+07	1.56E+02	4.77E+03	1.06E+03	1.93E+04	5.98E+02	
3	2.801E+04	6.74E+04	8.57E+04	3.57E+03	4.41E+04	3.81E+05	1.31E+04	1.13E+05	1.26E+06	1.73E+01	5.32E+02	1.18E+02	2.16E+03	6.66E+01	
4	4.391E+04	1.06E+05	1.34E+05	5.60E+03	6.91E+04	5.97E+05	2.06E+04	1.77E+05	1.98E+06	2.72E+01	8.34E+02	1.86E+02	3.38E+03	1.04E+02	
5	8.479E+05	2.04E+06	2.60E+06	1.08E+05	1.33E+06	1.15E+07	3.98E+05	3.42E+06	3.82E+07	5.25E+02	1.61E+04	3.58E+03	6.53E+04	2.02E+03	
6	0.000E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
7	1.136E+04	2.73E+04	3.48E+04	1.45E+03	1.79E+04	1.54E+05	5.33E+03	4.59E+04	5.12E+05	7.03E+00	2.16E+02	4.80E+01	8.74E+02	2.70E+01	
8	4.542E+04	1.09E+05	1.39E+05	5.79E+03	7.15E+04	6.18E+05	2.13E+04	1.83E+05	2.05E+06	2.81E+01	8.63E+02	1.92E+02	3.50E+03	1.08E+02	
9	9.842E+04	2.37E+05	3.01E+05	1.25E+04	1.55E+05	1.34E+06	4.62E+04	3.97E+05	4.43E+06	6.09E+01	1.87E+03	4.16E+02	7.58E+03	2.34E+02	
10	2.347E+05	5.65E+05	7.18E+05	2.99E+04	3.69E+05	3.19E+06	1.10E+05	9.48E+05	1.06E+07	1.45E+02	4.46E+03	9.92E+02	1.81E+04	5.58E+02	
11	9.615E+04	2.31E+05	2.94E+05	1.23E+04	1.51E+05	1.31E+06	4.51E+04	3.88E+05	4.33E+06	5.95E+01	1.83E+03	4.06E+02	7.40E+03	2.29E+02	
12	3.785E+04	9.11E+04	1.16E+05	4.83E+03	5.96E+04	5.15E+05	1.78E+04	1.53E+05	1.71E+06	2.34E+01	7.19E+02	1.60E+02	2.91E+03	9.00E+01	
13	3.255E+05	7.83E+05	9.96E+05	4.15E+04	5.12E+05	4.43E+06	1.53E+05	1.31E+06	1.47E+07	2.02E+02	6.18E+03	1.38E+03	2.51E+04	7.74E+02	
14	8.964E+05	2.16E+06	2.74E+06	1.14E+05	1.41E+06	1.22E+07	4.20E+05	3.62E+06	4.04E+07	5.55E+02	1.70E+04	3.79E+03	6.90E+04	2.13E+03	
15	1.099E+06	2.64E+06	3.36E+06	1.40E+05	1.73E+06	1.49E+07	5.15E+05	4.44E+06	4.95E+07	6.80E+02	2.09E+04	4.64E+03	8.46E+04	2.61E+03	
16	2.067E+06	4.97E+06	6.33E+06	2.64E+05	3.25E+06	2.81E+07	9.69E+05	8.35E+06	9.31E+07	1.28E+03	3.92E+04	8.74E+03	1.59E+05	4.92E+03	
17	5.300E+04	1.28E+05	1.62E+05	6.76E+03	8.34E+04	7.20E+05	2.49E+04	2.14E+05	2.39E+06	3.28E+01	1.01E+03	2.24E+02	4.08E+03	1.26E+02	
18	1.514E+04	3.64E+04	4.63E+04	1.93E+03	2.38E+04	2.06E+05	7.10E+03	6.11E+04	6.82E+05	9.37E+00	2.88E+02	6.40E+01	1.17E+03	3.60E+01	
19	2.037E+05	4.90E+05	6.23E+05	2.60E+04	3.20E+05	2.77E+06	9.55E+04	8.22E+05	9.18E+06	1.26E+02	3.87E+03	8.61E+02	1.57E+04	4.84E+02	
20	6.814E+04	1.64E+05	2.09E+05	8.69E+03	1.07E+05	9.26E+05	3.20E+04	2.75E+05	3.07E+06	4.22E+01	1.29E+03	2.88E+02	5.25E+03	1.62E+02	
21	2.370E+05	5.70E+05	7.25E+05	3.02E+04	3.73E+05	3.22E+06	1.11E+05	9.57E+05	1.07E+07	1.47E+02	4.50E+03	1.00E+03	1.82E+04	5.64E+02	
22	5.678E+04	1.37E+05	1.74E+05	7.24E+03	8.94E+04	7.72E+05	2.66E+04	2.29E+05	2.56E+06	3.51E+01	1.08E+03	2.40E+02	4.37E+03	1.35E+02	
H-3 Only UL's obtained,therefore they were used for calculations, no MDA's used.															
Co-60 value based detection limit values.															
Np-237 value based upon Tanks 19, 20 and 22 only. All other values were limits only.															
Others: detected activity only used to calculate average values, no MDA's, LL's, or UL's used.															
C-14, I-129, Sr-90, and Tc-99 based upon suspended solids data.															
VOC based upon filtered liquid data and corrected for estimated density of 2 g/cm3.															

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Filtered Liquids																
		(uCi/mL)	(uCi/mL)	(uCi/mL)	(uCi/mL)	(uCi/mL)	(uCi/mL)	(uCi/mL)	(uCi/mL)	(uCi/mL)	(uCi/mL)	(uCi/mL)	(uCi/mL)	(uCi/mL)	(uCi/mL)	
	Std Dev	1.67E-03	2.14E-04	7.97E-05	3.02E+00	9.40E-01	7.87E-02	2.48E-01	1.70E-01	9.55E-05	3.46E-03	1.07E-04	8.54E-03	2.54E-04		
	Ave	1.97E-03	3.24E-04	1.60E-04	9.21E-01	5.97E-01	4.91E-02	2.24E-01	7.81E-02	9.89E-05	4.00E-03	7.98E-05	3.34E-03	3.38E-04		
Tank	Volume	H-3	C-14	I-129	Cs-137	Pu-238	Pu-239	Pu-241	Sr-90	U-235	U-238	Co-60	Tc-99	Np-237		
#	mL	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi	uCi		
1	4.433E+05	8.73E+02	1.44E+02	7.08E+01	4.08E+05	2.65E+05	2.18E+04	9.95E+04	3.46E+04	4.39E+01	1.77E+03	3.54E+01	1.48E+03	1.50E+02		
2	4.228E+05	8.32E+02	1.37E+02	6.76E+01	3.89E+05	2.53E+05	2.08E+04	9.49E+04	3.30E+04	4.18E+01	1.69E+03	3.37E+01	1.41E+03	1.43E+02		
3	1.506E+06	2.97E+03	4.89E+02	2.41E+02	1.39E+06	9.00E+05	7.40E+04	3.38E+05	1.18E+05	1.49E+02	6.03E+03	1.20E+02	5.03E+03	5.09E+02		
4	1.398E+06	2.75E+03	4.53E+02	2.23E+02	1.29E+06	8.35E+05	6.86E+04	3.14E+05	1.09E+05	1.38E+02	5.59E+03	1.12E+02	4.67E+03	4.72E+02		
5	3.483E+05	6.86E+02	1.13E+02	5.57E+01	3.21E+05	2.08E+05	1.71E+04	7.82E+04	2.72E+04	3.45E+01	1.39E+03	2.78E+01	1.16E+03	1.18E+02		
6	1.042E+06	2.05E+03	3.38E+02	1.67E+02	9.60E+05	6.22E+05	5.12E+04	2.34E+05	8.13E+04	1.03E+02	4.17E+03	8.32E+01	3.48E+03	3.52E+02		
7	1.200E+06	2.36E+03	3.89E+02	1.92E+02	1.11E+06	7.17E+05	5.89E+04	2.69E+05	9.37E+04	1.19E+02	4.80E+03	9.58E+01	4.01E+03	4.05E+02		
8	5.186E+05	1.02E+03	1.68E+02	8.29E+01	4.78E+05	3.10E+05	2.55E+04	1.16E+05	4.05E+04	5.13E+01	2.08E+03	4.14E+01	1.73E+03	1.75E+02		
9	0.000E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
10	3.790E+04	7.46E+01	1.23E+01	6.06E+00	3.49E+04	2.26E+04	1.86E+03	8.51E+03	2.96E+03	3.75E+00	1.52E+02	3.02E+00	1.27E+02	1.28E+01		
11	5.410E+04	1.07E+02	1.76E+01	8.65E+00	4.98E+04	3.23E+04	2.66E+03	1.21E+04	4.22E+03	5.35E+00	2.16E+02	4.32E+00	1.81E+02	1.83E+01		
12	1.890E+04	3.72E+01	6.13E+00	3.02E+00	1.74E+04	1.13E+04	9.28E+02	4.24E+03	1.48E+03	1.87E+00	7.56E+01	1.51E+00	6.32E+01	6.38E+00		
13	8.264E+05	1.63E+03	2.68E+02	1.32E+02	7.61E+05	4.94E+05	4.06E+04	1.85E+05	6.45E+04	8.18E+01	3.31E+03	6.60E+01	2.76E+03	2.79E+02		
14	1.387E+06	2.73E+03	4.50E+02	2.22E+02	1.28E+06	8.28E+05	6.81E+04	3.11E+05	1.08E+05	1.37E+02	5.55E+03	1.11E+02	4.64E+03	4.68E+02		
15	0.000E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
16	0.000E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
17	0.000E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		
18	1.890E+04	3.72E+01	6.13E+00	3.02E+00	1.74E+04	1.13E+04	9.28E+02	4.24E+03	1.48E+03	1.87E+00	7.56E+01	1.51E+00	6.32E+01	6.38E+00		
19-O	2.171E+06	4.27E+03	7.04E+02	3.47E+02	2.00E+06	1.30E+06	1.07E+05	4.87E+05	1.69E+05	2.15E+02	8.69E+03	1.73E+02	7.25E+03	7.33E+02		
20-T	7.552E+06	1.49E+04	2.45E+03	1.21E+03	6.95E+06	4.51E+06	3.71E+05	1.70E+06	5.89E+05	7.47E+02	3.02E+04	6.03E+02	2.52E+04	2.55E+03		
20-B	7.552E+06	1.49E+04	2.45E+03	1.21E+03	6.95E+06	4.51E+06	3.71E+05	1.70E+06	5.89E+05	7.47E+02	3.02E+04	6.03E+02	2.52E+04	2.55E+03		
21	6.905E+05	1.36E+03	2.24E+02	1.10E+02	6.36E+05	4.12E+05	3.39E+04	1.55E+05	5.39E+04	6.83E+01	2.76E+03	5.51E+01	2.31E+03	2.33E+02		
22	1.694E+06	3.34E+03	5.50E+02	2.71E+02	1.56E+06	1.01E+06	8.32E+04	3.80E+05	1.32E+05	1.68E+02	6.78E+03	1.35E+02	5.66E+03	5.72E+02		
C-14 Only UL's used for calculations, no MDA's used. No C-14 observed in samples.																
Others: detected activity only used to calculate average values, no UL's used.																

Filtered Liquids							Filtered Liquids												
(uCi/mL)		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)														
8.87E-02	Std Dev	5.59E-01	2.67E+00	2.54E+01	1.67E+01			H-3	C-14	I-129	Cs-137	Pu-238	Pu-239	Pu-241	Sr-90				
5.02E-02	Ave	7.84E-01	5.89E+00	1.21E+01	9.95E+00		Tank	uCi/mL	uCi/mL	uCi/mL	uCi/mL	uCi/mL	uCi/mL	uCi/mL	uCi/mL				
Cm-244	Tank	Cd	Pb	Hg	VOC	Density	1	2.07E-04	3.50E-04		1.28E-02	6.49E-01	1.39E-02	1.60E-01	6.26E-01				
uCi	#	mg	mg	mg	mg	g/cm3	2	7.21E-04	7.34E-05		1.84E-02	1.42E-02		5.72E-03	1.80E-03				
2.23E+04	1	3.04E+02	2.28E+03	4.68E+03	3.86E+03	0.875	3	7.21E-04	1.31E-04		2.89E-02	1.00E-02	1.05E-02	1.72E-02	3.42E-02				
2.12E+04	2	3.33E+02	2.50E+03	5.12E+03	4.22E+03	1.003	4	2.70E-03	3.24E-04		9.91E-02	1.66E-02			1.22E-02				
7.57E+04	3	1.23E+03	9.24E+03	1.89E+04	1.56E+04	1.042	5				1.14E+01	3.28E+00	2.27E-01	8.11E-01	4.37E-02				
7.02E+04	4	1.18E+03	8.88E+03	1.82E+04	1.50E+04	1.079	6	4.82E-03	5.32E-04	1.41E-04	8.65E-02	1.24E-02		2.78E-02	9.91E-04				
1.75E+04	5	3.02E+02	2.27E+03	4.64E+03	3.83E+03	1.105	7	9.37E-04	2.73E-04	4.20E-05	1.51E-02	1.71E-01	1.02E-01	3.34E-01	1.55E-01				
5.24E+04	6	8.75E+02	6.57E+03	1.35E+04	1.11E+04	1.070	8	1.82E-03	8.60E-04		8.47E-01	2.64E-02		5.00E-01	9.64E-03				
6.03E+04	7	1.03E+03	7.73E+03	1.58E+04	1.31E+04	1.094	13	4.91E-04	2.46E-04	1.49E-04	1.36E-01	7.52E-01		2.03E-01	2.84E-02				
2.61E+04	8	4.28E+02	3.21E+03	6.58E+03	5.43E+03	1.051	14	8.69E-04			4.27E-02	1.08E-01	8.74E-03	2.39E-02	5.86E-02				
0.00E+00	9	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000	19-O	1.77E-03		2.44E-04	5.86E-02	2.02E+00	5.95E-03	5.18E-01	3.15E-02				
1.90E+03	10	2.97E+01	2.23E+02	4.57E+02	3.77E+02	1.000	20-B	1.35E-03	2.00E-04		1.56E-02	5.59E-01	1.21E-02	1.39E-01					
2.72E+03	11	4.33E+01	3.25E+02	6.67E+02	5.50E+02	1.021	21	4.55E-03	2.82E-04		5.63E-02	4.68E-01	1.26E-02	1.14E-01	9.46E-03				
9.50E+02	12	1.48E+01	1.11E+02	2.28E+02	1.88E+02	1.000	22	4.64E-03	2.97E-04	2.23E-04	7.57E-02	2.76E-01		6.44E-02	3.25E-03				
4.15E+04	13	7.10E+02	5.33E+03	1.09E+04	9.02E+03	1.096	Average	1.97E-03	3.24E-04	1.60E-04	9.21E-01	5.97E-01	4.91E-02	2.24E-01	7.81E-02				
6.97E+04	14	1.11E+03	8.32E+03	1.71E+04	1.41E+04	1.019	Std Dev	1.67E-03	2.14E-04	7.97E-05	3.02E+00	9.40E-01	7.87E-02	2.48E-01	1.70E-01				
0.00E+00	15	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000													
0.00E+00	16	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000													
0.00E+00	17	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.000													
9.50E+02	18	1.48E+01	1.11E+02	2.28E+02	1.88E+02	1.000													
1.09E+05	19-O	1.86E+03	1.40E+04	2.87E+04	2.36E+04	1.094													
3.79E+05	20-T	4.85E+03	3.64E+04	7.45E+04	6.15E+04	0.818													
3.79E+05	20-B	6.23E+03	4.67E+04	9.58E+04	7.90E+04	1.051													
3.47E+04	21	5.80E+02	4.36E+03	8.92E+03	7.36E+03	1.071													
8.51E+04	22	1.42E+03	1.06E+04	2.18E+04	1.80E+04	1.066													

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Suspended Solids						Suspended Solids									
(uCi/g)		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)										
5.22E+02	Std Dev	1.33E+03	5.07E+04	9.29E+03	8.33E+00										
2.62E+02	Ave	9.14E+02	2.99E+04	1.23E+04	4.98E+00										
Cm-244	Tank	Cd	Pb	Hg	VOC		H-3	C-14	I-129	Cs-137	Pu-238	Pu-239	Pu-241	Sr-90	
uCi	#	mg	mg	mg	mg		uCi/g	uCi/g	uCi/g	uCi/g	uCi/g	uCi/g	uCi/g	uCi/g	
1.01E+04	1	3.55E+01	1.16E+03	4.76E+02	1.93E-01				9.46E+00		9.32E+01		3.57E+01	8.06E+01	
2.22E+04	2	7.75E+01	2.54E+03	1.04E+03	4.22E-01					6.53E-01	1.34E+02	4.73E+00		2.74E+00	
5.75E+05	3	2.01E+03	6.57E+04	2.70E+04	1.09E+01				7.21E-02	8.02E+00	3.61E+01	8.69E+00	1.01E+01	1.16E+02	
7.89E+04	4	2.76E+02	9.02E+03	3.70E+03	1.50E+00					2.38E+00	3.18E+01	3.15E+00	9.01E+00		
9.10E+02	5	3.18E+00	1.04E+02	4.27E+01	1.73E-02					1.71E+00	1.29E+02	6.89E+00			
4.32E+06	6	1.51E+04	4.93E+05	2.02E+05	8.21E+01					7.97E-01	3.24E+01	5.50E+00	5.77E+00	3.31E+00	
6.52E+05	7	2.28E+03	7.46E+04	3.06E+04	1.24E+01					4.55E-01	3.50E+00	5.45E+00	1.23E+01	7.39E+00	
1.28E+05	8	4.49E+02	1.47E+04	6.02E+03	2.44E+00					4.15E+01	8.60E+01	1.16E+01	1.01E+01	1.10E+02	
0.00E+00	9	0.00E+00	0.00E+00	0.00E+00	0.00E+00					1.95E+01	1.13E+03	6.58E+01	3.90E+02	1.25E+02	
2.21E+04	10	7.71E+01	2.52E+03	1.03E+03	4.20E-01				2.21E-02	5.27E-01	2.48E+02	1.57E+00			
9.91E+02	11	3.47E+00	1.13E+02	4.65E+01	1.89E-02				2.98E-02	5.72E-01	9.19E+01	2.21E+00	2.86E+01	1.73E+01	
1.10E+04	12	3.86E+01	1.26E+03	5.17E+02	2.10E-01				1.14E-01	2.08E+00	8.83E+01	3.10E+00	2.12E+01	1.54E+01	
4.74E+04	13	1.66E+02	5.42E+03	2.22E+03	9.02E-01				1.41E-01	3.58E-01	6.85E+01	3.64E+00	2.05E+01	1.72E+01	
6.65E+04	14	2.33E+02	7.61E+03	3.12E+03	1.27E+00					2.25E+00	7.48E+01	7.03E+00	1.45E+01	6.85E-01	
0.00E+00	15	0.00E+00	0.00E+00	0.00E+00	0.00E+00		Average	7.29E-01	1.28E-01	6.22E+00	1.61E+02	9.95E+00	5.07E+01	4.51E+01	
0.00E+00	16	0.00E+00	0.00E+00	0.00E+00	0.00E+00		Std Dev	9.22E-01	2.87E+00	1.91E-02	1.18E+01	2.85E+02	1.70E+01	1.13E+02	5.12E+01
0.00E+00	17	0.00E+00	0.00E+00	0.00E+00	0.00E+00		DL Ave		4.13E-02						
1.10E+04	18	3.86E+01	1.26E+03	5.17E+02	2.10E-01		TSS Data for aqueous raw liquids			Estimated Suspended Solids					
7.45E+05	19-O	2.61E+03	8.52E+04	3.50E+04	1.42E+01		Tank	Wt %			Volume	Est. Solids			
2.91E+06	20-T	1.02E+04	3.32E+05	1.36E+05	5.53E+01		1	0.01			mL	grams			
4.15E+05	20-B	1.45E+03	4.75E+04	1.95E+04	7.90E+00		2	0.02			10	37854	8.43E+01		
1.86E+06	21	6.49E+03	2.12E+05	8.71E+04	3.53E+01		3	0.14			12	18927	4.22E+01		
1.42E+05	22	4.95E+02	1.62E+04	6.65E+03	2.70E+00		4	0.02			18	18927	4.22E+01		
							5	0.001							
							6	1.48		Calculation assumes density of liquids in tanks 10, 12, and 18 are 1.0 g/cm3.					
							7	0.19							
							8	0.09							
							13	0.02							
							14	0.018							
							19-O	0.12							
							20-B	0.02							
							21	0.96							
							22	0.03							
							Average	2.23E-01							
							Std Dev	4.38E-01							

[illegible]

Solvent Tank Nuclide Inventory Calculations - Filtered Liquids																	
	Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		
SPCAT	9.64E-03		6.24E-03		2.16E-06		6.47E-05		3.36E-07		7.05E-04		1.71E+01		6.21E-02		
	U-233	Error	U-234	Error	U-235	Error	U-236	Error	U-238	Error	Np-237	Error	Pu-238	Error	Pu-239	Error	
Tank #	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
S1	5.05E+05	1.01E+05	5.50E+06	1.10E+06	8.56E+04	1.71E+04	4.38E+04	8.77E+03	1.89E+06	3.77E+05	2.29E+05	1.15E+05	6.49E+08	6.49E+07	1.39E+07	6.94E+06	
S2	0.00E+00	0.00E+00	2.97E+06	1.78E+06	1.37E+04	5.31E+03	9.44E+04	1.40E+05	4.00E+06	6.92E+06	1.03E+05	2.62E+04	1.42E+07	2.84E+06	1.98E+06	0.00E+00	
S3	2.24E+06	4.48E+05	2.04E+06	4.07E+05	7.84E+04	1.57E+04	3.93E+04	7.86E+03	1.85E+06	3.70E+05	1.88E+05	9.39E+04	1.00E+07	2.01E+06	1.05E+07	5.25E+06	
S4	7.12E+06	0.00E+00	4.59E+06	0.00E+00	2.10E+05	4.20E+04	9.41E+04	1.88E+04	6.22E+06	1.77E+06	2.40E+05	0.00E+00	1.66E+07	6.63E+06	4.55E+07	0.00E+00	
S5	1.12E+07	2.24E+06	1.28E+07	2.57E+06	3.36E+05	6.72E+04	2.06E+05	4.12E+04	9.10E+06	1.82E+06	4.95E+05	0.00E+00	3.28E+09	1.31E+09	2.27E+08	4.55E+07	
S6	7.12E+06	0.00E+00	4.59E+06	0.00E+00	3.68E+04	7.37E+03	4.77E+04	0.00E+00	8.56E+05	1.71E+05	2.25E+05	0.00E+00	1.24E+07	3.72E+06	4.55E+07	0.00E+00	
S7	7.12E+06	0.00E+00	4.59E+06	0.00E+00	2.32E+05	1.72E+05	1.99E+05	3.97E+04	1.12E+07	2.24E+06	6.76E+05	2.70E+05	1.71E+08	5.12E+07	1.02E+08	4.07E+07	
S8	7.12E+06	0.00E+00	4.59E+06	0.00E+00	2.55E+04	5.11E+03	4.77E+04	0.00E+00	6.04E+05	1.21E+05	5.18E+05	0.00E+00	2.64E+07	7.92E+06	4.55E+07	0.00E+00	
S9	4.90E+06	9.30E+06	4.39E+06	7.54E+06	9.89E+04	1.91E+05	9.44E+04	1.40E+05	4.00E+06	6.92E+06	3.38E+05	5.08E+05	5.97E+08	1.88E+09	4.91E+07	1.57E+08	
S10	4.90E+06	9.30E+06	4.39E+06	7.54E+06	9.89E+04	1.91E+05	9.44E+04	1.40E+05	4.00E+06	6.92E+06	3.38E+05	5.08E+05	5.97E+08	1.88E+09	4.91E+07	1.57E+08	
S11	6.76E+04	0.00E+00	4.35E+04	8.70E+03	2.02E+03	4.04E+02	4.55E+02	9.10E+01	4.86E+04	0.00E+00	4.95E+03	9.91E+02	2.52E+09	5.05E+08	4.34E+07	8.68E+06	
S12	4.90E+06	9.30E+06	4.39E+06	7.54E+06	9.89E+04	1.91E+05	9.44E+04	1.40E+05	4.00E+06	6.92E+06	3.38E+05	5.08E+05	5.97E+08	1.88E+09	4.91E+07	1.57E+08	
S13	8.60E+06	1.72E+06	5.77E+06	1.15E+06	1.34E+05	2.68E+04	1.72E+05	3.43E+04	3.37E+06	6.75E+05	4.91E+05	0.00E+00	7.52E+08	1.50E+08	4.55E+07	0.00E+00	
S14	3.29E+05	6.58E+04	2.17E+06	4.34E+05	5.09E+04	1.02E+04	5.95E+04	1.19E+04	3.68E+06	7.62E+05	8.02E+05	4.01E+05	1.08E+08	2.16E+07	8.74E+06	4.37E+06	
S15	4.90E+06	9.30E+06	4.39E+06	7.54E+06	9.89E+04	1.91E+05	9.44E+04	1.40E+05	4.00E+06	6.92E+06	3.38E+05	5.08E+05	5.97E+08	1.88E+09	4.91E+07	1.57E+08	
S16	4.90E+06	9.30E+06	4.39E+06	7.54E+06	9.89E+04	1.91E+05	9.44E+04	1.40E+05	4.00E+06	6.92E+06	3.38E+05	5.08E+05	5.97E+08	1.88E+09	4.91E+07	1.57E+08	
S17	4.90E+06	9.30E+06	4.39E+06	7.54E+06	9.89E+04	1.91E+05	9.44E+04	1.40E+05	4.00E+06	6.92E+06	3.38E+05	5.08E+05	5.97E+08	1.88E+09	4.91E+07	1.57E+08	
S18	4.90E+06	9.30E+06	4.39E+06	7.54E+06	9.89E+04	1.91E+05	9.44E+04	1.40E+05	4.00E+06	6.92E+06	3.38E+05	5.08E+05	5.97E+08	1.88E+09	4.91E+07	1.57E+08	
S19-O	2.55E+06	5.10E+05	1.59E+06	3.19E+05	3.05E+04	6.11E+03	3.08E+04	6.16E+03	7.66E+06	1.20E+06	2.26E+05	1.13E+05	2.02E+09	2.02E+08	5.95E+06	2.97E+06	
S19-A	2.33E+06	4.66E+05	1.64E+06	3.28E+05	3.08E+04	6.15E+03	2.97E+04	5.94E+03	6.26E+06	1.05E+06	2.49E+05	1.24E+05	2.03E+09	2.03E+08	4.77E+06	2.39E+06	
S20-T	1.62E+05	3.24E+04	1.13E+05	2.25E+04	2.11E+03	4.22E+02	2.15E+03	4.31E+02	9.23E+03	1.85E+03	1.20E+04	5.99E+03	1.41E+06	7.50E+05	3.10E+05	1.55E+05	
S20-B	1.12E+07	2.24E+06	3.26E+06	6.51E+05	4.59E+04	9.19E+03	5.32E+04	1.06E+04	1.53E+06	3.05E+05	2.45E+05	1.22E+05	5.59E+08	5.59E+07	1.21E+07	6.06E+06	
S21	2.60E+06	5.21E+05	1.95E+06	3.90E+05	5.32E+04	1.06E+04	4.59E+04	9.19E+03	3.08E+06	6.58E+05	2.32E+05	1.16E+05	4.68E+08	1.41E+08	1.26E+07	6.28E+06	
S22	7.12E+06	0.00E+00	4.59E+06	0.00E+00	5.27E+04	1.05E+04	4.77E+04	0.00E+00	9.77E+05	1.95E+05	2.07E+05	0.00E+00	2.76E+08	5.51E+07	4.55E+07	0.00E+00	
Values listed in Black Bold Italics print are detection limits or upper limits.																	
Tank S2 U-233 included in U-234 activity, Pu-240 included in Pu-239 activity. U-236, U-238, Pu-242, Am-243, Cm-245, Cm-246 not measured																	
Tank S5 Cm-244 upper limit value estimated from Gross Alpha activity.																	
The values calculated for samples S20-T and S20-B are upper limits.																	
Values listed in Blue Bold Italics are calculated based upon average activity concentrations of the analyzed aqueous solutions.																	
The organic liquids in Tank S11 and S20 (20-T) were not used to calculate average activity concentrations.																	
Since S19-O and S19-A represent duplicate samples, only S19-O was used in the average activity calculations.																	
Average Pu-242, Cm-245, and Cm-246 values calculated from detection limit numbers.																	
Errors associated with average activities were calculated by averaging the relative errors associated with the activities.																	

Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g	
2.27E-01		1.03E+02		3.93E-03		3.44E+00		2.00E-01		8.10E+01		1.72E-01		3.04E-01	
Pu-240	Error	Pu-241	Error	Pu-242	Error	Am-241	Error	Am-243	Error	Cm-244	Error	Cm-245	Error	Cm-246	Error
pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L	pCi/L
1.97E+06	9.86E+05	1.60E+08	4.81E+07	1.81E+04	0.00E+00	8.42E+06	4.36E+05	9.95E+04	0.00E+00	2.04E+07	4.07E+07	7.88E+05	0.00E+00	1.41E+06	0.00E+00
0.00E+00	0.00E+00	5.72E+06	2.52E+06	1.56E+06	0.00E+00	3.14E+05	2.29E+04	1.31E+07	0.00E+00	2.37E+06	4.75E+05	6.82E+07	0.00E+00	1.21E+08	0.00E+00
1.05E+06	0.00E+00	1.72E+07	1.37E+07	1.81E+04	0.00E+00	1.15E+05	0.00E+00	3.61E+04	0.00E+00	1.09E+07	1.53E+06	7.88E+05	0.00E+00	1.41E+06	0.00E+00
1.67E+08	0.00E+00	1.14E+07	0.00E+00	2.90E+06	0.00E+00	3.50E+05	0.00E+00	1.14E+05	0.00E+00	1.02E+06	2.05E+06	1.27E+08	0.00E+00	2.25E+08	0.00E+00
2.24E+08	4.49E+07	8.11E+08	3.24E+08	2.75E+06	0.00E+00	1.39E+08	5.60E+07	1.40E+08	0.00E+00	2.49E+11	0.00E+00	1.20E+08	0.00E+00	2.14E+08	0.00E+00
1.67E+08	0.00E+00	2.78E+07	1.67E+07	2.90E+06	0.00E+00	3.14E+05	0.00E+00	1.05E+05	0.00E+00	6.17E+05	0.00E+00	1.27E+08	0.00E+00	2.25E+08	0.00E+00
1.67E+08	0.00E+00	3.34E+08	1.54E+08	2.90E+06	0.00E+00	3.83E+07	1.94E+06	8.56E+04	0.00E+00	2.18E+06	0.00E+00	1.27E+08	0.00E+00	2.25E+08	0.00E+00
1.67E+08	0.00E+00	5.00E+08	7.80E+08	2.90E+06	0.00E+00	5.36E+06	0.00E+00	1.75E+06	0.00E+00	2.25E+06	0.00E+00	1.27E+08	0.00E+00	2.25E+08	0.00E+00
4.02E+07	1.80E+08	2.24E+08	4.96E+08	1.56E+06	0.00E+00	2.11E+07	9.18E+07	1.31E+07	0.00E+00	5.56E+07	1.85E+08	6.82E+07	0.00E+00	1.21E+08	0.00E+00
4.02E+07	1.80E+08	2.24E+08	4.96E+08	1.56E+06	0.00E+00	2.11E+07	9.18E+07	1.31E+07	0.00E+00	5.56E+07	1.85E+08	6.82E+07	0.00E+00	1.21E+08	0.00E+00
1.59E+08	3.18E+07	1.14E+09	4.54E+08	2.75E+06	0.00E+00	3.71E+06	0.00E+00	1.45E+06	0.00E+00	5.09E+09	1.02E+09	1.20E+08	0.00E+00	2.14E+08	4.28E+07
4.02E+07	1.80E+08	2.24E+08	4.96E+08	1.56E+06	0.00E+00	2.11E+07	9.18E+07	1.31E+07	0.00E+00	5.56E+07	1.85E+08	6.82E+07	0.00E+00	1.21E+08	0.00E+00
1.67E+08	0.00E+00	2.03E+08	8.13E+07	2.90E+06	0.00E+00	7.52E+05	0.00E+00	2.32E+05	0.00E+00	2.26E+07	0.00E+00	1.27E+08	0.00E+00	2.25E+08	0.00E+00
1.27E+06	6.35E+05	2.39E+07	9.55E+06	1.81E+04	0.00E+00	1.41E+06	1.64E+05	8.33E+04	3.30E+04	6.62E+06	2.65E+06	7.88E+05	0.00E+00	1.41E+06	0.00E+00
4.02E+07	1.80E+08	2.24E+08	4.96E+08	1.56E+06	0.00E+00	2.11E+07	9.18E+07	1.31E+07	0.00E+00	5.56E+07	1.85E+08	6.82E+07	0.00E+00	1.21E+08	0.00E+00
4.02E+07	1.80E+08	2.24E+08	4.96E+08	1.56E+06	0.00E+00	2.11E+07	9.18E+07	1.31E+07	0.00E+00	5.56E+07	1.85E+08	6.82E+07	0.00E+00	1.21E+08	0.00E+00
4.02E+07	1.80E+08	2.24E+08	4.96E+08	1.56E+06	0.00E+00	2.11E+07	9.18E+07	1.31E+07	0.00E+00	5.56E+07	1.85E+08	6.82E+07	0.00E+00	1.21E+08	0.00E+00
1.43E+06	7.14E+05	5.18E+08	1.55E+08	1.81E+04	0.00E+00	9.05E+05	1.12E+05	1.34E+05	0.00E+00	8.11E+06	1.62E+07	7.88E+05	0.00E+00	1.41E+06	0.00E+00
1.57E+06	7.84E+05	5.23E+08	1.57E+08	1.81E+04	0.00E+00	9.05E+05	1.08E+05	1.36E+05	0.00E+00	8.15E+06	1.63E+07	7.88E+05	0.00E+00	1.41E+06	0.00E+00
1.05E+06	0.00E+00	4.77E+05	0.00E+00	1.81E+04	0.00E+00	5.77E+05	4.12E+04	6.26E+04	6.51E+03	1.07E+07	1.73E+06	7.88E+05	0.00E+00	1.41E+06	0.00E+00
7.52E+06	3.76E+06	1.39E+08	4.16E+07	1.81E+04	0.00E+00	1.55E+05	3.91E+04	9.19E+05	0.00E+00	4.28E+07	2.14E+07	7.88E+05	0.00E+00	1.41E+06	0.00E+00
4.73E+06	2.36E+06	1.14E+08	4.77E+07	1.81E+04	0.00E+00	1.13E+06	1.61E+05	6.49E+05	0.00E+00	1.32E+08	3.97E+07	7.88E+05	0.00E+00	1.41E+06	0.00E+00
1.67E+08	0.00E+00	6.44E+07	2.58E+07	2.90E+06	0.00E+00	6.53E+05	1.96E+05	1.01E+06	6.24E+04	2.76E+08	5.51E+07	1.27E+08	0.00E+00	2.25E+08	0.00E+00

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Activity Concentration Including Error																	

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Solvent Tank Nuclide Inventory Calculations - Suspended Solids																	
	Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		
SPCAT	9.64E-03		6.24E-03		2.16E-06		6.47E-05		3.36E-07		7.05E-04		1.71E+01		6.21E-02		
	U-233	Error	U-234	Error	U-235	Error	U-236	Error	U-238	Error	Np-237	Error	Pu-238	Error	Pu-239	Error	
Tank #	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	
S1	6.35E+05	0.00E+00	6.49E+05	0.00E+00	2.28E+03	4.57E+02	6.76E+03	0.00E+00	5.27E+04	1.05E+04	7.34E+04	0.00E+00	9.32E+07	2.80E+07	6.49E+06	0.00E+00	
S2	3.05E+05	0.00E+00	3.11E+05	0.00E+00	7.21E+03	1.44E+03	6.49E+03	0.00E+00	1.80E+05	3.60E+04	9.55E+04	0.00E+00	1.34E+08	1.36E+07	4.73E+06	1.89E+06	
S3	2.91E+04	0.00E+00	1.48E+05	2.96E+04	6.67E+03	1.33E+03	2.92E+03	5.84E+02	1.36E+05	2.73E+04	6.76E+04	1.35E+04	3.61E+07	4.33E+06	8.69E+06	1.74E+06	
S4	4.55E+04	9.10E+03	1.21E+05	2.42E+04	4.21E+03	8.42E+02	2.28E+03	4.57E+02	8.60E+04	1.72E+04	4.03E+03	8.05E+02	3.18E+07	6.36E+06	3.15E+06	6.31E+05	
S5	3.04E+05	0.00E+00	1.96E+05	0.00E+00	9.95E+02	1.99E+02	2.04E+03	0.00E+00	2.37E+04	4.74E+03	2.22E+04	0.00E+00	1.29E+08	5.15E+07	6.89E+06	1.38E+06	
S6	4.55E+04	9.10E+03	1.51E+05	3.03E+04	6.71E+03	7.68E+02	5.41E+03	1.08E+03	2.22E+05	3.42E+04	9.14E+03	1.83E+03	3.24E+07	9.73E+06	5.50E+06	1.10E+06	
S7	2.32E+03	0.00E+00	1.28E+05	2.56E+04	4.01E+03	8.02E+02	4.46E+03	8.92E+02	1.45E+04	2.90E+03	3.59E+03	7.18E+02	3.50E+06	2.66E+06	5.45E+06	1.09E+06	
S8	1.65E+04	3.30E+03	2.41E+04	4.81E+03	2.48E+02	4.96E+01	2.50E+02	5.00E+01	5.41E+03	5.41E+03	1.61E+04	3.22E+03	8.60E+07	1.72E+07	1.16E+07	2.32E+06	
S9	3.07E+05	1.42E+06	1.63E+05	4.64E+05	3.89E+03	8.88E+03	4.63E+03	1.40E+04	8.42E+04	1.72E+05	1.08E+05	5.36E+05	1.61E+08	5.70E+08	9.95E+06	3.40E+07	
S10	3.07E+05	1.42E+06	1.63E+05	4.64E+05	3.89E+03	8.88E+03	4.63E+03	1.40E+04	8.42E+04	1.72E+05	1.08E+05	5.36E+05	1.61E+08	5.70E+08	9.95E+06	3.40E+07	
S11	2.32E+04	0.00E+00	1.50E+04	0.00E+00	5.54E+01	1.11E+01	1.56E+02	0.00E+00	1.50E+03	3.01E+02	1.70E+03	0.00E+00	2.45E+07	9.78E+06	1.49E+06	5.95E+05	
S12	3.07E+05	1.42E+06	1.63E+05	4.64E+05	3.89E+03	8.88E+03	4.63E+03	1.40E+04	8.42E+04	1.72E+05	1.08E+05	5.36E+05	1.61E+08	5.70E+08	9.95E+06	3.40E+07	
S13	1.92E+06	3.85E+05	7.66E+05	1.53E+05	1.67E+04	3.34E+03	2.28E+04	4.57E+03	2.55E+05	2.55E+05	1.20E+05	2.40E+04	1.13E+09	2.26E+08	6.58E+07	1.32E+07	
S14	2.54E+04	0.00E+00	2.58E+04	0.00E+00	1.80E+02	3.60E+01	2.68E+02	0.00E+00	4.48E+03	8.95E+02	3.41E+03	1.36E+03	2.48E+08	2.68E+07	1.57E+06	3.14E+05	
S15	3.07E+05	1.42E+06	1.63E+05	4.64E+05	3.89E+03	8.88E+03	4.63E+03	1.40E+04	8.42E+04	1.72E+05	1.08E+05	5.36E+05	1.61E+08	5.70E+08	9.95E+06	3.40E+07	
S16	3.07E+05	1.42E+06	1.63E+05	4.64E+05	3.89E+03	8.88E+03	4.63E+03	1.40E+04	8.42E+04	1.72E+05	1.08E+05	5.36E+05	1.61E+08	5.70E+08	9.95E+06	3.40E+07	
S17	3.07E+05	1.42E+06	1.63E+05	4.64E+05	3.89E+03	8.88E+03	4.63E+03	1.40E+04	8.42E+04	1.72E+05	1.08E+05	5.36E+05	1.61E+08	5.70E+08	9.95E+06	3.40E+07	
S18	3.07E+05	1.42E+06	1.63E+05	4.64E+05	3.89E+03	8.88E+03	4.63E+03	1.40E+04	8.42E+04	1.72E+05	1.08E+05	5.36E+05	1.61E+08	5.70E+08	9.95E+06	3.40E+07	
S19-O	3.93E+04	1.57E+04	6.85E+04	1.37E+04	1.90E+03	3.79E+02	1.59E+03	3.19E+02	4.59E+04	9.19E+03	9.10E+05	3.42E+05	9.19E+07	9.19E+06	2.21E+06	4.41E+05	
S19-A	4.48E+04	1.79E+04	4.55E+04	1.82E+04	1.06E+03	2.12E+02	9.50E+02	1.90E+02	2.64E+04	5.28E+03	1.40E+04	2.79E+03	2.29E+07	2.29E+06	6.94E+05	2.77E+05	
S20-T	3.03E+04	0.00E+00	3.08E+04	0.00E+00	2.28E+01	9.10E+00	3.21E+02	0.00E+00	6.05E+02	1.21E+02	3.51E+03	0.00E+00	8.63E+05	4.32E+05	3.08E+05	0.00E+00	
S20-B	2.03E+05	0.00E+00	2.06E+05	0.00E+00	1.41E+03	2.81E+02	2.15E+03	0.00E+00	3.73E+04	7.47E+03	2.56E+04	1.03E+04	8.83E+07	8.83E+06	3.10E+06	1.24E+06	
S21	4.68E+04	9.37E+03	3.89E+04	7.78E+03	1.32E+03	2.64E+02	1.40E+03	2.79E+02	3.21E+04	6.41E+03	2.92E+04	5.85E+03	6.85E+07	1.78E+07	3.64E+06	7.28E+05	
S22	3.53E+04	7.06E+03	2.40E+04	4.80E+03	6.62E+02	1.32E+02	5.81E+02	1.16E+02	1.39E+04	0.00E+00	3.99E+03	7.98E+02	7.48E+07	4.49E+07	7.03E+06	1.41E+06	
Values listed in Black Bold Italics print are detection limits or upper limits.																	
Tanks S8and S13 U-238 activity is a lower limit. Uncertainty of 100% has been assigned.																	
The values calculated for samples S20-T and S20-B are upper limits.																	
Values listed in Blue Bold Italics are calculated based upon average activity concentrations of the analyzed suspended solids from aqueous solutions.																	
The suspended solids from the organic liquids in Tanks S11 and S20 (20-T) were not used to calculate average activity concentrations.																	
Since S19-O and S19-A represent duplicate samples, only S19-O was used in the average activity calculations.																	
The average Cm-245 value is based upon the activity concentration from the suspended solids in Tank S6 only.																	
The average Cm-246 value is based upon the activity concentration from the supsended solids in Tanks S6, S21, and S22.																	
Errors associated with average activities were calculated by averaging the relative errors associated with the activities.																	

Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g	
2.27E-01		1.03E+02		3.93E-03		3.44E+00		2.00E-01		8.10E+01		1.72E-01		3.04E-01	
Pu-240	Error	Pu-241	Error	Pu-242	Error	Am-241	Error	Am-243	Error	Cm-244	Error	Cm-245	Error	Cm-246	Error
pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g
2.36E+07	0.00E+00	3.57E+07	3.78E+07	4.10E+05	0.00E+00	5.05E+06	0.00E+00	2.08E+07	0.00E+00	1.18E+08	2.17E+07	1.79E+07	0.00E+00	3.18E+07	0.00E+00
9.73E+06	0.00E+00	3.53E+07	0.00E+00	1.69E+05	0.00E+00	2.31E+06	3.95E+05	8.56E+06	0.00E+00	2.54E+07	5.07E+06	7.39E+06	0.00E+00	1.31E+07	0.00E+00
2.97E+06	5.94E+05	1.01E+07	2.84E+06	1.87E+04	0.00E+00	1.06E+06	2.71E+05	5.32E+05	7.91E+04	9.46E+07	9.46E+06	8.20E+05	0.00E+00	1.46E+06	0.00E+00
1.35E+06	2.69E+06	9.01E+06	3.60E+06	7.30E+03	0.00E+00	2.58E+05	4.44E+04	3.71E+05	0.00E+00	3.23E+05	1.94E+05	3.19E+05	0.00E+00	5.68E+05	0.00E+00
1.01E+07	2.02E+06	9.28E+06	0.00E+00	1.24E+05	0.00E+00	2.97E+06	2.96E+05	1.69E+06	1.29E+05	2.55E+09	0.00E+00	5.41E+06	0.00E+00	9.64E+06	0.00E+00
8.78E+05	1.76E+05	5.77E+06	2.65E+06	1.31E+03	2.62E+02	6.71E+05	4.05E+04	5.90E+04	1.18E+04	1.09E+06	2.18E+05	2.26E+04	4.51E+03	5.00E+04	1.00E+04
1.26E+06	2.51E+05	1.23E+07	4.92E+06	2.09E+03	4.19E+02	9.64E+05	5.21E+04	4.82E+04	0.00E+00	7.57E+04	0.00E+00	4.14E+04	0.00E+00	7.34E+04	0.00E+00
2.85E+06	5.70E+05	1.01E+07	4.05E+06	2.26E+03	0.00E+00	1.95E+06	1.15E+05	1.14E+05	0.00E+00	9.01E+05	1.80E+05	9.86E+04	0.00E+00	1.75E+05	0.00E+00
1.03E+07	3.18E+07	5.07E+07	2.26E+08	2.59E+04	8.88E+04	6.42E+06	2.28E+07	2.62E+06	8.50E+06	2.62E+08	1.04E+09	3.07E+06	0.00E+00	6.47E+06	0.00E+00
1.03E+07	3.18E+07	5.07E+07	2.26E+08	2.59E+04	8.88E+04	6.42E+06	2.28E+07	2.62E+06	8.50E+06	2.62E+08	1.04E+09	3.07E+06	0.00E+00	6.47E+06	0.00E+00
8.06E+05	3.23E+05	9.46E+06	3.78E+06	9.50E+03	0.00E+00	1.59E+06	1.30E+05	1.74E+05	2.68E+04	6.81E+07	1.36E+07	4.14E+05	0.00E+00	7.39E+05	0.00E+00
1.03E+07	3.18E+07	5.07E+07	2.26E+08	2.59E+04	8.88E+04	6.42E+06	2.28E+07	2.62E+06	8.50E+06	2.62E+08	1.04E+09	3.07E+06	0.00E+00	6.47E+06	0.00E+00
2.48E+07	4.95E+06	3.90E+08	1.56E+08	9.23E+04	1.85E+04	4.09E+07	2.02E+06	8.11E+05	0.00E+00	1.16E+07	0.00E+00	6.94E+05	0.00E+00	1.24E+06	0.00E+00
3.16E+06	1.26E+06	2.75E+05	0.00E+00	1.63E+04	0.00E+00	1.86E+07	9.71E+05	1.08E+06	4.31E+05	1.36E+08	1.36E+07	7.12E+05	0.00E+00	1.27E+06	0.00E+00
1.03E+07	3.18E+07	5.07E+07	2.26E+08	2.59E+04	8.88E+04	6.42E+06	2.28E+07	2.62E+06	8.50E+06	2.62E+08	1.04E+09	3.07E+06	0.00E+00	6.47E+06	0.00E+00
1.03E+07	3.18E+07	5.07E+07	2.26E+08	2.59E+04	8.88E+04	6.42E+06	2.28E+07	2.62E+06	8.50E+06	2.62E+08	1.04E+09	3.07E+06	0.00E+00	6.47E+06	0.00E+00
1.03E+07	3.18E+07	5.07E+07	2.26E+08	2.59E+04	8.88E+04	6.42E+06	2.28E+07	2.62E+06	8.50E+06	2.62E+08	1.04E+09	3.07E+06	0.00E+00	6.47E+06	0.00E+00
2.92E+06	5.85E+05	2.86E+07	9.15E+06	2.18E+04	0.00E+00	4.14E+06	4.43E+05	5.45E+05	1.05E+05	1.18E+08	1.18E+07	9.50E+05	0.00E+00	1.69E+06	0.00E+00
1.43E+06	0.00E+00	1.36E+07	6.26E+06	2.47E+04	0.00E+00	1.01E+06	2.22E+05	1.26E+06	0.00E+00	3.03E+07	3.03E+06	1.08E+06	0.00E+00	1.92E+06	0.00E+00
1.13E+06	0.00E+00	1.66E+05	3.34E+05	1.94E+04	0.00E+00	1.71E+05	0.00E+00	9.92E+05	0.00E+00	1.26E+06	1.26E+05	8.49E+05	0.00E+00	1.51E+06	0.00E+00
7.52E+06	0.00E+00	2.12E+07	5.52E+06	1.31E+05	0.00E+00	2.01E+06	8.52E+05	6.62E+06	0.00E+00	8.06E+07	8.06E+06	5.27E+06	0.00E+00	1.01E+07	0.00E+00
9.77E+06	1.95E+06	2.05E+07	7.38E+06	2.74E+03	0.00E+00	3.36E+06	2.11E+05	2.32E+06	4.64E+05	5.32E+08	1.06E+08	1.20E+05	0.00E+00	2.48E+06	9.93E+04
5.32E+07	1.06E+07	1.45E+07	1.02E+07	7.84E+03	1.57E+03	4.27E+06	3.50E+05	1.21E+07	2.42E+06	1.77E+09	7.10E+08	2.32E+05	0.00E+00	1.15E+06	2.30E+05
												</			

Total Activity Including Error																
Mass	U-233	U-234	U-235	U-236	U-238	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	Am-243	Cm-244	Cm-245	Cm-246
Grams	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci
38.79	2.46E-05	2.52E-05	1.06E-07	2.62E-07	2.45E-06	2.85E-06	4.70E-03	2.52E-04	9.15E-04	2.85E-03	1.59E-05	1.96E-04	8.07E-04	5.42E-03	6.94E-04	1.23E-03
84.82	2.59E-05	2.64E-05	7.34E-07	5.50E-07	1.83E-05	8.10E-06	1.25E-02	5.62E-04	8.25E-04	2.99E-03	1.43E-05	2.29E-04	7.26E-04	2.58E-03	6.27E-04	1.11E-03
2197.27	6.39E-05	3.90E-04	1.76E-05	7.70E-06	3.59E-04	1.78E-04	8.88E-02	2.29E-02	7.83E-03	2.84E-02	4.11E-05	2.92E-03	1.34E-03	2.29E-01	1.80E-03	3.21E-03
301.60	1.65E-05	4.38E-05	1.52E-06	8.25E-07	3.11E-05	1.46E-06	1.15E-02	1.14E-03	4.88E-04	3.80E-03	2.20E-06	9.12E-05	1.12E-04	1.56E-04	9.62E-05	1.71E-04
3.48	1.06E-06	6.82E-07	4.16E-09	7.10E-09	9.90E-08	7.73E-08	6.28E-04	2.88E-05	4.22E-05	3.23E-05	4.32E-07	1.14E-05	6.33E-06	8.87E-03	1.88E-05	3.35E-05
16503.08	9.01E-04	2.99E-03	1.23E-04	1.07E-04	4.23E-03	1.81E-04	6.95E-01	1.09E-01	1.74E-02	1.39E-01	2.59E-05	1.17E-02	1.17E-03	2.16E-02	4.47E-04	9.90E-04
2494.27	5.79E-06	3.83E-04	1.20E-05	1.33E-05	4.34E-05	1.07E-05	1.54E-02	1.63E-02	3.77E-03	4.30E-02	6.26E-06	2.53E-03	1.20E-04	1.89E-04	1.03E-04	1.83E-04
490.55	9.71E-06	1.42E-05	1.46E-07	1.47E-07	5.31E-06	9.48E-06	5.06E-02	6.83E-03	1.68E-03	6.94E-03	1.11E-06	1.01E-03	5.59E-05	5.30E-04	4.84E-05	8.58E-05
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
84.33	1.46E-04	5.29E-05	1.08E-06	1.57E-06	2.16E-05	5.43E-05	6.16E-02	3.71E-03	3.55E-03	2.33E-02	9.67E-06	2.46E-03	9.38E-04	1.10E-01	2.59E-04	5.46E-04
3.79	8.79E-08	5.69E-08	2.52E-10	5.91E-10	6.83E-09	6.44E-09	1.30E-04	7.90E-06	4.28E-06	5.02E-05	3.60E-08	6.52E-06	7.61E-07	3.10E-04	1.57E-06	2.80E-06
42.17	7.28E-05	2.64E-05	5.39E-07	7.86E-07	1.08E-05	2.72E-05	3.08E-02	1.85E-03	1.78E-03	1.17E-02	4.84E-06	1.23E-03	4.69E-04	5.49E-02	1.29E-04	2.73E-04
181.14	4.18E-04	1.66E-04	3.63E-06	4.96E-06	9.24E-05	2.61E-05	2.46E-01	1.43E-02	5.39E-03	9.89E-02	2.01E-05	7.77E-03	1.47E-04	2.10E-03	1.26E-04	2.25E-04
254.4	6.46E-06	6.56E-06	5.50E-08	6.82E-08	1.37E-06	1.21E-06	6.99E-02	4.79E-04	1.12E-03	7.00E-05	4.15E-06	4.98E-03	3.84E-04	3.81E-02	1.81E-04	3.23E-04
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
42.17	7.28E-05	2.64E-05	5.39E-07	7.86E-07	1.08E-05	2.72E-05	3.08E-02	1.85E-03	1.78E-03	1.17E-02	4.84E-06	1.23E-03	4.69E-04	5.49E-02	1.29E-04	2.73E-04
2849.5	1.57E-04	2.34E-04	6.49E-06	5.44E-06	1.57E-04	3.57E-03	2.88E-01	7.55E-03	9.99E-03	1.08E-01	6.21E-05	1.31E-02	1.85E-03	3.70E-01	2.71E-03	4.82E-03
2619.21	1.64E-04	1.67E-04	3.33E-06	2.99E-06	8.30E-05	4.40E-05	6.60E-02	2.54E-03	3.75E-03	5.20E-02	6.47E-05	3.23E-03	3.30E-03	8.73E-02	2.83E-03	5.03E-03
11119.41	3.37E-04	3.42E-04	3.55E-07	3.57E-06	8.07E-06	3.90E-05	1.44E-02	3.42E-03	1.26E-02	5.56E-03	2.16E-04	1.90E-03	1.10E-02	1.54E-02	9.44E-03	1.68E-02
1587.41	3.22E-04	3.27E-04	2.68E-06	3.41E-06	7.11E-05	5.70E-05	1.54E-01	6.89E-03	1.19E-02	4.24E-02	2.08E-04	4.54E-03	1.05E-02	1.41E-01	8.37E-03	1.60E-02
7099.02	3.99E-04	3.31E-04	1.12E-05	1.19E-05	2.73E-04	2.49E-04	6.13E-01	3.10E-02	8.32E-02	1.98E-01	1.95E-05	2.54E-02	1.98E-02	4.53E+00	8.52E-04	1.83E-02
541.85	2.30E-05	1.56E-05	4.30E-07	3.78E-07	7.53E-06	2.59E-06	6.49E-02	4.57E-03	3.46E-02	1.34E-02	5.10E-06	2.50E-03	7.87E-03	1.34E+00	1.26E-04	7.48E-04

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Solvent Tank Nuclide Inventory Calculations - Sludge																
	Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g	
SPCAT	9.64E-03		6.24E-03		2.16E-06		6.47E-05		3.36E-07		7.05E-04		1.71E+01		6.21E-02	
	U-233	Error	U-234	Error	U-235	Error	U-236	Error	U-238	Error	Np-237	Error	Pu-238	Error	Pu-239	Error
Tank #	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g
S1	2.06E+05	4.12E+04	5.02E+04	1.43E+05	6.19E+02	1.96E+03	1.08E+03	2.30E+03	1.90E+04	4.00E+04	2.38E+03	4.46E+03	1.36E+07	4.38E+07	4.69E+05	7.40E+05
S2	5.90E+03	0.00E+00	1.01E+04	0.00E+00	3.46E+01	6.92E+00	3.97E+01	0.00E+00	8.24E+02	1.65E+02	1.07E+03	0.00E+00	5.95E+07	2.38E+07	3.05E+05	0.00E+00
S3	2.06E+05	4.12E+04	5.02E+04	1.43E+05	6.19E+02	1.96E+03	1.08E+03	2.30E+03	1.90E+04	4.00E+04	2.38E+03	4.46E+03	1.36E+07	4.38E+07	4.69E+05	7.40E+05
S4(1)	0.00E+00	0.00E+00	9.23E+06	5.54E+06	3.57E+05	0.00E+00	1.08E+03	2.30E+03	9.23E+06	5.54E+06	3.29E+05	0.00E+00	8.20E+07	3.48E+07	3.96E+06	2.38E+06
S5	2.06E+05	4.12E+04	5.02E+04	1.43E+05	6.19E+02	1.96E+03	1.08E+03	2.30E+03	1.90E+04	4.00E+04	2.38E+03	4.46E+03	1.36E+07	4.38E+07	4.69E+05	7.40E+05
S6	2.06E+05	4.12E+04	5.02E+04	1.43E+05	6.19E+02	1.96E+03	1.08E+03	2.30E+03	1.90E+04	4.00E+04	2.38E+03	4.46E+03	1.36E+07	4.38E+07	4.69E+05	7.40E+05
S7	1.13E+04	0.00E+00	1.72E+04	3.43E+03	5.81E+02	1.16E+02	6.35E+02	1.27E+02	1.72E+04	3.44E+03	8.24E+02	0.00E+00	2.02E+05	8.07E+04	4.05E+05	8.09E+04
S8	1.92E+03	0.00E+00	1.24E+03	0.00E+00	7.30E+00	1.46E+00	1.29E+01	0.00E+00	1.66E+02	3.32E+01	2.09E+02	0.00E+00	3.81E+05	0.00E+00	3.66E+04	7.32E+03
S9	2.06E+05	4.12E+04	5.02E+04	1.43E+05	6.19E+02	1.96E+03	1.08E+03	2.30E+03	1.90E+04	4.00E+04	2.38E+03	4.46E+03	1.36E+07	4.38E+07	4.69E+05	7.40E+05
S10	2.06E+05	4.12E+04	5.02E+04	1.43E+05	6.19E+02	1.96E+03	1.08E+03	2.30E+03	1.90E+04	4.00E+04	2.38E+03	4.46E+03	1.36E+07	4.38E+07	4.69E+05	7.40E+05
S11	2.06E+05	4.12E+04	5.02E+04	1.43E+05	6.19E+02	1.96E+03	1.08E+03	2.30E+03	1.90E+04	4.00E+04	2.38E+03	4.46E+03	1.36E+07	4.38E+07	4.69E+05	7.40E+05
S12	2.06E+05	4.12E+04	5.02E+04	1.43E+05	6.19E+02	1.96E+03	1.08E+03	2.30E+03	1.90E+04	4.00E+04	2.38E+03	4.46E+03	1.36E+07	4.38E+07	4.69E+05	7.40E+05
S13	2.06E+05	4.12E+04	5.02E+04	1.43E+05	6.19E+02	1.96E+03	1.08E+03	2.30E+03	1.90E+04	4.00E+04	2.38E+03	4.46E+03	1.36E+07	4.38E+07	4.69E+05	7.40E+05
S14	2.06E+05	4.12E+04	5.02E+04	1.43E+05	6.19E+02	1.96E+03	1.08E+03	2.30E+03	1.90E+04	4.00E+04	2.38E+03	4.46E+03	1.36E+07	4.38E+07	4.69E+05	7.40E+05
S15	2.06E+05	4.12E+04	5.02E+04	1.43E+05	6.19E+02	1.96E+03	1.08E+03	2.30E+03	1.90E+04	4.00E+04	2.38E+03	4.46E+03	1.36E+07	4.38E+07	4.69E+05	7.40E+05
S16	6.31E+04	0.00E+00	4.08E+04	0.00E+00	8.87E+02	1.77E+02	9.23E+02	1.85E+02	2.54E+04	5.08E+03	3.15E+03	0.00E+00	7.39E+05	2.95E+05	7.16E+05	1.43E+05
S17	2.06E+05	4.12E+04	5.02E+04	1.43E+05	6.19E+02	1.96E+03	1.08E+03	2.30E+03	1.90E+04	4.00E+04	2.38E+03	4.46E+03	1.36E+07	4.38E+07	4.69E+05	7.40E+05
S18	2.06E+05	4.12E+04	5.02E+04	1.43E+05	6.19E+02	1.96E+03	1.08E+03	2.30E+03	1.90E+04	4.00E+04	2.38E+03	4.46E+03	1.36E+07	4.38E+07	4.69E+05	7.40E+05
S19	2.06E+05	4.12E+04	1.32E+05	2.63E+04	2.90E+03	5.80E+02	3.04E+03	6.08E+02	4.13E+04	8.25E+03	4.77E+03	9.55E+02	2.40E+07	9.60E+06	9.68E+05	1.94E+05
S20	1.80E+04	0.00E+00	1.16E+04	0.00E+00	5.00E+02	1.00E+02	7.84E+02	1.57E+02	4.77E+04	9.55E+03	2.02E+03	4.04E+02	5.77E+06	2.31E+06	8.15E+05	1.63E+05
S21	3.25E+03	0.00E+00	2.09E+03	0.00E+00	1.23E+01	4.94E+00	2.18E+01	0.00E+00	3.38E+02	6.77E+01	2.37E+02	0.00E+00	3.16E+05	1.26E+05	5.99E+04	1.20E+04
S22	6.58E+03	0.00E+00	1.35E+03	2.70E+02	3.01E+01	6.03E+00	1.19E+01	2.38E+00	1.90E+04	4.00E+04	3.45E+02	6.90E+01	4.64E+06	9.28E+05	2.82E+05	5.64E+04
Values listed in Black Bold Italics print are detection limits or upper limits.																
(1) The activities listed for Tank S4 are in units of pCi/L and the mass is liters.																
Tank S4 U-233 activity included in U-234 activity, Pu-240 activity included in Pu-239 activity. U-236, Pu-241, Pu-242, Cm-245, and Cm-246 not measured																
and are based upon the calculated average activity concentrations of these nuclides in the other analyzed sludges.																
Tank S22 U-238 not measured. Calculated activity based upon average activity concentrations of the other analyzed sludges.																
Values listed in Blue Bold Italics are calculated based upon average activity concentrations of the analyzed sludge samples.																
The sludge found in Tank S4 was not used to calculate average activity concentrations because of the fact that it was a liquid.																
The average U-233 activity concentration is based upon the sludge in Tank S19 only.																
The calculated Pu-240 activity concentration is based upon the sludge in Tank S22 only.																
The average Pu-242, Cm-245, and Cm-246 activity concentrations were calculated from detection limit numbers.																
Errors associated with average activities were calculated by averaging the relative errors associated with the activities.																

Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g		Ci/g	
2.27E-01		1.03E+02		3.93E-03		3.44E+00		2.00E-01		8.10E+01		1.72E-01		3.04E-01	
Pu-240	Error	Pu-241	Error	Pu-242	Error	Am-241	Error	Am-243	Error	Cm-244	Error	Cm-245	Error	Cm-246	Error
pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g	pCi/g
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
7.52E+05	0.00E+00	1.48E+07	5.91E+06	2.41E+03	0.00E+00	5.32E+06	2.82E+05	4.19E+05	2.09E+04	7.43E+07	1.49E+07	1.05E+05	0.00E+00	1.87E+05	0.00E+00
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
0.00E+00	0.00E+00	4.04E+06	1.16E+07	5.96E+03	0.00E+00	5.05E+06	5.80E+05	1.26E+05	0.00E+00	2.37E+07	9.50E+06	2.81E+05	0.00E+00	4.46E+05	0.00E+00
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
2.66E+05	0.00E+00	3.32E+05	1.33E+05	4.59E+03	0.00E+00	1.45E+05	8.79E+03	2.34E+05	0.00E+00	3.64E+04	1.46E+04	2.01E+05	0.00E+00	3.58E+05	0.00E+00
4.55E+04	0.00E+00	3.96E+04	0.00E+00	7.84E+02	0.00E+00	2.70E+04	0.00E+00	3.99E+04	0.00E+00	1.67E+04	6.67E+03	3.43E+04	0.00E+00	6.08E+04	0.00E+00
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
1.49E+06	0.00E+00	9.64E+05	0.00E+00	2.58E+04	0.00E+00	1.24E+04	6.99E+02	1.31E+06	0.00E+00	5.32E+08	0.00E+00	1.13E+06	0.00E+00	2.00E+06	0.00E+00
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
2.10E+06	4.21E+05	4.04E+06	1.16E+07	5.96E+03	0.00E+00	1.66E+06	4.40E+06	4.70E+05	0.00E+00	4.34E+07	1.07E+08	2.81E+05	0.00E+00	4.46E+05	0.00E+00
1.58E+05	0.00E+00	6.58E+06	2.63E+06	2.73E+03	0.00E+00	3.41E+06	6.83E+05	4.49E+05	8.97E+04	7.57E+07	1.51E+07	1.19E+05	0.00E+00	2.13E+05	0.00E+00
4.24E+05	0.00E+00	1.79E+06	7.15E+05	7.34E+03	0.00E+00	9.23E+05	5.17E+04	7.66E+04	7.35E+03	1.68E+07	3.36E+06	3.21E+05	0.00E+00	5.72E+05	0.00E+00
7.66E+04	0.00E+00	9.50E+04	3.80E+04	1.32E+03	0.00E+00	7.48E+03	0.00E+00	6.71E+04	0.00E+00	8.15E+04	1.63E+04	5.77E+04	0.00E+00	1.03E+05	0.00E+00
2.10E+06	4.21E+05	6.31E+05	2.52E+05	2.68E+03	0.00E+00	1.69E+05	1.35E+04	6.98E+05	0.00E+00	1.37E+08	2.74E+07	6.35E+03	2.92E+03	7.07E+04	0.00E+00

Total Activity Including Error																
Mass	U-233	U-234	U-235	U-236	U-238	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	Am-243	Cm-244	Cm-245	Cm-246
Grams	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci	Ci
34068.71	8.42E-03	6.58E-03	8.79E-05	1.15E-04	2.01E-03	2.33E-04	1.96E+00	4.12E-02	8.59E-02	5.33E-01	2.03E-04	2.06E-01	1.60E-02	5.12E+00	9.57E-03	1.52E-02
251351.3	1.48E-03	2.54E-03	1.04E-05	9.98E-06	2.49E-04	2.69E-04	2.09E+01	7.67E-02	1.89E-01	5.21E+00	6.06E-04	1.41E+00	1.11E-01	2.24E+01	2.64E-02	4.70E-02
28012.05	6.92E-03	5.41E-03	7.22E-05	9.47E-05	1.65E-03	1.92E-04	1.61E+00	3.39E-02	7.06E-02	4.38E-01	1.67E-04	1.70E-01	1.32E-02	4.21E+00	7.87E-03	1.25E-02
21.95539	0.00E+00	3.24E-04	7.84E-06	7.42E-08	3.24E-04	7.22E-06	2.56E-03	1.39E-04	0.00E+00	3.43E-04	1.31E-07	1.24E-04	2.77E-06	7.29E-04	6.17E-06	9.79E-06
847932.2	2.10E-01	1.64E-01	2.19E-03	2.87E-03	5.00E-02	5.80E-03	4.87E+01	1.03E+00	2.14E+00	1.33E+01	5.05E-03	5.14E+00	3.99E-01	1.28E+02	2.38E-01	3.78E-01
0	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
11356.24	1.28E-04	2.34E-04	7.92E-06	8.65E-06	2.34E-04	9.36E-06	3.21E-03	5.52E-03	3.02E-03	5.28E-03	5.21E-05	1.75E-03	2.66E-03	5.79E-04	2.28E-03	4.07E-03
45424.94	8.72E-05	5.63E-05	3.98E-07	5.86E-07	9.05E-06	9.49E-06	1.73E-02	2.00E-03	2.07E-03	1.80E-03	3.56E-05	1.23E-03	1.81E-03	1.06E-03	1.56E-03	2.76E-03
98420.71	2.43E-02	1.90E-02	2.54E-04	3.33E-04	5.81E-03	6.73E-04	5.65E+00	1.19E-01	2.48E-01	1.54E+00	5.87E-04	5.96E-01	4.63E-02	1.48E+01	2.77E-02	4.39E-02
234695.5	5.80E-02	4.53E-02	6.05E-04	7.93E-04	1.38E-02	1.61E-03	1.35E+01	2.84E-01	5.92E-01	3.67E+00	1.40E-03	1.42E+00	1.10E-01	3.53E+01	6.59E-02	1.05E-01
96149.46	2.38E-02	1.86E-02	2.48E-04	3.25E-04	5.67E-03	6.58E-04	5.52E+00	1.16E-01	2.42E-01	1.50E+00	5.73E-04	5.83E-01	4.52E-02	1.45E+01	2.70E-02	4.29E-02
37854.12	9.36E-03	7.31E-03	9.76E-05	1.28E-04	2.23E-03	2.59E-04	2.17E+00	4.58E-02	9.54E-02	5.92E-01	2.26E-04	2.29E-01	1.78E-02	5.69E+00	1.06E-02	1.69E-02
325545.4	8.05E-02	6.29E-02	8.40E-04	1.10E-03	1.92E-02	2.23E-03	1.87E+01	3.94E-01	8.21E-01	5.09E+00	1.94E-03	1.97E+00	1.53E-01	4.90E+01	9.15E-02	1.45E-01
896385.5	2.22E-01	1.73E-01	2.31E-03	3.03E-03	5.29E-02	6.13E-03	5.15E+01	1.08E+00	2.26E+00	1.40E+01	5.34E-03	5.43E+00	4.21E-01	1.35E+02	2.52E-01	4.00E-01
1098527	2.72E-01	2.12E-01	2.83E-03	3.71E-03	6.48E-02	7.51E-03	6.31E+01	1.33E+00	2.77E+00	1.72E+01	6.55E-03	6.66E+00	5.16E-01	1.65E+02	3.09E-01	4.90E-01
2066835	1.30E-01	8.43E-02	2.20E-03	2.29E-03	6.30E-02	6.51E-03	2.14E+00	1.78E+00	3.08E+00	1.99E+00	5.33E-02	2.71E-02	2.71E+00	1.10E+03	2.34E+00	4.13E+

Activity Concentration Including Error																
	U-233	U-234	U-235	U-236	U-238	Np-237	Pu-238	Pu-239	Pu-240	Pu-241	Pu-242	Am-241	Am-243	Cm-244	Cm-245	Cm-246
Tank #	Ci/g	Ci/g	Ci/g	Ci/g	Ci/g	Ci/g	Ci/g	Ci/g	Ci/g	Ci/g	Ci/g	Ci/g	Ci/g	Ci/g	Ci/g	Ci/g
S1	2.47E-07	1.93E-07	2.58E-09	3.38E-09	5.90E-08	6.84E-09	5.74E-05	1.21E-06	2.52E-06	1.56E-05	5.96E-09	6.06E-06	4.70E-07	1.50E-04	2.81E-07	4.46E-07
S2	5.90E-09	1.01E-08	4.15E-11	3.97E-11	9.89E-10	1.07E-09	8.33E-05	3.05E-07	7.52E-07	2.07E-05	2.41E-09	5.60E-06	4.40E-07	8.92E-05	1.05E-07	1.87E-07
S3	2.47E-07	1.93E-07	2.58E-09	3.38E-09	5.90E-08	6.84E-09	5.74E-05	1.21E-06	2.52E-06	1.56E-05	5.96E-09	6.06E-06	4.70E-07	1.50E-04	2.81E-07	4.46E-07
S4(1)	0.00E+00	1.48E-05	3.57E-07	3.38E-09	1.48E-05	3.29E-07	1.17E-04	6.34E-06	0.00E+00	1.56E-05	5.96E-09	5.63E-06	1.26E-07	3.32E-05	2.81E-07	4.46E-07
S5	2.47E-07	1.93E-07	2.58E-09	3.38E-09	5.90E-08	6.84E-09	5.74E-05	1.21E-06	2.52E-06	1.56E-05	5.96E-09	6.06E-06	4.70E-07	1.50E-04	2.81E-07	4.46E-07
S6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
S7	1.13E-08	2.06E-08	6.97E-10	7.62E-10	2.06E-08	8.24E-10	2.83E-07	4.86E-07	2.66E-07	4.65E-07	4.59E-09	1.54E-07	2.34E-07	5.10E-08	2.01E-07	3.58E-07
S8	1.92E-09	1.24E-09	8.76E-12	1.29E-11	1.99E-10	2.09E-10	3.81E-07	4.39E-08	4.55E-08	3.96E-08	7.84E-10	2.70E-08	3.99E-08	2.34E-08	3.43E-08	6.08E-08
S9	2.47E-07	1.93E-07	2.58E-09	3.38E-09	5.90E-08	6.84E-09	5.74E-05	1.21E-06	2.52E-06	1.56E-05	5.96E-09	6.06E-06	4.70E-07	1.50E-04	2.81E-07	4.46E-07
S10	2.47E-07	1.93E-07	2.58E-09	3.38E-09	5.90E-08	6.84E-09	5.74E-05	1.21E-06	2.52E-06	1.56E-05	5.96E-09	6.06E-06	4.70E-07	1.50E-04	2.81E-07	4.46E-07
S11	2.47E-07	1.93E-07	2.58E-09	3.38E-09	5.90E-08	6.84E-09	5.74E-05	1.21E-06	2.52E-06	1.56E-05	5.96E-09	6.06E-06	4.70E-07	1.50E-04	2.81E-07	4.46E-07
S12	2.47E-07	1.93E-07	2.58E-09	3.38E-09	5.90E-08	6.84E-09	5.74E-05	1.21E-06	2.52E-06	1.56E-05	5.96E-09	6.06E-06	4.70E-07	1.50E-04	2.81E-07	4.46E-07
S13	2.47E-07	1.93E-07	2.58E-09	3.38E-09	5.90E-08	6.84E-09	5.74E-05	1.21E-06	2.52E-06	1.56E-05	5.96E-09	6.06E-06	4.70E-07	1.50E-04	2.81E-07	4.46E-07
S14	2.47E-07	1.93E-07	2.58E-09	3.38E-09	5.90E-08	6.84E-09	5.74E-05	1.21E-06	2.52E-06	1.56E-05	5.96E-09	6.06E-06	4.70E-07	1.50E-04	2.81E-07	4.46E-07
S15	2.47E-07	1.93E-07	2.58E-09	3.38E-09	5.90E-08	6.84E-09	5.74E-05	1.21E-06	2.52E-06	1.56E-05	5.96E-09	6.06E-06	4.70E-07	1.50E-04	2.81E-07	4.46E-07
S16	6.31E-08	4.08E-08	1.06E-09	1.11E-09	3.05E-08	3.15E-09	1.03E-06	8.59E-07	1.49E-06	9.64E-07	2.58E-08	1.31E-08	1.31E-06	5.32E-04	1.13E-06	2.00E-06
S17	2.47E-07	1.93E-07	2.58E-09	3.38E-09	5.90E-08	6.84E-09	5.74E-05	1.21E-06	2.52E-06	1.56E-05	5.96E-09	6.06E-06	4.70E-07	1.50E-04	2.81E-07	4.46E-07
S18	2.47E-07	1.93E-07	2.58E-09	3.38E-09	5.90E-08	6.84E-09	5.74E-05	1.21E-06	2.52E-06	1.56E-05	5.96E-09	6.06E-06	4.70E-07	1.50E-04	2.81E-07	4.46E-07
S19	2.47E-07	1.58E-07	3.48E-09	3.65E-09	4.96E-08	5.73E-09	3.36E-05	1.16E-06	1.58E-07	9.21E-06	2.73E-09	4.09E-06	5.39E-07	9.08E-05	1.19E-07	2.13E-07
S20	1.80E-08	1.16E-08	6.00E-10	9.41E-10	5.73E-08	2.42E-09	8.08E-06	9.78E-07	4.24E-07	2.51E-06	7.34E-09	9.75E-07	8.40E-08	2.02E-05	3.21E-07	5.72E-07
S21	3.25E-09	2.09E-09	1.72E-11	2.18E-11	4.06E-10	2.37E-10	4.42E-07	7.19E-08	7.66E-08	1.33E-07	1.32E-09	7.48E-09	6.71E-08	9.78E-08	5.77E-08	1.03E-07
S22	6.58E-09	1.62E-09	3.61E-11	1.43E-11	5.90E-08	4.14E-10	5.57E-06	3.38E-07	2.52E-06	8.83E-07	2.68E-09	1.83E-07	6.98E-07	1.64E-04	9.27E-09	7.07E-08

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