Hanford Tank Waste Operations Simulator Model Data Package for the Development Run for the Refined Target Case

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Abstract: This document presents the results from a HTWOS model run performed to support performance assessments that are being performed to support the Tank Closure Environmental Impact Statement, SST closure, and the Integrated Disposal Facility, and to support a composite analysis being performed by PNNL.

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HANFORD TANK WASTE OPERATIONS SIMULATOR MODEL DATA PACKAGE FOR THE DEVELOPMENT RUN FOR THE REFINED TARGET CASE

June 2005

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TERMS

Abbreviations and Acronyms

BBI	Best-Basis Inventory
BNI	Bechtel National, Inc.
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CH	Contact-handled
CSB	Canister Storage Building
DBVS	Demonstration Bulk Vitrification System
DOE	U.S. Department of Energy
DST	double-shell tank
Ecology	State of Washington Department of Ecology
EIS	Environmental Impact Statement
ETF	Effluent Treatment Facility
FCL	Feed Control List
FY	fiscal year
HEPA	high-efficiency particulate air
HLW	high-level waste
HTWOS	Hanford Tank Waste Operations Simulator
IDF	Integrated Disposal Facility
IHLW	immobilized high-level waste
ILAW	immobilized low-activity waste
LAW	low-activity waste
LERF	Liquid Effluent Retention Facility
LLW	low-level waste
N/A	Not applicable
NaOH	Sodium hydroxide
ORP	U.S. Department of Energy, Office of River Protection
PCT	Product Consistency Test
PT	Pretreated
RCRA	Resource Conservation and Recovery Act
RH	remote-handled
RPP	River Protection Project
SALDS	State-Approved Land Disposal Site
SBS	Submerged Bed Scrubber
SST	single-shell tank
STP	Supplemental Treatment Plant
TBD	to be determined
TEDF	Treated Effluent Disposal Facility
TFC	Tank Farm Contractor
TOC	total organic carbon
TOE	total operating efficiency
Tri-Party Agreement (or TPA)	*Hanford Federal Facility Agreement and Consent Order*
TRU	transuranic

TWINS	Tank Waste Information Network System
VOC	volatile organic compound
WIPP	Waste Isolation Pilot Plant (Carlsbad, New Mexico)
WESF	Waste Encapsulation and Storage Facility
WESP	wet electrostatic precipitator
WRF	Waste Retrieval Facility
WSCF	Waste Sampling and Characterization Facility
WTP	Waste Treatment and Immobilization Plant
WVRF	Waste volume reduction factor

Units

Ci	Curies
ft	feet
ft^3	cubic feet
g	grams
g/cm^3	grams per cubic centimeter
g/mL	grams per milliliter
gpm	gallons per minute
Kgal	kilogallon (1,000 gallons)
lb_m	pound mass
M	molarity or moles per liter
m^2	square meters
m^3	cubic meters
Mgal	million gallons
MT	metric ton
MTG/d	metric tons of glass per day
Pa•s	Pascals per second
SpG	Specific gravity
wt%	weight percent
µg	micrograms
µCi	microcuries
°C	degrees Celsius

1.0 INTRODUCTION

This document presents the results from a Hanford Tank Waste Operations Simulator (HTWOS) model run (tracked internally as "HTWOS model run Development Run RTC backdecayed_1-5-05"[1]) performed to support performance assessments that are being performed to support the Tank Closure Environmental Impact Statement (EIS), single-shell tank (SST) closure, and the Integrated Disposal Facility (IDF), and to support a composite analysis being performed by Pacific Northwest National Laboratory.

The Development Run for the Refined Target Case (RTC) is being modeled to support the performance assessment process and is an update of several recent, closely related, cases:

- HNF-SD-WM-SP-012, *Tank Farm Contractor Operation and Utilization Plan* (TFCO&UP), Rev. 5B.
- ORP-11242, *River Protection Project System Plan*, Rev. 2 (Target Case).
- RPP-21217, *Hanford Tank Waste Operations Simulator Model Data Package for the Tri-Party Agreement M-45-04-01 Change Request Case*, Rev. 0.

This case builds upon the modeling documented in those cases and incorporates assumptions and guidance from U.S. Department of Energy (DOE) Office of River Protection (ORP) staff. This particular run is called a development run because the HTWOS modelers are using this run to assist with the development (notably refining the WTP [Waste Treatment and Immobilization Plant] model, additional primary waste streams such as TRU [transuranic] product and bulk vitrification product, and adding secondary waste streams) of the HTWOS model, which ORP identified as near-term priorities for the HTWOS modeling efforts..

This run is based on a set of preliminary assumptions originally intended to be used for the proposed Refined Target Case in Revision 3 of the System Plan (ORP-11242) planned for issuance in December 2004 in concert with ORP's Tri-Party Agreement[2] Milestone M-62 submittals; the results from this run were expected to be used to refine the final assumptions for the System Plan after resolution of conflicting assumptions and adjusting the waste retrieval and staging sequence to meet the mission objectives. The results of this development run would then be published as a means to support the schedule for the performance assessments while the System Plan was being revised.

However, with the delay of the M-62 milestone series, the current need date for Revision 3 of the System Plan no longer supports the near term performance assessment activities described above.

[1] The word "backdecayed" in the title indicates that the radionuclides were decayed during the run and the results were backdecayed after the run to a reference date of January 1, 2004 for reporting. This terminology in the title is used to distinguish this run from another run where radionuclides were not decayed during the run. The "1/5/05" date in the run name identifies the date that the model run was completed.
[2] *Hanford Federal Facility Agreement and Consent Order* (Ecology et al. 1996)

This report provides a referenceable set of results from a simulation of the ORP lifecycle treatment mission, including overall system mass balances for the primary and secondary waste streams. The simulation reflects recent enhancements to the HTWOS model and underlying assumptions, including the addition of secondary waste streams, updated water wash and caustic leach factors and strontium solubility model, oxidative leaching, additional supplemental treatment process details, and other refinements to the ORP technical baseline that are thought to more accurately model the completion of the overall mission.

The HTWOS model simulates the dynamic operation of the tank farm systems and all interfacing systems including new waste generators, the 242-A Evaporator, the Waste Treatment and Immobilization Plant (WTP), supplemental treatment of waste using bulk vitrification, Transuranic (TRU) waste packaging, and other facilities within the 200 East and 200 West Areas. CH2M HILL Hanford Group, Inc.'s baseline case and baseline version of the HTWOS model are documented in detail in Appendix A of the Tank Farm Contractor Operation and Utilization Plan (HNF-SD-WM-SP-012). A detailed description of the HTWOS model can be found in the *Configuration Management Plan for Hanford Tank Waste Operations Simulator Flowsheet Modeling* (RPP-7630).

The Development Run was created by taking the baseline version of the HTWOS model and making the modifications listed below as bulleted items. Additional detail about the assumption modifications made to create the Development Run can be found in Appendix A of this document.

- Updating the inventory data used as the starting point,
- Adding detail to the WTP processes including partition factors and secondary waste estimates,
- Adding partitioning factors to the 242-A Evaporator,
- Revising the target dates for completing all waste processing,
- Increasing the maximum capacities of the low-activity (LAW) and high-level waste (HLW) melters,
- Updating the water wash and caustic leach factors to include revised Cr and Al water-wash and caustic leach factors, and revised ^{99}Tc water-wash factors for tanks in the S and SX tank farms,
- Adding an oxidative leach assumption,
- Adding a process to simulate the packaging of contact-handled TRU (CH-TRU) and remote-handled TRU (RH-TRU) wastes, including partition factors and secondary waste estimates,
- Updating the CH-TRU capacity assumption,
- Updating the RH-TRU capacity assumption and modeling the washing and delivery of SST waste to the RH-TRU facility,

- Adding a process to simulate the supplemental treatment of waste using bulk vitrification, including partition factors and secondary waste estimates for both demonstration and production facilities,
- Updating the list of candidate tanks that are used as feed sources for feeding the bulk vitrification facility directly from the tank farms,
- Revising the assumptions for tank waste residuals,
- Revising SST retrieval assumptions to reflect the completion of interim stabilization,
- Incorporating double-shell tank (DST) use constraints from the Feed Control List (FCL),
- Blending AZ-102 supernate to reduce the sulfate concentration,
- Blending the C-104 solids with other wastes to reduce the ^{233}U concentration,
- Reducing the 242-A Evaporator target specific gravity to avoid problems with solids formation see during recent operations,
- Updating 242-A Evaporator assumptions to match current operations,
- Adding a process to simulate Liquid Effluent Retention Facility (LERF) and Effluent Treatment Facility (ETF) operations, and
- Implementing a model for Sr solubility in the wastes.

The model was also modified to provide annual reports for the inventories of waste in various parts of the River Protection Project (RPP) system, and to provide projected compositions of retrieved waste that could be used to make estimates of leakage during retrieval.

2.0 VERIFICATION AND VALIDATION

The actions in the bulleted list below were used to verify that the approved assumption values were correctly incorporated into the HTWOS for this model run. Details about the verification of specific assumptions are found in the HTWOS Model Modification Forms provided in Appendix B of this document.

- Assumption values were compared directly with values set by the HTWOS modeler or with data arrays within HTWOS.
- Assumption values were compared to results reported by the HTWOS model.
- Assumption values were compared to intermediate data values taken directly from the HTWOS or to the results of hand calculations performed on intermediate values taken from HTWOS.
- Assumption values were compared to intermediate data plots made using plotting routines within the HTWOS.
- Process schematics in source documentation were compared to process schematics within the HTWOS.
- Assumptions about operating logic were compared to color changes in the process schematics during the model run. The color changes in the process schematics provide an indication of waste movement or of changes in the state of a process during operation.
- The modeler watched for flags set by internal checking routines that indicated a problem has occurred during the model execution and took action to correct the error condition associated with the flag.

A number of deviations from the approved assumptions were found during the verification process. The deviations were evaluated to have a generally minor impact on predicting the contents of the primary and secondary streams for the whole RPP mission. Appendix A Table A-12 provides a summary of all of the deviations that were found; the more substantive deviations are listed below. More detail about the deviations can be found in Appendix B in the HTWOS Model Modification Forms for particular assumptions.

- The WTP Pretreatment Facility off-gas cleanup is not modeled in detail because it was not identified as a key feature of the WTP needing to be modeled. If it were modeled, the increase in total activity going to the LERF/ETF would be about 1.4%.

- About 8.6 Ci of ^{129}I was incorrectly projected as accumulating on the LAW volatile organic compound (VOC) carbon beds rather than being routed to the LERF/ETF.

- About 0.71 Ci of ^{99}Tc was incorrectly projected as being released out the HLW stack instead of retaining it on the HLW VOC carbon beds.

- The total projected ^{60}Co and ^{137}Cs loading on the spent ion exchange resin reported in Appendix C is understated by about 8 Ci and about 24,700 Ci, respectively, because the loading parameter values for those two radionuclides were set too low.

- Too much NH_3, NO_2, and NO_3 were reported as going to the liquid effluent stream because the melter reactions for these constituents were not implemented.

- The model reported a residual volume of about 9,300 gallons for tank SY-101 because the model did not stop the new waste additions from 222-S Laboratory at the end of the RPP mission. The waste is mostly dilute and does not represent a significant inventory.

Normally all or most of these deviations would be corrected as part of the verification and validation process and the model rerun before publication of results. However, since the preliminary results were already used by others, it is necessary to document those results in Revision 0 of this report. It is anticipated that Revision 1 of this report will correct those deviations.

3.0 RESULTS

The following results were projected by the HTWOS model based on the assumptions used in the Development Run:

- All SST wastes are retrieved by the end of December 2027.
- The processing of all wastes into immobilized forms for disposal is completed by the end of August 2029[3].
- Processing wastes through the WTP produces about 203,580 MT of immobilized low-activity waste (ILAW) (about 34,390 ILAW packages) and about 34,780 MT of immobilized high-level waste (IHLW) (about 10,870 canisters).
- Processing of low-curie wastes delivered directly to Supplemental Treatment from tank farms and "excess" pretreated LAW from the WTP produces about 161,440 MT of glass, which can be packaged in about 3,690 Roll-Off Boxes. This projected quantity assumes bulk vitrification is used to treat the waste and includes the glass made to demonstrate the use of bulk vitrification as a supplemental treatment process.
- Packaging of CH-TRU waste produces about 1,620 Standard Waste Boxes, and packaging of RH-TRU waste produces about 7,460 55-gallon drums. The RH-TRU drums can be transported in about 2,490 RH-72B Casks.

The HTWOS model was modified to project annual estimates of the inventory in the waste tanks, to project estimates of the secondary waste streams from the various processes on an annual basis and totals for the whole mission, and to project the retrieved SST waste composition for others to use in evaluating the impact of potential "leaks" that might occur during SST waste retrieval.

[3] The Tri-Party Agreement milestone M-62-00, "Complete Pretreatment Processing and Vitrification of Hanford Tank High Level (HLW) and Low Activity (LAW) Tank Waste," is not projected to be completed by its December 31, 2028 due date. The primary reason for this is that the projected quantity of IHLW has increased due to updates in the Al and Cr wash and leach factors. See RPP-20003 for further discussion of the changes in wash and leach factor and their impacts. For purposes of the Development Run, the net HLW vitrification system capacity was assumed to be increased to 6 MTG/day to partially recover the treatment end date. The secondary reason for not meeting the treatment end date is that the ultrafiltration system does not appear to have adequate capacity to consistently provide feed to the LAW and HLW melters. Partial mitigation required increasing the ultrafilter permeate rate to increase the overall pretreatment system capacity. The completion of treatment end date is not significant in the time horizon considered by the various performance assessments since the time frame for the performance assessments is over thousands of years. The overall material balance, i.e., where the various radionuclides and chemicals end up, is what is important. The overall material balance is unaffected by the basic waste treatment schedule. ORP continues to evaluate system improvements to ensure that the 2028 completion of waste treatment milestone is met. It is expected that the next issuance of the System Plan (Rev. 3) will show how this can be accomplished.

A schematic showing the primary and secondary waste streams within the RPP can be found in Appendix C along with projections of the total inventory for the various streams. Three versions of the schematic showing the quantities of total activity, ^{129}I, and ^{99}Tc associated with the various streams are also provided in Appendix C.

The projected radionuclide and chemical inventory of residual waste left in the SSTs and DSTs at the end of the mission is provided in Appendix D, Tables D-1 and D-2. The projected radionuclide and chemical composition of the liquid phase of the retrieved SST waste is provided in Appendix D, Tables D-3 and D-4.

Several key inputs or assumptions used in this model run have either changed in parallel to this work or may be changes in the near future. Changes which might potentially impact the suitability of using these results as the basis for further studies are identified below:

- A revised template for R2-type sludge layers was implemented in the Best-Basis Inventory (BBI). One main result of implementing the template was to increase the total ^{90}Sr in the waste by about 20% compared to the inventory used in this model run.
- Additional process details are being developed for the Supplemental LAW Treatment Process (Bulk Vitrification). The additional details being developed include partitioning coefficients for additional radionuclides and chemical species, which would provide improved estimates of the secondary waste streams.
- The HTWOS model is being modified so radionuclides can be tracked explicitly in the glass waste form. Currently, the radionuclide partitioning between the WTP failed melters and the glass product streams is estimated because the isotopes associated with each tracked element are reacted to a single oxide of that element in the WTP melters, which prevents the explicit tracking of individual isotopes in those streams.
- A series of optimization studies are being performed by the Tank Farm Contractor to determine if overall improvements in the lifecycle treatment mission can be made. Studies include partial pretreatment of the waste by the Tank Farm Contractor to eliminate some WTP processing constraints and various blending scenarios to address problematic waste and to reduce the mass of HLW glass.
- A series of optimization studies are being performed by the WTP to refine the design, flowsheet, and operating modes of the Pretreatment Facility to eliminate some WTP processing constraints.

Additionally, during the verification of the run, a number of deviations from the approved modeling assumptions were identified. These are discussed in Section A1.3 of Appendix A.

4.0 REFERENCES

Ecology, EPA, and DOE, 1996, *Hanford Federal Facility Agreement and Consent Order*, as amended, Washington State Department of Ecology, U.S. Environmental Protection Agency, and U.S. Department of Energy, Olympia, Washington.

HNF-SD-WM SP-012, 2002, *Tank Farm Contractor Operation and Utilization Plan*, Rev. 5A, CH2M HILL Hanford Group, Inc., Richland, Washington.

ORP-11242, 2003, *River Protection Project System Plan*, Rev. 2, U.S. Department of Energy, Office of River Protection, Richland, Washington.

RPP-7630, 2003, *Configuration Management Plan for Hanford Tank Waste Operations Simulator Flowsheet Modeling*, Rev. 3, CH2M HILL Hanford Group, Inc., Richland, Washington.

RPP-20003, 2005, *Sensitivity of Hanford Immobilized High-Level Waste Glass Mass to Chromium and Aluminum Partitioning Assumptions*, Rev. 1, CH2M HILL Hanford Group, Inc., Richland, Washington.

RPP-21217, 2004, *Hanford Tank Waste Operations Simulator Model Data Package for the Tri-Party Agreement M-45-04-01 Change Request Case*, Rev. 0, CH2M HILL Hanford Group, Inc., Richland, Washington.

APPENDIX A

HANFORD TANK WASTE OPERATIONS SIMULATOR MODELING CONSTRAINTS, REQUIREMENTS, AND ASSUMPTIONS

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LIST OF TERMS

Terms

None

Abbreviations and Acronyms

BBI	Best-Basis Inventory
BNI	Bechtel National, Inc.
CH-TRU	contact-handled TRU
CSB	Canister Storage Building
DOE	U.S. Department of Energy
DST	Double-shell tank
EIS	Environmental Impact Statement
ETF	Effluent Treatment Facility
FY	Fiscal year
HEPA	high-efficiency particulate air
HLW	High-level waste
HTWOS	Hanford Tank Waste Operations Simulator
IDF	Integrated Disposal Facility
IHLW	Immobilized high-level waste
ILAW	Immobilized low-activity waste
IMUST	Inactive miscellaneous underground storage tanks
LAW	Low-activity waste
LERF	Liquid Effluent Retention Facility
LLW	Low-level waste
ORP	U.S. Department of Energy, Office of River Protection
PFP	Plutonium Finishing Plant
POC	Point of contact
PT	Pretreated
PUREX	Plutonium-Uranium Extraction Plant
RH-TRU	remote-handled TRU
RL	U.S. Department of Energy, Richland Operations Office
RPP	River Protection Project
SALDS	State-Approved Land Disposal Site
SBS	Submerged Bed Scrubber
SST	Single-shell tank
STP	Supplemental Treatment Plant
TEDF	Treated Effluent Disposal Facility
TFC	Tank Farm Contractor
TOC	total organic carbon
TOE	total operating efficiency
Tri-Party Agreement	*Hanford Federal Facility Agreement and Consent Order* (or TPA)
TRU	transuranic
TWINS	Tank Waste Information Network System

VOC	volatile organic compound
WESF	Waste Encapsulation and Storage Facility
WESP	wet electrostatic precipitator
WSCF	Waste Sampling and Characterization Facility
WRF	Waste Retrieval Facility
WTP	Waste Treatment and Immobilization Plant
WVRF	Waste volume reduction factor

Units

Ci	Curies
ft	feet
ft^3	cubic feet
g	grams
g/mL	grams per milliliter
gpm	gallons per minute
Kgal	kilogallons
M	molarity or moles per liter
m^2	square meters
m^3	cubic meters
Mgal	million gallons
MT	metric tons
MTG/d	metric tons of glass per day
Pa•s	Pascals per second
SpG	Specific gravity
wt%	Weight percent
µCi	microcuries
µg	micrograms
°C	degrees Celsius

A1.0 INTRODUCTION

Appendix A presents a detailed discussion of the assumptions used in the Hanford Tank Waste Operations Simulator (HTWOS) model run performed to support performance assessments performed to support the Tank Closure Environmental Impact Statement (EIS), single-shell tank (SST) closure, and the Integrated Disposal Facility (IDF), and to support a composite analysis being performed by Pacific Northwest National Laboratory. This appendix documents the assumptions and defines the major inputs for the HTWOS model that represents a development run of the Refined Target Case performed to provide the specific data needed to support the various performance assessments.

These technical assumptions address the major functions, processes, and interfaces that correspond with the River Protection Project (RPP) system shown in Figure A-1. The availability and capacities of the various systems and processes are defined in the HTWOS model to determine a processing schedule for waste retrieval, delivery, and treatment.

Tables A-1 and A-2 summarize the direction for the modeling and the key assumptions in a concise format to aid the reader.

A1.1 BRIEF DESCRIPTION OF CASE AND ASSUMPTIONS

Text of Item: The Development Run for the Refined Target Case is being modeled to support the performance assessment process and is an update of several recent, closely related, cases:

- HNF-SD-WM-SP-012, *Tank Farm Contractor Operation and Utilization Plan* (TFCO&UP), Rev. 5B.
- ORP-11242, *River Protection Project System Plan*, Rev. 2 (Target Case).
- RPP-21217, *Hanford Tank Waste Operations Simulator Model Data Package for the Tri-Party Agreement M-45-04-01 Change Request Case*, Rev. 0.

This case builds upon the modeling documented in those cases and incorporates assumptions and guidance from U.S. Department of Energy (DOE) Office of River Protection (ORP) staff. This particular run is called a development run because the HTWOS modelers are using this run to assist with the development (notably refining the WTP model, additional primary waste streams such as TRU product and bulk vitrification product, and adding secondary waste streams) of the HTWOS model. This run is based on a set of preliminary assumptions for the Refined Target Case for Revision 3 of the System Plan (ORP-11242); the results from this run are expected to be used to refine the final assumptions for the System Plan after resolution of conflicting assumptions and adjusting the waste retrieval and staging sequence to meet the mission objectives. The results of this development run are being published as a means to support the schedule for the performance assessments.

Discussion: The HTWOS model simulates the waste storage, retrieval, and treatment processes to provide an integrated flowsheet and mission scenario using the agreed upon modeling assumptions.

Figure A-1. Simplified Schematic of the River Protection Project.

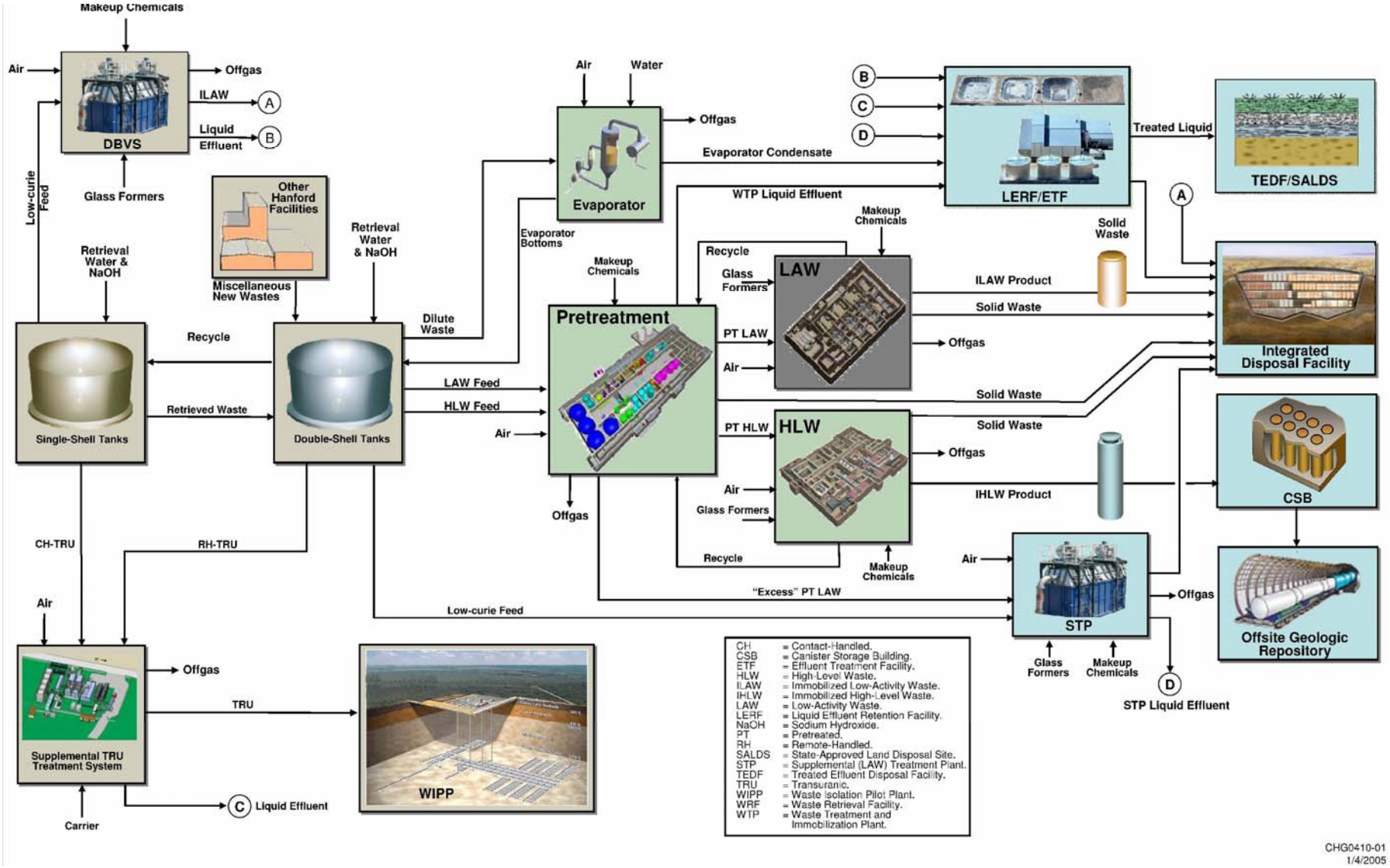

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Table A-1. HTWOS Model Change Summary Form.

Case Name	Development Run for the Refined Target Case

Objective: Provide HTWOS model results to support performance assessments performed to support the Tank Closure Environmental Impact Statement (EIS), single-shell tank closure, and the Integrated Disposal Facility (IDF), and to support a composite analysis being performed by Pacific Northwest National Laboratory. .

Scenario Change Summary - This section is focused on changes in key assumptions or key inputs to the model.

Revise model assumptions (from the "TPA M-45-04-01 Change Request" case documented in RPP-21217, *Hanford Tank Waste Operations Simulator Model Data Package for the Tri-Party Agreement M-45-04-01 Change Request Case*, Rev. 0) to incorporate Success Criteria and Key Enabling Assumptions provided by ORP staff. Run the HTWOS model and provide results.

Software Change Summary - This section is focused on changes in the HTWOS model functionality and includes references to the Scenario Change Summary section where appropriate.

Revise the model as needed to implement the changes outlined in the Scenario Change Summary Section above.

Requestor or Point of Contact: - Paul Certa

For reporting modeling status and resolving issues.

Supplemental Information:

The following specific information is requested as an output from the model:

- The tank-by-tank residual inventory estimates for all DSTs and SSTs.
- The end-of-treatment-mission total inventory, by waste stream, sent to the IDF for the following streams:
  - Spent resin from WTP Pretreatment
  - Spent LAW melters from LAW Vitrification
  - Two streams of used HEPA filters from LAW Vitrification
  - Used VOC beds from LAW Vitrification
  - ILAW product from LAW Vitrification
  - Spent HLW melters from HLW Vitrification
  - Two streams of used HEPA filters from HLW Vitrification
  - Used VOC beds from HLW Vitrification
  - Spent Ag-Mordenite from HLW Vitrification
  - ILAW from the Demonstration Bulk Vitrification System
  - ILAW from Supplemental Treatment Production Facility
  - Solid waste from ETF
- The tank-by-tank composition of a hypothetical retrieval leak for each SST. This will be interpreted as the inventory or composition for a unit volume of the liquid-phase at the bulk as-retrieved composition. Leak estimates will not be included in the runs.
- Feed Vector of delivered batches to the WTP
- One file for each year of the treatment mission, containing the inventory in each SST and DST, and for each primary and secondary waste product stream. This should be based on a "non-decayed" run.
- Mass balance table for all components and streams, keyed into the streams on Figure A-1 or a similar figure. Negotiate level of detail and presentation format with the customer POC.

Change Approval

Team Lead: R. A. Kirkbride _____	**Manager:** N. W. Kirch _____
Customer Point of Contact: P. J. Certa _____	**Customer:** J. O. Honeyman_____
Customer: J. G. Field _____	**Concurrence:** C. S. Louie _____

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A1.1. Brief Description of Case		
Provide HTWOS model results to support preparation of performance assessments and a composite analysis. A simple schematic of the overall process is shown in Figure A-1.		No
A2.0. Major Facilities		
A2.1. New Waste Generation		
A2.1.1. New Waste Introduced Via 200 East Area		
PUREX – yearly rate for FYs 2010 through 2017	5 Kgal/year	No
B-Plant – yearly rate	No waste anticipated	No
WESF – yearly rate	No waste anticipated	No
300 Area – yearly rate for FYs 2006, 2007, and 2008. Flush for misc. waste	20 Kgal/year 44%	No
400 Area	No wastes anticipated	No
WSCF	No wastes anticipated	No
100 Area	No wastes anticipated from 100 N, 100-K Basin, 105-F Basin, or 105-H Basin	No
A2.1.2. New Waste Introduced Via 200 West Area		
222-S Laboratory – yearly rate Flush for misc. waste WVRF	10 Kgal/year 22% 99%	No
T-Plant Yearly rate (FYs 2018 through 2021) Flush for misc. waste	15 Kgal/year 22%	No
PFP stabilization – not calculated in yearly average dates Total volume Flush	2004-2005 15 Kgal total 22%	No
Tank Farm Waste Generations		
Tank Farms Yearly Rate	120 Kgal/year	No

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A2.2. Waste Treatment Plant		
Key features for modeling	Key features of the WTP that will be modeled for purposes of mission planning and estimation of secondary waste streams include: • LAW Feed Receipt Tanks (simplified – 1.5 Mgal lumped capacity) • HLW Feed Receipt Tank • Front End Evaporator (simplified – no feed tanks) • Ultrafilter System (with modified [OH-] endpoint and oxidative leach) • Pretreated HLW Lag Storage and Blend Tanks (simplified – 81 Kgal lumped capacity) • Cesium Ion-Exchange (as a black-box) • Back End Evaporator / Pretreated LAW Storage (simplified and product routing modified to interface with STP) • HLW Melter Feed Preparation (simplified) • HLW Melter (model total capacity, not individual melters) • LAW Melter Feed Preparation (simplified) • LAW Melter (model total capacity, not individual melters) • Off-gas treatment systems (added NH_4+ for proper stoichiometry). • Recycle of LAW SBS and WESP Condensate to back-end evaporator feed tank. • Recycle of HLW SBS and WESP to front-end evaporator feed tank. • Transfer of LAW Caustic Scrubber solution to LERF via WTP PT facility.	Yes
Technical Basis for Modeling	The basis for modeled chemical reactions, extents, and split factors for estimating primary and secondary waste streams will be the 24590-WTP-MDD-PR-01-002, Rev 6, with flowsheet and operating mode modifications as needed to implement the other assumptions for the System Plan (ORP-11242).	Yes

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A2.2.1. Low-Activity Waste Processing		
LAW feed delivery dates	Start delivery of the first LAW feed batch on 12/1/2009 and deliver remaining LAW feed as needed to keep the WTP operating within model constraints. The first LAW feed batch will be provided by a decant transfer of all supernatant in AY-102 (less ten-inches above the HLW solids) to the LAW feed receipt tanks.	No
LAW Pretreatment Ramp Up	From - To / MT Na /year (net rate) 12/1/2009 – 1/31/2011 based on LAW melter[1] 2/1/2011 –12/31/2028 2950	Yes
LAW Vitrification Ramp Up[2]	From - To / MTG/d (net rate) 3/1/2010 – 1/31/11 3.4[3] 2/1/2011 – 12/31/2011 18.0 1/1/2012 – 12/31/2012 24.0 1/1/2013 – 12/31/2014 28.8[4] 1/1/2015 – 12/31/2028 34.0[5]	Yes
Complete Waste Processing	Goal is to complete waste processing by12/31/2028.	No
A2.2.2. LAW Feed Receipt Tanks		
LAW Feed Receipt Tank Use	1.5 Mgal Total Capacity; be capable of receiving 1 Mgal without interruption while feeding out of the remaining 0.5 Mgal	No

[1] LAW pretreatment will provide sufficient feed at the rate needed to operate the LAW melter.

[2] Melter ramp-up is based on ORP-22339, *River Protection Project Low-Activity Waste Supplemental Treatment Technologies Report*, Rev. A, 90% Draft.

[3] Melter rate is the average value that produces 188 ILAW packages during hot commissioning.

[4] This is based on a name-plate capacity of 36 MTG/d and a 0.80 TOE (total operating efficiency). The basis for the TOE is *Low Activity Waste Facility Operations Research Availability Assessment* (24590-LAW-RPT-PO-03-001, Rev. 0) and is driven by the 16-week bubbler life. It is assumed that the TOE stated in the reference (0.774) can be increased to an average of 0.80 until such time as the second-generation melters are available. The basis for the nameplate is the 5-day average goal stated in Table C.6-5.1 of Standard 5 of the BNI Contract for the LAW Facility (DE-AC27-01RV14136).

[5] This capacity assumes the installation of second-generation LAW melters.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A2.2.3. LAW Pre-Treatment Process		
LAW WTP Process Model	• The LAW (liquid) fraction of Envelope C waste from tanks AN-102 and AN-107 will be segregated from other waste within the PT facility until the strontium and transuranic components are removed. • There will be approximately 300 gallons (2005 lb_m air-dried) of spent cesium ion exchange resin generated for every 300,000 gallons of supernate treated through the cesium ion exchange system.[6] • Spent cesium ion exchange resin will contain the following constituents after being prepared for disposal[7]: o Cr – 670 µg/g o K – 220 µg/g o Na – 83,800 µg/g o ^{99}Tc – 6.74 µg/g[8] o ^{238}U – 14.8 µg/g[8] o ^{60}Co – 1.31 µCi/g o ^{137}Cs – 60 µCi/g	Yes

[6] This assumes that all supernate is Envelope A and is based on operating the system as four column carousel (lead, lag, polish, regeneration), with the columns swapping function every 100 column volumes, 300 gallons per column volume, resin change-out after the 10th regeneration cycle (24590-WTP-MDD-PR-01-002, Section 4.7.4). Using the air-dried bulk density of SuperLig resin from 4716-1, *Flow Properties Test Report Sodium Form Resin Samples*, Jenike & Johanson, 2003, summary page 2, the bulk density is about 50 pounds per cubic foot of resin

[7] These are the RCRA listed constituents detected at levels above the minimum reportable quantities during small-scale column testing per 24590-PTF-3PS-MWD0-T0003, Rev 1, Section 3.4.7.5, page 10.

[8] The reference states µg/g, not µCi/g.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A2.2.4. ILAW Formulation and Packaging		
ILAW Process	• During hot commissioning, the total sodium loading, sulfate volatilization and formulation of the LAW glass will be estimated using the Gimpel Model as described in 24590-WTP-MDD-PR-01-002.[9] • During hot operations, the total sodium loading of LAW glass from pretreated feed will be determined using the DOE Model (D-03-DESIGN-004), which maximizes the sodium oxide loading in the LAW glass subject to the following constraints: $[Na_2O] \leq 20wt\%$ $[SO_3] \leq 0.8wt\%$ • During hot operations, the composition of the LAW glass will be estimated using a glass recipe model similar to that described in 24590-WTP-MRQ-PO-04-0065 (DRAFT). Sulfate volatilization will be estimated using Equation 3.1-5f of 24590-WTP-RPT-PT-02-005. • Melter split factor for I-129: assume that 20% of the ^{129}I entering the melter is retained in the LAW glass product; the remaining 80% will report to the melter off-gas system.[10] • One LAW Melter is assumed to fail every 2.5 years and contains 6900 gallons of glass,[11] not to exceed 9 failed LAW melters.[12]	Yes
ILAW Glass Density	2.6 MT/m^3	No
ILAW Package Net Mass	5.92 MT	Yes

[9] This is an updated reference from 24590-WTP-MCR-PT-02-002, which was used in SP2.

[10] BNI is in the process of updating the model design document for the WTP dynamic model. One of the parameters being updated is the melter splits for ^{129}I. The Configuration Management Group (DOE 2004) has directed that we adopt the preliminary splits for ^{129}I since this is a significant change (72.973 % retention, reduced to 20% retention) in a component important to performance of the disposed waste.

[11] Melter failures are already accounted for in the assumed net production capacity assumptions. Assumes two melters, each with a 5-year minimum design life per 24590-LAW-3PS-AE00-T0001. Volume of glass in the melter does not include an allowance for increased volume due corrosion of refractory and reflects the set point of 6891 gallons per 24590-WTP-MDD-PR-01-002, Appendix D; other contributions to source term such as plenum deposits are neglected.

[12] Per 24590-WTP-ICD-MG-01-003, Section 4.2.1.2.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A2.2.5. ILAW Interim Storage Capacity		
ILAW Interim Storage Capacity	No lag storage of ILAW in WTP.	No
A2.2.6. High-Level Waste Processing		
HLW feed delivery dates	Start delivery of the first batch group of HLW feed on 12/15/2009 and deliver remaining HLW feed as needed to keep the WTP operating within model constraints. The first batch group of HLW feed will be provided from AY-102 by adding sufficient water to the decanted solids to yield a solids loading between 10 and 200 grams solids per liter of slurry (150 g/liter nominal).	No
HLW Vitrification Ramp-up[13]	From - To HLW MTG/d (net rate) 5/17/2010 – 1/31/2011 0.69[14] 2/1/2011 – 12/31/2011 3.0 1/1/2012 – 12/31/2012 4.0 1/1/2013 – 9/30/2027 5.0[15,16]	Yes
A2.2.7. HLW Feed Receipt Tanks		
HLW Feed Receipt Tank Usage	• Sufficient space to receive 160,000 gallons (600 m^3) without interruption. • HLW feed deliveries will be suspended when the LAW feed receipt tanks contain waste from either AN-102 or AN-107 to segregate the LAW liquids until the Sr and TRU is removed. • All HLW batches must be at least 130,000 gallons total volume and contain more than 2 wt% solids.	No

[13] Melter ramp-up is based on ORP-22339, *River Protection Project Low-Activity Waste Supplemental Treatment Technologies Report*, Rev. A, 90% Draft.

[14] Melter rate is the average needed to produce 56 canisters of immobilized high-level waste (glass) during Hot Commissioning.

[15] This is based on a nameplate capacity of 6 MTG/d and a 0.84 TOE. The basis for the TOE is "High Level Waste Facility Operations Research Availability Assessment," (24590-HLW-RPT-PT-02-001, Rev. 0). The basis for the nameplate is the goal stated in Table C.6-5.1 of Standard 5 of the BNI Contract (DE-AC27-01RV14136).

[16] This rate can be increased not-to-exceed 6 MTG/d if needed to finish waste treatment by 2028, with a commensurate increase in programmatic risk.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A2.2.8. HLW Pre-Treatment Process		
HLW WTP Process Model	• HLW pretreatment can provide sufficient pretreated HLW solids to produce up to 571 canisters of IHLW per year.[17] • The water wash factors in the TWINS on 8/24/2004 will be used for partitioning waste into solid and liquid phases during retrieval and staging. • The caustic leach factors in the TWINS on 8/24/2004 will be used as the basis for computing the caustic leach factors associated with each delivered batch of HLW solids and for the entrained solids. • One HLW Melter is assumed to fail every 2.5 years and contains 1800 gallons of glass,[18] not to exceed 9 failed HLW melters. • For planning purposes, all solids delivered with the HLW feed and entrained solids delivered with the LAW feed, except for those associated with the Envelope C waste from AN-102 and AN-107, will undergo caustic and oxidative leaching with the insoluble fraction incorporated into HLW glass. • An oxidative leach process that removes Cr from the HLW sludge without impact on cycle time or other species will be implemented in the ultrafilters. Reaction stoichiometry and endpoint (5,000 µg Cr / g dried solids) are described in RPP-15552. • The LAW (liquid) fraction of Envelope C waste from tanks AN-102 and AN-107 will be segregated from other waste within the PT facility until the strontium and transuranic components are removed.	Yes

[17] This is based on 5.0 MTG/d per ORP-22339, 365.24 d/yr and 3.2 MTG/canister (thin-walled canisters). Section C.7(b)(1)(ii) of the BNI contract requires HLW pretreatment to be sized to support 480 canisters of HLW glass per year. This also assumes that issues with ultrafilter performance identified in D-03-DESIGN-005 have been successfully resolved.

[18] Melter failures are already accounted for in the assumed net production capacity assumptions. Assumes two melters, each with a 5-year minimum design life per 24590-HLW-3PS-AE00-T0001. Volume of glass in the melter includes an allowance for increased volume due corrosion of refractory per 24590-HLW-M5C-HMP-00002, Table 2; other contributions to source term such as plenum deposits are neglected.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
`A2.2.9. IHLW Formulation and Packaging		
Method for Estimating HLW Waste Oxide Loading	Glass Properties Model modified as follows. • Increase the maximum spinel liquidus temperature constraint from 1050 ºC to 1100 ºC. • Increase the maximum viscosity constraint from 5.5 Pa•s to 10 Pa•s. • Increase the maximum Cr_2O_3 constraint from 0.5 wt% to 1.0 wt%. • Use a maximum zircon liquidus temperature limit of 1050 ºC. • Use a Product Consistency Test (PCT) upper limit of 2 g/m^2.	Yes
Melter split factor for I-129	Assume that 20% of the ^{129}I entering the melter is retained in the HLW glass product; the remaining 80% will report to the melter off-gas system.[10]	Yes
IHLW Glass Density	2.7 MT/m^3	No
IHLW Canister Net Mass	3.2 MT (thin-walled canister)	No
A2.2.10. IHLW Interim Storage		
IHLW Interim Storage Capacity	22 canisters of IHLW can be stored in the WTP before having to ship canisters to an interim storage site on the Hanford Site.	No
A2.3. Supplemental Treatment		
A2.3.1. TRU/LLW Sludge Packaging		
Contact-Handled Sludge Packaging	• The contact-handled Supplemental TRU Treatment and Packaging process will be available on February 28, 2006 and treat a maximum of 2,880 gallons of undiluted TRU tank waste per day.[19] • The system will first be located near B-Farm and then moved to T-Farm. There will be a 10-day outage between tanks and 60-day outage to move equipment between farms. • The SSTs assumed to provide contact-handled sludge are [B-201, B-202, B-203, B-204], [T-201, T-202, T-203, T-204], T-111, T-110, and T-104, in the stated order except that the tank order within the [brackets] can be changed.[20] • The waste from the B-200 and T-200 series SSTS, T-104, T-110, and T-111 will be retrieved without impact to DST space.	Yes

[19] The stated rate is based on planning assumptions for a single retrieval system and does not fully utilize the TRU treatment system capacity.

[20] These are operational considerations.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
	• It is assumed that this waste can be treated and packaged as contact-handled TRU and disposed of at WIPP. • There will be no water or waste sent to the DST system. • The process assumptions for the contact-handled sludge treatment system are discussed in the remote-handled section.	
Remote-Handled Sludge Packaging	• The remote-handled Supplemental TRU Treatment and Packaging process will be available on 7/1/2012 and treat 2,880 gallons of undiluted tank waste per day. It is assumed to be located near AW-Farm.[21] • All remote-handled sludge will be water-washed prior to treatment to remove soluble waste constituents. The East Area DSTs will be water washed in their respective tanks; the SSTs and SY-102 waste will be retrieved, transferred to a 200E Area DST and then water-washed. No attempt will be made to segregate the remote-handled SST TRU sludge from the remote-handled DST TRU sludge. • Supernatant liquid will be decanted from tank AW-103 in August 2011. The waste solids in tank AW-103 will be washed four times over a nine month period starting 9/1/2011 using 273,000 gallons of 0.01 M NaOH solution each time. After each wash, the solids are settled to 40 wt% before decanting the wash solution for feed to the evaporator. The first wash of AW-103 waste solids is assumed to dissolve the saltcake portion. Existing water wash factors and the Sr solubility model will be applied to estimate the overall wash effectiveness.	Yes

[21] The remote-handled Supplemental TRU Treatment and Packaging process is expected to be a re-deployment of the contact-handled system with additional shielding.

[22] "Dry batch mode" is a continuous process.

[23] This assumes that only 4 of the 5 feed tanks are used; the 5th tank is kept in reserve.

[24] "Carrier" refers to the material added to the waste in the dryer to form a stable mixture with appropriate handling properties.

[25] The final package has not been established; 55-gallon drums may also be used.

[26] The final package configuration has not been established; the dried waste may also be directly loaded into the RH-72B canister.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**

	• Supernatant liquid will be decanted from tank AW-105 in September 2012. The waste solids in tank AW-105 will be washed four times over a nine-month period starting 10/1/2012 using 263,000 gallons of 0.01 M NaOH solution each time. After each wash, the solids are settled to 40 wt% before decanting the wash solution for feed to the evaporator. The first wash of AW-105 waste solids is assumed to dissolve the saltcake portion. Existing water wash factors and the Sr solubility model will be applied to estimate the overall wash effectiveness.
	• Supernatant liquid will be decanted from tank SY-102 by 10/30/2013. The SY-102 solids will be washed three times over a nine month period starting by 11/1/2013 using 290,000 gallons of 0.01 M NaOH solution each time. After each wash, the solids are settled to 40 wt% before decanting the wash solution for feed to the evaporator. The first wash of SY-102 waste solids is assumed to dissolve the saltcake portion. Existing water wash factors and the Sr solubility model will be applied to estimate the overall wash effectiveness. (Note: The solids in SY-102 may be moved to AW-103 for washing, after the washed AW-103 solids are delivered for packaging, if the cross-site transfer does not delay operation of the packaging facility.)
	• The SSTs assumed to provide remote-handled sludge are T-105, T-107, T-112, B-107, B-110, and B-111; the DSTs assumed to provide remote-handled sludge are SY-102, AW-103, and AW-105.
	• The overall process for both contact-handled and remote-handled TRU sludge treatment is assumed to use the "dry batch mode"[22] as described in the System Design Description (RPP-20499) and summarized as follows:
	  o As the CH-TRU sludge is retrieved and transferred, a total of 1 part water by volume is added per original in-tank sludge bulk volume.
	  o The slurry (either direct from the SSTs for CH-TRU or via a DST for water washed RH-TRU) will be transferred to the Feed Receipt Process System modeled as a single tank with a working volume of 28,800 gallons.[23]	

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
	o The slurry, carrier[24] and heat are continuously added to the dryer, while dried product is withdrawn to maintain a product with 20-wt% water and 80-wt% waste loading (both relative to waste, water and carrier). o The CH-TRU dried waste product is packaged in standard waste boxes (SWB) [25], each SWB holding approximately 2,760 lb_m waste. o The RH-TRU dried waste product is assumed to be packaged in 55-gallon drums containing 700 lb_m of product per drum, which are loaded three drums to a RH-72B canister[26]. • Secondary waste will be estimated using the dryer retention factors as stated in 20843.PCAL.001, Assumption 8 and by applying the DFs for the 242-A Evaporator condenser. The dryer retention factors (and equivalent splits for modeling) are presented in Table A-3 the gaseous effluent split factors are presented in Table A-4. • Liquid effluent will either be transferred to the LERF via Tank Truck or recycled to the Retrieval project. For planning purposes, it will be assumed that the liquid effluent is transferred only to LERF (no recycle) and modeled as a continuous transfer. • The washed solids are assumed to be remote handled for packaging. • It is assumed that this waste can be treated and packaged as remote-handled TRU and disposed of at WIPP.	
A2.3.2. Supplemental LAW Processing		
Supplemental Treatment Demonstration	• A demonstration facility will be located in the 200 West Area (west of S-Farm) and be operated at a net rate of 3.92 MTG/d starting on 5/31/2005 to process 260 MT Na from the low-curie waste from tank S-109.	Yes

[27] The demonstration project will probably target a lower ^{137}Cs concentration in the low-curie feed from S-109 for shielding considerations.

[28] The demonstration project is expected to increase the estimated amount of Cs-rich waste from S-109 to about 250 Kgal.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
	• The demonstration facility will be fed directly from S-109 with no solids entrained out of S-109. The feed will be delivered at 5 M Na. The S-109 waste retrieval will be controlled to limit the total activity in the retrieved waste to 0.0062 Ci per liter (at the 5 M Na feed concentration) for the demonstration.[27] Retrieval of the low-Cs waste from S-109 will generate about 100 Kgal of Cs-rich wastes that will be sent to tank SY-102.[28] • The Supplemental Treatment Demonstration process assumptions (other than process rate) will be the same as that used for the full-scale Supplemental Treatment Process.	

Supplemental Treatment Process	• A production process facility will be located in the 200 East Area.
	• The production facility, consisting of eight melter lines, starts operating after 1/31/2011and operates at a combined net rate of 31.4 MTG/day[29].
	• The feed to the Supplemental Treatment process includes:
	  o Low-curie feed from the selective dissolution and solid/liquid separation of SST waste.[30]
	  o "Excess" pretreated LAW from the WTP[31] - this feed source should be preferentially used.
	• Low-Cs waste in the 200 West Area will be moved cross-site to feed the process when dedicated DST space is available to transfer low-Cs waste without contamination (through SY-101 in to an East Area DST used as a feed tank).
		Yes

[29] If necessary, the treatment rate may be ramped up by two additional melter lines (for an increase of 7.84 MTG/day) on a date agreed to by the requestor.

[30] The amount of low-curie feed may be increased if needed to finish waste treatment by 12/31/2028, not to exceed the available amount of low-curie feed. The estimated amount of low-curie feed required is about 3,500 MT Na.

[31] The amount of "excess" pretreated LAW that is available is the difference between the assumed LAW pretreatment capacity of 2,950 MT Na/year and the demand from the WTP LAW Vitrification facility expressed in MT Na/year and depends on the glass formulation for each specific LAW melter batch.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
WTP Process Considerations	The WTP pretreatment facility will be configured so that a portion of concentrated pretreated LAW from the Treated LAW Concentrate Tank can be transferred to the Supplemental Treatment Plant (STP) as feed. This is downstream of the point to which LAW SBS and WESP condensate is recycled, so the STP feed will include a proportional fraction of the SBS and WESP condensate.	Yes
STP Process Basis	The process will be modeled using a simple lumped flowsheet that implements the overall mass balances (elemental, NOX, and activity) as shown in Section 3.2 of the process flowsheet (RPP-20528) using the process design criteria provided in 145579-A-DC-002, with the following exceptions: • The Tri-mer scrubber (provides backup off-gas treatment) is assumed to not be operated. • The splits for the dryer will be set equal to the splits used for the WTP evaporators.[32] • 20 wt% waste Na_2O loading.[33] These mass balances cover both primary and major secondary waste streams from the process which will be modeled as a single lumped process train comprising the following unit operations: • Feed Tank • Dryer • Condenser for Dryer Offgas • Melter • Sintered Metal Filter with recycle to dryer (modeled as to dryer feed tank) • Hydrosonic Scrubber • HEPA Filter • Carbon Filter • NOx Removal	Yes

[32] The referenced flowsheet assumes that 50% of the I-129 in the dryer feed reports to dryer offgas stream – this is an overly conservative value. Additionally, only I-129 is partitioned (not conservative). Since the dryer operates in a similar temperature and pressure regime as both the 242-A Evaporator and the WTP evaporators, it is assumed that using the evaporator splits will provide a better estimate of the partitioning that will take place until the flowsheet is updated or supplanted. The Configuration Management Team provided verbal concurrence with this change on December 27, 2004 with the understanding that approval will be indicated by ORP's concurrence with these assumptions. For simplicity, the HTWOS model will use the published WTP Evaporator splits rather than the more complicated 242-A Evaporator partitioning coefficients.

[33] It is assumed that the target waste sodium oxide loading of 17.6-wt% in 145579-A-DC-002 is increased by flowsheet refinements such as low-sodium soil to the nominal value of 20-wt% assumed in ORP-22339. No allowance is made for potentially lower oxide loadings during the supplemental treatment system demonstration.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
Feed Staging[34] and Solids Return	• The low-Cs tanks that are candidates for feed are**:** B-105, T-109, B-103, B-101, S-109, B-108, S-105, TY-102, TX-117, BY-112, BY-105, BY-102, BY-111, BY-108, TX-118, BY-109 BX-111, BY-103, and TX-114. • The following tanks can be considered candidate Low-Cs Tanks after 1/1/2011: TX-112, TX-111, and TX-110. • The following tanks can be considered candidate Low-Cs Tanks after 1/1/2018: TX-105, TX-115, U-107, TX-108, and TX-103. • Selective dissolution will be used during the retrieval of candidate feed tanks using the planning assumptions in Table A-5 for splits – use average values when ranges are provided. First, the "higher" curie fraction will be retrieved from the SST and stored in the DST system for later delivery to the WTP. Then, the remainder of the waste (the low-curie fraction) will be retrieved and staged in a separate 200E area DST for delivery to the Supplemental Treatment Process.	Yes
Product and Packaging	Bulk vitrification is used as the supplemental treatment process to immobilize LAW. The following will be used to estimate bulk vitrification product volume and package count. • Glass density is 2.7 MT/m^3. • Packaged in 35 m^3 roll-off boxes, each filled with 43.8 MT glass. External volume of box is 1,920 ft^3 (8 ft by 10 ft by 24 ft, ~ 54.4 m^3).	Yes
A2.4. Waste Disposal Sites		
ILAW Facility Need Dates (Integrated Disposal Facility; IDF)	The IDF is assumed to be operational on 2/28/2006. The ILAW produced by the Supplemental Treatment demonstration can be safely stored until the IDF is available.	No

[34] The list of candidate SSTs and selective dissolution assumptions are provided by 7F300-04-RER-001 R1.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
IHLW Facility Need Dates (Project W-464)	The need date for IHLW interim storage facility (the Canister Storage Building) will be the date on which the 1st IHLW is produced (5/17/2010). The demand for interim storage space will be established assuming that 22 canisters of WTP-provided IHLW is used. The shipping date of IHLW to Yucca will be the date on which the Canister Storage Building is full (880 canisters + 22 canisters in WTP-provided lag storage), but no earlier than 1/1/2012. Canisters will be shipped to Yucca at a rate of 2 canisters per day, first priority given to shipping the newly created IHLW from the WTP – any excess shipping capacity will be used to empty the IHLW stored in the CSB.	No
A2.5. Cesium and Strontium Capsule Processing		
Cesium and Strontium Capsules	Cesium and strontium capsules are disposed separately by RL and not incorporated into HLW glass in the WTP.	No
A3.0. Retrieval and Closure		
A3.1. SST Interim Stabilization		
Saltwell liquid pumping	None; saltwell pumping was completed in March 2004.	Yes
A3.2. SST Tri-Party Agreement Milestones		
SST TPA Milestone Dates	Retrieve S-112 per TPA Milestone M-045-03C by 3/31/2005. Retrieve S-102 per TPA Milestone M-045-05A by 3/31/2005. Retrieve C-Farm (Waste Management Area – C) per TPA Milestone M-045-00B by 9/30/2006.	No
A3.3. SST Retrieval Sequence Basis		
Retrieval sequence basis	Give priority to the SST milestones listed above, then: • Retrieve the remaining Pool tanks, balancing logistics, tanks space and feed to the various treatment processes. • Retrieve the remaining SSTs, risk-based, balancing logistics, tank space and feed to the various treatment processes. Table A-6 provides the list of SSTs in the SST retrieval pool. Table A-7 provides starting assumptions for sequence and retrieved waste volumes for near term SST retrievals.	No

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A3.4. Waste Retrieval Facilities		
Waste Retrieval Facility (WRF) Availability Dates	B-Complex WRF: 6/1/2018 T-Complex WRF: 6/1/2018 Wastes retrieved from tanks in the B or T complexes before the WRFs are available will be at lower insoluble solids loadings as defined in the Retrieved Waste Composition assumptions (see Section A3.8 of HNF-SD-WM-SP-012). Compliant transfer lines will be constructed to support retrievals from B and T complex before the WRFs are made available; one line for each complex.	No
A3.5. SST Farm Upgrades		
Availability Dates for Tank Farms Upgrades	Any SST farm upgrades needed to support the retrieval of SST waste will be completed before the retrieval dates projected by the HTWOS model.	No
A3.6. Constraints on Simultaneous Retrievals		
Simultaneous retrieval	• The most limiting condition(s) resulting from application of the following constraints:[35] Retrieval and transfer systems in the NE and NW quadrants can support a maximum of 6 simultaneous retrievals in each tank farm and a total of six simultaneous retrievals in each quadrant (after the WRFs are constructed). Retrieval and transfer systems in the SE and SW quadrants can support a maximum of 2 simultaneous retrievals in each tank farm and a total of two simultaneous retrievals in that quadrant. SE - A, AX, and C farms NE - B, BX, and BY farms SW - S, SX, and U farms NW - T, TX, and TY farms A maximum of 7 total simultaneous retrievals can be performed at one time. (This assumes that labor resources are available.) The waste from up to two SSTs may be retrieved to one DST at one time. The waste from one only SST may be retrieved into one WRF tank at a time. Constraints also apply to retrievals going directly from SSTs to supplemental treatment processes.	No

[35] These constraints may be lifted by retrieving several source SSTs into one receiver tank if the modeling indicates that they create a bottleneck in the system.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A3.7. Retrieval Rates		
SST Waste Retrieval Rates	Minimum retrieval durations are given in Section A3.7 of HNF-SD-WM-SP-012 and based on proposed project schedules or technologies to be used to retrieve the waste.	No
SST Waste Residuals	• 200 Series SSTs: 30 ft^3 of "selected phase" as defined in DOE/ORP-2003-02, *Inventory and Source Term Data Package - Environmental Impact Statement for Retrieval, Treatment and Disposal of Tank Waste, and Closure of Single-Shell Tank Waste at the Hanford Site Richland WA*, Rev. 0; re-estimated using the current Best Basis Inventory (BBI). • 100 Series SSTs: 360 ft^3 of 35-wt% water-washed solids with ½ concentration of bulk as-retrieved supernate for all tanks; except C-106 will use the BBI.	Yes
A3.8. Retrieved Waste Composition		
Retrieval Solution Requirements	• The amount of retrieval solution needed to retrieve the waste from SSTs listed in Table A-14 in Section A3.3 of HNF-SD-WM-SP-012 will be determined as the amount need to achieve the total retrieved volume given in the table after the application of water wash factors. • The amount of retrieval solution needed to retrieve wastes from the S, SX, and U farm SSTs not listed in Table A-14 will be determined as the amount needed to result in a Na concentration ≤ 5 M and an insoluble solids concentration ≤ 5 wt% (3.5 volume %) after the application of wash factors. • The amount of retrieval solution needed to retrieve wastes from SSTs in the B or T farm complex before the WRFs are available will be determined as the amount needed to result in a Na concentration ≤ 5 M and an insoluble solids concentration ≤ 5 wt% after the application of wash factors. • The amount of retrieval solution needed to retrieve wastes from SSTs in the B or T farm complex after the WRFs are available will be determined as the amount needed to result in a Na concentration ≤ 5 M and an insoluble solids concentration ≤ 10 wt% after the application of wash factors. • The amount of retrieval solution needed to retrieve wastes from all other SSTs will be determined as the amount needed to result in a Na concentration ≤ 5 M and an insoluble solids concentration ≤ 10 wt% after the application of wash factors.	No

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A3.9. Retrieval System Reuse		
Retrieval System Availability	• A sufficient number of retrieval systems are available. • Retrieval systems will be reused when cost effective.	No
A3.X. SST Closure		
SST Closure	• SSTs will be interim closed in the 10-month period immediately after retrieval has been completed. • Closure activities for each tank farm can begin after all tanks in that farm are interim closed.[36]	No
A3.X. SST Waste Leaks		
SST Waste Leaks During Retrieval	No waste is assumed to leak from the SSTs during retrieval.	No
A4.0. Waste Feed Operations		
A4.1. Waste Inventory		
A4.1.1. Initial Inventory		
Date that BBI quarterly update was issued	Starting tank inventories represents the contents of the tanks as of April 2004 per RPP-22760. This is identified as the "FY 2004a" inventory and is based on BBI downloaded from TWINS circa 8/10/2004. Adjustments were made in the HTWOS model for historical transfers through June 30, 2004.[37]	Yes
IMUST waste total volume (2011-15)	500 Kgal total	No
A4.2. DST Operations		
A4.2.1. Sodium Hydroxide Additions		
Caustic addition • Planned Additions • Caustic Rules for SST Retrievals	• No near-term additions are planned. Future evaluations may show the need for caustic additions. • Liquids associated with sludge retrievals need to have at least 0.05 M free OH. Saltcake retrievals do not require NaOH addition because waste in DSTs contains sufficient OH^- as a buffer.	No

[36] This is an enabling assumption that may need to be refined as closure strategies are developed.

[37] In parallel to performing this run, the BBI was revised to incorporate a template for R2 sludges. One main effect of implementing the template was to increase the total ^{90}Sr inventory by about 20% (from about 4.3 E+07 Ci to about 5.2 E+07 Ci).

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A4.2.2. Flush Volumes		
	Table A-16 in Section A4.2.2 of HNF-SD-WM-SP-012 provides the flush volumes used in the HTWOS model.	No
A4.2.3. Minimum DST Level		
	• Liquids or slurries can be removed down to within 12 inches above the bottom of a DST. • Wastes can be removed down to the bottom of a DST during final cleanout. • Supernatants can be pumped down to within 10 inches of a settled solids layer. • SY-101 can only be pumped down to 100 inches (275 Kgal) between now and 10/1/2013. After that date, the transfer pump will be replaced and the waste can be pumped down to 12 inches. • SY-102 can only be pumped down to 200 inches (550 Kgal) until the solids are washed before delivery for TRU packaging. After the solids are washed, the waste can be pumped down to within 12 inches. • The AZ/AY farm tanks can be pumped down below 64 inches if the annulus ventilation is shut down. The annulus ventilation will be shut down when necessary to deliver feed to the WTP allowing the waste to be pumped down within 12 inches of the bottom.	No
A4.2.4. Maximum DST Level		
Maximum DST Levels	Design evaluation, records evaluation, and Ultrasonic Testing will confirm that AP farm is appropriate for increased fill height by 11/1/2004. Actual use of the increased fill will be managed through "In-Process Tests" during transfers.[38] No transfers that use the increased operating level are scheduled for calendar year 2004. See Table A-8 for a list of the maximum levels for each DST.	No

[38] The dates proposed for increasing the DST fill levels may be revised after evaluating results from the model run.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A4.2.5. Tank Solids Level		
Solids Settling Endpoint	Insoluble solids retrieved from C-Farm SSTs can be settled to a solids loading comparable to that in the source SSTs within 2 days of transferring to a DST. This is accomplished in the model by settling to the same bulk solids volume observed in the SSTs or to an adjusted bulk volume based on mass dissolved during retrieval. Insoluble solids retrieved from other SSTs and currently in the DST system can be settled to 40 wt% solids within 30 days.[39]	No
Solids Management Strategy	Assume that the solids management strategy for the DSTs will allow, on the average: • DSTs supporting C-Farm retrieval will be operated with a minimal supernate layer so that they do not become Group A tanks even though they will be filled with significant quantities of solids. • DSTs not supporting C-Farm retrieval are assumed to hold up to 10-wt% bulk solids based on the maximum operating level of each DST.	No
A4.2.6. Tank Space Allocation		
Space Allocation Categories	Use the categories and reasoning given in Table A-19 in Section A4.2.6 of HNF-SD-WM-SP-012 to allocate and track head space above the waste in the DSTs.	No
DST Usage	**WTP Feed Staging tanks**: [40] AN-101, AN-102, AN-103, AN-104, AN-105, AN-107, AP-101, AP-102, AP-103, AP-104, AP-105, AP-106, AP-108, AW-101, AY-101, AY-102, AZ-101, and AZ-102 **WTP Alternative (Back-up) HLW Feed Staging tanks:** AN-103, AN-104 (cross-site receiver), and AN-105. At the modelers' discretion, other DSTs equipped with dual mixer pumps can be used to store and stage HLW feed. **Slurry Transfer Limitations:** Use AZ, AY, and AN farms, primarily for staging HLW solids. Try to avoid staging solids through AP or AW farms after retrieving the solids currently in those farms.	Yes

[39] The modelers will seek to apply the "wet sludge volume" approach used for the C-Farm retrievals to insoluble solids retrieved from other SSTs if it can be implemented. If it cannot be implemented due to model logic issues, the current approach of settling to 40 wt% solids will be used.

[40] See Section A5.2 for information on project scopes regarding equipment needs.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
	Supplemental Sludge Treatment Process Feed Staging Tanks: AW-103, AW-105, and SY-102 **Supplemental LAW Treatment DST Usage:** Provide feed directly from S-109 to the Demonstration Bulk Vitrification System. Transfer low-Cs wastes from the West Area and from East Area SSTs when sufficient DST space is available to transfer cross-site without contamination and to provide a dedicated feed tank in the East Area. Retrievals and transfers are managed to prevent the entrainment of solids in the feed. **Sludge Transfer for Waste Feed Staging:** AN-101 and AN-106 will acquire solids from C-Farm retrieval and require additional equipment to transfer a portion of those solids into other DSTs for waste feed staging into the WTP. Issue: This is emerging work scope and not currently covered by current project scope or baseline plans.	
Emergency Space and LAW or HLW Waste Return Space • TFC Emergency Space and Emergency Returns from WTP • LAW or HLW Non-Emergency Process Returns from WTP • Contingency space	Emergency Space and Emergency Returns will be raised from 1.14 Mgal to 1.235 Mgal on 11/1/2004, and will be allocated as shown below: • 1.235 Mgal total • None • None	No
WTP Returns (to the DST system)	No waste streams or wastewaters are returned to DST system from the WTP.	No
DST Space Allocation Categories • Evaporator Operational Space • Restricted TRU Head Space • Restricted WTP Feed Tank Space • Safety Basis Head Space	• Supports 242-A operation (AW-102, bottoms receiver, and dilute waste receivers, when used) • TRU solids (AW-103 and AW-105) • Early WTP feed sources or DSTs used to stage WTP feed • Waste has an associated safety issue	No
A4.2.7. Waste Segregation or Blending		
Feed Controls	The feed controls (which specify specific blending and waste segregation requirements) from HNF-SD-WM-OCD-015, Rev 13, are modified as needed to support the other mission assumptions and summarized below:	Yes

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
• Blend off high-sulfate supernate (FCL Issue # 1)	• A portion of supernate from AZ-102 will be decanted and blended with lower [SO_4] supernate, so that the final [SO_4]:[Na] ratio in AZ-102 and in any other tank receiving significant quantities of the high [SO_4] supernate will be less than a target level of 0.048 mole SO_4/mole Na after blending and any evaporator campaigns are completed. Constrain the blending of AZ-102 supernate to start after 4/1/2007.	
• Blend off high ^{233}U solids (FCL Issue # 2)	• The solids from C-104 will be blended with the solids in AY-101 so that the resulting [^{233}U] is less than a target level of 2.0E-04 Ci/100 grams equivalent of waste oxides. The two source tanks and the resulting blend will be kept segregated from other sources of solids.	
• Prepare and protect hot commissioning feed (FCL Issue # 3)	• The supernate in AY-102 will be removed and replaced with supernate from AP-101, without concentration. It is assumed that the TFC will successfully demonstrate the supernate in AP-101 should be consolidated with the solids in AY-102 using the stipulated "Special process to release controls." No other waste, other than process condensate, will be mixed with the hot commissioning feed staged in AY-102.	
• Segregate Envelope C (FCL Issue # 4)	• The waste in AN-102 and AN-107 shall be segregated from all other wastes until it has been delivered to the WTP.	
• Segregate TRU sludge from complexed waste (FCL Issue # 5)	• Envelope C waste or other waste capable of complexing TRU shall not be stored with the insoluble solids currently in AW-103, AW-105, or SY-102. For purposes of this control, waste will be considered to be Envelope C if the [TRU]:[Na] ration exceeds 13 µCi/mole or the [^{90}Sr]:[Na] ratio exceeds 1.19E+03 µCi/mole in the liquid phase.	
• Segregate waste destined for TRU or LLW packaging (FCL Issue # 6)	• No additional waste shall be added or stored with the insoluble solids currently in AW-103 and AW-105, except that the addition of remote-handled TRU from SSTs or SY-102 is permitted. Avoid mixing the waste in SY-102 with additional solids (other than remote-handled TRU). Do not transfer contact-handled TRU waste into the DST system. Keep the remote-handled TRU waste segregated from insoluble non-TRU solids.	
• Segregate low-cesium SST waste for supplemental treatment (FCL Issue # 7)	• Waste from the candidate SSTs containing low-curie waste should be managed to maximize the amount of low-curie (less than 0.05 Ci/liter ^{137}Cs). The low-cesium fraction designated for feed to supplemental LAW treatment should be kept segregated from any high-cesium waste.	

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
Blending	There is no deliberate blending of waste to optimize WTP feeds other than the specific blending described in the feed controls. Incidental blending that occurs as waste is moved through the system is relied on to provide benefits such as a significant reduction in HLW glass quantities.	No
A4.2.8. Availability of DST Space		
DST Integrity	No DST failures or replacements are assumed.	No
A4.2.9. Space Optimization		
Tank Space Options Incorporated (M-46-21 options)	• Concentrate waste to save space (to 1.44 SpG). • Release the ORP restriction on the use of the WTP feed restricted space. • Allocate only 1.235 Mgal as emergency space. • Implement tank level increases detailed in Table A-8.	Yes
A4.2.10. Aging Waste Farm Condensates		
	HTWOS does not account for in-tank evaporation from or the recycle back to the aging waste tanks.	No
A4.2.11. Common Use of Transfer Lines		
	There are no restrictions on the subsequent use of transfer lines based on waste types (HLW, LAW, TRU, and LLW) and chemistries.	No
A4.2.12. Waste Transfer Routes		
Essential Drawings for DST Waste Transfer System	Transfer system constraints are imposed through the near-term SST retrieval plans.	No
A4.2.13. Waste Transfers		
Cross-site Transfer Rate	• Wastes transferred cross-site through the supernatant line can be transferred at rates between 50 and 60 gallons per minute. • Wastes transferred cross-site through the slurry line can be transferred at rates between 100 and 120 gallons per minute.	No
SST Retrievals	Wastes retrieved from the SSTs will be retrieved at the capacity of the retrieval system as defined by the minimum durations when DST space is available.	No
DST Transfer Rate	Wastes can be transferred between DSTs or to the WTP at a rate of 140 gallons per minute (excluding cross-site transfers).	No
Transfer Durations	Waste transfer durations will be calculated by dividing the total volume being transferred by the transfer rate.	No
Transfer System Set-up Time	There is a 5-day delay between subsequent uses of transfer routes having common components starting on 11/1/2007 to account for the closeout of one transfer route and the establishment of another route.	No
DST Waste Residuals	100 gallons having the composition of the last waste contained in the tank.	Yes

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A4.3. 242-A Evaporator		
A4.3.1. Evaporator Availability		
242-A Evaporator Shutdown & New Evaporator Availability	• 242-A Evaporator is available until 9/30/2018 • No tank farm evaporator is available after 10/1/2018 to support DST space management.	No
A4.3.2. Evaporator Operation		
• Training Volume • Average Evaporation Rate • Maximum Evaporation Rate • Bottoms Set Point (g/mL) • Feed Staging Duration • Yearly Evaporation of Waste • SST wastes evaporated	• 82 Kgal of water is evaporated to train personnel if the evaporator has not been operated for 11 months.[41] Each training run adds 50 Kgal of water to AW-102. • 500 Kgal/month[42] • The lesser of 50 gpm boil-off or 140 gpm feed • 1.44[43]. • 3 months minimum;[44] • Yes • Evaporate retrieved waste as needed to manage DST space until the WTP starts.	Yes
A4.3.3. Evaporator Process Chemistry		
Waste Volume Reduction	• Water is removed until the specific gravity set point is reached (as calculated by algorithms within the model). Recent issues with solids formation in the evaporator are handled as part of the historical transfer data. • The waste volume reduction factor can be calculated using the following equation: $WVR = \frac{(\rho_B - \rho_F)}{(\rho_B - 1)}$ Where: ρ_B = Evaporator set point (bottoms SpG) ρ_F = Specific gravity of evaporator feed	No

[41] The period between evaporator campaigns must be less than 12 months to maintain operator qualifications and avoid the need for a full readiness review. An eleven month period was chosen in the model to make sure training runs occurred within a 12 month period. About 50 Kgal of water is sent to AW-102 is from seal water (during the run) and emptying the evaporator vessel after the training run. This will be modeled as a 50 Kgal addition after each training run.

[42] This is an operational constraint to avoid over committing evaporator campaigns.

[43] This density is expected to be the average density selected for future evaporator campaigns – it is not an inherent limitation of the evaporator. The feed for each evaporator campaign will be evaluated, and a target density for specific for that feed will be determined considering the ability of the transfer system to maintain solids in suspension and the DSTs ability to stay within buoyant displacement gas release event (BDGRE) controls. In the future, a lower value may be used for waste containing high concentrations of phosphates.

[44] The evaporator feed may be sampled and staged in one or more DSTs, including AW-102, during the three-month period prior to being run through the evaporator.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
Process Condensate Composition	• The volume of process condensate will be 1.15 times the waste volume boiled off the feed to account for seal water and the vacuum system steam jets. • The composition of process condensate from the 242-A Evaporator will be estimated using the split factors calculated using the following equation: $$SF_i = \frac{1}{\left[1 + \frac{Kp_i}{21{,}579}\left(\frac{(1 - WVR)}{WVR}\right)\right]}$$ Where: SF_i = split factor for component i; the split factor is the mass or activity of component i in the process condensate to the mass or activity of i in the feed WVR = waste volume reduction factor Kp_i = 242-A evaporator partition coefficients from HNF-14755 and RPP-17239; in the case of tritium and water the Kp_i values are equal to the WVR because they partition equally with water. The partition coefficients are provided in Table A-9. 21,579 = a numerical factor accounting for the 15% volume increase and for the ratio of the volume of condensate as a vapor to the volume of condensate as a liquid.	Yes
Gaseous Effluent	The contributions of the waste to the gaseous effluent stream will be estimated by applying split factors (the reciprocal of decontamination factors) to the process condensate stream. The split factors are derived from decontamination factors that come from a condenser in the WTP evaporator model, which is based on the 242-A Evaporator. The split factors are reported in Table A-4.	Yes
A4.3.4. ETF and LERF		
• Effluent Treatment Facility	• ETF (nor the downstream facilities TEDF/SALDS) capacity does not constrain Tank Farm, supplemental treatment, or WTP operations. The processing rate may be varied at the discretion of the modeler.	Yes

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
• LERF Capacity	• The ETF will be modeled as a black-box. Overall partitioning of feed into solid waste and treated effluent will be approximated using overall removal efficiencies for the polisher.[45] The values used are reported in Table A-10. • The LERF will be modeled as two basins[46], each with a 7.8 Mgal volume, used to provide lag storage of liquid effluents from the 242-A Evaporator and the various treatment processes. One will be used to accumulate effluents while the other is used to feed the ETF.	
A4.4. Waste Feed Delivery		
A4.4.1. LAW Feed Delivery Plans		
LAW Feed Delivery Sequence and Envelope Designation[47,]	Source Tank (Envelope) AY-102 (containing concentrated AP-101; A/D) 1-3 tanks from AP-Farm (A) AN-104 (A) AN-102 (C) AN-105 (A) AN-107 (C) SY-101 (A) AN-103 (A) AW-101(A) Continue with liquid wastes made available from SST retrieval.	No
A4.4.2. LAW Feed Specifications		
	BNI contract Specification 7 will be used to assess envelope compliance.	No
A4.4.3. LAW Entrained Solids		
Entrained Solids Quantity	• 0.5 wt% solids are entrained in decanted supernatants. • Supernatant liquids from dissolving salts will entrain the same solids concentration as exists in the tank after dissolution up to a maximum of 2 wt%.	No
Entrained Solids Composition	Entrained solids have the same composition as the average composition of solids in the tank.	No

[45] Removal efficiencies reported in Table A-7 are taken from HNF-4573, *Liquid Effluent Retention Facility Basin 44 Process Test Post-Report*, Rev. 0A.

[46] Two of the three LEFR basins are allocated to support the waste treatment mission; the other basis is set aside for potential use with CERCLA waste.

[47] The LAW feed sequence may be modified to support accelerated SST retrieval or to improve the availability of feed for the WTP at the discretion of the modeler.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A4.4.4. HLW Feed Delivery Plans		
HLW Feed Delivery Sequence and Retrieval Efficiency[48]	Source Tank / Retrieval Efficiency AY-102 (AP-101)[49] 90% AZ-101 90% AZ-102 80% C-104/AY-101 100%/100% Continue with HLW solids made available from SST retrieval.	No
A4.4.5. HLW Feed Specifications		
	BNI contract Specification 8 will be used to assess envelope compliance.	No
A4.4.6. Feed Compliance Verification		
Compliance Verification Sampling	Allow 210 days to complete feed compliance verification starting from when each staging tank (DST) is first filled with feed.	No
A5.0. Project Delivery		
A5.1. Project Impacts on DST System Availability[50]		
AN-101-01A Pit work (W-314)	9/23/2004 – 4/7/2005	No
241-A-A Pit work outage (W-314)	9/23/2004 – 4/7/2005	No
AN Farm Outage (W-314)	9/23/2004 – 4/7/2005	No
AP Farm Outage (W-314)	9/23/2004 – 4/7/2005	No
Cross-site line outage connects cross-site to AN farm (W-314)	9/23/2004 – 4/7/2005	No
Cross-site to AP farm (W-211)	6/1/2004 – 11/1/2004	No
AW Farm Outage (W-314)	7/1/2004 – 11/1/2004	No
SY Farm Outage (W-314)	7/1/2004 – 11/1/2004	No
244-S Outage (W-314)	4/10/2003 – 8/1/2004 222-S direct routed to SY farm after 6/30/2005 PFP can no longer use 244-TX after 3/30/2005	No
AY Farm Electrical Upgrades to support C-104 retrieval	12/1/2005 – 12/1/2006	No
AZ Farm Electrical Upgrades	9/23/2004 – 12/31/2005	No

[48] The HLW feed sequence may be modified to support accelerated SST retrieval or to improve the availability of feed for the WTP at the discretion of the modeler.

[49] Consolidation of AP-101 waste into tank AY-102 introduces a risk that there will be insufficient space to receive aging waste farm ventilation condensates from 702-AZ. AY-102 solids are anticipated to be delivered with water for WTP Hot Commissioning feed.

[50] These dates are not considered hard constraints because of current efforts to re-plan field schedules. The modeling will be managed to use the latest available schedule data and still meet the completion date.

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A5.2. Feed Staging Tank Upgrades		
	• The necessary equipment will be available in time to support all planned waste transfers. • The DSTs will need a mixer pump, and, a decant/transfer pump (if solids entrainment is a concern) or a fixed intake transfer pump (if solids entrainment is not a problem). Solids retrieval equipment will be installed in AN-101 and AN-106 to move C-Farm solids into WTP waste feed staging tanks. • The following DSTs have been identified as requiring expense or capital project work before use as feed staging tanks; AN-101, AN-102, AN-103, AN-104, AN-105, AN-107, AP-101, AP-102, AP-104, AW-101, AY-101, AY-102, AZ-101, and AZ-102	No
A6.0. HTWOS Model or Data Analysis Assumptions		
A6.1. Estimating Waste Compositions		
	Wastes are homogenized when mixed.	No
A6.2. Water Content of Initial Inventory		
	The water content of initial inventory is determined by calculating a stream density and total stream mass (including water), the total stream mass excluding water, and then obtaining water content by difference.	No
A6.3. Volume of In-Process Streams		
	Volumes of waste streams are calculated from mass using density correlations for liquids and a solid density of 3 g/mL.	No
A6.4. Transuranic Content Accounting		
	TRU quantities for LAW and ILAW are based on Specification 2 and 7 definitions.	No
A6.5. Radionuclide Decay		
	• The BBI reference decay date of 1/1/2004 is used as the reference decay date in the model. • Radionuclides are decayed to the date of delivery for feed specification compliance assessment. • Half-life values for decay calculations are taken from the Chart of Nuclides, 15th Edition.	Yes

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case		**Involves Model Change That Needs to be Verified?**
A6.6. Waste Chemistry and Mass Balances		
	• Dissolution of solids is predicted by the application of water-wash factors from TWINS and by use of the Sr solubility model documented in RPP-21807. • Chemical charges are balanced when washing solids by the adjustment of bound OH^- and then by adjustment of CO_3^{2-}. • TOC (less oxalate) shall be treated as C. • HTWOS does not account for solids formation.	Yes
A6.7. ILAW Package Production		
	ILAW package production rates are based on the glass production rates, glass density, and package fill assumptions.	No
A6.8. IHLW Canister Production		
	IHLW canister production rates are based on the glass production rates, glass density, and package fill assumptions.	No
A6.9. Mission Summary Diagram		
Mission Summary Diagram • Schedule float • Transfer window	• Handled external to the model. When possible, allocate 6 months float on either side of feed compliance verification activities for the 1st batch of LAW and the 1st batch of HLW. All other schedule float and project strategy will be developed with guidance from Projects. • Two months	No

Table A-2. Assumptions Matrix. (30 Sheets)

Case name: Development Run for the Refined Target Case	**Involves Model Change That Needs to be Verified?**
Terms: BBI = Best Basis Inventory BNI = Bechtel National, Inc. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act of 1980 CH-TRU = Contact-handled TRU DST = Double-Shell Tank ETF = Effluent Treatment Facility FCL = Feed Control Limit FY = fiscal year HEPA = high-efficiency particulate air HLW = high-level waste IDF = Integrated Disposal Facility IHLW = immobilized high-level waste ILAW = immobilized low-activity waste IMUST = inactive miscellaneous underground storage tanks LAW = low-activity waste LERF = Liquid Effluent Retention Facility LLW = low-level waste ORP = U.S. Department of Energy, Office of River Protection PFP = Plutonium Finishing Plant PT = Pretreated PUREX = Plutonium-Uranium Extraction Plant RCRA = Resource Conservation and Recovery Act of 1976 RH-TRU = remote-handled TRU RL = U.S. Department of Energy, Richland Operations Office SALDS = State-Approved Land Disposal Site SBS = Submerged Bed Scrubber SST = Single-Shell Tank STP = Supplemental Treatment Plant SWB = Standard Waste Box TEDF = Treated Effluent Disposal Facility TFC = Tank Farm Contractor TOC = total organic carbon TOE = total operating efficiency TPA = Tri-Party Agreement (*Hanford Federal Facility Agreement and Consent Order*) (Ecology et al. 1996) TRU = transuranic TWINS = Tank Waste Information Network System WSCF = Waste Sampling and Characterization Facility WESF = Waste Encapsulation and Storage Facility WESP = wet electrostatic precipitator WIPP = Waste Isolation Pilot Plant (Carlsbad, New Mexico) WRF = Waste Retrieval Facility WTP = Waste Treatment and Immobilization Plant WVRF = waste volume reduction factor	

Table A-3. Transuranic Waste Dryer Retention Factors. (2 Sheets)

Analyte	Fraction Retained	Split Factor[2]	Analyte	Fraction Retained	Split Factor
^{106}Ru	99.999640%	3.600E-06	Cd^{+2}	99.899690%	1.003E-03
^{113m}Cd	99.899690%	1.003E-03	Ce^{+3}	99.999988%	1.250E-07
^{125}Sb	99.999988%	1.250E-07	Cl^{-}	99.806490%	1.935E-03
^{126}Sn	99.999988%	1.250E-07	CN^{-}	99.719600%	2.804E-03
^{129}I	26.214580%	7.379E-01	Co^{+3}	99.899700%	1.003E-03
^{134}Cs	100.000000%	0.000E+00	CO_3^{-2}	99.899700%	1.003E-03
^{137}Cs	100.000000%	0.000E+00	$Cr(OH)_4^{-}$	99.999988%	1.250E-07
^{137m}Ba	100.000000%	0.000E+00	Cr(TOTAL)	99.997130%	2.870E-05
^{14}C	99.899680%	1.003E-03	Cs^{+}	100.000000%	0.000E+00
^{151}Sm	99.999988%	1.250E-07	Cu^{+2}	99.892270%	1.077E-03
^{152}Eu	99.999988%	1.250E-07	F^{-}	99.994300%	5.700E-05
^{154}Eu	99.999988%	1.250E-07	Fe^{+3}	99.890000%	1.100E-03
^{155}Eu	99.999988%	1.250E-07	H_2O	Calculated[1]	Calculated[1]
^{226}Ra	99.999988%	1.250E-07	Hg^{+2}	99.899640%	1.004E-03
^{227}Ac	99.999988%	1.250E-07	K^{+}	99.971130%	2.887E-04
^{228}Ra	99.999988%	1.250E-07	La^{+3}	99.999988%	1.250E-07
^{229}Th	99.999988%	1.250E-07	Li+	99.999988%	1.250E-07
^{231}Pa	99.999988%	1.250E-07	Mg^{+2}	99.187720%	8.123E-03
^{232}Th	99.999988%	1.250E-07	Mn^{+4}	99.897470%	1.025E-03
^{232}U	99.899660%	1.003E-03	Mo^{+6}	99.899700%	1.003E-03
^{233}U	99.899660%	1.003E-03	Na^{+}	99.996610%	3.390E-05
^{234}U	99.899660%	1.003E-03	Nd^{+3}	99.999988%	1.250E-07
^{235}U	99.899660%	1.003E-03	NH_3	11.001890%	8.900E-01
^{236}U	99.899660%	1.003E-03	Ni^{+2}	99.899690%	1.003E-03
^{237}Np	99.899700%	1.003E-03	NO_2^{-}	99.958180%	4.182E-04
^{238}Pu	99.999970%	3.000E-07	NO_3^{-}	99.883090%	1.169E-03
^{238}U	99.899660%	1.003E-03	OH (Bound)	99.999988%	1.250E-07
^{239}Pu	99.999970%	3.000E-07	OH^{-}	99.899700%	1.003E-03
^{240}Pu	99.999970%	3.000E-07	Pb^{+2}	96.760970%	3.239E-02
^{241}Am	99.999930%	7.000E-07	Pd^{+2}	99.999988%	1.250E-07
^{241}Pu	99.999970%	3.000E-07	PO_4^{-3}	99.899700%	1.003E-03
^{242}Cm	99.899700%	1.003E-03	Pr^{+3}	99.999988%	1.250E-07
^{242}Pu	99.999970%	3.000E-07	Pu^{+4}	99.999970%	3.000E-07
^{243}Am	99.999930%	7.000E-07	Rb^{+}	99.999988%	1.250E-07
^{243}Cm	99.899700%	1.003E-03	Rh^{+3}	99.999988%	1.250E-07
^{244}Cm	99.899700%	1.003E-03	Ru^{+3}	99.999640%	3.600E-06
^{3}H	Calculated[1]	Calculated[1]	Sb^{+5}	99.999988%	1.250E-07

Table A-3. Transuranic Waste Dryer Retention Factors. (2 Sheets)

Analyte	Fraction Retained	Split Factor[2]	Analyte	Fraction Retained	Split Factor
^{59}Ni	99.899690%	1.003E-03	Se^{+6}	99.999988%	1.250E-07
^{60}Co	99.899700%	1.003E-03	Si^{+4}	99.840100%	1.599E-03
^{63}Ni	99.899690%	1.003E-03	SO_4^{-2}	99.911820%	8.818E-04
^{79}Se	99.899700%	1.003E-03	Sr^{+2}	99.999980%	2.000E-07
^{90}Sr	99.999980%	2.000E-07	Ta^{+5}	99.999988%	1.250E-07
^{90}Y	99.999980%	2.000E-07	Tc^{+7}	99.899700%	1.003E-03
^{93}Zr	99.999988%	1.250E-07	Te^{+6}	99.999988%	1.250E-07
^{93m}Nb	99.899700%	1.003E-03	Th^{+4}	99.999988%	1.250E-07
^{99}Tc	99.899700%	1.003E-03	Ti^{+4}	99.999988%	1.250E-07
Ag+	99.999988%	1.250E-07	Tl^{+3}	99.999988%	1.250E-07
$Al(OH)_4^-$	99.933110%	6.689E-04	TOC	97.130510%	2.869E-02
Al^{+3}	99.933110%	6.689E-04	U(TOTAL)	99.899690%	1.003E-03
As^{+5}	99.999988%	1.250E-07	V^{+5}	99.999988%	1.250E-07
B^{+3}	99.894770%	1.052E-03	W^{+6}	99.899700%	1.003E-03
Ba^{+2}	99.889560%	1.104E-03	Y^{+3}	99.999980%	2.000E-07
Be^{+2}	99.999988%	1.250E-07	Zn^{+2}	99.897910%	1.021E-03
Bi^{+3}	99.999988%	1.250E-07	Zr^{+4}	99.999988%	1.250E-07
Ca^{+2}	98.691590%	1.308E-02	NA	NA	NA

Notes:

1. Water and tritium retention in the dried solids and partitioning to the condensate is based on the water content of the dried solids with tritium partitioning in the same proportion as water.
2. $$SFi = \left(1 - \frac{RFi}{100}\right)$$

   Where,
   SFi = The split factor or component i,
   RFi = The dryer retention factor for component i expressed as a percent,
   i = Index for the component list,
   /100 = Converts the value from a percentage to a fraction

   NA = not applicable
   TOC = total organic carbon

Table A-4. Gaseous Effluent Split Factors for Generic Condenser. (2 Sheets)

Analyte	Split Factor	Analyte	Split Factor
^{106}Ru	No Value	Ba^{+2}	0.002016
^{113m}Cd	0.00154	Bi^{+3}	0.0000358
^{125}Sb	0.0000358	$C_2O_{4-}{}^{2}$	1.53E-06
^{126}Sn	0.0000358	Ca^{+2}	0.05814
^{129}I	0.0011	Cd^{+2}	0.00154
^{134}Cs	0.0000427	Ce^{+3}	0.00154
^{137}Cs	0.0000427	Cl^{-}	0.0001299
^{137m}Ba	0.002	Co^{+3}	0.00154
^{14}C	0.00154	$CO_3{}^{-2}$	0.00154
^{151}Sm	0.00032	$Cr(OH)_4{}^{-}$	0.000188
^{152}Eu	0.00032	Cr(TOTAL)	0.000188
^{154}Eu	0.00032	Cs^{+}	0.0000427
^{155}Eu	0.00032	Cu^{+2}	0.000188
^{229}Th	0.00154	F^{-}	0.00053
^{232}Th	0.00154	Fe^{+3}	0.002
^{232}U	0.00154	H^{+}	0.01
^{233}U	0.00154	Hg^{+2}	0.00154
^{234}U	0.00154	K^{+}	0.00157
^{235}U	0.00154	La^{+3}	0.00154
^{236}U	0.00154	Li^{+}	0.0016
^{237}Np	0.00154	Mg^{+2}	0.035
^{238}Pu	0.00032	Mn^{+4}	0.001642
^{238}U	0.00154	Mo^{+6}	0.001642
^{239}Pu	0.00032	Na^{+}	0.0016
^{240}Pu	0.00032	NH_3	0.0806
^{241}Am	0.00032	Ni^{+2}	0.00154
^{241}Pu	0.00032	$NO_2{}^{-}$	0.0000962
^{242}Cm	0.00154	$NO_3{}^{-}$	0.0000962
^{242}Pu	0.00032	OH (Bound)	0.00154
^{243}Am	0.00032	OH^{-}	0.00154
^{243}Cm	0.00154	Pb^{+2}	0.0000358
^{244}Cm	0.00154	Pd^{+2}	0.00154
^{3}H	0.014	$PO4^{-3}$	0.00154
^{59}Ni	0.00154	Pu^{+4}	0.00032
^{60}Co	0.00154	Sb^{+5}	0.0000358
^{63}Ni	0.00154	Si^{+4}	0.00435
^{90}Sr	0.0000855	$SO_4{}^{-2}$	0.0002375

Table A-4. Gaseous Effluent Split Factors for Generic Condenser. (2 Sheets)

Analyte	Split Factor	Analyte	Split Factor
^{93}Zr	0.002	Sr^{+2}	0.0000855
^{99}Tc	0.00154	Tc^{+7}	0.00154
Ag^{+}	0.00188	Th^{+4}	0.00154
$Al(OH)_4^{-}$	0.00154	Ti^{+4}	0.002
Al^{+3}	0.00154	U(TOTAL)	0.00154
As^{+5}	0.00154	Zn^{+2}	0.001621
B^{+3}	0.00177	Zr+4	0.002

Table A-5. Selective Dissolution Separation Assumptions.

Specie	Percentage of Tank Waste Low Curie Feed to Bulk Vitrification	Percentage of Waste Feed to Waste Treatment Plant
Chemical		
Aluminum (Al)	40	60
Calcium (Ca)	100	0
Chromate (CrO_4)	45	55
Potassium (K)	80	20
Sodium (Na)	70	30
Nitrate (NO_3)	65	35
Nitrite (NO_2)	40	60
Hydroxide (OH)	40	60
Chloride (Cl)	40	60
Fluoride (F)	100	0
Phosphate (PO_4)	75	25
Sulfate (SO_4)	90	10
Total Inorganic Carbon (TIC)	85	15
Total Organic Carbon (TOC)	90	10
Radionuclide		
^{90}Sr (soluble)[2]	100	0
^{99}Tc	40	60
^{129}I	40	60
^{137}Cs [1]	20 to 40	80 to 60
^{241}Am (soluble)[2]	100	0
Pu (soluble)[2]	100	0

Table A-6. Single-Shell Tank Retrieval Pool Tank List.

A-102	C-108	SX-108
A-106	C-109	SX-110
AX-101	C-110	SX-115
AX-102	C-111	T-104
AX-103	C-112	T-110
AX-104	C-201	T-111
B-201	C-202	T-112
B-202	C-203	T-201
B-203	C-204	T-202
B-204	S-102	T-203
C-101	S-103	T-204
C-102	S-105	U-112
C-103	S-107	U-201
C-104	S-112	U-202
C-105	SX-101	U-203
C-106	SX-105	U-204
C-107	SX-106	-

Table A-7. Single-Shell Tank Retrieval Modeling Assumptions. (2 Sheets)

Order in Sequence[1,2]	Single-Shell Tank	Target Destination	Estimated Volume After Retrieval (Kgal)[3]	Estimated Retrieval Duration (days)
1	C-106	AN-106	485	134
2	S-112	SY-101	2,000	294
3	C-203	AN-106	37	12
4	C-202	AN-106	12	4
5	S-102	SY-102	1,500	184
6	C-201	AN-106	12	4
7	C-204	AN-106	24	8
	S-109[4]	SY-102/ Supp Demo	100/ 592	7/ TBD
8	U-201	SY-102	40	5
9	U-202	SY-102	40	5
10	U-203	SY-102	40	5
11	U-204	SY-102	30	4
12	C-103	AN-106	230	38
13	C-102	AN-101	445	164
14	C-105	AN-106	276	38
15	B-201	TRU	[30]	10
16	B-202	TRU	[29]	10
17	B-203	TRU	[51]	17
18	B-204	TRU	[50]	17
19	T-201	TRU	[31]	10
20	C-109	AN-106	280	34
21	T-202	TRU	[21]	7
22	T-203	TRU	[37]	12
23	C-101	AN-101	332	56
24	C-112	AN-106	316	55
25	T-204	TRU	[37]	12

Table A-7. Single-Shell Tank Retrieval Modeling Assumptions. (2 Sheets)

Order in Sequence[1,2]	Single-Shell Tank	Target Destination	Estimated Volume After Retrieval (Kgal)[3]	Estimated Retrieval Duration (days)
26	T-110	TRU	[370]	128
27	C-110	AY-101	374	40
28	C-107	AN-106	420	32
29	C-104	AY-101	1,700	134
30	C-111	AN-101	229	42
31	T-111	TRU	[447]	155
32	C-108	AN-106	279	35
33	U-112	SY-102	555	47
34	SX-115	SY-102	35	7
35	SX-108	SY-102	178	26
36	A-102	AN-101	68	6
37	A-106	AN-101	384	26
38	T-104	TRU	[441]	153
39	SX-110	SY-102	478	25
40	AX-102	AN-101	53	4
41	AX-104	AN-101	97	2
42	AX-103	AN-101	235	14
43	AX-101	AN-101	999	125
44	SX-106	SY-102	979	131
45	SX-105	TBD	984	13
46	SX-101	TBD	1,170	16
47	S-103	TBD	1,300	97
48	S-105	TBD	2,200	239
49	S-107	TBD	2,963	70
50	T-112	TBD	67	23

Notes:

1. Retrieval of waste from tank C-106 has been completed.
2. Sequence numbering applied to SST retrieval pool tanks.
3. Volumes given are net impact to the DST system. The waste in the C-Farm SSTs and tank S-102 will be retrieved using recirculation involving larger volumes. Volumes in brackets [ ] represent CH-TRU waste that is retrieved directly to the Supplemental TRU Sludge Treatment System without impact to DST tank space.
4. Tank S-109 is not in the single-shell tank retrieval pool but some waste is being retrieved from tank S-109 to demonstrate supplementary low-activity waste treatment technologies to support other RRP mission requirements. The impact of the S-109 retrieval to the DST system was modeled as 100 Kgal with the bulk of the as-retrieved volume being fed to a supplemental treatment process.

TBD = to be determined

Table A-8. Maximum DST Fill Levels.

DSTs	Current Fill Height Limit (inches)	New Fill Height Limit (inches)	Level Increase (Date)	Current Fill Volume[1] (Kgal)	New Fill Volume[1, 2] (Kgal)
AP-101	416	449	11/1/04	1,144	1,235
AP-102	416	449	11/1/04	1,144	1,235
AP-103	416	449	11/1/04	1,144	1,235
AP-104	416	449	11/1/04	1,144	1,235
AP-105	416	449	11/1/04	1,144	1,235
AP-106	416	449	11/1/04	1,144	1,235
AP-107	416	449	11/1/04	1,144	1,235
AP-108	416	449	11/1/04	1,144	1,235
SY-101	416	416	NA	1,144	1,144
SY-102	421	421	NA	1,158	1,158
SY-103	416	416	NA	1,144	1,144
AN-101	416	416	NA	1,144	1,144
AN-102	416	416	NA	1,144	1,144
AN-106	416	416	NA	1,144	1,144
AN-107	416	416	NA	1,144	1,144
AN-103	416	416	NA	1,144	1,144
AN-104	416	416	NA	1,144	1,144
AN-105	416	416	NA	1,144	1,144
AW-105	416	416	NA	1,144	1,144
AW-106	416	416	NA	1,144	1,144
AW-101	416	416	NA	1,144	1,144
AW-102	409	409	NA	1,125	1,125
AW-103	416	416	NA	1,144	1,144
AW-104	416	416	NA	1,144	1,144
AY-101	364	364	NA	1,001	1,001
AY-102	364	364	NA	1,001	1,001
AZ-101	364	364	NA	1,001	1,001
AZ-102	364	364	NA	1,001	1,001
-	-	-	**Total**	31,455	32,183

Notes:

1. Fill volumes are calculated from fill heights and are rounded to the nearest 1,000 gallons
2. Existing space and new available space from increasing levels in some DSTs may not be used immediately because of other constraints, such as safety basis constraints, for example.

Table A-9. Partition Coefficients for the 242-A Evaporator. (3 Sheets)

Component Name	Partition Coefficient[1]	Reference
^{106}Ru	6.70E+07	HNF-14755, Rev. 0
^{113m}Cd	1.00E+07	RPP-17239, Rev. 0
^{125}Sb	1.00E+07	HNF-14755, Rev. 0
^{126}Sn	1.00E+07	HNF-14755, Rev. 0
^{129}I	4.00E+08	RPP-17239, Rev. 0
^{134}Cs	1.00E+07	RPP-17239, Rev. 0
^{137}Cs	9.30E+11	RPP-17239, Rev. 0
^{137m}Ba	1.00E+07	RPP-17239, Rev. 0
^{14}C	1.00E+07	HNF-14755, Rev. 0
^{151}Sm	1.00E+07	HNF-14755, Rev. 0
^{152}Eu	1.00E+07	RPP-17239, Rev. 0
^{154}Eu	1.00E+07	RPP-17239, Rev. 0
^{155}Eu	1.00E+07	HNF-14755, Rev. 0
^{226}Ra	1.00E+07	HNF-14755, Rev. 0
^{227}Ac	1.00E+07	RPP-17239, Rev. 0
^{228}Ra	1.00E+07	RPP-17239, Rev. 0
^{229}Th	1.00E+07	RPP-17239, Rev. 0
^{231}Pa	1.00E+07	RPP-17239, Rev. 0
^{232}Th	1.00E+07	RPP-17239, Rev. 0
^{232}U	1.00E+07	RPP-17239, Rev. 0
^{233}U	1.00E+07	HNF-14755, Rev. 0
^{234}U	1.00E+07	HNF-14755, Rev. 0
^{235}U	1.00E+07	HNF-14755, Rev. 0
^{236}U	1.00E+07	RPP-17239, Rev. 0
^{237}Np	3.70E+10	RPP-17239, Rev. 0
^{238}Pu	3.70E+10	HNF-14755, Rev. 0
^{238}U	1.00E+07	HNF-14755, Rev. 0
^{239}Pu	3.70E+10	HNF-14755, Rev. 0
^{240}Pu	1.00E+07	HNF-14755, Rev. 0
^{241}Am	1.40E+10	HNF-14755, Rev. 0
^{241}Pu	1.00E+07	HNF-14755, Rev. 0
^{242}Cm	1.00E+07	RPP-17239, Rev. 0
^{242}Pu	1.00E+07	RPP-17239, Rev. 0
^{243}Am	1.40E+10	HNF-14755, Rev. 0
^{243}Cm	1.00E+07	RPP-17239, Rev. 0
^{244}Cm	1.00E+07	HNF-14755, Rev. 0
^{3}H	=WVR[2]	RPP-17239, Rev. 0
^{59}Ni	1.00E+07	RPP-17239, Rev. 0
^{60}Co	7.00E+10	RPP-17239, Rev. 0
^{63}Ni	1.00E+07	HNF-14755, Rev. 0
^{79}Se	1.00E+07	HNF-14755, Rev. 0
^{90}Sr	2.30E+09	RPP-17239, Rev. 0
^{90}Y	1.00E+07	RPP-17239, Rev. 0
^{93}Zr	1.00E+07	HNF-14755, Rev. 0
^{93m}Nb	1.00E+07	RPP-17239, Rev. 0
^{99}Tc	1.10E+11	RPP-17239, Rev. 0
Ag^{+}	1.00E+07	HNF-14755, Rev. 0
$Al(OH)_{4-}$	1.00E+07	RPP-17239, Rev. 0
Al^{+3}	1.50E+07	HNF-14755, Rev. 0
As^{+5}	1.00E+07	HNF-14755, Rev. 0

Table A-9. Partition Coefficients for the 242-A Evaporator. (3 Sheets)

Component Name	Partition Coefficient[1]	Reference
B^{+3}	1.00E+07	HNF-14755, Rev. 0
Ba^{+2}	1.00E+07	HNF-14755, Rev. 0
Be^{+2}	1.00E+07	HNF-14755, Rev. 0
Bi^{+3}	1.00E+07	HNF-14755, Rev. 0
Ca^{+2}	1.00E+07	HNF-14755, Rev. 0
Cd^{+2}	1.00E+07	HNF-14755, Rev. 0
Ce^{+3}	1.00E+07	RPP-17239, Rev. 0
Cl^{-}	5.20E+06	HNF-14755, Rev. 0
CN^{-}	1.00E+07	HNF-14755, Rev. 0
Co^{+3}	1.00E+07	RPP-17239, Rev. 0
CO_3^{-2}	1.00E+07	HNF-14755, Rev. 0
$Cr(OH)_4^{-}$	1.00E+07	RPP-17239, Rev. 0
Cr(TOTAL)	3.50E+08	HNF-14755, Rev. 0
Cs+	1.00E+07	RPP-17239, Rev. 0
Cu^{+2}	1.00E+07	RPP-17239, Rev. 0
F^{-}	2.40E+08	HNF-14755, Rev. 0
Fe^{+3}	1.00E+07	HNF-14755, Rev. 0
H^{+}	=WVR[2]	RPP-17239, Rev. 0
H_2O	=WVR[2]	RPP-17239, Rev. 0
Hg^{+2}	1.00E+07	HNF-14755, Rev. 0
K^{+}	3.50E+07	HNF-14755, Rev. 0
La+3	1.00E+07	RPP-17239, Rev. 0
Li^{+}	1.00E+07	RPP-17239, Rev. 0
Mg^{+2}	1.00E+07	HNF-14755, Rev. 0
Mn^{+4}	1.00E+07	HNF-14755, Rev. 0
MnO_2	1.00E+07	RPP-17239, Rev. 0
MnO_4^{-}	1.00E+07	RPP-17239, Rev. 0
Mo^{+6}	1.00E+07	HNF-14755, Rev. 0
Na^{+}	3.00E+08	HNF-14755, Rev. 0
Nd^{+3}	1.00E+07	RPP-17239, Rev. 0
NH_3	1.10E+03	HNF-14755, Rev. 0
Ni^{+2}	1.00E+07	HNF-14755, Rev. 0
NO_2^{-}	2.40E+07	HNF-14755, Rev. 0
NO_3^{-}	5.70E+06	HNF-14755, Rev. 0
OH^{-}	1.00E+07	HNF-14755, Rev. 0
Pb^{+2}	3.00E+05	HNF-14755, Rev. 0
Pd^{+2}	1.00E+07	RPP-17239, Rev. 0
PO_4^{-3}	1.00E+07	HNF-14755, Rev. 0
Pr^{+3}	1.00E+07	RPP-17239, Rev. 0
Pu^{+4}	1.00E+07	RPP-17239, Rev. 0
Rb^{+}	1.00E+07	RPP-17239, Rev. 0
Rh^{+3}	1.00E+07	RPP-17239, Rev. 0
Ru^{+3}	1.00E+07	RPP-17239, Rev. 0
Sb^{+5}	1.00E+07	HNF-14755, Rev. 0
Se^{+6}	1.00E+07	HNF-14755, Rev. 0
Si^{+4}	1.00E+07	HNF-14755, Rev. 0
SO_4^{-2}	1.40E+07	HNF-14755, Rev. 0
Sr^{+2}	1.00E+07	RPP-17239, Rev. 0
Ta^{+5}	1.00E+07	RPP-17239, Rev. 0
Tc^{+7}	1.00E+07	RPP-17239, Rev. 0
Te^{+6}	1.00E+07	RPP-17239, Rev. 0

Table A-9. Partition Coefficients for the 242-A Evaporator. (3 Sheets)

Component Name	Partition Coefficient[1]	Reference
Th^{+4}	1.00E+07	RPP-17239, Rev. 0
Ti^{+4}	1.00E+07	HNF-14755, Rev. 0
Tl^{+3}	1.00E+07	RPP-17239, Rev. 0
TOC	1.00E+07	RPP-17239, Rev. 0
U(TOTAL)	1.00E+07	HNF-14755, Rev. 0
V^{+5}	1.00E+07	HNF-14755, Rev. 0
W^{+6}	1.00E+07	RPP-17239, Rev. 0
Y^{+3}	1.00E+07	RPP-17239, Rev. 0
Zn^{+2}	1.00E+07	HNF-14755, Rev. 0
Zr^{+4}	1.00E+07	HNF-14755, Rev. 0

Notes;

1. The partition coefficient represents the vapor-liquid equilibrium behavior of a component, and is defined as the ratio of the concentration of a component in the concentrated bottoms to the concentration of that same component in the vapor.
2. The entry "=WVR" means "equals the waste volume reduction factor." The use of "=WVR" indicates that the affected component is split in the same proportions as water.

Table A-10. Liquid Effluent Retention Facility Powder Split Factors. (2 Sheets)

Analyte	Split Factor	Analyte	Split Factor
^{106}Ru	0.99999	Be^{+3}	0.999
^{113m}Cd	0.99999	Bi^{+3}	0.999
^{125}Sb	0.99999	$C_2O_4^{-2}$	0.999
^{126}Sn	0.99999	Ca^{+2}	0.999
^{129}I	0.99999	Cd^{+2}	0.999
^{134}Cs	0.99999	Ce^{+3}	0.999
^{137}Cs	0.99999	Cl^{-}	0.999
^{137m}Ba	0.99999	Co^{+3}	0.999
^{14}C	0.99999	CO_3^{-2}	0.999
^{151}Sm	0.99999	$Cr(OH)_4^{-}$	0.999
^{152}Eu	0.99999	Cr(TOTAL)	0.999
^{154}Eu	0.99999	Cs^{+}	0.999
^{155}Eu	0.99999	Cu^{+2}	0.999
^{226}Ra	0.99999	F^{-}	0.999
^{227}Ac	0.99999	Fe^{+3}	0.999
^{228}Ra	0.99999	Hg^{+2}	0.999
^{231}Pa	0.999	K^{+}	0.999
^{229}Th	0.999	La^{+3}	0.999
^{232}Th	0.999	Li^{+}	0.999
^{232}U	0.999	Mg^{+2}	0.999
^{233}U	0.999	Mn^{+4}	0.999
^{234}U	0.999	Mo^{+6}	0.999
^{235}U	0.999	Na^{+}	0.999

Table A-10. Liquid Effluent Retention Facility Powder Split Factors. (2 Sheets)

Analyte	Split Factor	Analyte	Split Factor
^{236}U	0.999	Nd^{+3}	0.999
^{237}Np	0.999	NH_3	0.999
^{238}Pu	0.999	Ni^{+2}	0.999
^{238}U	0.999	NO_2^-	0.999
^{239}Pu	0.999	NO_3^-	0.999
^{240}Pu	0.999	OH (Bound)	0.999
^{241}Am	0.999	OH^-	0.999
^{241}Pu	0.999	Pb^{+2}	0.999
^{242}Cm	0.999	Pd^{+2}	0.999
^{242}Pu	0.999	PO_4^{-3}	0.999
^{243}Am	0.999	Pu^{+4}	0.999
^{243}Cm	0.999	Rb^+	0.999
^{244}Cm	0.999	Rh^{+3}	0.999
^{3}H	0.00	Ru^{+3}	0.999
^{59}Ni	0.999	Sb^{+5}	0.999
^{60}Co	0.99999	Se^{+6}	0.999
^{63}Ni	0.99999	Si^{+4}	0.999
^{79}Se	0.99999	SO_4^{-2}	0.999
^{90}Sr	0.999999	Sr^{+2}	0.999
^{90}Y	0.999999	Ta^{+5}	0.999
^{93}Zr	0.99999	Tc^{+7}	0.999
^{93m}Nb	0.999999	Te^{+6}	0.999
^{99}Tc	0.99999	Th^{+4}	0.999
Ag^+	0.999	Ti^{+4}	0.999
$Al(OH)_4^-$	0.999	Tl^{+3}	0.999
Al^{+3}	0.999	TOC	0.930
As^{+5}	0.999	U(TOTAL)	0.999
B^{+3}	0.999	Zn^{+2}	0.999
Ba^{+2}	0.999	Zr^{+4}	0.999

Note: Split factor values are based on Polisher removal efficiencies taken from HNF-4573, *Liquid Effluent Retention Facility Basin 44 Process Test Post-Report*, Rev. 0A.

A1.2 DEVIATION FROM SUCCESS CRITERIA AND KEY-ENABLING ASSUMPTIONS

Text of Item: The assumptions listed in Table A-2 did not always implement the preliminary Success Criteria and Key Assumptions (approved on September 14, 2004) for Revision 3 of the System Plan (ORP-11242). These deviations were necessary to correct typographical errors or inconsistencies, clarify or update assumptions, or to simplify certain assumptions to work with current HTWOS model code. The deviations are described in Table A-11.

A1.3 EXCEPTIONS TO ASSUMPTIONS

Text of Item: Several of the assumptions listed in Table A-2 were not implemented in the HTWOS model for various reasons. The deviations from the assumptions in Table A-2 are given in Table A-12. The listed deviations were evaluated to have a minor impact on predicting the contents of the primary and secondary streams for the whole RPP mission. Additional detail about specific deviations may be found in Appendix B in the HTWOS Model Modification form for the particular assumption.

Table A-11. Deviations from Success Criteria and Key Enabling Assumptions.

Item Number from Appendix E	Deviation
E3.1.2.6	Additional feed controls have been relaxed to enable other assumptions to be implemented (for example, staging of remote-handled TRU waste from SSTs though SY-102).
E3.1.4.8	Releases to the gaseous effluent from the 242-A Evaporator will be estimated using split factors based on condenser decontamination factors taken from the BNI evaporator models rather than using the release factors in Table D-6 of RPP-17239. The condenser decontamination factors were taken from the 242-A Evaporator Safety Analysis Report (SAR) (HNF-14755) and can be applied in the current model logic. The release factors in RPP-17239 are used to evaluate the compliance of proposed operations with permit limits and are applied to the evaporator feed, which requires additional programming of the model.
E3.2.1.9	The split factors for estimating the amount of I-129 retained in the WTP LAW and HLW glass product will be changed so that 20% of ^{129}I in the melter feed is retained in the glass. This change was requested by the Configuration Management Group and is documented in their meeting minutes of December 7, 2004.
E3.2.1.10	The content of failed LAW melters is assumed to be the contents of the melter at the time of failure. The HTWOS model allows the glass volume to float from 6,891 gallons to 7,236 gallons, based on the parameters for LAW melter operation. The Key Enabling Assumption value is 6,900 gallons.
E3.2.1.11	The content of failed HLW melters is assumed to be the contents of the melter at the time of failure. The HTWOS model allows the glass volume to float from 1,760 gallons to 1,800 gallons, based on the parameters for HLW melter operation and end-of-life pool volume. The Key Enabling Assumption value is 1,800 gallons which accounts for loss of refractory due to corrosion.
E3.2.2.9	The overall reaction stoichiometry was adjusted to match the HTWOS analyte list, which does not include CrO_4^-.
E3.2.2.11	Approximately 300 gallons of spent cesium ion exchange resin are generated for every 300,000 gallons of supernate treated rather than every 1,200,000 gallons (mistake in System Plan assumptions).
E3.2.3.3	The upper limit of the HLW vitrification capacity was raised from 5.5 to 6 MTG/d.
E3.3.1.3	The STP was modeled in more detail than "a simple black-box approach" to improve the fidelity of the model. In addition, the split factors used for the STP dryer were updated to match those used by the WTP evaporators until such time as the Bulk Vitrification flowsheets have been updated. See footnote 32 for more details.
E3.3.3.7	HTWOS modeled the TRU Packaging Feed Receipt Process System (FRPS), in greater detail, as 4 tanks each having a total volume of 8,000 gallons and a working volume of 7,200 gallons for a total working volume of 28,800 gallons, rather than one tank with a 28,800 gallon working volume.
E3.3.3.8	The gaseous release from the FRPS is not modeled (code not implemented). Gaseous releases from the process are modeled by applying split factors to the condensate stream. Split factors used are the same factors as those used for the 242-A Evaporator condenser (See Table A-4).
E3.4.1.2	The LERF has been modeled, in greater detail, as two basins, each with a 7.8 Mgal volume, rather than one basin with a lumped volume of 15.6 Mgal.
E3.5.6	TOC will be treated as carbon in the WTP since more detailed speciation assumptions are not available. HTWOS is already set up to handle TOC as C rather than oxalate.

Table A-12. Deviations from Approved Assumptions. (2 Sheets)

Item	Deviation
HTWOS case used as starting point for modeling.	The current Case Description shows that Case BCR-04-001, which traces to the Tank Farm Contractor Operation and Utilization Plan case, was used instead of the TPA M-45-04-01 Change Request Case. Use of a different case as a starting point for modeling was compensated by incorporating near-term single-shell tank retrieval plans from the "TPA-M-45-04-01 Change Request" Case. Additional updates were made to the retrieval schedule and to projected retrieved waste volumes based on recently observed retrieval system performance. These additional changes were considered acceptable to achieve an equivalent starting point for modeling and appropriate given the time delay that occurred in completing the modeling.
WTP Key Features Modeled	The WTP Pretreatment Facility off-gas cleanup is not modeled in detail. This system was not identified as a key feature of the WTP needing to be modeled. If it were modeled, there would be a decrease in the activity discharged to the stack from Pretreatment with a comparable increase in the activity discharged to the LERF/ETF. The increase in total activity going to the LERF/ETF would be about 1.4% at most.
Technical Basis for Modeling the WTP	Some incorrect or rounded split factor values were used instead of the values provided in the source documents. The two main impacts were due to incorrect values and are discussed below: • Incorrectly accumulating about 8.6 Ci of ^{129}I on the LAW VOC beds rather than correctly being routed to the LERF/ETF. • Incorrectly releasing 0.71 Ci of ^{99}Tc out the HLW stack instead of retaining it on the HLW VOC beds. The other impacts due to using rounded values were evaluated to be minor.
WTP LAW Pretreatment Capacity	A 20.2 gallon per minute permeate rate was used to govern the processing rate instead of the 2,950 MT Na per year specified in the assumptions. This was done with the agreement of P. J. Certa to better match the process details modeled. The annual masses of sodium processed through LAW pretreatment in calendar years 2011 through 2028 ranged from about 1,400 to just over 3,500 MT per year, and averaged about 2,300 MT per year. The increased processing rates were needed to complete processing of all waste by the middle of calendar year 2029.
^{60}Co and ^{137}Cs Loading on Spent Ion Exchange Resin	The calculated loading values for ^{60}Co and ^{137}Cs indicated that the loading parameter values for those two radionuclides were set too low by a factor of 1,000 compared to the stated assumption values. The total ^{60}Co and ^{137}Cs loading on the spent ion exchange resin reported in Appendix C is understated by about 8 Ci and about 24,700 Ci, respectively.
ILAW Mass per package	The stated assumption value was not implemented because the former assumption value of 6 MT ILAW per package was inadvertently retained during the coding of the detail for the WTP processes. The correct total number of ILAW packages is reported in the main body of this document. Subsequent users of the ILAW production data in the file "htwos-law-canister-logger-history.his" will need to multiply the ILAW package count by a factor of 6 divided by 5.92 to obtain the correct package count.

Table A-12. Deviations from Approved Assumptions. (2 Sheets)

Item	Deviation
TRU Waste Delivery and Processing	The contact-handled TRU wastes are delivered at a rate slightly higher than that assumed for the packaging process to avoid having retrieval constrain the packaging rate. The remote-handled TRU waste packaging capacity is based on the capacity of a dryer rather than on a daily volume of undiluted tank waste to match the details of the packaging process.
Low-Curie Waste Staging to Supplemental LAW Treatment	Tank SY-102 was used to stage West Area low-curie waste to the East Area rather than tank SY-101 as stated in the assumptions.
Bulk Vitrification Liquid Effluent	Too much NH_3, NO_2, and NO_3 were reported as going to the liquid effluent stream because the melter reactions for these constituents were not implemented.
Historical Transfer Data	A later cut-off date for historical transfers was used because of delays in completing the modeling.
DST Usage	An additional tank (AP-107) was used in March 2015 to stage LAW feed to the WTP beyond those listed in the assumptions.
Feed Controls	Supernate in tank AP-101 was concentrated before being added to tank AY-102.
DST Space Options	The DST levels were raised on 24 tanks rather than on only eight tanks as stated in the assumptions. This did not affect the near-term DST usage because the near-term transfers were based upon another model run that was constrained by the correct DST level assumptions, and would not have significantly impacted the total quantities projected for the various streams beyond the uncertainty associated with the input inventory data.
DST Waste Residuals	The model reported a residual volume of about 9,300 gallons for tank SY-101. This occurred because there was no logic to stop new waste additions from 222-S laboratory at the end of the River Protection Project mission. The waste is mostly dilute and doesn't represent a significant inventory.
Evaporator Operation	Two training runs for the 242-A evaporator are missing a total of 62 Kgal of impact to tank AW-102 in September 2014 and January 2018. This was not considered to be an issue because sufficient DST space is available in those periods.
Compliance Verification Sampling	The 210-day constraint on compliance verification sampling was reduced to 90 days for the staged HLW feed HLW feed in an attempt to reduce HLW melter outages and complete processing of all wastes by December 31, 2028. Relaxing this constraint does not impact the use of the results from this run as input to a performance assessment and was only intended as an interim measure until more attention could be given to determine what was delaying the retrieval and staging of HLW solids for delivery to the WTP.

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APPENDIX B

ASSUMPTION VALIDATION

APPENDIX B

ASSUMPTION VALIDATION

Appendix B contains the completed Hanford Tank Waste Operations Simulator (HTWOS) Model Modification Record forms along with any necessary supporting data. These forms were prepared in accordance with "HTWOS Model Assumption Validation" (TFC-ENG-CHEM-D-39) to verify that the approved assumptions were incorporated into the model. Any assumptions not incorporated are identified as deviations in the "Result of Checking Modification" section of the form and are summarized in Appendix A Table A-12.

The CH2M HILL Hanford Group, Inc. personnel who changed the model to incorporate the assumptions or who verified the model changes are listed below. Their signatures are recorded below and apply to all of the forms documented on pages B-3 through B-33.

Modelers Names

G. K. Allen Date: 15 Apr 05

R. S. Wittman Date: 4/15/05

Verifier Name

R. A. Kirkbride Date: 4/15/05

HTWOS Model Modification Form

Modification Title: Use "TPA M-45-04-01 Change Request" Case as starting point.
Description of Modification: Revise model assumptions (from the "TPA M-45-04-01 Change Request" case documented in RPP-21217, *Hanford Tank Waste Operations Simulator Model Data Package for the Tri-Party Agreement M-45-04-01 Change Request Case*, Rev. 0)
Method Used to Check Modification: Check case name in Current Case Description within model and compare selected near-term single-shell tank retrievals to single-shell tank retrieval sequence reported in subject document.
Result of Checking Modification: The current Case Description shows that Case BCR-04-001, which traces to the Tank Farm Contractor Operation and Utilization Plan case, was used instead of the TPA M-45-04-01 Change Request Case. The case was revised to match the TPA M-45-04-01 Change Request Case by incorporating near-term single-shell tank retrieval plans from the "TPA-M-45-04-01 Change Request" Case. Additional updates were made to the retrieval schedule and to projected retrieved waste volumes based on recently observed retrieval system performance. These changes were considered acceptable to achieve an equivalent starting point for modeling and appropriate given the time delay that occurred in completing the modeling. One discrepancy was observed in that about 200 Kgal of water was missing from the retrieved waste volume for tank S-112. A rerun with the volume included showed that the discrepancy did not adversely impact DST usage (because sufficient space is available) or the projected waste streams (because the total waste inventory was retrieved from the tank).
Modeler Name: G. K. Allen **Verifier Name:** R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Key features for modeling

Description of Modification: Key features of the WTP that will be modeled for purposes of mission planning and estimation of secondary waste streams include:

- LAW Feed Receipt Tanks (simplified – 1.5 Mgal lumped capacity)
- HLW Feed Receipt Tank
- Front End Evaporator (simplified – no feed tanks)
- Ultrafilter System (with modified [OH-] endpoint and oxidative leach)
- Pretreated HLW Lag Storage and Blend Tanks (simplified – 81 Kgal lumped capacity)
- Cesium Ion-Exchange (as a black-box)
- Back End Evaporator / Pretreated LAW Storage (simplified and product routing modified to interface with STP)
- HLW Melter Feed Preparation (simplified)
- HLW Melter (model total capacity, not individual melters)
- LAW Melter Feed Preparation (simplified)
- LAW Melter (model total capacity, not individual melters)
- Off-gas treatment systems (added NH_4^+ for proper stoichiometry).
- Recycle of LAW SBS and WESP Condensate to back-end evaporator feed tank.
- Recycle of HLW SBS and WESP to front-end evaporator feed tank.
- Transfer of LAW Caustic Scrubber solution to LERF via WTP PT facility.

Method Used to Check Modification: Reviewed HTWOS depiction of process objects against process schematics in source documents and the key features in the assumption.

Result of Checking Modification: The HTWOS depiction matched the key features of the processes described in the source documents, except that the WTP Pretreatment Facility off-gas cleanup unit operations are not modeled. This system was not identified as a key feature of the WTP needing to be modeled. If it were modeled, there would be a decrease in the activity discharged to the stack from Pretreatment with a comparable increase in the activity discharged to the LERF/ETF. The increase in total activity going to the LERF/ETF would be about 1.4% at most.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Technical Basis for Modeling

Description of Modification: The basis for modeled chemical reactions, extents and split factors for estimating primary and secondary waste streams will be the 24590-WTP-MDD-PR-01-002, Rev 6, with flowsheet and operating mode modifications as needed to implement the other assumptions for the System Plan.

Method Used to Check Modification: Compared modeled chemical reactions, extent of reaction, and split factors against source documents.

Result of Checking Modification:

1. Chief Modeler used the cited source document as the basis for revisions to the WTP portion of the HTWOS.
2. Modeled chemical reactions, extent of reaction, and split factors agreed with source documents, except as listed below:

   a. Rounded values were used for the ^{129}I, Cl^-, and NO_3^- split factors for the WTP Pretreatment facility off-gas condensers slightly underestimating the quantity of ^{129}I condensed and slightly overestimating the quantity of Cl^- and NO_3^- condensed.

   b. The values for the partitioning of Na from the HLW melter to the submerged bed scrubber (SBS) liquid stream were applied to the LAW melter. This underestimated the Na partitioned to the LAW SBS liquid stream. The modeled value was 0.397% and the value that should have been used was 0.794%.

   c. The model incorrectly retained about 8.6 Ci of ^{129}I on the LAW melter volatile organic carbon absorber beds. The ^{129}I should have moved on through the off-gas system and been captured in the LAW melter caustic scrubber and sent to the LERF/ETF.

   d. The split factors for accumulating Cl^- and F^- on the Ag-Mordenite beds were incorrectly applied to HCl and HF in the gas phase.

   e. The HLW NOx scrubber liquid incorrectly accumulated NO, NO_2, and SO_2 from the gas phase.

   f. The oxalate split factor values used in the condensers are based on projected organic behavior for the 242-A Evaporator rather than on the values provided in the source documents.

   g. Split factors are provided in the model for $Al(OH)_4^-$, $Cr(OH)_4^-$, and miscellaneous organics where none are given in the source documents. The values for the $Al(OH)_4^-$ and the $Cr(OH)_4^-$ split factors are taken from the split factors for Al^- and Cr^- as chemical analogues. The split factor values for the miscellaneous organics are based on projected organic behavior for the 242-A Evaporator.

   h. Eleven components are not accumulated on the HLW volatile organic carbon absorber beds that should be according to the source documents; the main component of interest being ^{99}Tc. About 0.71 Ci of ^{99}Tc should have accumulated on the carbon beds and sent to the IDF instead of going up the stack.

   i. Only ^{129}I, Cl^-, and F^- should have been accumulated on the Ag-Mordenite beds. About 26 components were accumulated that are not listed in the source documents.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: LAW Pretreatment Ramp Up

Description of Modification:

From - To	MT Na /year (net rate)
12/1/2009 – 1/31/2011	based on LAW melter
2/1/2011 – 12/31/2028	2,950

Method Used to Check Modification: The control windows in the HTWOS model containing those parameters were compared to the stated assumptions. HTWOS mass history data files were examined to see the annual masses of sodium processed through pretreatment.

Result of Checking Modification:

1. The LAW melter capacity governed LAW Pretreatment operation between 12/1/2009 and 1/31/2011.
2. After 2/1/2011 a 20.2 gallon per minute permeate rate was used to govern the processing rate instead of the 2,950 MT Na per year specified in the assumptions. This was done with the agreement of P. J. Certa to better match the process details modeled. The annual masses of sodium processed through LAW pretreatment in calendar years 2011 through 2028 ranged from about 1,400 to just over 3,500 MT per year, and averaged about 2,300 MT per year. The increased processing rates were needed to complete processing of all waste by the middle of calendar year 2029.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: LAW Vitrification Ramp Up

Description of Modification:

From - To	MTG/d (net rate)
3/1/2010 – 1/31/11	3.4
2/1/2011 – 12/31/2011	18.0
1/1/2012 – 12/31/2012	24.0
1/1/2013 – 12/31/2014	28.8
1/1/2015 – 12/31/2028	34.0

Method Used to Check Modification: The values of parameters used for controlling the LAW melter rate contained in the HTWOS model control windows and results from the model were compared to the stated assumptions.

Result of Checking Modification: The parameter values in the control windows agreed with the values stated in the assumptions. The model results showed that the projected processing rates agreed with the peak capacities for those periods. The projected average processing capacities for those periods were observed to be within 7% of the peak capacities, which is considered acceptable because there are other processing constraints that prevent processing at the stated capacities.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: LAW WTP Process Model

Description of Modification:

- The LAW (liquid) fraction of Envelope C waste from tanks AN-102 and AN-107 will be segregated from other waste within the PT facility until the strontium and transuranic components are removed.
- There will be approximately 300 gallons (2,005 lb_m air-dried) of spent cesium ion exchange resin generated for every 300,000 gallons of supernate treated through the cesium ion exchange system.
- Spent cesium ion exchange resin will contain the following constituents after being prepared for disposal:
  - Cr – 670 µg/g
  - K – 220 µg/g
  - Na – 83,800 µg/g
  - ^{99}Tc – 6.74 µg/g
  - ^{238}U – 14.8 µg/g
  - ^{60}Co – 1.31 µCi/g
  - ^{137}Cs – 60 µCi/g

Method Used to Check Modification:

- **Segregation**: Inspected model during execution.
- **Quantity of Spent Resin**: The values of parameters used for estimating spent resin quantity contained in the HTWOS model control windows were compared to the stated assumptions.
- **Composition of Spent Resin**: The values of parameters used for estimating spent resin composition contained in the HTWOS model code were compared to the stated assumptions and the spent resin loading calculated from the reported values was compared to the stated assumptions.

Result of Checking Modification:

- **Segregation**: Observed that wastes were segregated.
- **Quantity of Spent Resin**: The parameter values in the control windows agreed with the values stated in the assumptions.
- **Composition of Spent Resin**: The parameter values in the code and the calculated loading values for Cr, K, Na, ^{99}Tc, and ^{238}U agreed with the values stated in the assumptions, or were lower than the stated values because there was an insufficient quantity of the chemical specie in the waste to load to the stated assumption value. The calculated loading values for ^{60}Co and ^{137}Cs indicated that the loading parameter values were too low by a factor of 1,000 (see the comparison below). The model was rerun with the correct loading parameter values to determine how much ^{60}Co and ^{137}Cs should have loaded on the resin. The recalculated loading for ^{137}Cs is higher than the stated loading parameter because spent resin loading is estimated using decayed values for radionuclides and the recalculated loading values were back-decayed to January 1, 2004.

Radionuclide	Stated Loading Parameter	Total Activity Loaded	Calculated Loading	Modeled Loading Parameter	Recalculated Total Activity
^{60}Co	1.31 µCi/g	2.251 Ci	0.00793 µCi/g	1.31 nCi/g	10.22 Ci
^{137}Cs	60 µCi/g	24.45 Ci	0.0862 µCi/g	60 nCi/g	24,750 Ci

(In the process of checking the resin loading assumptions it was determined that the way the spent loading assumptions are applied may not accurately model spent resin loading behavior in the plant.)

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: ILAW Process

Description of Modification:

- During hot commissioning, the total sodium loading, sulfate volatilization and formulation of the LAW glass will be estimated using the Gimpel Model as described in 24590-WTP-MDD-PR-01-002.
- During hot operations, the total sodium loading of LAW glass from pretreated feed will be determined using the DOE Model (D-03-DESIGN-004), which maximizes the sodium oxide loading in the LAW glass subject to the following constraints:

$$[Na_2O] \leq 20wt\%$$
$$[SO_3] \leq 0.8wt\%$$

- During hot operations, the composition of the LAW glass will be estimated using a glass recipe model similar to that described in 24590-WTP-MRQ-PO-04-0065 (DRAFT). Sulfate volatilization will be estimated using Equation 3.1-5f of 24590-WTP-RPT-PT-02-005.
- Melter split factor for ^{129}I: assume that 20% of the ^{129}I entering the melter is retained in the LAW glass product; the remaining 80% will report to the melter off-gas system.
- One LAW Melter is assumed to fail every 2.5 years and contains 6,900 gallons of glass, not to exceed 9 failed LAW melters.

Method Used to Check Modification:

- HTWOS model code was compared to reference document stated in assumptions.
- Parameter values in the HTWOS model code were compared to the source document for the DOE model and model results were checked for the average Na_2O and SO_3 loading in the ILAW.
- Parameter values in the HTWOS model code were compared to the source document.
- The value of the parameter used for estimating the ^{129}I split contained in the HTWOS model control window was compared to the stated assumptions and result values reported by the model were checked against stated assumptions.
- The values of parameters used for triggering melter failure contained in the HTWOS model control windows were compared to the stated assumptions and the total quantity of glass in the failed LAW melter stream was checked for consistency.

Result of Checking Modification:

- The Gimpel rule was used to estimate the total sodium loading during the hot commissioning phase. The DOE model was used to estimate sulfate volatilization and glass formulation throughout the mission.
- The DOE model was used to estimate total sodium loading starting on 2/1/2011. The average Na_2O and SO_3 loading in the ILAW were found to be in agreement with the stated assumptions (19.3 and 0.55 wt%, respectively).
- The code agreed with the stated assumption.
- The value in the control window and the reported results agreed with the stated assumption. Results from the model show that 19.96% of the ^{129}I in the pretreated LAW stream remained in the ILAW.
- The model code agreed with the stated assumptions with the exception that the quantity of glass in a failed melter depended on the level of glass in the melter when it was considered to be failed, at the end of every 2.5-year period. The total mass of glass in the failed melter stream was found to be about 76% of the maximum value that would be calculated from 9 failed melters, each containing 6,900 gallons of glass.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: ILAW Package Net Mass

Description of Modification: 5.92 MT

Method Used to Check Modification: Compare the reported number of ILAW packages to the number obtained by dividing the total ILAW mass by the stated assumption.

Result of Checking Modification: The stated assumption was not implemented. The former assumption of 6 MT ILAW per package was in advertently retained during the coding of the detail for the WTP processes. The correct total number of ILAW packages (about 34,390 packages) is reported in the main body of this document. Subsequent users of the ILAW production data in the file "htwos-law-canister-logger-history.his" will need to multiply the ILAW package count by a factor of 6 divided by 5.92 to obtain the correct package count (33,925 packages times 6 and divided by 5.92 equals 34,383).

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: HLW Vitrification Ramp-up

Description of Modification:

From - To	HLW MTG/d (net rate)
5/17/2010 – 1/31/2011	0.69
2/1/2011 – 12/31/2011	3.0
1/1/2012 – 12/31/2012	4.0
1/1/2013 – 9/30/2027	5.0

Method Used to Check Modification: The values of parameters used for controlling the high-level waste melter rate contained in the HTWOS model control windows and results from the model run were compared to the stated assumptions.

Result of Checking Modification: The values in the control window agreed with the stated assumptions. The model results showed that projected processing rates agreed with the peak capacities in the stated assumptions. The projected average processing capacities for those periods were observed to be within 7% of the peak capacities, which is considered acceptable because there are other processing constraints that prevent processing at the stated capacities. Note that during the model run the value for the maximum capacity of the HLW melter was raised to 6.0 MTG/day as allowed by footnote 17 in Table A-2. This processing rate was modeled as being achieved for about 9-1/2 years between January 1, 2016 and the completion of processing all of the waste in August 2029.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form (2 Sheets)

Modification Title: HLW WTP Process Model

Description of Modification:

- HLW pretreatment can provide sufficient pretreated HLW solids to produce up to 571 canisters of IHLW per year.
- The water wash factors in the TWINS on August 24, 2004 will be used for partitioning waste into solid and liquid phases during retrieval and staging.
- The caustic leach factors in the TWINS on August 24, 2004 will be used as the basis for computing the caustic leach factors associated with each delivered batch of HLW solids and for the entrained solids.
- One HLW Melter is assumed to fail every 2.5 years and contains 1,800 gallons of glass, not to exceed 9 failed HLW melters.
- For planning purposes, all solids delivered with the HLW feed and entrained solids delivered with the LAW feed, except for those associated with the Envelope C waste from AN-102 and AN-107, will undergo caustic and oxidative leaching with the insoluble fraction incorporated into HLW glass.
- An oxidative leach process that removes Cr from the HLW sludge without impact on cycle time or other species will be implemented in the ultrafilters. Reaction stoichiometry and endpoint (5,000 μg Cr / g dried solids) are described in RPP-15552.
- The LAW (liquid) fraction of Envelope C waste from tanks AN-102 and AN-107 will be segregated from other waste within the PT facility until the strontium and transuranic components are removed.

Method Used to Check Modification:

- An average rate for producing IHLW canisters was calculated for the period from January 1, 2015 through the completion of waste processing using IHLW production data.
- The date stamp on the wash factor data file is August 24, 2004.
- The date stamp on the caustic leach factor data file is August 24, 2004.
- The values of parameters used for triggering melter failure contained in the HTWOS model control windows were compared to the stated assumptions and the total quantity of glass in the failed HLW melter stream was checked for consistency.
- The HTWOS model code governing caustic leaching was checked against the stated assumptions.
- The value of the parameter limiting the final Cr concentration in the pretreated solid phase contained in the HTWOS model control window was compared to the stated assumptions for oxidative leaching and the mass of chromium in the pretreated HLW stream was checked for consistency with the stated assumptions. The reaction definitions and extent of reaction values in the model were compared to the source document.
- This was verified as part of verifying the LAW WTP Process Model assumptions on page B-8.

Result of Checking Modification:

- The observed average IHLW canister production rate of 641 canisters per year agrees with the increased HLW pretreatment capacity allowed by the stated assumptions.
- The wash factor data used as input to HTWOS were obtained from TWINS on August 24, 2004.
- The caustic leach factor data used as input to HTWOS were obtained from TWINS on 8/24/2004.

HTWOS Model Modification Form (2 Sheets)

Modification Title: HLW WTP Process Model

- The model code agreed with the stated assumptions with the exception that the quantity of glass in a failed melter depended on the level of glass in the melter when it was considered to be failed, at the end of every 2.5-year period. The total mass of glass in the failed melter stream was found to be about 72% of the maximum value that would be calculated from 9 failed melters, each containing 1,800 gallons of glass
- The HTWOS model is not coded to implement caustic leaching on the solids from tanks AN-102 and AN-107.
- The control window contained the 5,000 µg Cr/g dried solids value from the stated assumptions. The average Cr concentration in the solid portion of the pretreated HLW stream was 4,357 µg Cr/g dried solids. Having an average value below the assumption value was expected because there are situations where caustic leaching will result in a Cr concentration less than 5,000 µg Cr/g dried solids.
- See the verification of the LAW WTP Process Model assumptions on page B-8.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Method for Estimating HLW Waste Oxide Loading

Description of Modification: Glass Properties Model modified as follows.

- Increase the maximum spinel liquidus temperature constraint from 1,050 ºC to 1,100 ºC.
- Increase the maximum viscosity constraint from 5.5 Pa•s to 10 Pa•s.
- Increase the maximum Cr_2O_3 constraint from 0.5 wt% to 1.0 wt%.
- Use a maximum zircon liquidus temperature limit of 1,050 ºC.
- Use a Product Consistency Test (PCT) upper limit of 2 g/m^2.

Method Used to Check Modification: The values of the parameters in the HTWOS model control windows for the maximum spinel liquidus temperature, the maximum viscosity constraint, the maximum Cr_2O_3 constraint, and the maximum zircon liquidus temperature limit were compared to the stated assumptions. The model code governing the HLW glass formulation was checked for the logic to implement the PCT upper limit.

Result of Checking Modification: The values in the control window agreed with the stated parameters for the maximum spinel liquidus temperature, the maximum viscosity constraint, the maximum Cr_2O_3 constraint, and the maximum zircon liquidus temperature limit. The model code contains a value of 2 g/m^2 for the upper limit of the PCT constraint.

Modeler Name: R. S. Wittman

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Melter split factor for ^{129}I

Description of Modification: Assume that 20% of the ^{129}I entering the melter is retained in the HLW glass product; the remaining 80% will report to the melter off-gas system.

Method Used to Check Modification: The value of the parameter in the HTWOS model control window controlling the ^{129}I split in the melter was compared to the stated assumptions, informal hand calculations were performed using data taken from the melter streams during execution of the HTWOS model to check the split, and results reported from the HTWOS model were checked for consistency.

Result of Checking Modification: The 20% value was found in the control window, the hand calculations showed the ^{129}I splitting in accordance with the stated assumptions, and results reported from the model showed the quantity of ^{129}I in the IHLW stream to be 19.94% of the ^{129}I in the pretreated HLW stream.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form (2 Sheets)

Modification Title: Contact-Handled Sludge Packaging

Description of Modification:

- The contact-handled Supplemental TRU Treatment and Packaging process will be available on February 28, 2006 and treat a maximum of 2,880 gallons of undiluted TRU tank waste per day.
- The system will first be located near B-Farm and then moved to T-Farm. There will be a 10-day outage between tanks and 60-day outage to move equipment between farms.
- The SSTs assumed to provide contact-handled sludge are [B-201, B-202, B-203, B-204], [T-201, T-202, T-203, T-204], T-111, T-110, and T-104, in the stated order except that the tank order within the [brackets] can be changed.
- The waste from the B-200 and T-200 series SSTS, T-104, T-110, and T-111 will be retrieved without impact to DST space.
- It is assumed that this waste can be treated and packaged as contact-handled TRU and disposed of at WIPP.
- There will be no water or waste sent to the DST system.
- The process assumptions for the contact-handled sludge treatment system are discussed in the remote-handled section.

Method Used to Check Modification:

- Examine the transfer file for the delivery schedule to CH-TRU and calculate the rate of delivery.
- Examine the transfer file for the delivery schedule to CH-TRU and calculate time between deliveries.
- Examine the transfer file for the delivery schedule to CH-TRU.
- Examine the transfer file for destination for the listed wastes.
- N/A, as this is a programmatic assumption not contained in the HTWOS model.
- Examine the transfer file for destination for the listed wastes.

HTWOS Model Modification Form (2 Sheets)

Modification Title: Contact-Handled Sludge Packaging

- N/A, as this is addressed in the RH-TRU assumptions.

Result of Checking Modification:

- The waste is delivered at slightly higher rates ranging from about 2,884 to 3,100 gallons per day to support operation at 2,880 gallons per day of undiluted waste.
- The time between deliveries ranges from 11 to 15 days and allows for the stated time between deliveries plus the time to process at 2,880 gallons per day. The time between the deliveries for the T-200 series wastes and the B-200 series wastes is 64 days, which is consistent with the stated assumptions and allows for the completion of processing the B-204 waste before moving the facility.
- The wastes are delivered to CH-TRU facility in the stated order.
- The listed wastes are transferred directly to a TRU packaging facility.
- N/A, as this is a programmatic assumption not contained in the HTWOS model.
- None of the listed wastes are transferred to a DST.
- N/A, as this is addressed in the RH-TRU assumptions.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form (3 Sheets)

Modification Title: Remote-Handled Sludge Packaging

Description of Modification:

- The remote-handled Supplemental TRU Treatment and Packaging process will be available on July 1, 2012 and treat 2,880 gallons of undiluted tank waste per day. It is assumed to be located near AW-Farm.
- All remote handled sludge will be water-washed prior to treatment to remove soluble waste constituents. The East Area DSTs will be water washed in their respective tanks; the SSTs and SY-102 waste will be retrieved, transferred to a 200E area DST and then water-washed. No attempt will be made to segregate the remote-handled SST TRU sludge from the remote-handled DST TRU sludge.
- Supernatant liquid will be decanted from tank AW-103 in August 2011. The waste solids in tank AW-103 will be washed four times over a nine month period starting 9/1/2011 using 273,000 gallons of 0.01 M NaOH solution each time. After each wash, the solids are settled to 40 wt% before decanting the wash solution for feed to the evaporator. The first wash of AW-103 waste solids is assumed to dissolve the saltcake portion. Existing water wash factors and the Sr solubility model will be applied to estimate the overall wash effectiveness.
- Supernatant liquid will be decanted from tank AW-105 in September 2012. The waste solids in tank AW-105 will be washed four times over a nine-month period starting October 1, 2012 using 263,000 gallons of 0.01 M NaOH solution each time. After each wash, the solids are settled to 40 wt% before decanting the wash solution for feed to the evaporator. The first wash of AW-105 waste solids is assumed to dissolve the saltcake portion. Existing water wash factors and the Sr solubility model will be applied to estimate the overall wash effectiveness.

HTWOS Model Modification Form (3 Sheets)

Modification Title: Remote-Handled Sludge Packaging

- Supernatant liquid will be decanted from tank SY-102 by October 30, 2013. The SY-102 solids will be washed three times over a nine month period starting by November 1, 2013 using 290,000 gallons of 0.01 M NaOH solution each time. After each wash, the solids are settled to 40 wt% before decanting the wash solution for feed to the evaporator. The first wash of SY-102 waste solids is assumed to dissolve the saltcake portion. Existing water wash factors and the Sr solubility model will be applied to estimate the overall wash effectiveness. (Note: The solids in SY-102 may be moved to AW-103 for washing, after the washed AW-103 solids are delivered for packaging, if the cross-site transfer does not delay operation of the packaging facility.)
- The SSTs assumed to provide remote-handled sludge are T-105, T-107, T-112, B-107, B-110, and B-111; the DSTs assumed to provide remote-handled sludge are SY-102, AW-103 and AW-105.
- The overall process for both contact-handled and remote-handled TRU sludge treatment is assumed to use the "dry batch mode" as described in the System Design Description (RPP-20499) and summarized as follows:
    - As the CH-TRU sludge is retrieved and transferred, a total of 1 part water by volume is added per original in-tank sludge bulk volume.
    - The slurry (either direct from the SSTs for CH-TRU or via a DST for water washed RH-TRU) will be transferred to the Feed Receipt Process System modeled as a single tank with a working volume of 28,800 gallons.
    - The slurry, carrier and heat are continuously added to the dryer, while dried product is withdrawn to maintain a product with 20-wt% water and 80-wt% waste loading (both relative to waste, water and carrier).
    - The CH-TRU dried waste product is packaged in standard waste boxes (SWB), each SWB holding approximately 2,760 lb_m waste.
    - The RH-TRU dried waste product is assumed to be packaged in 55-gallon drums containing 700 lb_m of product per drum, which are loaded three drums to a RH-72B canister.
- Secondary waste will be estimated using the dryer retention factors as stated in 20843.PCAL.001, Assumption 8 and by applying the decontamination factors (DFs) for the 242-A Evaporator condenser. The dryer retention factors (and equivalent splits for modeling) are presented in Table A-3 the gaseous effluent split factors are presented in Table A-4.
- Liquid effluent will either be transferred to the LERF via Tank Truck or recycled to the Retrieval project. For planning purposes, it will be assumed that the liquid effluent is transferred only to LERF (no recycle) and modeled as a continuous transfer.
- The washed solids are assumed to be remote handled for packaging.

It is assumed that this waste can be treated and packaged as remote-handled TRU and disposed of at WIPP.

Method Used to Check Modification:

- The values of parameters used for controlling the delivery of and processing rate for RH-TRU contained in the HTWOS model control windows were compared to the stated assumptions.

HTWOS Model Modification Form (3 Sheets)

Modification Title: Remote-Handled Sludge Packaging

- The transfer file was checked for the presence of the waste transfers and to check that the transfers matched the stated assumptions.
- The transfer file was checked for the decant transfer from AW-103 and wash operations in AW-103. The model logic for washing the solids was compared to the stated assumptions.
- The transfer file was checked for the decant transfer from AW-105 and wash operations in AW-105. The model logic for washing the solids was compared to the stated assumptions.
- The transfer file was checked for the decant transfer from SY-102 and wash operations in SY-102. The model logic for washing the solids was compared to the stated assumptions.
- The transfer file was checked for the presence of the waste transfers and to check that the transfers matched the stated assumptions.
- The process schematic and modeling assumptions used for the TRU packaging process within the HTWOS model were compared to the cited references.
- The data arrays within HTWOS containing the dryer retention factors and gaseous effluent split factors were compared to the values in Tables A-3 and A-4.

Result of Checking Modification:

- The values of parameters used for controlling the delivery of and processing rate for RH-TRU contained in the HTWOS model control windows agreed with the stated assumptions, except that the dryer capacity was modeled as 5 gallons per minute of retrieved waste (7,200 gallons per day) rather than the 2,880 gallons of undiluted tank waste per day. This was done to match the details of the packaging process. Washed solids are delivered from tank AW-103 during June 2012.
- The transfer file contained the waste transfers and the transfers matched the stated assumptions, except for slight schedule delays due to a lack of DST space.
- The transfer file contains the decant transfer from AW-103 and the wash operations in AW-103. The model logic for washing the solids agrees with the stated assumptions.
- The transfer file contains the decant transfer from AW-105 and the wash operations in AW-105. The model logic for washing the solids agrees with the stated assumptions.
- The transfer file shows that the waste in SY-102 is transferred to tank AW-103 and wash operations are conducted in tank AW-103. The model logic for washing the solids agrees with the stated assumptions.
- The transfer file shows that the waste from tanks T-105, T-107, and T-112 were transferred into tank SY-102 before the combined waste in SY-102 was transferred to tank AW-103. The transfer file shows that the waste from tanks B-107, B-110, and B-111 were transferred into tank AW-105 before the combined waste in AW-105 was washed.
- The process schematic and modeling assumptions used for the TRU packaging process within the HTWOS model agreed with the cited references.
- The data arrays within HTWOS contained a split factor calculated from the dryer retention factors in Table A-3. The gaseous effluent split factors agreed with the values in Table A-4.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Supplemental Treatment Demonstration

Description of Modification:

- A demonstration facility will be located in the 200 West Area (west of S-Farm) and be operated at a net rate of 3.92 MTG/d starting on 5/31/2005 to process 260 MT Na from the low-curie waste from tank S-109.
- The demonstration facility will be fed directly from S-109 with no solids entrained out of S-109. The feed will be delivered at 5 M Na. The S-109 waste retrieval will be controlled to limit the total activity in the retrieved waste to 0.0062 Ci per liter (at the 5 M Na feed concentration) for the demonstration. Retrieval of the low-Cs waste from S-109 will generate about 100 Kgal of Cs-rich wastes that will be sent to tank SY-102.
- The Supplemental Treatment Demonstration process assumptions (other than process rate) will be the same as that used for the full-scale Supplemental Treatment Process.

Method Used to Check Modification:

- Check the transfer file for the destination of waste from tank S-109 and timing of transfer. Check reported results for mass of Na delivered. Check results from HTWOS for average melter rate.
- Check Na and total activity concentration in delivered feed. Check transfer file for volume of waste sent to SY-102 from S-019 during demonstration.
- See the Model Modification Form for the Supplemental Treatment Process on page B-18.

Result of Checking Modification:

- Waste is transferred from tank S-109 to the Demonstration Supplemental Treatment Facility between 6/2/2005 and 9/1/2006. A total of 262.9 MT of Na are delivered for the demonstration. Results from the model show glass production at an average rate of 3.92 MTG/day.
- The delivered feed has a Na concentration of 5 M Na and a total activity concentration of 0.00583 Ci per liter. The transfer file shows a transfer of 100 Kgal from S-109 to SY-102.
- See the Model Modification Form for the Supplemental Treatment Process on page B-18.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Supplemental Treatment Process

Description of Modification:

- A production process facility will be located in the 200 East Area.
- The production facility, consisting of eight melter lines, starts operating after January 31, 2011, and operates at a combined net rate of 31.4 MTG/day.
- The feed to the Supplemental Treatment process includes:
  - Low-curie feed from the selective dissolution and solid/liquid separation of SST waste.
  - "Excess" pretreated LAW from the WTP - this feed source should be preferentially used.
- Low-Cs waste in the 200 West Area will be moved cross-site to feed the process when dedicated DST space is available to transfer low-Cs waste without contamination (through SY-101 in to an East Area DST used as a feed tank).

Method Used to Check Modification:

- N/A as this was not modeled explicitly.
- Check values of parameters in HTWOS control window. Check glass production dates and average glass production rate from Roll-off Box production data.
- Check HTWOS model graphics for relationship of processes.
- Check transfer file for routing of waste to Supplemental Treatment Facility.

Result of Checking Modification:

- N/A
- The parameter value in the HTWOS control window agrees with the stated assumption. The first Roll-off Box of glass is produced on February 5, 2011. The average glass rate observed between January 1, 2015 and the completion of waste processing was 31.2 MTG/day, which agrees with the stated assumption.
- The Supplemental Treatment Process receives low-curie waste from the tank farm and excess pretreated low-activity waste from the Waste Treatment and Immobilization Plant.
- Low-Cs waste in the 200 West Area is routed through SY-102 to AN-102 for delivery to the Supplemental Treatment Process. Use of SY-102 instead of SY-101 was considered acceptable because it did not conflict with any other goals of the River Protection Project mission.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: WTP Process Considerations
Description of Modification: The WTP pretreatment facility will be configured so that a portion of concentrated pretreated LAW from the Treated LAW Concentrate Tank can be transferred to the Supplemental Treatment Plant (STP) as feed. This is downstream of the point to which LAW SBS and WESP condensate is recycled, so the STP feed will include a proportional fraction of the SBS and WESP condensate.
Method Used to Check Modification: Check the HTWOS graphics showing the relationship of the process unit operations.
Result of Checking Modification: The source for excess pretreated feed agrees with the stated assumptions.
Modeler Name: G. K. Allen **Verifier Name:** R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: STP Process Basis

Description of Modification: The process will be modeled using a simple lumped flowsheet that implements the overall mass balances (elemental, NOX, and activity) as shown in Section 3.2 of the process flowsheet (RPP-20528) using the process design criteria provided in 145579-A-DC-002, with the following exceptions:

- The Tri-mer scrubber (provides backup off-gas treatment) is assumed to not be operated.
- The splits for the dryer will be set equal to the splits used for the WTP evaporators.
- 20 wt% waste Na_2O loading.

These mass balances cover both primary and major secondary waste streams from the process which will be modeled as a single lumped process train comprising the following unit operations:

- Feed Tank
- Dryer
- Condenser for Dryer Offgas
- Melter
- Sintered Metal Filter with recycle to dryer (modeled as to dryer feed tank)
- Hydrosonic Scrubber
- HEPA Filter
- Carbon Filter
- NOx Removal

Method Used to Check Modification:

- Check the HTWOS graphics showing the relationship of the process unit operations.
- The data arrays in HTWOS containing the partition factors for the various processes were compared to the cited source documents.
- Results from the model were compared to the assumptions.

Result of Checking Modification:

- Modeling of the processes agreed with the stated assumptions for the relationship of the processes.
- The values in the data arrays agreed with the stated assumptions.
- The results indicated that the NH_3, NO_2, and NO_3 were not being reacted in the melter as indicated in the assumptions. A rerun of the model showed the following changes:
  - The NH_3 reacts in the melter or is sent out the stack rather than being sent out in the liquid effluent.
  - The NO_2 and NO_3 in the liquid effluent are reduced by about 99.96% and 90%, respectively.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Feed Staging and Solids Return

Description of Modification:

- The low-Cs tanks that are candidates for feed are**:** B-105, T-109, B-103, B-101, S-109, B-108, S-105, TY-102, TX-117, BY-112, BY-105, BY-102, BY-111, BY-108, TX-118, BY-109 BX-111, BY-103, and TX-114.
- The following tanks can be considered candidate Low-Cs Tanks after 1/1/2011: TX-112, TX-111, and TX-110.
- The following tanks can be considered candidate Low-Cs Tanks after 1/1/2018: TX-105, TX-115, U-107, TX-108, and TX-103.
- Selective dissolution will be used during the retrieval of candidate feed tanks using the planning assumptions in Table A-5 for splits – use average values when ranges are provided. First, the "higher" curie fraction will be retrieved from the SST and stored in the DST system for later delivery to the WTP. Then, the remainder of the waste (the low-curie fraction) will be retrieved and staged in a separate 200E area DST for delivery to the Supplemental Treatment Process.

Method Used to Check Modification:

- The transfer file was examined to see if the single-shell tank wastes delivered to the Supplemental Treatment Facility came from the single-shell tanks identified in the first three bullets above.
- The values in the HTWOS array used to simulate selective dissolution were compared to the stated assumptions.

Result of Checking Modification:

- The feed sources came from the listed single-shell tanks.
- The values agreed with the stated assumptions.

Modeler Name: R. S. Wittman

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Product and Packaging

Description of Modification: Bulk vitrification is used as the supplemental treatment process to immobilize LAW. The following will be used to estimate bulk vitrification product volume and package count.

- Glass density is 2.7 MT/m^3.
- Packaged in 35 m^3 roll-off boxes, each filled with 43.8 MT glass. External volume of box is 1,920 ft^3 (8 ft by 10 ft by 24 ft, ~ 54.4 m^3).

Method Used to Check Modification:

- The value for the glass density contained in the HTWOS model was compared to the stated assumption.
- The total box count reported by HTWOS was compared to a value obtained by dividing the total glass mass by the amount of glass loaded into each box.

Result of Checking Modification:

- The value in HTWOS agreed with the stated assumptions.
- The total box count values agreed.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Saltwell liquid pumping

Description of Modification: None; saltwell pumping was completed in March 2004.

Method Used to Check Modification: Check the values in the saltwell transfer array.

Result of Checking Modification: The last transfer contained in the array ended on January 20, 2004, before the stated completion date of March 2004.

Modeler Name: R. S. Wittman

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: SST Waste Residuals

Description of Modification:

- 200 Series SSTs: 30 ft^3 of "selected phase" as defined in DOE/ORP-2003-02, Inventory and Source Term Data Package - Environmental Impact Statement for Retrieval, Treatment and Disposal of Tank Waste, and Closure of Single-Shell Tank Waste at the Hanford Site Richland WA, Rev. 0; re-estimated using the current BBI.
- 100 Series SSTs: 360 ft^3 of 35-wt% water-washed solids with ½ concentration of bulk as-retrieved supernate for all tanks; except C-106 will use the BBI.

Method Used to Check Modification:

- The reported residual for the 200 Series SSTs was compared to an alternate calculation of the waste residual.
- Check the HTWOS model logic for the reporting of the 100 Series SST residuals.

Result of Checking Modification:

- The reported values agreed with the calculated values.
- The model logic agreed with the stated assumptions.

Modeler Name: R. S. Wittman

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Date that BBI quarterly update was issued

Description of Modification: Starting tank inventories represents the contents of the tanks as of April 2004 per RPP-22760. This is identified as the "FY 2004a" inventory and is based on Best Basis Inventory (BBI) downloaded from TWINS circa August 10, 2004. Adjustments were made in the HTWOS model for historical transfers through June 30, 2004[1].

Method Used to Check Modification:

- Check the input data files used for the model run against the 2004a source files.
- The content of the historical transfer file was examined.

Result of Checking Modification:

- The 2004a inventory was used as input to the model.
- The historical transfer file contained condensate return transfers to tank AY-102 that were made out through December 31, 2004. In retrospect this deemed to be acceptable because delays in performing the modeling made it appropriate to include additional transfers in the historical transfer file.
- An additional minor issue was found that did not impact the results of the modeling; namely, that the ^{137}Cs to ^{137}mBa ratio used within the model did not agree with the value used in the Best-Basis Inventory data that comprised the 2004a inventory. The differences due to using the old value were less than 0.25%, the selected tolerance value for mass and activity balance closure.

Modeler Name: R. S. Wittman

Verifier Name: R. A. Kirkbride

[1] In parallel to performing this run, the Best-Basis Inventory was revised to incorporate a template for R2 sludges. The effect of implementing the template was an increase of about 20% in the total ^{90}Sr inventory. If the newer inventory data were used, the following increases in ^{90}Sr would be observed:

- About 19% in the IHLW stream;
- About 33% in the total of the off-gas streams;
- About 45% in the total going to solid waste;
- About 43% in the total going to TEDF/SALDS; and
- About 93% in the total waste residual.

HTWOS Model Modification Form

Modification Title: DST Usage

Description of Modification:

WTP Feed Staging tanks:

AN-101, AN-102, AN-103, AN-104, AN-105, AN-107, AP-101, AP-102, AP-103, AP-104, AP-105, AP-106, AP-108, AW-101, AY-101, AY-102, AZ-101, and AZ-102

WTP Alternative (Back-up) HLW Feed Staging tanks:

AN-103, AN-104 (cross-site receiver), and AN-105. At the modelers' discretion, other DSTs equipped with dual mixer pumps can be used to store and stage HLW feed.

Slurry Transfer Limitations:

Use AZ, AY, and AN farms, primarily for staging HLW solids. Try to avoid staging solids through AP or AW farms after retrieving the solids currently in those farms.

Supplemental Sludge Treatment Process Feed Staging Tanks:

AW-103, AW-105, and SY-102

Supplemental LAW Treatment DST Usage:

Provide feed directly from S-109 to the Demonstration Bulk Vitrification System. Transfer low-Cs wastes from the West Area and from East Area SSTs when sufficient DST space is available to transfer cross-site without contamination and to provide a dedicated feed tank in the East Area. Retrievals and transfers are managed to prevent the entrainment of solids in the feed.

Sludge Transfer for Waste Feed Staging:

AN-101 and AN-106 will acquire solids from C-Farm retrieval and require additional equipment to transfer a portion of those solids into other DSTs for waste feed staging into the WTP.

Method Used to Check Modification: Check the transfer file and model logic to see how the tanks are used.

Result of Checking Modification: Tank usage agrees with the stated assumptions, except that SY-102 is not used to stage feed to the Supplemental Sludge Treatment process and that AP-107 is used to stage low-activity waste batches in March 2015, in late December 2027, and early February 2028.

Modeler Name: R. S. Wittman

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Feed Controls

Description of Modification:

The feed controls (which specify specific blending and waste segregation requirements) from HNF-SD-WM-OCD-015, Rev 13, are modified as needed to support the other mission assumptions and summarized below:

- **Blend off high-sulfate supernate (FCL Issue # 1)**: A portion of supernate from AZ-102 will be decanted and blended with lower [SO_4] supernate, so that the final [SO_4]:[Na] ratio in AZ-102 and in any other tank receiving significant quantities of the high [SO_4] supernate will be less than a target level of 0.048 mole SO_4/mole Na after blending and any evaporator campaigns are completed. Constrain the blending of AZ-102 supernate to start after 4/1/2007.
- **Blend off high ^{233}U solids (FCL Issue # 2)**: The solids from C-104 will be blended with the solids in AY-101 so that the resulting [^{233}U] is less than a target level of 2.0E-04 Ci/100 grams equivalent of waste oxides. The two source tanks and the resulting blend will be kept segregated from other sources of solids.
- **Prepare and protect hot commissioning feed (FCL Issue # 3)**: The supernate in AY-102 will be removed and replaced with supernate from AP-101, without concentration. It is assumed that the TFC will successfully demonstrate the supernate in AP-101 should be consolidated with the solids in AY-102 using the stipulated "Special process to release controls". No other waste, other than process condensate, will be mixed with the hot commissioning feed staged in AY-102.
- **Segregate Envelope C (FCL Issue # 4)**: The waste in AN-102 and AN-107 shall be segregated from all other wastes until it has been delivered to the WTP.
- **Segregate TRU sludge from complexed waste (FCL Issue # 5)**: Envelope C waste or other waste capable of complexing TRU shall not be stored with the insoluble solids currently in AW-103, AW-105 or SY-102. For purposes of this control, waste will be considered to be Envelope C if the [TRU]:[Na] ration exceeds 13 µCi/mole or the [^{90}Sr]:[Na] ratio exceeds 1.19E+03 µCi/mole in the liquid phase.
- **Segregate waste destined for TRU or LLW packaging (FCL Issue # 6)**: No additional waste shall be added or stored with the insoluble solids currently in AW-103 and AW-105, except that the addition of remote-handled TRU from SSTs or SY-102 is permitted. Avoid mixing the waste in SY-102 with additional solids (other than remote-handled TRU). Do not transfer contact-handled TRU waste into the DST system. Keep the remote-handled TRU waste segregated from insoluble non-TRU solids.
- **Segregate low-cesium SST waste for supplemental treatment (FCL Issue # 7)**: Waste from the candidate SSTs containing low-curie waste should be managed to maximize the amount of low-curie (less than 0.05 Ci/liter ^{137}Cs). The low-cesium fraction designated for feed to supplemental LAW treatment should be kept segregated from any high-cesium waste.

Method Used to Check Modification: Check the transfer file and model logic to see how the tanks are used.

Result of Checking Modification: Tank usage agrees with the stated assumptions, except that the ^{233}U concentration resulting from the blend was not checked and that AP-101 was concentrated before being placed in tank AY-102. It should be noted that the assumption matrix table provides inconsistent direction regarding the concentration of AP-101 supernate.

Modeler Name: R. S. Wittman

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Tank Space Options Incorporated

Description of Modification:

- Concentrate waste to save space (to 1.44 SpG).
- Release the ORP restriction on the use of the WTP feed restricted space.
- Allocate only 1.235 Mgal as emergency space.
- Implement tank level increases detailed in Table A-8.

Method Used to Check Modification:

- N/A, as this is verified under the 242-A Evaporator assumptions.
- Check the DST space usage.
- Check the Total DST volume plot.
- Check array of values for maximum DST levels.

Result of Checking Modification:

- N/A.
- WTP feed restricted space is used when no other constraints prevent use of space.
- Only 1.235 Mgal are allocated as emergency space.
- The DST levels were raised on 24 tanks rather than on only eight tanks as stated in the assumptions. This did not affect the near-term DST usage because the near-term transfers were based upon another model run that was constrained by the correct DST level assumptions, and would not have significantly impacted the total quantities projected for the various streams beyond the uncertainty associated with the input inventory data.

Modeler Name: R. S. Wittman

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: DST Waste Residuals

Description of Modification: 100 gallons having the composition of the last waste contained in the tank.

Method Used to Check Modification: Check the reported values for DST residual volumes.

Result of Checking Modification: Reported values agree with stated assumptions, except that tank SY-101 contains about 9,300 of residual waste. This is mostly dilute waste from 222-S laboratory inadvertently added because there was no logic to stop new waste additions from this source at the end of the River Protection Project mission.

Modeler Name: R. S. Wittman

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Evaporator Operation

Description of Modification:

- **Training Volume**: 82 Kgal of water is evaporated to train personnel if the evaporator has not been operated for 11 months. Each training run adds 50 Kgal of water to AW-102.
- **Average Evaporation Rate**: 500 Kgal/month
- **Maximum Evaporation Rate**: The lesser of 50 gpm boil-off or 140 gpm feed
- **Bottoms Set Point (g/mL)**: 1.44
- **Feed Staging Duration**: 3 months minimum
- **Yearly Evaporation of Waste**: Yes
- **SST wastes evaporated**: Evaporate retrieved waste as needed to manage DST space until the WTP starts.

Method Used to Check Modification:

- Check transfer file for waster additions to AW-102, and for operation of the 242-A Evaporator.
- N/A, as this value is not used to constrain evaporator operation.
- N/A, as the maximum evaporation rate was previously verified and not changed in this run.
- Checked SpG parameter value in the HTWOS control window and checked specific gravity of bottoms streams reported in the transfer file.
- N/A, as the feed staging duration, yearly evaporation of waste, and evaporation of SST waste to manage DST space were previously verified and not changed in this run.

Result of Checking Modification:

- Eight training runs can be found in the transfer file (by filtering for the 82 Kgal volume). Six of these have a 50-Kgal volume impacts to AW-102 associated with them in agreement with the stated assumptions. One training run has a 38 Kgal volume impact to AW-102 associated with it, and one does not have any volume impact to AW-102 associated with it. The two training runs that are missing or short with regard to the space impact occur at times when several million gallons of DST space exists (in January 2018 and in September 2014, respectively) and the under-reporting of the DST space demand does not present a significant issue in managing available DST space.
- N/A.
- N/A.
- Parameter in control window agreed with the stated value. Specific gravity values reported in transfer file for wastes concentrated before September 30, 2006 exceeded the value in the stated assumption. This was acceptable because it was done to match the near-term retrieval and transfer plans. Wastes concentrated after October 1, 2006 were concentrated to the value in the stated assumptions.
- N/A.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Process Condensate Composition

Description of Modification:

- The volume of process condensate will be 1.15 times the waste volume boiled off the feed to account for seal water and the vacuum system steam jets.
- The composition of process condensate from the 242-A Evaporator will be estimated using the split factors calculated using the following equation:

$$SF_i = \frac{1}{\left[1 + \frac{Kp_i}{21{,}579}\left(\frac{(1 - WVR)}{WVR}\right)\right]}$$

Where:

SF_i = split factor for component i; the split factor is the mass or activity of component i in the process condensate to the mass or activity of i in the feed

WVR = waste volume reduction factor

Kp_i = 242-A Evaporator partition coefficients from HNF-14755 and RPP-17239; in the case of tritium and water the Kp_i values are equal to the WVR because they partition equally with water. The partition coefficients are provided in Table A-9.

21,579 = a numerical factor accounting for the 15% volume increase and for the ratio of the volume of condensate as a vapor to the volume of condensate as a liquid.

Method Used to Check Modification:

- Check the HTWOS model logic for the volume multiplier.
- Compare values in the partition coefficient array to the values in Table A-9, and check the model logic that calculates the split factors from the partition coefficients.

Result of Checking Modification:

- The HTWOS model adds 15% water by volume to account for the seal water and the vacuum system steam jets.
- Values in the partition coefficient array agree with the values stated in Table A-9. The HTWOS model calculates the same split factors as those reported for a test calculation when using the same input values for the operating conditions.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Gaseous Effluent
Description of Modification: The contributions of the waste to the gaseous effluent stream will be estimated by applying split factors (the reciprocal of decontamination factors) to the process condensate stream. The split factors are derived from decontamination factors that come from a condenser in the WTP evaporator model, which is based on the 242-A Evaporator. The split factors are reported in Table A-4.
Method Used to Check Modification: Check the split factors in an array within the HTWOS model to the values contained in Table A-4.
Result of Checking Modification: The values in the array within HTWOS agreed with the values contained in Table A-4.
Modeler Name: G. K. Allen **Verifier Name:** R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: ETF and LERF

Description of Modification:

- **Effluent Treatment Facility**: ETF (nor the downstream facilities TEDF/SALDS) capacity does not constrain Tank Farm, supplemental treatment, or WTP operations. The processing rate may be varied at the discretion of the modeler.
- **LERF Capacity**:
  - The ETF will be modeled as a black-box. Overall partitioning of feed into solid waste and treated effluent will be approximated using overall removal efficiencies for the polisher. The values used are reported in Table A-10.
  - The LERF will be modeled as two basins, each with a 7.8 Mgal volume, used to provide lag storage of liquid effluents from the 242-A Evaporator and the various treatment processes. One will be used to accumulate effluents while the other is used to feed the ETF.

Method Used to Check Modification:

- Check the model code for constraints on ETF capacity.
- LERF Capacity
  - Check the HTWOS graphics depicting the LERF process. Compare the polisher removal efficiencies contained in an array within HTWOS to the values contained in Table A-10.
  - Check the HTWOS graphics depicting the LERF process.

Result of Checking Modification:

- No constraints on ETF capacity exist in the HTWOS model.
- LERF Capacity
  - The LERF process is modeled as a black box. The polisher removal efficiencies contained in an array within HTWOS agree with the assumption values contained in Table A-10.
  - The LERF process is modeled as two retention basins, each with a 7.8 Mgal volume.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Radionuclide Decay

Description of Modification:

- The BBI reference decay date of 1/1/2004 is used as the reference decay date in the model.
- Radionuclides are decayed to the date of delivery for feed specification compliance assessment.
- Half-life values for decay calculations are taken from the Chart of Nuclides, 15th Edition.

Method Used to Check Modification:

- Check the decay date value in the control window within HTWOS.
- N/A, as the decay of radionuclides for feed delivery was previously verified and not changed in this run.
- N/A, as the half-life values for radionuclide decay were previously verified and not changed in this run.

Result of Checking Modification:

- The reference decay date was set to 1/1/2004.
- N/A.
- N/A.

Modeler Name: R. S. Wittman

Verifier Name: R. A. Kirkbride

HTWOS Model Modification Form

Modification Title: Waste Chemistry and Mass Balances

Description of Modification:

- Dissolution of solids is predicted by the application of water-wash factors from TWINS and by use of the Sr solubility model documented in RPP-21807.
- Chemical charges are balanced when washing solids by the adjustment of bound OH^- and then by adjustment of CO_3^{2-}.
- TOC (less oxalate) shall be treated as C.
- HTWOS does not account for solids formation.

Method Used to Check Modification:

- Check that wash factors taken from TWINS are applied and that the model is applying the Sr solubility logic.
- Check that the model logic balances charges by adjustment of bound OH^- and then by adjustment of CO_3^{2-}.
- Check that TOC (less oxalate) is treated as C.
- N/A, as this capability has not been programmed into the model, other than the use of the Sr solubility model discussed in the first bullet. The statement is included in the assumptions to inform readers of one of the limitations of the HTWOS model.

Result of Checking Modification:

- The wash factors taken from TWINS were applied and the model is applying the Sr solubility logic.
- The model logic balances charges by adjustment of bound OH^- and then by adjustment of CO_3^{2-}.
- TOC (less oxalate) is treated as C.
- N/A.

Modeler Name: G. K. Allen

Verifier Name: R. A. Kirkbride

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APPENDIX C

RIVER PROTECTION PROJECT
PRIMARY AND SECONDARY WASTE STREAM DATA

FIGURES

Figure C-1. Primary and Secondary Waste Streams in the River Protection Project C-4

Figure C-2. Total Activity Balance for the River Protection Project C-5

Figure C-3. Iodine-129 Balance for the River Protection Project C-6

Figure C-4. Technetium-99 Balance for the River Protection Project.....C-7

TABLES

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project C-8

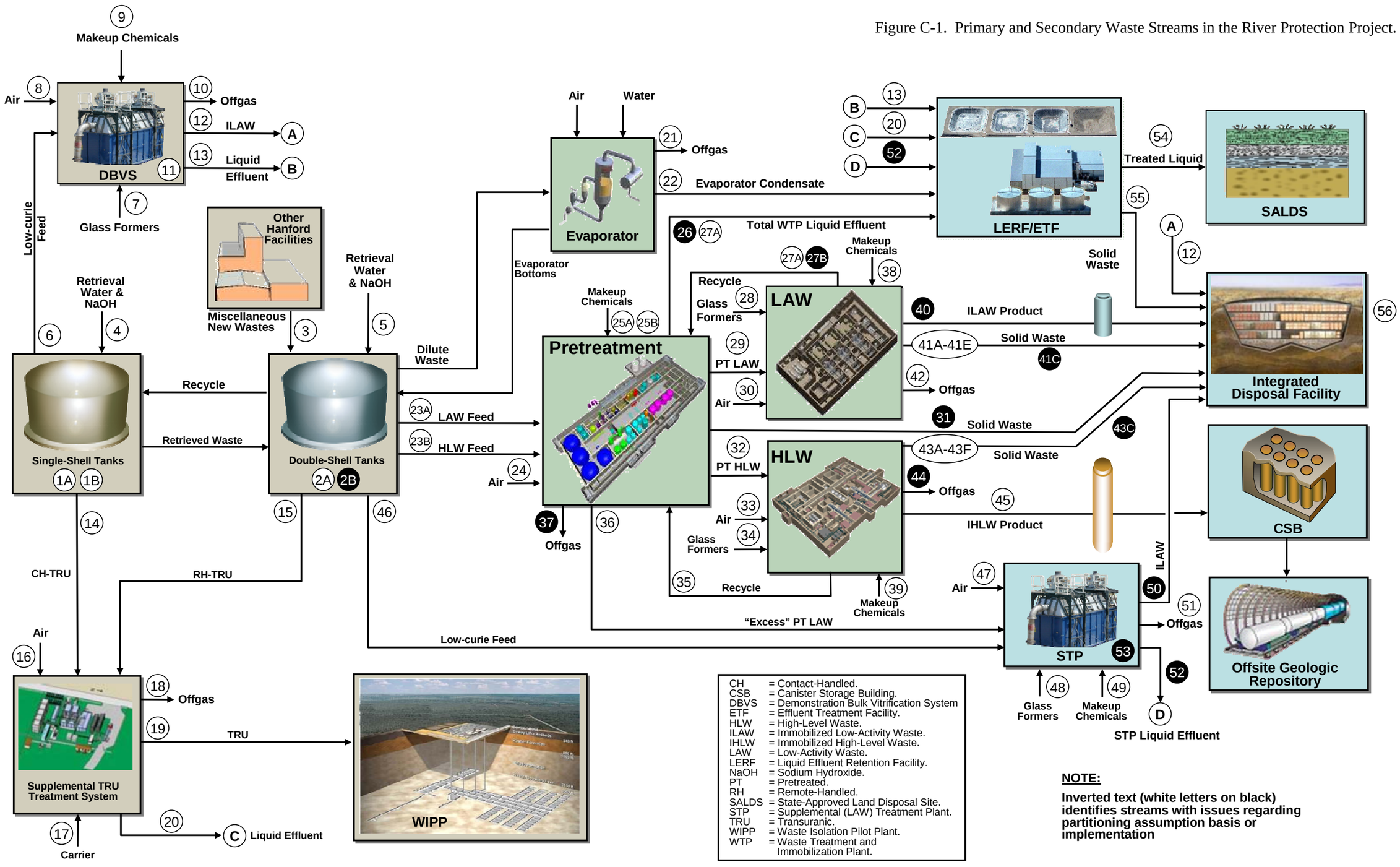
APPENDIX C

RIVER PROTECTION PROJECT
PRIMARY AND SECONDARY WASTE STREAM DATA

Appendix C contains several process schematics showing the primary and secondary waste streams along with supporting data about the total material contained in that stream for the whole mission. Figure C-1 provides an overall process schematic of the River Protection Project that shows the primary and secondary waste streams. Figures C-2, C-3, and C-4 provide the quantities of total activity, ^{129}I, and ^{99}Tc in the primary and secondary waste streams. Table C-1 provides the quantities of radionuclides, chemical species, glass formers, gaseous phase components, and elements in each of the primary and secondary waste streams. The stream numbers in Figure C-1 directly correspond to the stream numbers in Table C-1.

Some of the stream numbers on Figure C-1 and activity values on Figures C-2 through C-4 are formatted with inverted text (white letters on a black background) to identify that there are issues with the basis for a partitioning assumption or with the implementation of a partitioning assumption in the HTWOS model. The issues are discussed in Sections 2.0 and 3.0, and in Section A1.3 of this report. Only the streams directly affected by the issue are identified and not all of the streams that may be impacted by the partitioning assumption. No attempt was made to flag the impact of those issues throughout the RPP. The reporting of numbers in Figures C-2 through C-4 and in Table C-1 to four significant figures is done solely for convenience and is not meant to imply that the numbers are accurate to four significant figures.

Figure C-1. Primary and Secondary Waste Streams in the River Protection Project.



CH	= Contact-Handled.
CSB	= Canister Storage Building.
DBVS	= Demonstration Bulk Vitrification System
ETF	= Effluent Treatment Facility.
HLW	= High-Level Waste.
ILAW	= Immobilized Low-Activity Waste.
IHLW	= Immobilized High-Level Waste.
LAW	= Low-Activity Waste.
LERF	= Liquid Effluent Retention Facility.
NaOH	= Sodium Hydroxide.
PT	= Pretreated.
RH	= Remote-Handled.
SALDS	= State-Approved Land Disposal Site.
STP	= Supplemental (LAW) Treatment Plant.
TRU	= Transuranic.
WIPP	= Waste Isolation Pilot Plant.
WTP	= Waste Treatment and Immobilization Plant.

NOTE:

Inverted text (white letters on black) identifies streams with issues regarding partitioning assumption basis or implementation

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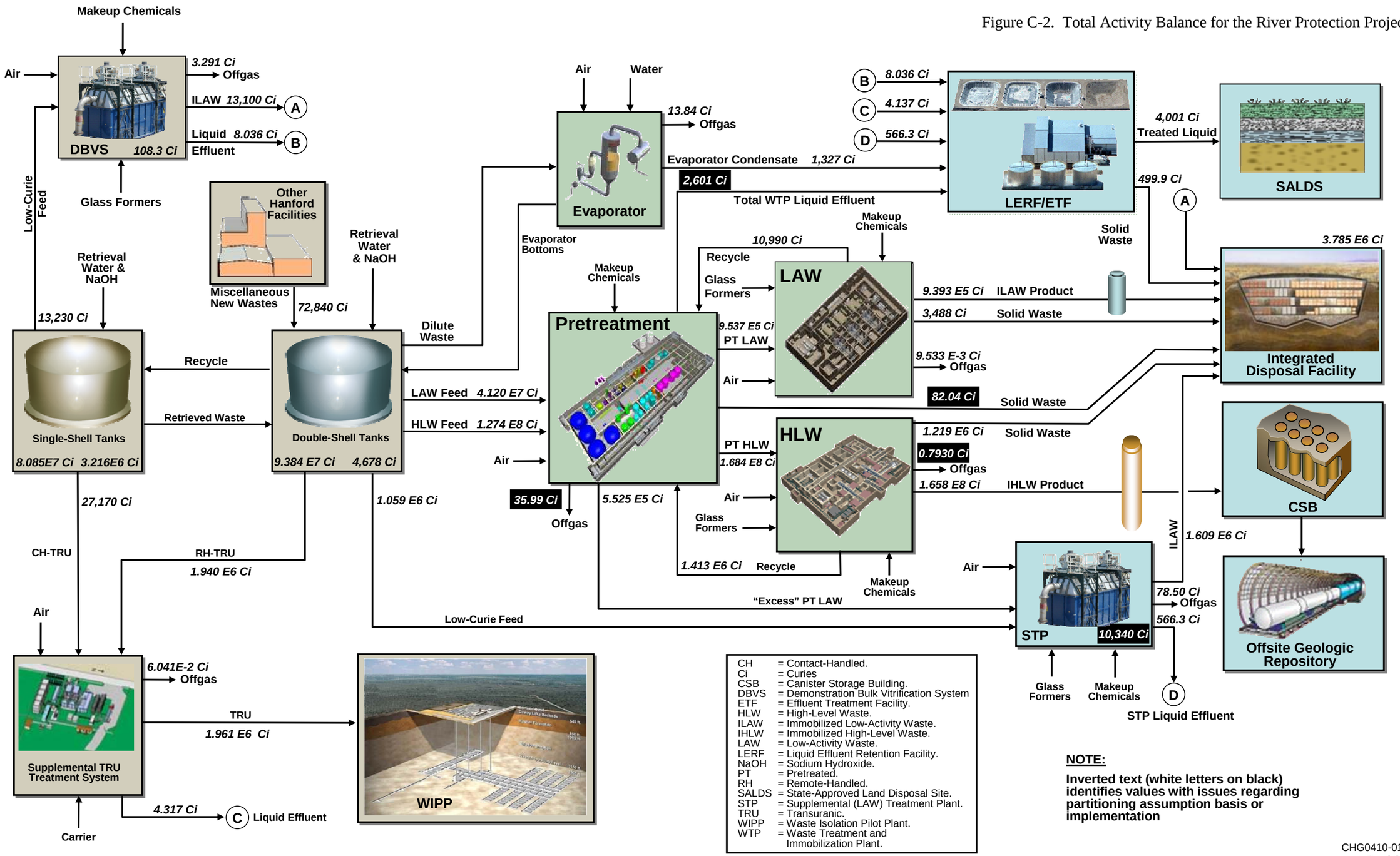
Figure C-2. Total Activity Balance for the River Protection Project.



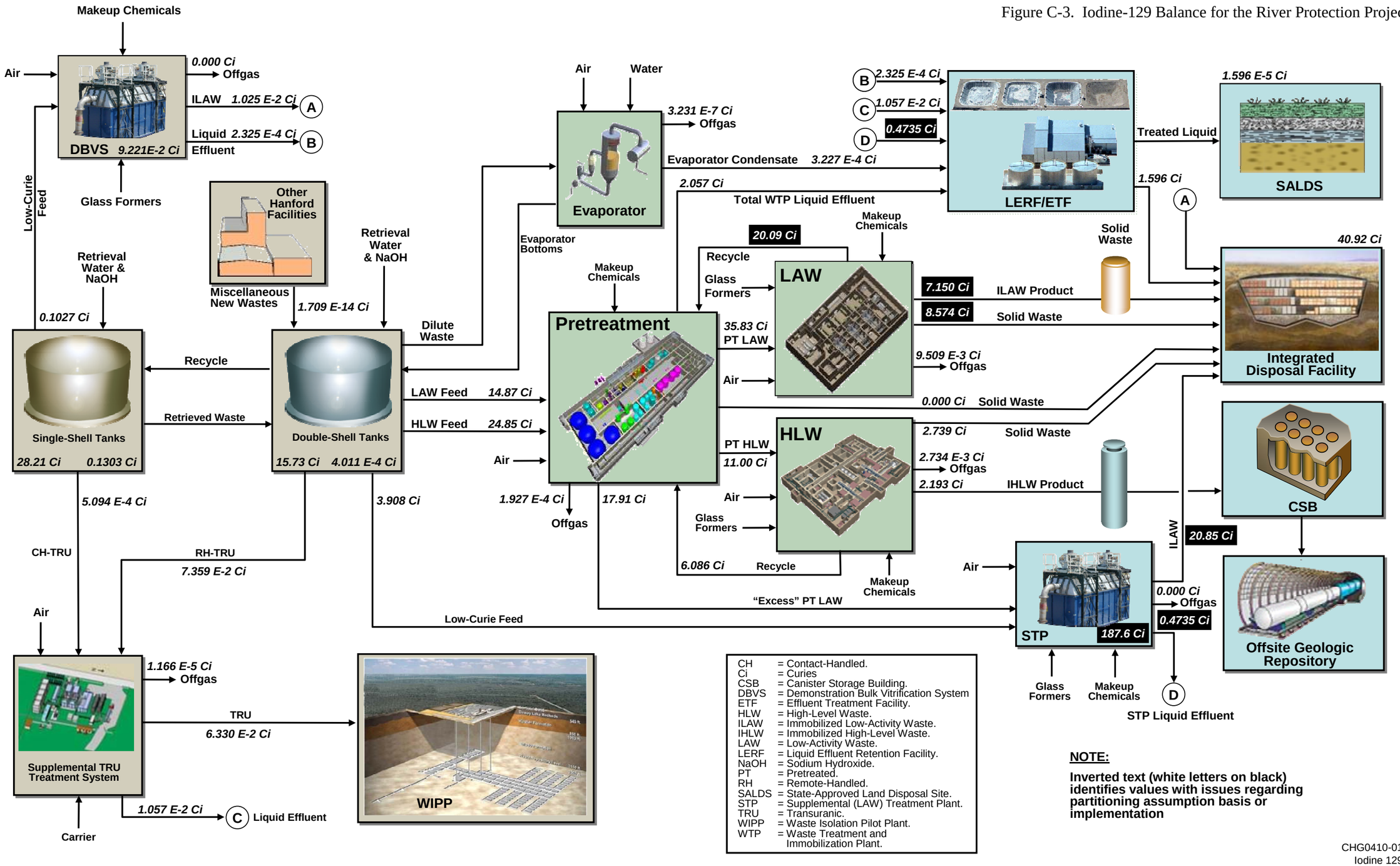
CH	= Contact-Handled.
Ci	= Curies
CSB	= Canister Storage Building.
DBVS	= Demonstration Bulk Vitrification System
ETF	= Effluent Treatment Facility.
HLW	= High-Level Waste.
ILAW	= Immobilized Low-Activity Waste.
IHLW	= Immobilized High-Level Waste.
LAW	= Low-Activity Waste.
LERF	= Liquid Effluent Retention Facility.
NaOH	= Sodium Hydroxide.
PT	= Pretreated.
RH	= Remote-Handled.
SALDS	= State-Approved Land Disposal Site.
STP	= Supplemental (LAW) Treatment Plant.
TRU	= Transuranic.
WIPP	= Waste Isolation Pilot Plant.
WTP	= Waste Treatment and Immobilization Plant.

NOTE:

Inverted text (white letters on black) identifies values with issues regarding partitioning assumption basis or implementation

CHG0410-01
Total Ci
4/15/05

Figure C-3. Iodine-129 Balance for the River Protection Project.



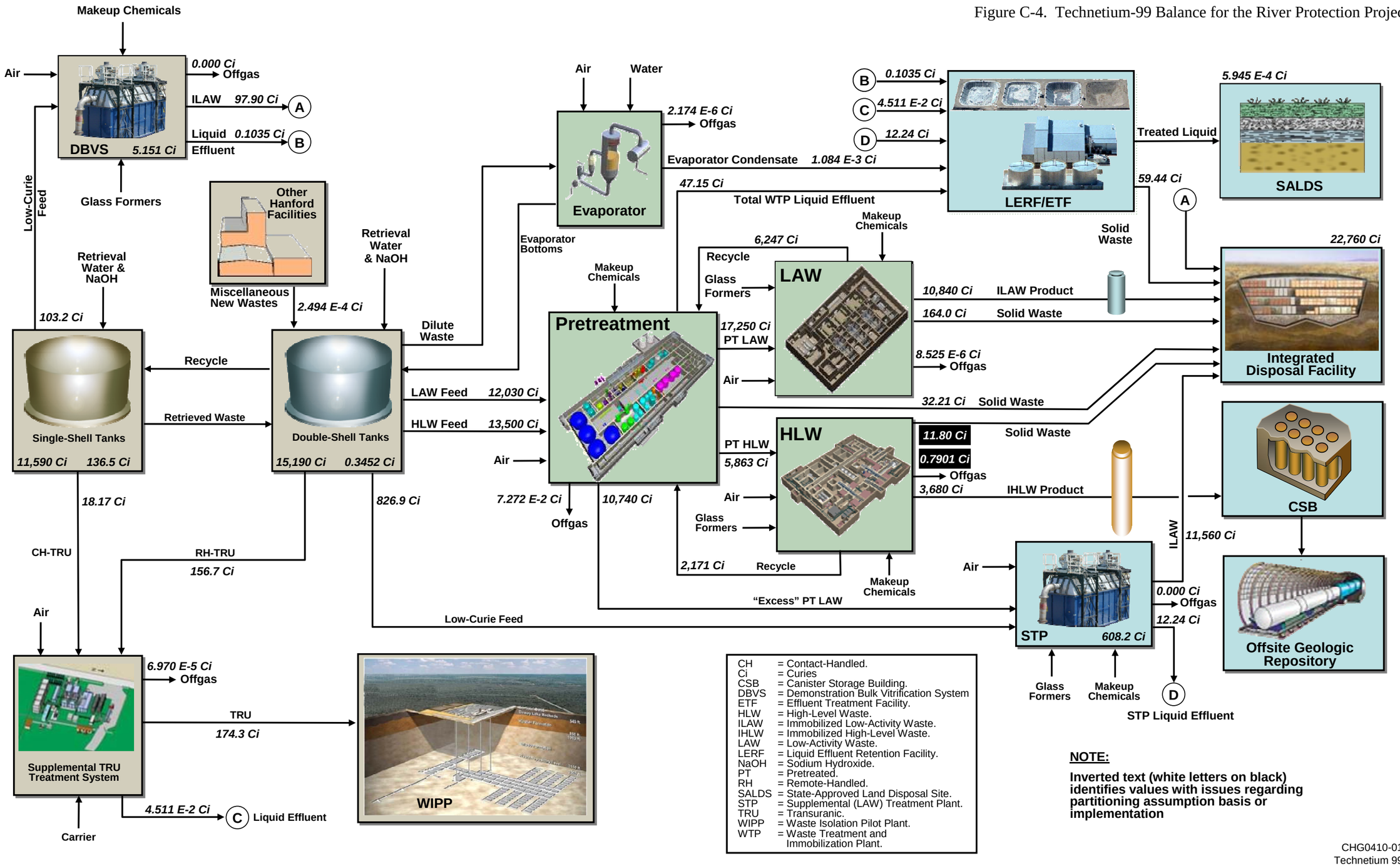
CH	= Contact-Handled.
Ci	= Curies
CSB	= Canister Storage Building.
DBVS	= Demonstration Bulk Vitrification System
ETF	= Effluent Treatment Facility.
HLW	= High-Level Waste.
ILAW	= Immobilized Low-Activity Waste.
IHLW	= Immobilized High-Level Waste.
LAW	= Low-Activity Waste.
LERF	= Liquid Effluent Retention Facility.
NaOH	= Sodium Hydroxide.
PT	= Pretreated.
RH	= Remote-Handled.
SALDS	= State-Approved Land Disposal Site.
STP	= Supplemental (LAW) Treatment Plant.
TRU	= Transuranic.
WIPP	= Waste Isolation Pilot Plant.
WTP	= Waste Treatment and Immobilization Plant.

NOTE:

Inverted text (white letters on black) identifies values with issues regarding partitioning assumption basis or implementation

CHG0410-01
Iodine 129
4/15/05

Figure C-4. Technetium-99 Balance for the River Protection Project.



CH	= Contact-Handled.
Ci	= Curies
CSB	= Canister Storage Building.
DBVS	= Demonstration Bulk Vitrification System
ETF	= Effluent Treatment Facility.
HLW	= High-Level Waste.
ILAW	= Immobilized Low-Activity Waste.
IHLW	= Immobilized High-Level Waste.
LAW	= Low-Activity Waste.
LERF	= Liquid Effluent Retention Facility.
NaOH	= Sodium Hydroxide.
PT	= Pretreated.
RH	= Remote-Handled.
SALDS	= State-Approved Land Disposal Site.
STP	= Supplemental (LAW) Treatment Plant.
TRU	= Transuranic.
WIPP	= Waste Isolation Pilot Plant.
WTP	= Waste Treatment and Immobilization Plant.

NOTE:

Inverted text (white letters on black) identifies values with issues regarding partitioning assumption basis or implementation

CHG0410-01
Technetium 99
4/15/05

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project (35 Sheets)

Stream Number on Summary Graphic-->		1A	1B	2A	2B	3	4	5	6	7	8	9	10	11	12	13
	Standard Units of Measure	Initial Single-Shell Tank Inventory	Residual Single-Shell Tank Inventory	Initial Double-Shell Tank Inventory	Residual Double-Shell Tank Inventory	New Waste Additions	Single-Shell Tank Retrieval Water & Sodium Hydroxide	Double-Shell Tank Retrieval Water & Chemical Additions	Low-Curie Feed to Demonstration Bulk Vitrification System	Demonstration Bulk Vitrification System Glass Formers	Demonstration Bulk Vitrification System Air Supply	Demonstration Bulk Vitrification System Makeup Chemicals	Demonstration Bulk Vitrification System Off-Gas	Demonstration Bulk Vitrification System Off-Gas Treatment Recycle	Demonstration Bulk Vitrification System Immobilized Low-Activity Waste Product	Demonstration Bulk Vitrification System Liquid Effluent
Waste Radionulides																
106Ru	Ci	8.940E-03	4.933E-04	1.728E+02	9.608E-04	5.011E+02			1.023E-06						1.023E-06	
113mCd	Ci	2.020E+03	8.876E+01	2.787E+03	9.240E-02				1.101E+01						1.100E+01	4.967E-04
125Sb	Ci	1.314E+03	1.781E+02	8.063E+03	1.449E-01	2.009E-03			8.146E-01						8.141E-01	2.033E-04
126Sn	Ci	2.219E+02	7.613E+00	2.290E+02	7.092E-03				1.575E-01						1.574E-01	3.932E-05
129I	Ci	2.821E+01	1.303E-01	1.573E+01	4.011E-04	1.709E-14			1.027E-01					9.221E-02	1.025E-02	2.325E-04
134Cs	Ci	2.445E+01	1.801E+01	2.772E+03	7.203E-03	1.461E+01			5.435E-02						5.433E-02	5.807E-10
137Cs	Ci	1.357E+07	1.135E+05	2.949E+07	4.401E+02	2.817E+04			5.300E+03					5.297E+01	5.245E+03	1.579E-02
137mBa	Ci	1.281E+07	1.074E+05	2.784E+07	4.163E+02	2.665E+04			5.014E+03					5.011E+01	4.962E+03	1.494E-02
14C	Ci	3.909E+02	1.433E+00	2.341E+02	7.731E+00	2.132E+02			3.295E+00				3.291E+00			3.258E-03
151Sm	Ci	2.607E+06	1.100E+05	1.140E+06	1.445E+02				6.088E+01						6.086E+01	1.623E-05
152Eu	Ci	7.574E+02	9.639E+01	7.907E+02	6.880E-02	2.210E-01			8.718E-03						8.715E-03	6.172E-09
154Eu	Ci	2.944E+04	1.719E+03	3.054E+04	1.815E+00	4.288E-01			6.935E-01						6.931E-01	6.981E-05
155Eu	Ci	1.205E+04	7.076E+02	2.492E+04	7.437E-01	1.100E-01			2.196E-01						2.195E-01	1.555E-07
226Ra	Ci	4.160E+02	4.160E+02	1.426E+00	2.253E-06				1.039E-05						1.038E-05	
227Ac	Ci	3.815E+00	5.100E-02	2.493E-01	1.247E-05				2.920E-05						2.919E-05	
228Ra	Ci	3.759E+00	4.192E-02	2.485E+00	8.755E-05				9.458E-04						9.455E-04	-1.233E-09
229Th	Ci	1.391E+00	1.760E-02	1.011E-01	1.938E-05				8.452E-07						8.440E-07	8.355E-10
231Pa	Ci	3.525E+00	1.129E-01	2.557E+00	5.822E-05				9.023E-04						9.019E-04	
232Th	Ci	8.042E+00	8.619E-02	4.638E-01	6.613E-05				2.894E-06						2.890E-06	2.860E-09
232U	Ci	6.867E+00	1.951E-01	2.302E-01	7.969E-05				1.259E-05						1.258E-05	1.245E-08
233U	Ci	7.155E+02	1.278E+01	7.716E+00	4.823E-03				7.788E-04						7.778E-04	7.699E-07
234U	Ci	2.037E+02	6.679E+00	2.264E+01	4.759E-03	6.957E-06			1.488E-03						1.486E-03	1.471E-06
235U	Ci	8.445E+00	2.842E-01	8.824E-01	2.024E-04	6.128E-04			6.343E-05						6.334E-05	6.270E-08
236U	Ci	3.805E+00	1.191E-01	1.930E+00	1.556E-04	5.490E-06			3.280E-05						3.276E-05	3.242E-08
237Np	Ci	6.325E+01	3.211E+00	6.424E+01	3.563E-03				1.586E-01						1.584E-01	1.568E-04
238Pu	Ci	1.187E+03	6.234E+01	7.729E+02	3.879E-02	5.025E+00			1.151E-02						1.151E-02	3.069E-09
238U	Ci	1.904E+02	6.452E+00	1.650E+01	4.338E-03	5.799E-01			1.484E-03						1.482E-03	1.466E-06
239Pu	Ci	4.175E+04	1.634E+03	1.191E+04	9.868E-01	1.667E+03			5.996E-01					5.992E-05	5.993E-01	1.777E-07
240Pu	Ci	8.563E+03	3.441E+02	2.991E+03	2.146E-01	5.371E+01			1.179E-01						1.179E-01	3.144E-08
241Am	Ci	5.144E+04	2.836E+03	9.052E+04	3.995E+00	1.288E+01			1.622E-01						1.622E-01	1.156E-07
241Pu	Ci	5.204E+04	2.236E+03	4.602E+04	1.878E+00	2.577E+02			4.029E-01						4.028E-01	1.074E-07
242Cm	Ci	3.413E+01	2.309E+00	2.688E+02	4.642E-03				3.912E-03						3.907E-03	3.867E-06
242Pu	Ci	4.863E-01	2.088E-02	2.967E-01	1.415E-05	1.791E-03			4.023E-06						4.022E-06	1.073E-12
243Am	Ci	2.201E+01	1.680E+00	4.054E+01	1.874E-03				7.687E-05						7.684E-05	5.442E-11
243Cm	Ci	2.232E+00	4.473E-01	2.142E+01	3.371E-04				1.276E-04						1.275E-04	1.262E-07
244Cm	Ci	5.149E+01	1.057E+01	4.992E+02	7.766E-03				2.975E-03						2.971E-03	2.941E-06
3H	Ci	2.637E+03	4.818E+00	1.765E+03	5.273E-02	2.506E-02			1.274E+01						5.105E+00	7.617E+00
59Ni	Ci	1.290E+03	4.689E+01	2.686E+02	3.402E-02				9.001E-01						8.998E-01	3.047E-05
60Co	Ci	3.863E+03	1.892E+02	2.570E+03	2.225E-01	3.520E-03			9.670E-02						9.656E-02	1.052E-04
63Ni	Ci	1.208E+05	4.453E+03	2.314E+04	3.173E+00				8.374E+01						8.371E+01	2.835E-03
79Se	Ci	4.204E+01	1.334E-01	5.028E+01	1.019E-03				3.476E-01						3.475E-01	
90Sr	Ci	2.576E+07	1.435E+06	1.755E+07	1.828E+03	7.647E+03			1.313E+03						1.312E+03	1.369E-01
90Y	Ci	2.576E+07	1.435E+06	1.755E+07	1.828E+03	7.647E+03			1.313E+03						1.312E+03	1.369E-01
93Zr	Ci	1.974E+03	7.843E+01	1.718E+03	8.180E-02				3.874E+00						3.869E+00	3.830E-03
93mNb	Ci	1.650E+03	7.070E+01	1.320E+03	7.017E-02				2.247E+00						2.246E+00	-5.385E-04
99Tc	Ci	1.159E+04	1.365E+02	1.519E+04	3.452E-01	2.494E-04			1.032E+02					5.151E+00	9.790E+01	1.035E-01
	Ci	**8.085E+07**	**3.216E+06**	**9.384E+07**	**4.678E+03**	**7.284E+04**			**1.323E+04**				**3.291E+00**	**1.083E+02**	**1.310E+04**	**8.036E+00**

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project (35 Sheets)

Stream Number on Summary Graphic-->		1A	1B	2A	2B	3	4	5	6	7	8	9	10	11	12	13
	Standard Units of Measure	Initial Single-Shell Tank Inventory	Residual Single-Shell Tank Inventory	Initial Double-Shell Tank Inventory	Residual Double-Shell Tank Inventory	New Waste Additions	Single-Shell Tank Retrieval Water & Sodium Hydroxide	Double-Shell Tank Retrieval Water & Chemical Additions	Low-Curie Feed to Demonstration Bulk Vitrification System	Demonstration Bulk Vitrification System Glass Formers	Demonstration Bulk Vitrification System Air Supply	Demonstration Bulk Vitrification System Makeup Chemicals	Demonstration Bulk Vitrification System Off-Gas	Demonstration Bulk Vitrification System Off-Gas Treatment Recycle	Demonstration Bulk Vitrification System Immobilized Low-Activity Waste Product	Demonstration Bulk Vitrification System Liquid Effluent
Chemical Species																
Ag+	kg	3.022E+03	7.678E+01	2.650E+03	1.240E-01	1.244E-01			3.694E-01							4.054E-03
Al(OH)4-	kg															
Al+3	kg	6.213E+06	9.455E+04	2.076E+06	2.105E+02	3.983E+03			7.423E+03							4.877E+00
As+5	kg	3.129E+03	1.366E+02	1.696E+03	1.401E-01	6.575E-02			8.678E-01							2.609E-01
B+3	kg	1.237E+04	5.097E+02	5.240E+03	5.546E-01	1.003E-01			1.543E+00							1.525E-03
Ba+2	kg	1.058E+04	2.956E+02	1.820E+03	1.027E-01	1.605E-01			4.350E-01							4.774E-03
Be+2	kg	7.218E+02	3.179E+01	2.215E+02	2.026E-02	2.832E-04			4.328E-02							
Bi+3	kg	5.583E+05	1.453E+04	4.893E+03	1.127E+01	3.323E+04			6.979E-01							1.742E-04
C10H12N2O8-4	kg															
C10H15N2O7-3	kg															
C12H27O4P	kg															
C13H28	kg															
C2Cl4	kg															
C2H3O2-	kg															
C2H3O3-	kg															
C2HCl3	kg															
C2O4-2	kg	1.010E+06	2.780E+04	4.672E+05	2.331E+01				1.071E+03							7.165E+01
C3H6O	kg															
C4H10O	kg															
C4H8O	kg															
C5H5N	kg															
C6H5NO2	kg															
C6H5O7-3	kg															
C6H6	kg															
C7H6N2O4	kg															
C7H8O	kg															
Ca+2	kg	2.302E+05	6.461E+03	3.835E+04	4.437E+00	2.251E+03			2.742E+01							2.738E-02
Cd+2	kg	2.481E+03	4.856E+01	5.086E+03	1.415E-01	5.967E-02			2.006E+00							6.016E-01
Ce+3	kg	5.593E+03	1.815E+02	2.933E+03	1.582E-01	3.048E-01			8.678E-01							8.579E-04
CH2Cl2	kg															
CHCl3	kg															
CHO2-	kg															
Cl-	kg	4.584E+05	6.672E+02	4.034E+05	4.737E+01	1.095E+03			6.319E+02							3.165E+02
CN-	kg	4.455E+03	1.564E+02	3.339E+02	3.903E-03											
Co+3	kg	1.221E+03	4.623E+01	4.724E+02	3.626E-02				2.365E-01							2.338E-04
CO3-2	kg	6.545E+06	2.780E+04	3.289E+06	1.242E+02	7.014E+03			2.534E+04							2.628E+04
Cr(OH)4-	kg															
Cr(TOTAL)	kg	4.687E+05	1.450E+04	1.402E+05	1.875E+01	9.127E-01			4.961E+02							1.397E-02
Cs+	kg	5.577E+02	4.666E+00	1.069E+03	1.763E-02				5.663E-01							6.050E-09
Cu+2	kg	2.356E+03	6.211E+01	9.668E+02	6.025E-02	3.456E-01			8.678E-02							8.579E-05
F-	kg	7.935E+05	6.379E+03	3.120E+05	1.871E+01	2.213E+02			2.660E+02							4.070E+01
Fe+3	kg	1.034E+06	3.641E+04	2.171E+05	3.024E+01	1.170E+04			6.920E+01							6.841E-02
H+	kg															3.401E+01
H2O	kg	5.721E+06	1.101E+06		4.431E+04	3.323E+07	4.614E+08	2.929E+07	1.948E+06	1.539E+05		5.445E+06				7.338E+06
H2O2	kg															
Hg+2	kg	1.602E+03	3.538E+01	2.080E+02	3.717E-02	5.252E-03			5.500E-01							5.437E-04
K+	kg	2.295E+05	1.524E+03	7.156E+05	6.666E+00	8.256E-01			4.103E+02							1.155E-01

Stream Number on Summary Graphic-->		1A	1B	2A	2B	3	4	5	6	7	8	9	10	11	12	13
	Standard Units of Measure	Initial Single-Shell Tank Inventory	Residual Single-Shell Tank Inventory	Initial Double-Shell Tank Inventory	Residual Double-Shell Tank Inventory	New Waste Additions	Single-Shell Tank Retrieval Water & Sodium Hydroxide	Double-Shell Tank Retrieval Water & Chemical Additions	Low-Curie Feed to Demonstration Bulk Vitrification System	Demonstration Bulk Vitrification System Glass Formers	Demonstration Bulk Vitrification System Air Supply	Demonstration Bulk Vitrification System Makeup Chemicals	Demonstration Bulk Vitrification System Off-Gas	Demonstration Bulk Vitrification System Off-Gas Treatment Recycle	Demonstration Bulk Vitrification System Immobilized Low-Activity Waste Product	Demonstration Bulk Vitrification System Liquid Effluent
La+3	kg	2.823E+04	5.248E+02	4.626E+03	3.522E-01	1.033E+04			2.321E-03							2.295E-06
Li+	kg	1.515E+03	5.912E+01	5.563E+02	4.154E-02	7.848E-04										
Mg+2	kg	1.848E+04	6.034E+02	5.898E+03	4.151E-01	2.364E+03			8.678E-01							8.579E-04
Mn+4	kg	1.302E+05	4.658E+03	3.124E+04	2.584E+00	1.605E+04			1.301E-01							1.286E-04
MnO2	kg															
MnO4-	kg															
Mo+6	kg	3.087E+03	1.241E+02	4.078E+03	1.294E-01	1.652E+02			1.788E+00							
Na+	kg	3.185E+07	1.035E+05	1.627E+07	9.176E+02	3.148E+04	1.143E+05	1.089E+05	2.629E+05			4.501E+04				4.501E+04
Nd+3	kg	5.048E+03	1.804E+02	5.022E+03	1.964E-01				8.678E-01							
NH3	kg	4.661E+03	6.072E+01	4.832E+03	5.091E-02	3.072E-03						1.655E+05				1.655E+05
NH4+	kg															
Ni+2	kg	8.789E+04	2.700E+03	1.340E+04	2.014E+00	2.175E+04			4.008E+00							1.357E-04
NO2-	kg	5.305E+06	9.827E+03	6.648E+06	1.867E+02	1.617E+04		1.038E+05	7.312E+03							7.310E+03
NO3-	kg	4.302E+07	6.863E+04	1.189E+07	1.137E+03	1.089E+05			6.502E+05							6.499E+05
OH(BOUND)	kg	1.695E+07	2.763E+05	5.489E+06	4.387E+02	2.725E+00			1.989E+03							1.966E+00
OH-	kg	2.096E+05	9.112E+03	2.719E+06	1.863E+02	5.875E+03	8.459E+04	4.219E+04	1.817E+03			3.329E+04				3.330E+04
Pb+2	kg	6.863E+04	2.327E+03	1.315E+04	3.794E+00	6.792E-01			2.004E+00							2.008E-01
Pd+2	kg	3.101E+01	1.275E+01	3.333E+02	2.178E-03											
PO4-3	kg	4.674E+06	5.070E+04	4.037E+05	9.638E+01	2.430E+04			1.143E+04							1.129E+01
Pr+3	kg	2.860E+02	8.220E+00	4.920E+02	7.068E-03											
Pu+4	kg															
Rb+	kg	2.899E+02	2.588E+01	1.743E+02	8.940E-04											
Rh+3	kg	2.339E+02	5.361E+00	3.094E+02	4.395E-03											
Ru+3	kg	1.120E+03	1.752E+01	1.098E+03	2.367E-02											
Sb+5	kg	2.455E+03	8.883E+01	1.088E+03	8.412E-02				5.125E+00							1.792E-03
Se+6	kg	3.674E+03	1.674E+01	1.707E+03	5.699E-02	9.528E-02			6.447E+01							6.444E-01
Si+4	kg	7.352E+05	1.769E+04	3.633E+04	1.740E+01	6.751E+03			2.602E+02							2.573E-01
SO4-2	kg	3.046E+06	1.125E+04	5.811E+05	6.273E+01	5.279E+03			8.835E+03							8.825E+03
Sr+2	kg	3.802E+04	1.289E+03	4.045E+02	4.284E-01	2.688E-03			7.439E-01							7.429E-01
Ta+5	kg	5.680E+00	2.519E+00	8.554E+01	5.854E-05											
Tc+7	kg															
Te+6	kg	2.407E+02	5.875E+00	1.744E+02	6.190E-03											
Th+4	kg	2.504E+02	1.943E+00	6.838E+00	4.182E-04				4.974E-05							4.917E-08
Ti+4	kg	1.343E+03	4.386E+01	4.627E+02	3.747E-02	1.382E-03			8.678E-02							8.579E-05
Tl+3	kg	4.467E+03	7.716E+01	1.695E+03	1.962E-01											
TOC	kg	3.626E+05	1.092E+04	4.955E+05	9.293E+00	2.182E+02			2.867E+01							2.866E+01
U(TOTAL)	kg															
V+5	kg	2.046E+03	8.722E+01	7.932E+02	7.838E-02				4.350E-01							
W+6	kg	7.109E+02	1.459E+01	1.424E+03	3.381E-03											
Y+3	kg	1.559E+02	3.830E+00	5.171E+02	6.210E-03											
Zn+2	kg	6.069E+03	1.871E+02	1.244E+03	1.587E-01	2.323E-03			1.301E-01							1.286E-04
Zr+4	kg	1.156E+05	1.039E+03	2.848E+05	1.352E+01	1.682E-03			2.704E-01							2.673E-04

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project (35 Sheets)

Stream Number on Summary Graphic-->		1A	1B	2A	2B	3	4	5	6	7	8	9	10	11	12	13
	Standard Units of Measure	Initial Single-Shell Tank Inventory	Residual Single-Shell Tank Inventory	Initial Double-Shell Tank Inventory	Residual Double-Shell Tank Inventory	New Waste Additions	Single-Shell Tank Retrieval Water & Sodium Hydroxide	Double-Shell Tank Retrieval Water & Chemical Additions	Low-Curie Feed to Demonstration Bulk Vitrification System	Demonstration Bulk Vitrification System Glass Formers	Demonstration Bulk Vitrification System Air Supply	Demonstration Bulk Vitrification System Makeup Chemicals	Demonstration Bulk Vitrification System Off-Gas	Demonstration Bulk Vitrification System Off-Gas Treatment Recycle	Demonstration Bulk Vitrification System Immobilized Low-Activity Waste Product	Demonstration Bulk Vitrification System Liquid Effluent
Glass Formers																
Al2O3	kg															
B2O3	kg									8.523E+04					8.497E+04	
C12H22O11	kg															
CaO	kg															
Fe2O3	kg															
Li2O	kg															
MgO	kg															
Na2O	kg									4.077E+04					4.064E+04	
SiO2	kg									1.139E+06					1.136E+06	
TiO2	kg															
ZnO	kg															
ZrO2	kg									1.192E+05					1.189E+05	
Gas Phase																
129-I	Ci															
134-Cs	Ci															
137-Cs	Ci															
99-Tc	Ci															
CO	kg															
CO2	kg												2.998E+02			
Cs+	kg															
H2O	kg										1.598E+02		2.076E+05			
HCl	kg															
HF	kg												4.325E+00			
K+	kg															
N2	kg										9.816E+06		9.816E+06			
Na+	kg															
NH3	kg															
NO	kg															
NO2	kg															
O2	kg										2.981E+06		2.887E+06			
P2O5	kg															
SO2	kg												1.179E-01			
Waste Oxides																
Ac2O3	kg														1.769E-09	
Ag2O	kg														3.911E-01	
Al2O3	kg														1.397E+04	
Am2O3	kg														5.265E-05	
As2O5	kg														9.279E-01	
B2O3	kg														4.948E+00	
BaO	kg														4.789E-01	
BeO	kg														1.197E-01	
Bi2O3	kg														7.754E-01	
CaO	kg														3.820E+01	
CdO	kg														1.599E+00	
CeO2	kg														1.062E+00	

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project (35 Sheets)

Stream Number on Summary Graphic-->		1A	1B	2A	2B	3	4	5	6	7	8	9	10	11	12	13
	Standard Units of Measure	Initial Single-Shell Tank Inventory	Residual Single-Shell Tank Inventory	Initial Double-Shell Tank Inventory	Residual Double-Shell Tank Inventory	New Waste Additions	Single-Shell Tank Retrieval Water & Sodium Hydroxide	Double-Shell Tank Retrieval Water & Chemical Additions	Low-Curie Feed to Demonstration Bulk Vitrification System	Demonstration Bulk Vitrification System Glass Formers	Demonstration Bulk Vitrification System Air Supply	Demonstration Bulk Vitrification System Makeup Chemicals	Demonstration Bulk Vitrification System Off-Gas	Demonstration Bulk Vitrification System Off-Gas Treatment Recycle	Demonstration Bulk Vitrification System Immobilized Low-Activity Waste Product	Demonstration Bulk Vitrification System Liquid Effluent
Cl-	kg														3.143E+02	
Cm2O3	kg														3.927E-08	
Co2O3	kg														3.315E-01	
Cr2O3	kg														7.228E+02	
Cs2O	kg														6.566E-01	
CuO	kg														1.082E-01	
Dy2O3	kg															
Eu2O3	kg														2.640E-06	
F-	kg														2.204E+02	
Fe2O3	kg														9.853E+01	
HgO	kg														5.914E-01	
K2O	kg														4.925E+02	
La2O3	kg														2.711E-03	
Li2O	kg															
MgO	kg														1.433E+00	
MnO2	kg														2.050E-01	
MoO3	kg														2.673E+00	
Na2O	kg														3.533E+05	
Nb2O5	kg														1.475E-05	
Nd2O3	kg														1.009E+00	
NiO	kg														5.100E+00	
NpO2	kg														2.543E-01	
P2O5	kg														8.503E+03	
PbO	kg														1.936E+00	
PdO	kg															
Pr2O3	kg															
PuO2	kg														1.151E-02	
Rb2O	kg															
Re2O3	kg															
Rh2O3	kg															
Ru2O3	kg														4.206E-14	
Sb2O3	kg														6.114E+00	
SeO2	kg														8.947E+01	
SiO2	kg														5.544E+02	
Sm2O3	kg														2.608E-03	
SnO2	kg														3.027E-01	
SO3	kg														5.868E+00	
SrO	kg														1.124E-02	
Ta2O5	kg															
Tc2O7	kg														9.017E+00	
TeO2	kg															
ThO2	kg														2.984E-02	
TiO2	kg														1.442E-01	
Tl2O3	kg															
U3O8	kg														5.221E+00	
V2O5	kg														7.741E-01	
WO3	kg															
Y2O3	kg															
ZnO	kg														1.612E-01	
ZrO2	kg														2.397E+00	

Stream Number on Summary Graphic-->		1A	1B	2A	2B	3	4	5	6	7	8	9	10	11	12	13
	Standard Units of Measure	Initial Single-Shell Tank Inventory	Residual Single-Shell Tank Inventory	Initial Double-Shell Tank Inventory	Residual Double-Shell Tank Inventory	New Waste Additions	Single-Shell Tank Retrieval Water & Sodium Hydroxide	Double-Shell Tank Retrieval Water & Chemical Additions	Low-Curie Feed to Demonstration Bulk Vitrification System	Demonstration Bulk Vitrification System Glass Formers	Demonstration Bulk Vitrification System Air Supply	Demonstration Bulk Vitrification System Makeup Chemicals	Demonstration Bulk Vitrification System Off-Gas	Demonstration Bulk Vitrification System Off-Gas Treatment Recycle	Demonstration Bulk Vitrification System Immobilized Low-Activity Waste Product	Demonstration Bulk Vitrification System Liquid Effluent
Total Stream by Element																
Ac	kg	5.274E-05	7.051E-07	3.447E-06	1.723E-10				4.037E-10						2.227E-10	
Ag	kg	3.022E+03	7.678E+01	2.650E+03	1.240E-01	1.244E-01			3.694E-01						3.641E-01	4.054E-03
Al	kg	6.213E+06	9.455E+04	2.076E+06	2.105E+02	3.983E+03			7.423E+03						7.394E+03	4.877E+00
Am	kg	1.512E+01	8.357E-01	2.661E+01	1.175E-03	3.757E-03			4.770E-05						4.788E-05	3.401E-11
As	kg	3.129E+03	1.366E+02	1.696E+03	1.401E-01	6.575E-02			8.678E-01						6.050E-01	2.609E-01
B	kg	1.237E+04	5.097E+02	5.240E+03	5.546E-01	1.003E-01			1.543E+00	2.647E+04					2.639E+04	1.525E-03
Ba	kg	1.058E+04	2.956E+02	1.820E+03	1.027E-01	1.605E-01			4.350E-01					9.317E-11	4.289E-01	4.774E-03
Be	kg	7.218E+02	3.179E+01	2.215E+02	2.026E-02	2.832E-04			4.328E-02						4.315E-02	
Bi	kg	5.583E+05	1.453E+04	4.893E+03	1.127E+01	3.323E+04			6.979E-01						6.955E-01	1.742E-04
C	kg	1.950E+06	2.415E+04	1.282E+06	4.052E+01	1.622E+03			5.392E+03				8.182E+01			5.308E+03
Ca	kg	2.302E+05	6.461E+03	3.835E+04	4.437E+00	2.251E+03			2.742E+01						2.730E+01	2.738E-02
Cd	kg	2.481E+03	4.856E+01	5.086E+03	1.415E-01	5.967E-02			2.006E+00						1.400E+00	6.016E-01
Ce	kg	5.593E+03	1.815E+02	2.933E+03	1.582E-01	3.048E-01			8.678E-01						8.642E-01	8.579E-04
Cl	kg	4.584E+05	6.672E+02	4.034E+05	4.737E+01	1.095E+03			6.319E+02						3.143E+02	3.165E+02
Cm	kg	6.905E-04	1.401E-04	6.671E-03	1.040E-07				4.046E-08						3.575E-08	4.000E-11
Co	kg	1.221E+03	4.623E+01	4.724E+02	3.626E-02	3.115E-09			2.365E-01						2.355E-01	2.338E-04
Cr	kg	4.687E+05	1.450E+04	1.402E+05	1.875E+01	9.127E-01			4.961E+02						4.946E+02	1.397E-02
Cs	kg	7.141E+02	5.974E+00	1.409E+03	2.270E-02	3.247E-01			6.273E-01					6.104E-04	6.203E-01	1.880E-07
Cu	kg	2.356E+03	6.211E+01	9.668E+02	6.025E-02	3.456E-01			8.678E-02						8.642E-02	8.579E-05
Dy	kg															
Eu	kg	1.381E-01	8.374E-03	1.689E-01	8.645E-06	3.086E-06			3.069E-06						2.284E-06	2.587E-10
F	kg	7.935E+05	6.379E+03	3.120E+05	1.871E+01	2.213E+02			2.660E+02				4.107E+00		2.204E+02	4.070E+01
Fe	kg	1.034E+06	3.641E+04	2.171E+05	3.024E+01	1.170E+04			6.920E+01						6.892E+01	6.841E-02
H	kg	1.658E+06	1.401E+05	4.873E+05	4.996E+03	3.718E+06	5.163E+07	3.280E+06	2.182E+05	1.722E+04	1.788E+01	6.407E+05	2.323E+04		5.263E-07	8.525E+05
Hg	kg	1.602E+03	3.538E+01	2.080E+02	3.717E-02	5.252E-03			5.500E-01						5.477E-01	5.437E-04
I	kg	1.598E+02	7.382E-01	8.912E+01	2.273E-03	9.682E-14			5.820E-01					5.224E-01	5.790E-02	1.317E-03
K	kg	2.295E+05	1.524E+03	7.156E+05	6.666E+00	8.256E-01			4.103E+02						4.088E+02	1.155E-01
La	kg	2.823E+04	5.248E+02	4.626E+03	3.522E-01	1.033E+04			2.321E-03						2.312E-03	2.295E-06
Li	kg	1.515E+03	5.912E+01	5.563E+02	4.154E-02	7.848E-04										
Mg	kg	1.848E+04	6.034E+02	5.898E+03	4.151E-01	2.364E+03			8.678E-01						8.642E-01	8.579E-04
Mn	kg	1.302E+05	4.658E+03	3.124E+04	2.584E+00	1.605E+04			1.301E-01						1.295E-01	1.286E-04
Mo	kg	3.087E+03	1.241E+02	4.078E+03	1.294E-01	1.652E+02			1.788E+00						1.782E+00	
N	kg	1.134E+07	1.863E+04	4.713E+06	3.136E+02	2.953E+04		3.159E+04	1.491E+05		9.816E+06	1.361E+05	9.816E+06			2.852E+05
Na	kg	3.185E+07	1.035E+05	1.627E+07	9.176E+02	3.148E+04	1.143E+05	1.089E+05	2.629E+05	3.025E+04		4.501E+04			2.922E+05	4.501E+04
Nb	kg	6.908E-03	2.961E-04	5.526E-03	2.939E-07				9.408E-06						1.032E-05	-2.255E-09
Nd	kg	5.048E+03	1.804E+02	5.022E+03	1.964E-01				8.678E-01						8.651E-01	
Ni	kg	8.791E+04	2.701E+03	1.341E+04	2.014E+00	2.175E+04			4.021E+00						4.008E+00	1.361E-04
Np	kg	8.972E+01	4.556E+00	9.113E+01	5.055E-03				2.250E-01						2.241E-01	2.224E-04
O	kg	6.936E+07	1.390E+06	2.518E+07	4.118E+04	2.964E+07	4.099E+08	2.613E+07	2.276E+06	8.437E+05	2.981E+06	4.867E+06	3.072E+06		8.081E+05	7.084E+06
P	kg	1.524E+06	1.653E+04	1.317E+05	3.143E+01	7.925E+03			3.726E+03						3.711E+03	3.684E+00
Pa	kg	7.471E-02	2.393E-03	5.420E-02	1.234E-06				1.912E-05						1.906E-05	
Pb	kg	6.863E+04	2.327E+03	1.315E+04	3.794E+00	6.792E-01			2.004E+00						1.798E+00	2.008E-01
Pd	kg	3.101E+01	1.275E+01	3.333E+02	2.178E-03											
Pr	kg	2.860E+02	8.220E+00	4.920E+02	7.068E-03											
Pu	kg	7.110E+02	2.787E+01	2.057E+02	1.687E-02	2.710E+01			1.018E-02					9.654E-07	1.015E-02	3.002E-09
Ra	kg	4.205E-01	4.205E-01	1.450E-03	2.599E-09				1.397E-08						1.394E-08	-4.529E-15
Rb	kg	2.899E+02	2.588E+01	1.743E+02	8.940E-04											
Rh	kg	2.339E+02	5.361E+00	3.094E+02	4.395E-03											
Ru	kg	1.120E+03	1.752E+01	1.098E+03	2.367E-02	1.515E-04			3.094E-13						3.430E-14	
S	kg	1.017E+06	3.754E+03	1.939E+05	2.094E+01	1.762E+03			2.949E+03				5.902E-02		2.350E+00	2.945E+03

Stream Number on Summary Graphic-->		1A	1B	2A	2B	3	4	5	6	7	8	9	10	11	12	13
	Standard Units of Measure	Initial Single-Shell Tank Inventory	Residual Single-Shell Tank Inventory	Initial Double-Shell Tank Inventory	Residual Double-Shell Tank Inventory	New Waste Additions	Single-Shell Tank Retrieval Water & Sodium Hydroxide	Double-Shell Tank Retrieval Water & Chemical Additions	Low-Curie Feed to Demonstration Bulk Vitrification System	Demonstration Bulk Vitrification System Glass Formers	Demonstration Bulk Vitrification System Air Supply	Demonstration Bulk Vitrification System Makeup Chemicals	Demonstration Bulk Vitrification System Off-Gas	Demonstration Bulk Vitrification System Off-Gas Treatment Recycle	Demonstration Bulk Vitrification System Immobilized Low-Activity Waste Product	Demonstration Bulk Vitrification System Liquid Effluent
Sb	kg	2.455E+03	8.883E+01	1.088E+03	8.412E-02	1.937E-09			5.125E+00						5.107E+00	1.792E-03
Se	kg	3.680E+03	1.676E+01	1.714E+03	5.713E-02	9.528E-02			6.452E+01						6.367E+01	6.444E-01
Si	kg	7.352E+05	1.769E+04	3.633E+04	1.740E+01	6.751E+03			2.602E+02	5.326E+05					5.312E+05	2.573E-01
Sm	kg	9.907E+01	4.179E+00	4.334E+01	5.491E-03				2.314E-03						2.249E-03	6.169E-10
Sn	kg	1.955E+01	6.707E-01	2.017E+01	6.249E-04				1.388E-02						2.414E-01	3.464E-06
Sr	kg	3.821E+04	1.299E+03	5.317E+02	4.416E-01	5.810E-02			7.534E-01						9.501E-03	7.429E-01
Ta	kg	5.680E+00	2.519E+00	8.554E+01	5.854E-05											
Tc	kg	6.836E+02	8.054E+00	8.959E+02	2.036E-02	1.471E-05			6.088E+00					3.039E-01	5.759E+00	6.108E-03
Te	kg	2.407E+02	5.875E+00	1.744E+02	6.190E-03											
Th	kg	7.329E+04	7.847E+02	4.220E+03	6.010E-01				2.633E-02						2.622E-02	2.603E-05
Ti	kg	1.343E+03	4.386E+01	4.627E+02	3.747E-02	1.382E-03			8.678E-02						8.642E-02	8.579E-05
Tl	kg	4.467E+03	7.716E+01	1.695E+03	1.962E-01											
U	kg	5.709E+05	1.934E+04	4.955E+04	1.301E+01	1.726E+03			4.445E+00						4.427E+00	4.394E-03
V	kg	2.046E+03	8.722E+01	7.932E+02	7.838E-02				4.350E-01						4.336E-01	
W	kg	7.109E+02	1.459E+01	1.424E+03	3.381E-03											
Y	kg	1.559E+02	3.833E+00	5.172E+02	6.214E-03	1.407E-05			2.416E-06							2.519E-10
Zn	kg	6.069E+03	1.871E+02	1.244E+03	1.587E-01	2.323E-03			1.301E-01						1.295E-01	1.286E-04
Zr	kg	1.163E+05	1.070E+03	2.855E+05	1.355E+01	1.682E-03			1.782E+00	8.827E+04					8.799E+04	1.762E-03
		1.306E+08	**1.925E+06**	**5.265E+07**	**4.790E+04**	**3.354E+07**	**4.616E+08**	**2.955E+07**	**2.928E+06**	**1.539E+06**	**1.280E+07**	**5.689E+06**	**1.291E+07**	**8.269E-01**	**1.759E+06**	**8.275E+06**

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project (35 Sheets)

Stream Number on Summary Graphic-->		14	15	16	17	18	19	20	21	22	23	23A	23B	24	25	25A	25B
	Standard Units of Measure	Single-Shell Tank Feed to Contact-Handled Transuranic	Double-Shell Tank Feed to Remote-Handled Transuranic	Air Supply to Transuranic Packaging	Transuranic Waste Carrier (Additives)	Transuranic Packaging Off-Gas	Packaged Transuranic Waste	Transuranic Packaging Process Liquid Effluent	242-A Evaporator Off-Gas	242-A Evaporator Condensate (Liquid Effluent)	Double-Shell Tank Feed to Waste Treatment and Immobilization Plant	Low-Activity Waste Feed to Waste Treatment and Immobilization Plant	High-Level Waste Feed to Waste Treatment and Immobilization Plant	Air Supply to Waste Treatment and Immobilization Plant Pretreatment	All Waste Treatment and Immobilization Plant Pretreatment Makeup Chemicals	High-Level Waste Pretreatment Makeup Chemicals (Caustic Leach)	Waste Treatment and Immobilization Plant Low-Activity Waste Pretreatment Makeup Chemicals
Waste Radionulides																	
106Ru	Ci	6.150E-11	5.946E-01				5.945E-01	9.867E-10		1.279E-01	6.732E+02	1.152E+02	5.580E+02				
113mCd	Ci	6.121E-02	1.033E+02			3.838E-06	1.028E+02	2.487E-03	3.999E-03	1.995E+00	4.405E+03	1.695E+03	2.711E+03				
125Sb	Ci	8.241E-04	2.514E+02			7.542E-12	2.512E+02	2.107E-07	2.896E-04	8.090E+00	8.917E+03	1.200E+03	7.717E+03				
126Sn	Ci	5.381E-03	6.435E+00			5.179E-13	6.405E+00	1.446E-08	3.176E-06	8.870E-02	4.288E+02	1.728E+02	2.559E+02				
129I	Ci	5.092E-04	7.359E-02			1.166E-05	6.330E-02	1.057E-02	3.231E-07	3.227E-04	3.972E+01	1.487E+01	2.485E+01				
134Cs	Ci	5.724E-03	2.495E+00				2.500E+00		1.774E-09	4.154E-05	2.789E+03	5.397E+02	2.249E+03				
137Cs	Ci	5.154E+02	2.223E+05				2.220E+05		1.089E-05	2.549E-01	4.228E+07	1.924E+07	2.304E+07				
137mBa	Ci	4.876E+02	2.103E+05				2.100E+05		1.030E-05	2.411E-01	3.999E+07	1.820E+07	2.179E+07				
14C	Ci	7.284E-02	1.064E+00			1.097E-06	1.131E+00	7.094E-04	1.063E-03	5.300E-01	7.477E+02	3.499E+02	3.978E+02				
151Sm	Ci	1.451E+02	1.176E+05			1.719E-08	1.176E+05	5.371E-05	1.079E-01	3.370E+02	3.514E+06	3.507E+05	3.163E+06				
152Eu	Ci	4.590E-03	9.156E+01			4.667E-12	9.152E+01	1.458E-08	4.031E-05	1.259E-01	1.360E+03	7.759E+01	1.282E+03				
154Eu	Ci	2.367E+00	6.195E+02			5.425E-11	6.192E+02	1.692E-07	4.969E-04	1.552E+00	5.757E+04	4.454E+03	5.312E+04				
155Eu	Ci	1.237E+00	3.166E+02			5.066E-11	3.165E+02	1.581E-07	6.115E-04	1.910E+00	3.593E+04	2.217E+03	3.371E+04				
226Ra	Ci	7.164E-06	2.752E-04				2.808E-04	1.172E-12		6.558E-03	1.422E+00	1.351E+00	7.138E-02				
227Ac	Ci	8.447E-05	6.665E-02				6.635E-02	8.213E-12		7.309E-05	3.953E+00	1.283E-01	3.824E+00				
228Ra	Ci	1.028E-10	6.364E-02			-4.537E-13	6.340E-02	5.285E-10	-7.333E-07	1.649E-03	6.028E+00	2.070E+00	3.958E+00				
229Th	Ci	3.128E-08	1.841E-02			4.954E-14	1.837E-02	3.211E-11	2.065E-07	1.030E-04	1.455E+00	9.907E-02	1.356E+00				
231Pa	Ci	6.338E-04	9.075E-01				9.026E-01	4.109E-11		4.441E-04	4.851E+00	1.362E+00	3.489E+00				
232Th	Ci	2.638E-10	1.088E-01			2.662E-13	1.085E-01	1.725E-10	7.436E-07	3.710E-04	8.305E+00	2.548E-01	8.050E+00				
232U	Ci	3.708E-05	1.293E-01			3.137E-10	1.286E-01	2.031E-07	4.692E-07	2.341E-04	6.751E+00	1.895E-01	6.561E+00				
233U	Ci	3.068E-06	2.614E+00			1.010E-08	2.600E+00	6.528E-06	1.793E-05	8.944E-03	7.065E+02	5.904E+00	7.006E+02				
234U	Ci	3.038E+00	1.703E+01			5.196E-08	2.004E+01	3.363E-05	1.375E-05	6.858E-03	1.991E+02	3.362E+00	1.957E+02				
235U	Ci	1.275E-01	6.816E-01			2.067E-09	8.078E-01	1.338E-06	5.775E-07	2.880E-04	8.211E+00	1.367E-01	8.074E+00				
236U	Ci	3.543E-02	1.211E+00			1.136E-09	1.246E+00	7.359E-07	5.108E-07	2.548E-04	4.359E+00	1.697E-01	4.189E+00				
237Np	Ci	5.639E-02	2.401E+00			1.125E-07	2.445E+00	7.289E-05	1.536E-08	7.666E-06	1.199E+02	3.494E+01	8.491E+01				
238Pu	Ci	7.473E+00	3.056E+02			4.661E-11	3.117E+02	1.452E-07	2.997E-09	9.333E-06	1.584E+03	3.687E+01	1.547E+03				
238U	Ci	2.924E+00	1.341E+01			4.569E-08	1.630E+01	2.957E-05	1.371E-05	6.837E-03	1.842E+02	2.950E+00	1.813E+02				
239Pu	Ci	9.459E+02	5.912E+03			1.365E-09	6.828E+03	4.255E-06	4.782E-08	1.488E-04	4.661E+04	6.871E+02	4.592E+04				
240Pu	Ci	1.013E+02	1.319E+03			2.528E-10	1.413E+03	7.879E-07	3.980E-05	1.238E-01	9.796E+03	1.635E+02	9.633E+03				
241Am	Ci	1.812E+02	1.892E+04			1.833E-08	1.899E+04	5.707E-05	-3.905E-06	-1.212E-02	1.199E+05	4.166E+03	1.157E+05				
241Pu	Ci	2.081E+02	1.640E+04			2.287E-09	1.655E+04	7.126E-06	6.042E-04	1.882E+00	7.914E+04	2.011E+03	7.713E+04				
242Cm	Ci	2.537E-02	2.460E+01			1.205E-07	2.447E+01	7.786E-05	1.078E-05	5.357E-03	2.742E+02	3.642E+01	2.378E+02				
242Pu	Ci	3.040E-03	1.127E-01			1.772E-14	1.152E-01	5.520E-11	4.497E-09	1.401E-05	6.452E-01	1.411E-02	6.311E-01				
243Am	Ci	1.491E-02	5.601E+00			5.336E-12	5.582E+00	1.662E-08	2.710E-10	8.421E-07	5.516E+01	2.572E+00	5.259E+01				
243Cm	Ci	2.857E-04	4.828E-01			1.985E-09	4.806E-01	1.283E-06	1.319E-06	6.576E-04	2.263E+01	2.843E+00	1.979E+01				
244Cm	Ci	6.419E-03	1.103E+01			4.531E-08	1.098E+01	2.928E-05	3.065E-05	1.528E-02	5.270E+02	6.610E+01	4.609E+02				
3H	Ci	2.532E+00	4.664E+00			6.032E-02	2.884E+00	4.247E+00	1.371E+01	9.657E+02	2.868E+03	9.495E+02	1.919E+03				
59Ni	Ci	1.200E-01	1.306E+01			1.009E-07	1.312E+01	6.540E-05	9.681E-05	4.830E-02	1.449E+03	1.385E+02	1.310E+03				
60Co	Ci	1.515E-01	5.047E+01			9.883E-07	5.056E+01	6.407E-04	1.529E-07	7.627E-05	6.113E+03	7.755E+02	5.337E+03				
63Ni	Ci	1.298E+01	1.205E+03			5.588E-06	1.212E+03	3.622E-03	7.914E-03	3.949E+00	1.335E+05	1.131E+04	1.222E+05				
79Se	Ci	1.450E-03	7.941E-02				8.051E-02	7.040E-05		3.910E-02	8.410E+01	4.111E+01	4.299E+01				
90Sr	Ci	1.227E+04	6.722E+05			1.983E-07	6.824E+05	2.317E-03	6.237E-05	7.286E-01	4.113E+07	1.681E+06	3.945E+07				
90Y	Ci	1.227E+04	6.722E+05			1.983E-07	6.824E+05	2.317E-03	6.237E-05	7.286E-01	4.113E+07	1.681E+06	3.945E+07				
93Zr	Ci	1.697E+00	6.079E+01			2.310E-10	6.217E+01	1.152E-07	2.060E-03	1.028E+00	3.440E+03	1.059E+03	2.381E+03				
93mNb	Ci	1.532E+00	5.016E+01			-9.395E-11	5.142E+01	1.141E-03	-3.080E-04	7.537E-01	2.759E+03	8.336E+02	1.926E+03				
99Tc	Ci	1.817E+01	1.567E+02			6.970E-05	1.743E+02	4.511E-02	2.174E-06	1.084E-03	2.553E+04	1.203E+04	1.350E+04				
	Ci	**2.717E+04**	**1.940E+06**			**6.041E-02**	**1.961E+06**	**4.317E+00**	**1.384E+01**	**1.327E+03**	**1.686E+08**	**4.120E+07**	**1.274E+08**				

Stream Number on Summary Graphic-->		14	15	16	17	18	19	20	21	22	23	23A	23B	24	25	25A	25B
	Standard Units of Measure	Single-Shell Tank Feed to Contact-Handled Transuranic	Double-Shell Tank Feed to Remote-Handled Transuranic	Air Supply to Transuranic Packaging	Transuranic Waste Carrier (Additives)	Transuranic Packaging Off-Gas	Packaged Transuranic Waste	Transuranic Packaging Process Liquid Effluent	242-A Evaporator Off-Gas	242-A Evaporator Condensate (Liquid Effluent)	Double-Shell Tank Feed to Waste Treatment and Immobilization Plant	Low-Activity Waste Feed to Waste Treatment and Immobilization Plant	High-Level Waste Feed to Waste Treatment and Immobilization Plant	Air Supply to Waste Treatment and Immobilization Plant Pretreatment	All Waste Treatment and Immobilization Plant Pretreatment Makeup Chemicals	High-Level Waste Pretreatment Makeup Chemicals (Caustic Leach)	Waste Treatment and Immobilization Plant Low-Activity Waste Pretreatment Makeup Chemicals
Chemical Species																	
Ag+	kg	1.930E+02	1.309E+03			9.537E-11	1.502E+03	5.063E-08	2.618E-04	1.306E-01	4.089E+03	4.192E+02	3.670E+03				
Al(OH)4-	kg																
Al+3	kg	2.824E+04	1.245E+05			3.192E-03	1.521E+05	2.065E+00	1.641E+00	8.184E+02	7.816E+06	1.833E+06	5.983E+06				
As+5	kg	8.660E+01	2.527E+02			7.469E-11	3.388E+02	4.841E-08	7.224E-04	3.604E-01	4.336E+03	1.072E+03	3.264E+03				
B+3	kg	8.968E+02	1.977E+03			2.917E-06	2.873E+03	1.645E-03	2.877E-03	1.436E+00	1.420E+04	2.535E+03	1.166E+04				
Ba+2	kg	6.625E+02	3.204E+02			1.595E-06	9.825E+02	7.894E-04	4.455E-04	2.223E-01	1.112E+04	5.221E+02	1.059E+04				
Be+2	kg	2.422E+00	1.681E+02				1.704E+02	8.219E-09		2.683E-02	7.400E+02	5.925E+01	6.808E+02				
Bi+3	kg	1.771E+05	8.396E+04			1.154E-08	2.609E+05	3.224E-04	8.386E-05	2.331E+00	3.202E+05	1.787E+03	3.184E+05				
C10H12N2O8-4	kg																
C10H15N2O7-3	kg																
C12H27O4P	kg																
C13H28	kg																
C2Cl4	kg																
C2H3O2-	kg																
C2H3O3-	kg																
C2HCl3	kg																
C2O4-2	kg	2.352E+04	4.076E+04				6.409E+04		3.352E-04	4.869E+03	1.274E+06	1.994E+05	1.075E+06				
C3H6O	kg																
C4H10O	kg																
C4H8O	kg																
C5H5N	kg																
C6H5NO2	kg																
C6H5O7-3	kg																
C6H6	kg																
C7H6N2O4	kg																
C7H8O	kg																
Ca+2	kg	9.362E+03	7.142E+03			1.064E+00	1.646E+04	1.724E+01	4.577E-01	7.410E+00	2.383E+05	2.601E+04	2.123E+05				
Cd+2	kg	3.089E+01	9.635E+01			2.864E-06	1.270E+02	1.855E-03	3.029E-04	1.510E-01	7.305E+03	6.173E+02	6.688E+03				
Ce+3	kg	4.452E+02	4.270E+02			2.595E-10	8.709E+02	1.683E-07	7.888E-04	3.936E-01	7.461E+03	1.119E+03	6.342E+03				
CH2Cl2	kg																
CHCl3	kg																
CHO2-	kg																
Cl-	kg	4.941E+03	6.843E+02			1.413E-03	5.611E+03	1.087E+01	7.693E-02	5.919E+02	8.112E+05	3.968E+05	4.144E+05				
CN-	kg	1.157E+01	6.556E+01				7.676E+01	8.019E-05		4.913E-01	4.505E+03	1.687E+02	4.336E+03				
Co+3	kg	4.101E+01	1.124E+02			4.230E-06	1.534E+02	2.737E-03	3.954E-04	1.968E-01	1.484E+03	3.365E+02	1.147E+03				
CO3-2	kg	3.655E+04	2.807E+04			3.296E-02	6.454E+04	2.136E+01	7.076E+00	3.529E+03	7.825E+06	3.147E+06	4.678E+06				
Cr(OH)4-	kg																
Cr(TOTAL)	kg	1.132E+04	2.049E+04			1.498E-05	3.172E+04	7.960E-02	5.988E-04	3.182E+00	5.380E+05	8.986E+04	4.481E+05				
Cs+	kg	2.118E-02	9.130E+00				9.118E+00		3.204E-05	7.503E-01	1.584E+03	7.696E+02	8.140E+02				
Cu+2	kg	1.371E+02	4.496E+02			3.151E-08	5.858E+02	1.676E-04	2.488E-04	1.241E-01	2.668E+03	3.858E+02	2.283E+03				
F-	kg	3.291E+04	6.772E+04			7.357E-04	1.006E+05	1.387E+00	1.317E-02	2.482E+01	7.145E+05	2.277E+05	4.867E+05				
Fe+3	kg	7.495E+04	1.119E+05			2.014E-03	1.865E+05	1.005E+00	1.706E-02	8.501E+00	1.036E+06	2.339E+04	1.012E+06				
H+	kg														1.772E+05		1.772E+05
H2O	kg	5.352E+06	9.671E+06				4.400E+05	1.455E+07		4.392E+07	4.088E+08	1.011E+08	3.077E+08		3.234E+08	1.406E+07	3.094E+08
H2O2	kg																
Hg+2	kg	8.049E+00	2.528E+01			1.315E-06	3.325E+01	8.512E-04	2.820E-03	1.407E+00	1.713E+03	2.712E+02	1.442E+03				
K+	kg	1.057E+04	2.860E+03			4.166E-03	1.343E+04	2.649E+00	2.643E-01	1.318E+02	8.793E+05	6.022E+05	2.771E+05				

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project (35 Sheets)

Stream Number on Summary Graphic-->		14	15	16	17	18	19	20	21	22	23	23A	23B	24	25	25A	25B
	Standard Units of Measure	Single-Shell Tank Feed to Contact-Handled Transuranic	Double-Shell Tank Feed to Remote-Handled Transuranic	Air Supply to Transuranic Packaging	Transuranic Waste Carrier (Additives)	Transuranic Packaging Off-Gas	Packaged Transuranic Waste	Transuranic Packaging Process Liquid Effluent	242-A Evaporator Off-Gas	242-A Evaporator Condensate (Liquid Effluent)	Double-Shell Tank Feed to Waste Treatment and Immobilization Plant	Low-Activity Waste Feed to Waste Treatment and Immobilization Plant	High-Level Waste Feed to Waste Treatment and Immobilization Plant	Air Supply to Waste Treatment and Immobilization Plant Pretreatment	All Waste Treatment and Immobilization Plant Pretreatment Makeup Chemicals	High-Level Waste Pretreatment Makeup Chemicals (Caustic Leach)	Waste Treatment and Immobilization Plant Low-Activity Waste Pretreatment Makeup Chemicals
La+3	kg	2.369E+04	2.476E+03			1.502E-08	2.616E+04	9.740E-06	2.909E-04	1.450E-01	1.650E+04	3.310E+02	1.617E+04				
Li+	kg	1.122E+01	7.612E+01			4.122E-11	8.706E+01	2.572E-08	6.919E-05	3.452E-02	1.916E+03	2.826E+02	1.633E+03				
Mg+2	kg	1.189E+03	3.245E+03			4.192E-04	4.430E+03	1.156E-02	2.371E-02	6.537E-01	2.169E+04	1.440E+03	2.025E+04				
Mn+4	kg	3.642E+04	7.508E+03			7.434E-04	4.390E+04	4.520E-01	9.897E-04	4.931E-01	1.288E+05	4.506E+03	1.243E+05				
MnO2	kg																
MnO4-	kg														5.566E+05		5.566E+05
Mo+6	kg	1.994E+01	2.833E+02			2.924E-06	3.027E+02	1.777E-03		3.257E+00	6.869E+03	2.697E+03	4.172E+03				
Na+	kg	3.024E+05	1.775E+05			1.948E-02	4.793E+05	1.215E+01	1.007E+00	5.023E+02	4.035E+07	1.639E+07	2.396E+07		7.560E+06	6.287E+06	1.273E+06
Nd+3	kg	5.312E+01	6.443E+02				6.962E+02	5.643E-08		2.583E-01	9.179E+03	1.430E+03	7.749E+03				
NH3	kg		3.181E+02				3.181E+02		3.054E+02	3.465E+03	5.324E+03	9.556E+02	4.368E+03				
NH4+	kg																
Ni+2	kg	6.205E+02	7.216E+02			1.725E-05	1.339E+03	1.118E-02	6.629E-03	3.308E+00	1.182E+05	5.817E+03	1.124E+05				
NO2-	kg	3.479E+04	6.192E+04			3.309E-03	9.652E+04	3.436E+01	2.193E-01	2.277E+03	1.150E+07	6.051E+06	5.447E+06				
NO3-	kg	3.871E+05	9.035E+04			4.281E-02	4.768E+05	4.449E+02	2.037E+00	2.117E+04	4.365E+07	1.507E+07	2.858E+07		1.120E+07		1.120E+07
OH(BOUND)	kg	2.202E+05	6.333E+05			3.471E-07	8.514E+05	2.249E-04	2.334E+00	1.165E+03	1.542E+07	3.058E+06	1.236E+07				
OH-	kg	2.455E+04	2.310E+04			7.351E-02	4.755E+04	4.763E+01	4.916E+00	2.451E+03	8.309E+06	3.617E+06	4.692E+06		5.513E+06	4.651E+06	8.621E+05
Pb+2	kg	2.316E+03	4.743E+03			6.975E-05	7.045E+03	1.947E+00	4.021E-03	1.122E+02	7.196E+04	5.489E+03	6.647E+04				
Pd+2	kg								2.897E-04	1.445E-01	3.514E+02	8.305E+01	2.683E+02				
PO4-3	kg	2.288E+05	1.123E+05			1.967E-01	3.408E+05	1.275E+02	2.980E+00	1.485E+03	3.743E+06	6.810E+05	3.062E+06				
Pr+3	kg		5.871E+00				5.870E+00	3.332E-10		2.848E-03	7.639E+02	3.983E+01	7.241E+02				
Pu+4	kg																
Rb+	kg		3.681E+00				3.680E+00	2.182E-09		8.790E-02	4.345E+02	3.128E+01	4.033E+02				
Rh+3	kg		3.372E+01				3.372E+01	1.471E-09		1.794E-01	5.041E+02	1.380E+02	3.660E+02				
Ru+3	kg		1.458E+02				1.458E+02	2.569E-07		7.762E-01	2.054E+03	3.436E+02	1.710E+03				
Sb+5	kg	1.541E+02	3.397E+02			1.435E-11	4.925E+02	4.007E-07	8.237E-06	2.299E-01	2.918E+03	8.091E+02	2.109E+03				
Se+6	kg	3.643E+02	3.806E+01				4.022E+02	4.628E-05		1.870E+00	4.436E+03	1.927E+03	2.509E+03				
Si+4	kg	3.425E+04	4.162E+04			3.021E-02	7.579E+04	6.912E+00	2.727E-01	6.779E+01	6.595E+05	2.855E+04	6.309E+05				
SO4-2	kg	2.453E+04	2.174E+04			5.953E-03	4.618E+04	2.505E+01	2.356E-01	9.915E+02	2.551E+06	7.904E+05	1.761E+06				
Sr+2	kg	1.845E+03	1.633E+03			2.205E-08	3.471E+03	2.579E-04	2.828E-05	3.275E-01	3.306E+04	2.085E+02	3.285E+04		2.115E+05		2.115E+05
Ta+5	kg		2.237E+00				2.237E+00	3.332E-10		2.925E-03	8.646E+01	6.506E+01	2.139E+01				
Tc+7	kg																
Te+6	kg		4.135E+01				4.135E+01	3.332E-10		1.498E-02	3.678E+02	1.624E+01	3.516E+02				
Th+4	kg	1.026E-09	5.225E-01			2.094E-13	5.216E-01	1.354E-10	3.121E-06	1.557E-03	2.547E+02	4.278E+00	2.504E+02				
Ti+4	kg	9.226E+01	1.446E+02			1.278E-11	2.363E+02	6.375E-09	9.334E-05	4.657E-02	1.523E+03	1.837E+02	1.340E+03				
Tl+3	kg	1.175E+02	5.197E+02				6.363E+02	7.143E-08		4.498E-01	5.447E+03	1.008E+03	4.438E+03				
TOC	kg	4.021E+03	1.006E+04				1.394E+04	1.063E+02		1.871E+02	7.969E+05	3.962E+05	4.008E+05				
U(TOTAL)	kg																
V+5	kg	4.470E+01	2.440E+02				2.883E+02	3.341E-08		1.241E-01	2.456E+03	4.752E+02	1.981E+03				
W+6	kg	2.588E+00	1.366E+02				1.392E+02	8.230E-04		1.000E+00	1.980E+03	5.101E+02	1.470E+03				
Y+3	kg	5.320E-01	4.935E+01				4.987E+01	1.352E-09		1.061E-02	6.190E+02	9.436E+01	5.246E+02				
Zn+2	kg	4.270E+02	8.623E+02			3.987E-07	1.287E+03	2.455E-04	2.203E-04	1.099E-01	5.833E+03	5.833E+02	5.249E+03				
Zr+4	kg	1.179E+02	2.609E+05			2.908E-08	2.610E+05	1.451E-05	4.628E-02	2.309E+01	1.382E+05	7.645E+03	1.306E+05				

Stream Number on Summary Graphic-->		14	15	16	17	18	19	20	21	22	23	23A	23B	24	25	25A	25B
	Standard Units of Measure	Single-Shell Tank Feed to Contact-Handled Transuranic	Double-Shell Tank Feed to Remote-Handled Transuranic	Air Supply to Transuranic Packaging	Transuranic Waste Carrier (Additives)	Transuranic Packaging Off-Gas	Packaged Transuranic Waste	Transuranic Packaging Process Liquid Effluent	242-A Evaporator Off-Gas	242-A Evaporator Condensate (Liquid Effluent)	Double-Shell Tank Feed to Waste Treatment and Immobilization Plant	Low-Activity Waste Feed to Waste Treatment and Immobilization Plant	High-Level Waste Feed to Waste Treatment and Immobilization Plant	Air Supply to Waste Treatment and Immobilization Plant Pretreatment	All Waste Treatment and Immobilization Plant Pretreatment Makeup Chemicals	High-Level Waste Pretreatment Makeup Chemicals (Caustic Leach)	Waste Treatment and Immobilization Plant Low-Activity Waste Pretreatment Makeup Chemicals
Glass Formers																	
Al2O3	kg																
B2O3	kg																
C12H22O11	kg																
CaO	kg																
Fe2O3	kg																
Li2O	kg																
MgO	kg																
Na2O	kg																
SiO2	kg				2.252E+05		2.252E+05										
TiO2	kg																
ZnO	kg																
ZrO2	kg																
Gas Phase																	
129-I	Ci																
134-Cs	Ci																
137-Cs	Ci																
99-Tc	Ci																
CO	kg																
CO2	kg																
Cs+	kg																
H2O	kg			1.073E+02										1.463E+03			
HCl	kg																
HF	kg																
K+	kg																
N2	kg			6.588E+06		6.588E+06								8.988E+07			
Na+	kg																
NH3	kg																
NO	kg																
NO2	kg																
O2	kg			2.001E+06		2.001E+06								2.730E+07			
P2O5	kg																
SO2	kg																
Waste Oxides																	
Ac2O3	kg																
Ag2O	kg																
Al2O3	kg																
Am2O3	kg																
As2O5	kg																
B2O3	kg																
BaO	kg																
BeO	kg																
Bi2O3	kg																
CaO	kg																
CdO	kg																
CeO2	kg																

Stream Number on Summary Graphic-->		14	15	16	17	18	19	20	21	22	23	23A	23B	24	25	25A	25B
	Standard Units of Measure	Single-Shell Tank Feed to Contact-Handled Transuranic	Double-Shell Tank Feed to Remote-Handled Transuranic	Air Supply to Transuranic Packaging	Transuranic Waste Carrier (Additives)	Transuranic Packaging Off-Gas	Packaged Transuranic Waste	Transuranic Packaging Process Liquid Effluent	242-A Evaporator Off-Gas	242-A Evaporator Condensate (Liquid Effluent)	Double-Shell Tank Feed to Waste Treatment and Immobilization Plant	Low-Activity Waste Feed to Waste Treatment and Immobilization Plant	High-Level Waste Feed to Waste Treatment and Immobilization Plant	Air Supply to Waste Treatment and Immobilization Plant Pretreatment	All Waste Treatment and Immobilization Plant Pretreatment Makeup Chemicals	High-Level Waste Pretreatment Makeup Chemicals (Caustic Leach)	Waste Treatment and Immobilization Plant Low-Activity Waste Pretreatment Makeup Chemicals
Cl-	kg																
Cm2O3	kg																
Co2O3	kg																
Cr2O3	kg																
Cs2O	kg																
CuO	kg																
Dy2O3	kg																
Eu2O3	kg																
F-	kg																
Fe2O3	kg																
HgO	kg																
K2O	kg																
La2O3	kg																
Li2O	kg																
MgO	kg																
MnO2	kg																
MoO3	kg																
Na2O	kg																
Nb2O5	kg																
Nd2O3	kg																
NiO	kg																
NpO2	kg																
P2O5	kg																
PbO	kg																
PdO	kg																
Pr2O3	kg																
PuO2	kg																
Rb2O	kg																
Re2O3	kg																
Rh2O3	kg																
Ru2O3	kg																
Sb2O3	kg																
SeO2	kg																
SiO2	kg																
Sm2O3	kg																
SnO2	kg																
SO3	kg																
SrO	kg																
Ta2O5	kg																
Tc2O7	kg																
TeO2	kg																
ThO2	kg																
TiO2	kg																
Tl2O3	kg																
U3O8	kg																
V2O5	kg																
WO3	kg																
Y2O3	kg																
ZnO	kg																
ZrO2	kg																

Stream Number on Summary Graphic-->		14	15	16	17	18	19	20	21	22	23	23A	23B	24	25	25A	25B
	Standard Units of Measure	Single-Shell Tank Feed to Contact-Handled Transuranic	Double-Shell Tank Feed to Remote-Handled Transuranic	Air Supply to Transuranic Packaging	Transuranic Waste Carrier (Additives)	Transuranic Packaging Off-Gas	Packaged Transuranic Waste	Transuranic Packaging Process Liquid Effluent	242-A Evaporator Off-Gas	242-A Evaporator Condensate (Liquid Effluent)	Double-Shell Tank Feed to Waste Treatment and Immobilization Plant	Low-Activity Waste Feed to Waste Treatment and Immobilization Plant	High-Level Waste Feed to Waste Treatment and Immobilization Plant	Air Supply to Waste Treatment and Immobilization Plant Pretreatment	All Waste Treatment and Immobilization Plant Pretreatment Makeup Chemicals	High-Level Waste Pretreatment Makeup Chemicals (Caustic Leach)	Waste Treatment and Immobilization Plant Low-Activity Waste Pretreatment Makeup Chemicals
Total Stream by Element																	
Ac	kg	1.168E-09	9.215E-07				9.174E-07	1.135E-16		1.010E-09	5.465E-05	1.773E-06	5.288E-05				
Ag	kg	1.930E+02	1.309E+03			9.537E-11	1.502E+03	5.063E-08	2.618E-04	1.306E-01	4.089E+03	4.192E+02	3.670E+03				
Al	kg	2.824E+04	1.245E+05			3.192E-03	1.521E+05	2.065E+00	1.641E+00	8.184E+02	7.816E+06	1.833E+06	5.983E+06				
Am	kg	5.293E-02	5.548E+00			5.373E-12	5.568E+00	1.673E-08	-1.138E-09	-3.532E-06	3.524E+01	1.228E+00	3.401E+01				
As	kg	8.660E+01	2.527E+02			7.469E-11	3.388E+02	4.841E-08	7.224E-04	3.604E-01	4.336E+03	1.072E+03	3.264E+03				
B	kg	8.968E+02	1.977E+03			2.917E-06	2.873E+03	1.645E-03	2.877E-03	1.436E+00	1.420E+04	2.535E+03	1.166E+04				
Ba	kg	6.625E+02	3.204E+02			1.595E-06	9.825E+02	7.894E-04	4.455E-04	2.223E-01	1.112E+04	5.221E+02	1.059E+04				
Be	kg	2.422E+00	1.681E+02				1.704E+02	8.219E-09		2.683E-02	7.400E+02	5.925E+01	6.808E+02				
Bi	kg	1.771E+05	8.396E+04			1.154E-08	2.609E+05	3.224E-04	8.386E-05	2.331E+00	3.202E+05	1.787E+03	3.184E+05				
C	kg	1.776E+04	2.683E+04			6.597E-03	4.439E+04	1.106E+02	1.416E+00	2.223E+03	2.713E+06	1.081E+06	1.632E+06				
Ca	kg	9.362E+03	7.142E+03			1.064E+00	1.646E+04	1.724E+01	4.577E-01	7.410E+00	2.383E+05	2.601E+04	2.123E+05				
Cd	kg	3.089E+01	9.635E+01			2.864E-06	1.270E+02	1.855E-03	3.029E-04	1.510E-01	7.305E+03	6.173E+02	6.688E+03				
Ce	kg	4.452E+02	4.270E+02			2.595E-10	8.709E+02	1.683E-07	7.888E-04	3.936E-01	7.461E+03	1.119E+03	6.342E+03				
Cl	kg	4.941E+03	6.843E+02			1.413E-03	5.611E+03	1.087E+01	7.693E-02	5.919E+02	8.112E+05	3.968E+05	4.144E+05				
Cm	kg	9.260E-08	1.532E-04			6.353E-13	1.526E-04	4.106E-10	4.079E-10	2.034E-07	7.040E-03	8.838E-04	6.156E-03				
Co	kg	4.101E+01	1.124E+02			4.230E-06	1.534E+02	2.737E-03	3.954E-04	1.968E-01	1.484E+03	3.365E+02	1.147E+03				
Cr	kg	1.132E+04	2.049E+04			1.498E-05	3.172E+04	7.960E-02	5.988E-04	3.182E+00	5.380E+05	8.986E+04	4.481E+05				
Cs	kg	2.712E-02	1.169E+01				1.168E+01		3.204E-05	7.503E-01	2.071E+03	9.913E+02	1.079E+03				
Cu	kg	1.371E+02	4.496E+02			3.151E-08	5.858E+02	1.676E-04	2.488E-04	1.241E-01	2.668E+03	3.858E+02	2.283E+03				
Dy	kg																
Eu	kg	1.133E-05	3.472E-03			3.320E-16	3.470E-03	1.036E-12	3.330E-09	1.040E-05	2.949E-01	2.150E-02	2.734E-01				
F	kg	3.291E+04	6.772E+04			7.357E-04	1.006E+05	1.387E+00	1.317E-02	2.482E+01	7.145E+05	2.277E+05	4.867E+05				
Fe	kg	7.495E+04	1.119E+05			2.014E-03	1.865E+05	1.005E+00	1.706E-02	8.501E+00	1.036E+06	2.339E+04	1.012E+06				
H	kg	6.134E+05	1.121E+06	1.200E+01		4.357E-03	1.026E+05	1.628E+06	5.466E+01	4.916E+06	4.715E+07	1.171E+07	3.544E+07	1.638E+02	3.670E+07	1.849E+06	3.485E+07
Hg	kg	8.049E+00	2.528E+01			1.315E-06	3.325E+01	8.512E-04	2.820E-03	1.407E+00	1.713E+03	2.712E+02	1.442E+03				
I	kg	2.885E-03	4.169E-01			6.607E-05	3.586E-01	5.987E-02	1.831E-06	1.829E-03	2.251E+02	8.426E+01	1.408E+02				
K	kg	1.057E+04	2.860E+03			4.166E-03	1.343E+04	2.649E+00	2.643E-01	1.318E+02	8.793E+05	6.022E+05	2.771E+05				
La	kg	2.369E+04	2.476E+03			1.502E-08	2.616E+04	9.740E-06	2.909E-04	1.450E-01	1.650E+04	3.310E+02	1.617E+04				
Li	kg	1.122E+01	7.612E+01			4.122E-11	8.706E+01	2.572E-08	6.919E-05	3.452E-02	1.916E+03	2.826E+02	1.633E+03				
Mg	kg	1.189E+03	3.245E+03			4.192E-04	4.430E+03	1.156E-02	2.371E-02	6.537E-01	2.169E+04	1.440E+03	2.025E+04				
Mn	kg	3.642E+04	7.508E+03			7.434E-04	4.390E+04	4.520E-01	9.897E-04	4.931E-01	1.288E+05	4.506E+03	1.243E+05		2.571E+05		2.571E+05
Mo	kg	1.994E+01	2.833E+02			2.924E-06	3.027E+02	1.777E-03		3.257E+00	6.869E+03	2.697E+03	4.172E+03				
N	kg	9.804E+04	3.956E+04	6.588E+06		6.588E+06	1.374E+05	1.110E+02	2.517E+02	8.326E+03	1.337E+07	5.247E+06	8.120E+06	8.988E+07	2.531E+06		2.531E+06
Na	kg	3.024E+05	1.775E+05			1.948E-02	4.793E+05	1.215E+01	1.007E+00	5.023E+02	4.035E+07	1.639E+07	2.396E+07		7.560E+06	6.287E+06	1.273E+06
Nb	kg	6.416E-06	2.100E-04			-3.934E-16	2.153E-04	4.778E-09	-1.290E-09	3.156E-06	1.156E-02	3.491E-03	8.064E-03				
Nd	kg	5.312E+01	6.443E+02				6.962E+02	5.643E-08		2.583E-01	9.179E+03	1.430E+03	7.749E+03				
Ni	kg	6.205E+02	7.218E+02			1.725E-05	1.339E+03	1.118E-02	6.630E-03	3.308E+00	1.182E+05	5.819E+03	1.124E+05				
Np	kg	8.000E-02	3.407E+00			1.595E-07	3.469E+00	1.034E-04	2.179E-08	1.087E-05	1.700E+02	4.956E+01	1.205E+02				
O	kg	5.524E+06	9.462E+06	2.001E+06	1.199E+05	2.001E+06	2.151E+06	1.292E+07	1.638E+01	3.904E+07	4.386E+08	1.156E+08	3.230E+08	2.730E+07	3.014E+08	1.686E+07	2.845E+08
P	kg	7.461E+04	3.662E+04			6.414E-02	1.111E+05	4.158E+01	9.720E-01	4.842E+02	1.221E+06	2.221E+05	9.987E+05				
Pa	kg	1.343E-05	1.923E-02				1.913E-02	8.709E-13		9.412E-06	1.028E-01	2.888E-02	7.395E-02				
Pb	kg	2.316E+03	4.743E+03			6.975E-05	7.045E+03	1.947E+00	4.021E-03	1.122E+02	7.196E+04	5.489E+03	6.647E+04				
Pd	kg								2.897E-04	1.445E-01	3.514E+02	8.305E+01	2.683E+02				
Pr	kg		5.871E+00				5.870E+00	3.332E-10		2.848E-03	7.639E+02	3.983E+01	7.241E+02				
Pu	kg	1.569E+01	1.013E+02			2.313E-11	1.164E+02	7.212E-08	1.830E-07	5.694E-04	7.950E+02	1.181E+01	7.832E+02				
Ra	kg	7.241E-09	5.120E-07			-1.667E-18	5.168E-07	3.126E-15	-2.694E-12	6.635E-06	1.460E-03	1.373E-03	8.669E-05				
Rb	kg		3.681E+00				3.680E+00	2.182E-09		8.790E-02	4.345E+02	3.128E+01	4.033E+02				
Rh	kg		3.372E+01				3.372E+01	1.471E-09		1.794E-01	5.041E+02	1.380E+02	3.660E+02				
Ru	kg	1.860E-17	1.458E+02				1.458E+02	2.569E-07		7.762E-01	2.054E+03	3.436E+02	1.710E+03				
S	kg	8.188E+03	7.257E+03			1.987E-03	1.541E+04	8.362E+00	7.864E-02	3.309E+02	8.514E+05	2.638E+05	5.876E+05				

Stream Number on Summary Graphic-->		14	15	16	17	18	19	20	21	22	23	23A	23B	24	25	25A	25B
	Standard Units of Measure	Single-Shell Tank Feed to Contact-Handled Transuranic	Double-Shell Tank Feed to Remote-Handled Transuranic	Air Supply to Transuranic Packaging	Transuranic Waste Carrier (Additives)	Transuranic Packaging Off-Gas	Packaged Transuranic Waste	Transuranic Packaging Process Liquid Effluent	242-A Evaporator Off-Gas	242-A Evaporator Condensate (Liquid Effluent)	Double-Shell Tank Feed to Waste Treatment and Immobilization Plant	Low-Activity Waste Feed to Waste Treatment and Immobilization Plant	High-Level Waste Feed to Waste Treatment and Immobilization Plant	Air Supply to Waste Treatment and Immobilization Plant Pretreatment	All Waste Treatment and Immobilization Plant Pretreatment Makeup Chemicals	High-Level Waste Pretreatment Makeup Chemicals (Caustic Leach)	Waste Treatment and Immobilization Plant Low-Activity Waste Pretreatment Makeup Chemicals
Sb	kg	1.541E+02	3.397E+02			1.435E-11	4.925E+02	4.007E-07	8.237E-06	2.299E-01	2.918E+03	8.091E+02	2.109E+03				
Se	kg	3.643E+02	3.807E+01				4.022E+02	5.639E-05		1.876E+00	4.448E+03	1.933E+03	2.515E+03				
Si	kg	3.425E+04	4.162E+04		1.053E+05	3.021E-02	1.810E+05	6.912E+00	2.727E-01	6.779E+01	6.595E+05	2.855E+04	6.309E+05				
Sm	kg	5.515E-03	4.469E+00			6.535E-13	4.469E+00	2.041E-09	4.100E-06	1.281E-02	1.336E+02	1.333E+01	1.202E+02				
Sn	kg	4.741E-04	5.670E-01			4.563E-14	5.643E-01	1.274E-09	2.798E-07	7.815E-03	3.778E+01	1.523E+01	2.255E+01				
Sr	kg	1.845E+03	1.638E+03			2.205E-08	3.476E+03	2.579E-04	2.828E-05	3.275E-01	3.336E+04	2.207E+02	3.314E+04		2.115E+05		2.115E+05
Ta	kg		2.237E+00				2.237E+00	3.332E-10		2.925E-03	8.646E+01	6.506E+01	2.139E+01				
Tc	kg	1.072E+00	9.244E+00			4.112E-06	1.028E+01	2.662E-03	1.283E-07	6.397E-05	1.506E+03	7.099E+02	7.963E+02				
Te	kg		4.135E+01				4.135E+01	3.332E-10		1.498E-02	3.678E+02	1.624E+01	3.516E+02				
Th	kg	2.397E-06	9.884E+02			2.418E-09	9.856E+02	1.567E-06	6.757E-03	3.371E+00	7.569E+04	2.319E+03	7.337E+04				
Ti	kg	9.226E+01	1.446E+02			1.278E-11	2.363E+02	6.375E-09	9.334E-05	4.657E-02	1.523E+03	1.837E+02	1.340E+03				
Tl	kg	1.175E+02	5.197E+02				6.363E+02	7.143E-08		4.498E-01	5.447E+03	1.008E+03	4.438E+03				
U	kg	8.762E+03	4.024E+04			1.370E-04	4.891E+04	8.863E-02	4.109E-02	2.049E+01	5.522E+05	8.847E+03	5.433E+05				
V	kg	4.470E+01	2.440E+02				2.883E+02	3.341E-08		1.241E-01	2.456E+03	4.752E+02	1.981E+03				
W	kg	2.588E+00	1.366E+02				1.392E+02	8.230E-04		1.000E+00	1.980E+03	5.101E+02	1.470E+03				
Y	kg	5.320E-01	4.935E+01			3.649E-16	4.987E+01	1.356E-09	1.148E-13	1.061E-02	6.191E+02	9.437E+01	5.247E+02				
Zn	kg	4.270E+02	8.623E+02			3.987E-07	1.287E+03	2.455E-04	2.203E-04	1.099E-01	5.833E+03	5.833E+02	5.249E+03				
Zr	kg	1.186E+02	2.609E+05			2.917E-08	2.610E+05	1.455E-05	4.708E-02	2.349E+01	1.396E+05	8.058E+03	1.315E+05				
		7.101E+06	**1.166E+07**	**8.589E+06**	**2.252E+05**	**8.589E+06**	**4.400E+06**	**1.455E+07**	**3.291E+02**	**4.397E+07**	**5.585E+08**	**1.538E+08**	**4.047E+08**	**1.172E+08**	**3.487E+08**	**2.500E+07**	**3.237E+08**

Stream Number on Summary Graphic-->		26	27	27A	27B	28	29	30	31	32	33	34	35	36	37	38	39
	Standard Units of Measure	Waste Treatment and Immobilization Plant Liquid Effluent	Low-Activity Waste Melter Off-Gas Treatment Recycle	Low-Activity Waste Melter Off-Gas Liquid Effluent	Low-Activity Waste Melter Off-Gas Submerged Bed Scrubber Condensate Recycle	Immobilized Low-Activity Waste Glass Formers	Pretreated Low-Activity Waste	Low-Activity Waste Melter Air Supply	Waste Treatment and Immobilization Plant Pretreatment Solid Waste (Spent Resin)	Pretreated High-Level Waste	High-Level Waste Melter Air Supply	Immobilized High-Level Waste Glass Formers	High-Level Waste Melter Off-Gas Treatment Recycle	"Excess" Pretreated Low-Activity Waste	Waste Treatment and Immobilization Plant Pretreatment Off-Gas	Low-Activity Waste Melter System Makeup Chemicals (Excluding Glass Formers)	High-Level Waste Melter System Makeup Chemicals (Excluding Glass Formers)
Waste Radionulides																	
106Ru	Ci	2.041E-13	1.386E-01	2.041E-13	1.386E-01		4.173E+02			6.970E+01			2.366E-02	1.864E+02			
113mCd	Ci	2.049E-01					1.395E+03			1.948E+03				1.061E+03	3.161E-04		
125Sb	Ci	2.041E+00	1.512E+00	1.735E-11	1.512E+00		1.741E+03			4.203E+03			3.822E+00	2.974E+03	7.308E-05		
126Sn	Ci	1.066E-01	4.708E-02	3.093E-13	4.708E-02		1.460E+02			2.046E+02			6.950E-02	7.805E+01	3.815E-06		
129I	Ci	1.116E+00	2.009E+01	9.414E-01	1.915E+01		3.583E+01			1.100E+01			6.068E+00	1.791E+01	1.927E-04		
134Cs	Ci	2.606E-05	1.544E-02	1.388E-14	1.544E-02		9.868E-01			2.831E+03			4.493E+01	1.754E+00	1.113E-09		
137Cs	Ci	4.178E-01	3.396E+02	3.036E-10	3.396E+02		2.172E+04		2.445E+01	4.291E+07			6.809E+05	1.714E+04	1.784E-05		
137mBa	Ci	3.953E-01	3.213E+02	2.872E-10	3.213E+02		2.055E+04		2.313E+01	4.060E+07			6.441E+05	1.622E+04	1.688E-05		
14C	Ci	3.968E+00	2.860E+03		2.860E+03		2.862E+03			1.362E+03			1.361E+03	7.109E+02	6.120E-03		
151Sm	Ci	1.670E-01					2.005E+05			3.156E+06				1.554E+05	5.344E-05		
152Eu	Ci	1.269E-04	1.732E-02	1.218E-14	1.732E-02		5.124E+01			1.257E+03			4.271E-01	5.138E+01	4.061E-08		
154Eu	Ci	5.499E-03	1.010E+00	6.975E-13	1.010E+00		2.987E+03			5.339E+04			1.815E+01	1.193E+03	1.760E-06		
155Eu	Ci	3.904E-03	5.747E-01	3.985E-13	5.747E-01		1.699E+03			3.289E+04			1.118E+01	1.343E+03	1.250E-06		
226Ra	Ci	4.302E-09	1.682E-04	4.302E-09	1.682E-04		5.581E-01			1.074E-02			3.646E-06	8.536E-01			
227Ac	Ci						4.439E-02			3.891E+00				1.719E-02			
228Ra	Ci	-2.708E-03	5.275E-04	2.099E-08	5.275E-04		1.871E+00			2.836E+00			9.560E-04	1.308E+00	-4.176E-06		
229Th	Ci	1.985E-04					6.614E-02			1.338E+00				4.813E-02	3.062E-07		
231Pa	Ci						1.145E+00			3.125E+00				5.797E-01			
232Th	Ci	5.651E-04	6.517E-05		6.517E-05		1.917E-01			7.977E+00			2.710E-03	1.285E-01	8.717E-07		
232U	Ci	4.287E-04	4.763E-05	3.364E-17	4.763E-05		1.410E-01			6.504E+00			2.208E-03	9.132E-02	6.612E-07		
233U	Ci	1.657E-02	1.743E-03	1.241E-15	1.743E-03		5.163E+00			6.974E+02			2.369E-01	3.126E+00	2.556E-05		
234U	Ci	1.168E-02	1.240E-03	8.832E-16	1.240E-03		3.670E+00			1.930E+02			6.556E-02	2.285E+00	1.801E-05		
235U	Ci	4.935E-04	5.245E-05	3.737E-17	5.245E-05		1.552E-01			7.955E+00			2.703E-03	9.576E-02	7.611E-07		
236U	Ci	3.422E-04	3.613E-05	2.550E-17	3.613E-05		1.069E-01			4.169E+00			1.416E-03	8.011E-02	5.278E-07		
237Np	Ci	6.997E-02	6.781E-03	4.757E-15	6.781E-03		2.006E+01			7.821E+01			2.658E-02	2.150E+01	1.079E-04		
238Pu	Ci	2.159E-05	9.210E-03	6.455E-15	9.210E-03		2.725E+01			1.542E+03			5.241E-01	1.473E+01	6.912E-09		
238U	Ci	1.220E-02	1.310E-03	9.417E-16	1.310E-03		3.876E+00		1.407E-03	1.780E+02			6.047E-02	2.219E+00	1.882E-05		
239Pu	Ci	3.936E-04	1.369E-01	9.694E-14	1.369E-01		4.052E+02			4.592E+04			1.561E+01	2.812E+02	1.260E-07		
240Pu	Ci	8.344E-05	2.854E-02	2.021E-14	2.854E-02		8.444E+01			9.652E+03			3.281E+00	6.102E+01	2.671E-08		
241Am	Ci	7.941E-03	1.454E+01	1.001E-11	1.454E+01		2.912E+03			1.155E+05			5.826E+02	2.029E+03	2.542E-06		
241Pu	Ci	9.686E-04	3.178E-01	2.232E-13	3.178E-01		9.401E+02			7.744E+04			2.633E+01	7.680E+02	3.100E-07		
242Cm	Ci	3.165E-02	2.958E-03	3.499E-09	2.958E-03		8.751E+00			2.609E+02			8.870E-02	4.547E+00	4.882E-05		
242Pu	Ci	6.728E-09	2.255E-06	1.589E-18	2.255E-06		6.670E-03			6.333E-01			2.153E-04	5.238E-03	2.154E-12		
243Am	Ci	4.009E-06	6.973E-03	4.791E-15	6.973E-03		1.403E+00			5.306E+01			2.652E-01	9.447E-01	1.283E-09		
243Cm	Ci	1.760E-03	1.674E-04	1.190E-16	1.674E-04		4.953E-01			2.179E+01			7.408E-03	3.496E-01	2.715E-06		
244Cm	Ci	4.048E-02	3.843E-03	2.733E-15	3.843E-03		1.137E+01			5.077E+02			1.726E-01	7.980E+00	6.244E-05		
3H	Ci	2.529E+03	5.051E+02		5.051E+02		5.051E+02			5.030E+01			5.029E+01	3.030E+02	3.590E+01		
59Ni	Ci	1.510E-02					1.582E+02			1.228E+03				6.141E+01	2.330E-05		
60Co	Ci	1.865E+00	2.380E-01	3.411E-13	2.380E-01		7.164E+02		2.251E+00	5.091E+03			1.730E+00	3.001E+02	2.877E-03		
63Ni	Ci	1.300E+00					1.313E+04			1.148E+05				5.566E+03	2.005E-03		
79Se	Ci						4.797E+01			2.768E+00				3.334E+01			
90Sr	Ci	5.858E+00	3.400E+02	8.079E-11	3.400E+02		3.308E+05			4.065E+07			4.186E+04	1.674E+05	5.009E-04		
90Y	Ci	5.858E+00	3.400E+02	8.079E-11	3.400E+02		3.308E+05			4.065E+07			4.186E+04	1.674E+05	5.009E-04		
93Zr	Ci	3.118E+00					9.472E+02			1.794E+03				6.941E+02	6.249E-03		
93mNb	Ci	-2.469E+00					7.256E+02			1.522E+03				5.136E+02	-4.948E-03		
99Tc	Ci	4.715E+01	6.247E+03	8.533E-09	6.247E+03		1.725E+04		3.221E+01	5.863E+03			2.171E+03	1.074E+04	7.272E-02		
	Ci	**2.600E+03**	**1.099E+04**	**9.414E-01**	**1.099E+04**		**9.537E+05**		**8.204E+01**	**1.684E+08**			**1.413E+06**	**5.525E+05**	**3.599E+01**		

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project (35 Sheets)

Stream Number on Summary Graphic-->		26	27	27A	27B	28	29	30	31	32	33	34	35	36	37	38	39
	Standard Units of Measure	Waste Treatment and Immobilization Plant Liquid Effluent	Low-Activity Waste Melter Off-Gas Treatment Recycle	Low-Activity Waste Melter Off-Gas Liquid Effluent	Low-Activity Waste Melter Off-Gas Submerged Bed Scrubber Condensate Recycle	Immobilized Low-Activity Waste Glass Formers	Pretreated Low-Activity Waste	Low-Activity Waste Melter Air Supply	Waste Treatment and Immobilization Plant Pretreatment Solid Waste (Spent Resin)	Pretreated High-Level Waste	High-Level Waste Melter Air Supply	Immobilized High-Level Waste Glass Formers	High-Level Waste Melter Off-Gas Treatment Recycle	"Excess" Pretreated Low-Activity Waste	Waste Treatment and Immobilization Plant Pretreatment Off-Gas	Low-Activity Waste Melter System Makeup Chemicals (Excluding Glass Formers)	High-Level Waste Melter System Makeup Chemicals (Excluding Glass Formers)
Chemical Species																	
Ag+	kg	5.498E-01	4.664E+00	5.624E-13	4.664E+00		1.636E+02			3.914E+03			1.118E+02	1.259E+02	1.036E-03		
Al(OH)4-	kg	1.470E+04	8.993E+02		8.993E+02		6.921E+06			4.810E+05			6.251E+01	3.330E+06	2.267E+01		
Al+3	kg	4.105E+03	2.378E+02	1.963E-10	2.378E+02		1.838E+06			1.635E+06			2.124E+02	1.277E+06	6.331E+00		
As+5	kg	1.701E+00	1.528E+00	2.574E-12	1.528E+00		5.183E+02			3.422E+03			1.035E+01	4.025E+02	2.623E-03		
B+3	kg	4.089E+00	5.074E+00	6.813E-13	5.074E+00		1.270E+03			1.200E+04			4.791E+01	9.531E+02	7.250E-03		
Ba+2	kg	7.003E-01	4.867E-01	4.329E-13	4.867E-01		2.251E+02			1.076E+04			2.334E+01	1.538E+02	1.415E-03		
Be+2	kg	1.085E-13	1.555E-01	1.085E-13	1.555E-01		3.128E+01			6.874E+02			3.435E+00	2.444E+01			
Bi+3	kg	2.320E+00	2.624E+00	2.661E-12	2.624E+00		2.933E+03			3.158E+05			2.871E+02	1.570E+03	8.306E-05		
C10H12N2O8-4	kg																
C10H15N2O7-3	kg																
C12H27O4P	kg																
C13H28	kg																
C2Cl4	kg																
C2H3O2-	kg																
C2H3O3-	kg																
C2HCl3	kg																
C2O4-2	kg	6.552E+04					2.560E+05			7.755E+05				1.629E+05	4.510E-03		
C3H6O	kg																
C4H10O	kg																
C4H8O	kg																
C5H5N	kg																
C6H5NO2	kg																
C6H5O7-3	kg																
C6H6	kg																
C7H6N2O4	kg																
C7H8O	kg																
Ca+2	kg	5.527E+01	5.394E+00	3.960E-12	5.394E+00		1.872E+04			2.107E+05			6.109E+01	8.870E+03	3.412E+00		
Cd+2	kg	8.306E-02	1.579E+01	1.195E-11	1.579E+01		6.833E+02			6.537E+03			1.520E+02	2.514E+02	1.281E-04		
Ce+3	kg	1.593E+00	1.778E-01	3.460E-14	1.778E-01		5.237E+02			6.597E+03			2.242E+00	3.381E+02	2.456E-03		
CH2Cl2	kg																
CHCl3	kg																
CHO2-	kg																
Cl-	kg	3.241E+03					4.877E+05			7.708E+03				3.124E+05	4.210E-01		
CN-	kg	1.448E-10	1.930E+00	1.448E-10	1.930E+00		1.255E+02			4.380E+03			1.088E+02	1.101E+02			
Co+3	kg	4.859E-01	4.942E-02	7.104E-14	4.942E-02		1.489E+02			1.226E+03			4.165E-01	1.081E+02	7.494E-04		
CO3-2	kg	3.046E+06	3.032E+06	3.032E+06			4.257E+06			7.753E+05				2.796E+06	2.203E+01		
Cr(OH)4-	kg	3.892E+01	1.588E+03	8.294E-03	1.588E+03		4.178E+05		1.833E+02	3.479E+04			1.389E+02	2.148E+05	7.316E-03		
Cr(TOTAL)	kg	1.041E+01	4.100E+02	1.282E-09	4.100E+02		1.079E+05			6.536E+04			2.610E+02	7.663E+04	1.957E-03		
Cs+	kg	2.926E-05	1.279E+01	1.848E-11	1.279E+01		8.256E+02			1.754E+02			2.780E+00	5.980E+02	1.249E-09		
Cu+2	kg	6.582E-01	1.339E-01	1.940E-14	1.339E-01		2.684E+02			2.308E+03			1.154E+00	9.192E+01	1.238E-04		
F-	kg	5.018E+01	1.142E+04	5.947E-01	1.142E+04		3.591E+05			1.270E+05			4.174E+03	2.421E+05	2.630E-02		
Fe+3	kg	6.054E+01	2.423E+00	1.165E-12	2.423E+00		2.028E+04			1.006E+06			1.207E+02	9.078E+03	1.213E-01		
H+	kg	9.867E+04	9.871E+04	9.867E+04	3.747E+01		4.156E+00			1.775E-01			1.025E-02		4.579E-03		
H2O	kg	8.309E+08	2.169E+08	3.531E+07	1.816E+08		1.293E+08			5.040E+07			8.479E+07	6.092E+07		7.232E+07	3.101E+07
H2O2	kg																
Hg+2	kg	3.742E+00	2.874E+02	2.157E+00	2.853E+02		6.089E+02			4.347E+03			3.360E+03	3.782E+02	2.445E-03		
K+	kg	4.392E+02	3.222E+03	1.998E-09	3.222E+03		4.880E+05		6.222E+01	5.498E+04			3.666E+02	3.393E+05	6.906E-01		

Stream Number on Summary Graphic-->		26	27	27A	27B	28	29	30	31	32	33	34	35	36	37	38	39
	Standard Units of Measure	Waste Treatment and Immobilization Plant Liquid Effluent	Low-Activity Waste Melter Off-Gas Treatment Recycle	Low-Activity Waste Melter Off-Gas Liquid Effluent	Low-Activity Waste Melter Off-Gas Submerged Bed Scrubber Condensate Recycle	Immobilized Low-Activity Waste Glass Formers	Pretreated Low-Activity Waste	Low-Activity Waste Melter Air Supply	Waste Treatment and Immobilization Plant Pretreatment Solid Waste (Spent Resin)	Pretreated High-Level Waste	High-Level Waste Melter Air Supply	Immobilized High-Level Waste Glass Formers	High-Level Waste Melter Off-Gas Treatment Recycle	"Excess" Pretreated Low-Activity Waste	Waste Treatment and Immobilization Plant Pretreatment Off-Gas	Low-Activity Waste Melter System Makeup Chemicals (Excluding Glass Formers)	High-Level Waste Melter System Makeup Chemicals (Excluding Glass Formers)
La+3	kg	4.947E-01	4.331E+00	5.427E-13	4.331E+00		2.167E+02			1.655E+04			3.309E+02	6.146E+01	7.630E-04		
Li+	kg	1.212E-02	6.130E-02	3.028E-14	6.130E-02		1.104E+02			1.728E+03			9.673E-01	7.826E+01	1.942E-05		
Mg+2	kg	2.160E+00	3.952E-02	6.211E-14	3.952E-02		6.674E+02			2.049E+04			1.229E+00	5.253E+02	7.835E-02		
Mn+4	kg	5.814E+00	1.678E+01	1.462E-11	1.678E+01		2.534E+03			1.266E+05			8.438E+02	5.098E+02	9.562E-03		
MnO2	kg									3.117E+05							
MnO4-	kg	1.365E+02					1.229E+05			4.282E+03				2.637E+03			
Mo+6	kg	4.926E-11	3.845E+01	4.926E-11	3.845E+01		1.964E+03			3.350E+03			6.695E+01	1.657E+03			
Na+	kg	3.208E+03	2.651E+05	8.313E+01	2.650E+05		2.933E+07		2.370E+04	2.005E+06			7.909E+04	1.684E+07	5.009E+00	1.663E+05	7.130E+04
Nd+3	kg	6.874E-13	4.109E+00	6.874E-13	4.109E+00		8.226E+02			7.965E+03			3.981E+01	4.316E+02			
NH3	kg	9.326E+02					4.711E+01			4.247E+03				1.472E+01	8.176E+01		
NH4+	kg																
Ni+2	kg	7.368E-01	7.792E+00	4.806E-12	7.792E+00		7.832E+03			1.075E+05			1.074E+02	2.960E+03	1.136E-03		
NO2-	kg	9.222E+03					6.877E+06			1.524E+05				4.458E+06	8.873E-01		
NO3-	kg	2.562E+05	5.718E+05	2.592E+04	5.459E+05		3.486E+07			1.018E+06			1.821E+04	1.926E+07	2.216E+01		
OH(BOUND)	kg	5.141E+03					1.687E+06			5.696E+06				1.317E+06	7.930E+00		
OH-	kg	1.917E+04	4.094E+04	2.077E-02	4.094E+04		6.081E+06			2.145E+05			3.118E+05	3.471E+06	2.956E+01	1.230E+05	5.275E+04
Pb+2	kg	3.678E+00	4.361E+01	3.954E-11	4.361E+01		5.315E+03			6.491E+04			5.401E+02	2.231E+03	1.317E-04		
Pd+2	kg	1.046E-02	2.803E-02	1.974E-14	2.803E-02		8.293E+01			1.890E+02			6.427E-02	7.947E+01	1.614E-05		
PO4-3	kg	7.232E+03	1.170E+03	6.313E-09	1.170E+03		2.185E+06			3.411E+05			1.908E+02	1.203E+06	1.116E+01		
Pr+3	kg	9.276E-15	1.272E-02	9.276E-15	1.272E-02		2.560E+00			7.633E+02			3.816E+00	1.900E+00			
Pu+4	kg																
Rb+	kg	1.845E-13	2.720E-01	1.845E-13	2.720E-01		4.106E+01			3.519E+02			2.357E+00	4.418E+01			
Rh+3	kg	4.790E-12	8.726E-01	4.790E-12	8.726E-01		1.362E+02			3.182E+02			2.130E+00	5.267E+01			
Ru+3	kg	6.924E-11	4.899E+01	6.924E-11	4.899E+01		2.507E+02			2.077E+03			4.153E+02	1.900E+02			
Sb+5	kg	4.443E-01	4.332E-01	4.899E-12	4.332E-01		4.986E+02			2.011E+03			1.827E+00	4.082E+02	1.591E-05		
Se+6	kg	1.723E-10	1.914E+03	1.723E-10	1.914E+03		3.835E+03			4.752E+02			2.375E+02	2.274E+03			
Si+4	kg	6.219E+02	2.535E+01	7.187E-12	2.535E+01		1.956E+05			3.669E+05			4.769E+01	9.577E+04	2.717E+00		
SO4-2	kg	3.844E+03	4.094E+05	4.122E+00	4.094E+05		1.798E+06			1.490E+05			4.571E+04	1.048E+06	9.121E-01		
Sr+2	kg	3.631E-02	5.376E+00	1.249E-12	5.376E+00		5.231E+03			2.389E+05			2.460E+02	6.719E+02	3.105E-06		
Ta+5	kg	2.422E-13	3.606E-01	2.422E-13	3.606E-01		7.252E+01			1.042E+01			5.212E-02	3.925E+00			
Tc+7	kg																
Te+6	kg	1.729E-13	4.126E-01	1.729E-13	4.126E-01		4.155E+00			4.004E+02			4.003E+01	3.705E+00			
Th+4	kg	7.768E-03	8.943E-04	6.117E-16	8.943E-04		2.645E+00			2.502E+02			8.506E-02	1.820E+00	1.198E-05		
Ti+4	kg	2.856E-01	4.666E-02	7.009E-14	4.666E-02		8.662E+01			1.365E+03			7.370E-01	7.141E+01	5.724E-04		
Tl+3	kg	7.819E-11	3.533E+02	7.819E-11	3.533E+02		7.091E+02			9.226E+03			4.612E+03	4.423E+02			
TOC	kg						3.905E+05			2.553E+05				1.510E+05			
U(TOTAL)	kg																
V+5	kg	1.348E-12	1.102E+00	1.348E-12	1.102E+00		2.248E+02			2.049E+03			1.023E+01	1.919E+02			
W+6	kg	1.974E-12	2.754E+00	1.974E-12	2.754E+00		5.541E+02			9.608E+02			4.804E+00	4.730E+02			
Y+3	kg	1.522E-13	2.981E-01	1.522E-13	2.981E-01		9.060E+01			4.752E+02			1.568E+00	5.497E+01			
Zn+2	kg	7.754E-01	1.960E-02	5.361E-14	1.960E-02		2.506E+02			5.430E+03			4.342E-01	1.498E+02	1.259E-03		
Zr+4	kg	1.831E+01	5.663E-02	6.048E-14	5.663E-02		5.714E+03			1.281E+05			1.281E+00	4.320E+03	3.670E-02		

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project (35 Sheets)

Stream Number on Summary Graphic-->		26	27	27A	27B	28	29	30	31	32	33	34	35	36	37	38	39
	Standard Units of Measure	Waste Treatment and Immobilization Plant Liquid Effluent	Low-Activity Waste Melter Off-Gas Treatment Recycle	Low-Activity Waste Melter Off-Gas Liquid Effluent	Low-Activity Waste Melter Off-Gas Submerged Bed Scrubber Condensate Recycle	Immobilized Low-Activity Waste Glass Formers	Pretreated Low-Activity Waste	Low-Activity Waste Melter Air Supply	Waste Treatment and Immobilization Plant Pretreatment Solid Waste (Spent Resin)	Pretreated High-Level Waste	High-Level Waste Melter Air Supply	Immobilized High-Level Waste Glass Formers	High-Level Waste Melter Off-Gas Treatment Recycle	"Excess" Pretreated Low-Activity Waste	Waste Treatment and Immobilization Plant Pretreatment Off-Gas	Low-Activity Waste Melter System Makeup Chemicals (Excluding Glass Formers)	High-Level Waste Melter System Makeup Chemicals (Excluding Glass Formers)
Glass Formers																	
Al2O3	kg					7.220E+06						6.638E+05					
B2O3	kg					2.010E+07						3.646E+06					
C12H22O11	kg																
CaO	kg					4.087E+06											
Fe2O3	kg					1.132E+07						7.240E+05					
Li2O	kg					1.270E+04						1.053E+06					
MgO	kg					3.040E+06											
Na2O	kg					6.444E+04						2.097E+06					
SiO2	kg					9.032E+07						1.494E+07					
TiO2	kg					4.091E+06											
ZnO	kg					6.049E+06											
ZrO2	kg					5.965E+06						1.541E+05					
Gas Phase																	
129-I	Ci																
134-Cs	Ci																
137-Cs	Ci																
99-Tc	Ci																
CO	kg																
CO2	kg																
Cs+	kg																
H2O	kg							1.510E+03			9.592E+02						
HCl	kg																
HF	kg																
K+	kg																
N2	kg							9.273E+07			5.891E+07				8.988E+07		
Na+	kg																
NH3	kg																
NO	kg																
NO2	kg																
O2	kg							2.816E+07			1.789E+07				2.730E+07		
P2O5	kg																
SO2	kg																
Waste Oxides																	
Ac2O3	kg																
Ag2O	kg																
Al2O3	kg																
Am2O3	kg																
As2O5	kg																
B2O3	kg																
BaO	kg																
BeO	kg																
Bi2O3	kg																
CaO	kg																
CdO	kg																
CeO2	kg																

Stream Number on Summary Graphic-->		26	27	27A	27B	28	29	30	31	32	33	34	35	36	37	38	39
	Standard Units of Measure	Waste Treatment and Immobilization Plant Liquid Effluent	Low-Activity Waste Melter Off-Gas Treatment Recycle	Low-Activity Waste Melter Off-Gas Liquid Effluent	Low-Activity Waste Melter Off-Gas Submerged Bed Scrubber Condensate Recycle	Immobilized Low-Activity Waste Glass Formers	Pretreated Low-Activity Waste	Low-Activity Waste Melter Air Supply	Waste Treatment and Immobilization Plant Pretreatment Solid Waste (Spent Resin)	Pretreated High-Level Waste	High-Level Waste Melter Air Supply	Immobilized High-Level Waste Glass Formers	High-Level Waste Melter Off-Gas Treatment Recycle	"Excess" Pretreated Low-Activity Waste	Waste Treatment and Immobilization Plant Pretreatment Off-Gas	Low-Activity Waste Melter System Makeup Chemicals (Excluding Glass Formers)	High-Level Waste Melter System Makeup Chemicals (Excluding Glass Formers)
Cl-	kg																
Cm2O3	kg																
Co2O3	kg																
Cr2O3	kg																
Cs2O	kg																
CuO	kg																
Dy2O3	kg																
Eu2O3	kg																
F-	kg																
Fe2O3	kg																
HgO	kg																
K2O	kg																
La2O3	kg																
Li2O	kg																
MgO	kg																
MnO2	kg																
MoO3	kg																
Na2O	kg																
Nb2O5	kg																
Nd2O3	kg																
NiO	kg																
NpO2	kg																
P2O5	kg																
PbO	kg																
PdO	kg																
Pr2O3	kg																
PuO2	kg																
Rb2O	kg																
Re2O3	kg																
Rh2O3	kg																
Ru2O3	kg																
Sb2O3	kg																
SeO2	kg																
SiO2	kg																
Sm2O3	kg																
SnO2	kg																
SO3	kg																
SrO	kg																
Ta2O5	kg																
Tc2O7	kg																
TeO2	kg																
ThO2	kg																
TiO2	kg																
Tl2O3	kg																
U3O8	kg																
V2O5	kg																
WO3	kg																
Y2O3	kg																
ZnO	kg																
ZrO2	kg																

Stream Number on Summary Graphic-->		26	27	27A	27B	28	29	30	31	32	33	34	35	36	37	38	39
	Standard Units of Measure	Waste Treatment and Immobilization Plant Liquid Effluent	Low-Activity Waste Melter Off-Gas Treatment Recycle	Low-Activity Waste Melter Off-Gas Liquid Effluent	Low-Activity Waste Melter Off-Gas Submerged Bed Scrubber Condensate Recycle	Immobilized Low-Activity Waste Glass Formers	Pretreated Low-Activity Waste	Low-Activity Waste Melter Air Supply	Waste Treatment and Immobilization Plant Pretreatment Solid Waste (Spent Resin)	Pretreated High-Level Waste	High-Level Waste Melter Air Supply	Immobilized High-Level Waste Glass Formers	High-Level Waste Melter Off-Gas Treatment Recycle	"Excess" Pretreated Low-Activity Waste	Waste Treatment and Immobilization Plant Pretreatment Off-Gas	Low-Activity Waste Melter System Makeup Chemicals (Excluding Glass Formers)	High-Level Waste Melter System Makeup Chemicals (Excluding Glass Formers)
Total Stream by Element																	
Ac	kg						6.137E-07			5.379E-05				2.376E-07			
Ag	kg	5.498E-01	4.664E+00	5.624E-13	4.664E+00		1.636E+02			3.914E+03			1.118E+02	1.259E+02	1.036E-03		
Al	kg	8.279E+03	4.932E+02	1.963E-10	4.932E+02	3.821E+06	3.803E+06			1.771E+06		3.513E+05	2.302E+02	2.223E+06	1.277E+01		
Am	kg	2.337E-06	4.277E-03	2.943E-15	4.277E-03		8.564E-01			3.395E+01			1.713E-01	5.967E-01	7.480E-10		
As	kg	1.701E+00	1.528E+00	2.574E-12	1.528E+00		5.183E+02			3.422E+03			1.035E+01	4.025E+02	2.623E-03		
B	kg	4.089E+00	5.074E+00	6.813E-13	5.074E+00	6.241E+06	1.270E+03			1.200E+04		1.132E+06	4.791E+01	9.531E+02	7.250E-03		
Ba	kg	7.003E-01	4.867E-01	4.329E-13	4.867E-01		2.251E+02		4.301E-11	1.076E+04			2.334E+01	1.538E+02	1.415E-03		
Be	kg	1.085E-13	1.555E-01	1.085E-13	1.555E-01		3.128E+01			6.874E+02			3.435E+00	2.444E+01			
Bi	kg	2.320E+00	2.624E+00	2.661E-12	2.624E+00		2.933E+03			3.158E+05			2.871E+02	1.570E+03	8.306E-05		
C	kg	6.276E+05	6.069E+05	6.069E+05	1.531E+00		1.312E+06			6.241E+05			5.052E+01	7.550E+05	4.411E+00		
Ca	kg	5.527E+01	5.394E+00	3.960E-12	5.394E+00	2.921E+06	1.872E+04			2.107E+05			6.109E+01	8.870E+03	3.412E+00		
Cd	kg	8.306E-02	1.579E+01	1.195E-11	1.579E+01		6.833E+02			6.537E+03			1.520E+02	2.514E+02	1.281E-04		
Ce	kg	1.593E+00	1.778E-01	3.460E-14	1.778E-01		5.237E+02			6.597E+03			2.242E+00	3.381E+02	2.456E-03		
Cl	kg	3.241E+03					4.877E+05			7.708E+03				3.124E+05	4.210E-01		
Cm	kg	5.445E-07	5.168E-08	1.055E-15	5.168E-08		1.529E-04			6.781E-03			2.306E-06	1.069E-04	8.398E-10		
Co	kg	4.859E-01	4.943E-02	7.104E-14	4.943E-02		1.489E+02		1.992E-06	1.226E+03			4.165E-01	1.081E+02	7.494E-04		
Cr	kg	2.727E+01	1.098E+03	3.593E-03	1.098E+03		2.888E+05		7.941E+01	8.043E+04			3.212E+02	1.697E+05	5.127E-03		
Cs	kg	3.407E-05	1.280E+01	1.848E-11	1.280E+01		8.258E+02		2.817E-04	6.699E+02			1.063E+01	5.981E+02	1.455E-09		
Cu	kg	6.582E-01	1.339E-01	1.940E-14	1.339E-01		2.684E+02			2.308E+03			1.154E+00	9.192E+01	1.238E-04		
Dy	kg																
Eu	kg	2.912E-08	5.022E-06	3.472E-18	5.022E-06		1.485E-02			2.726E-01			9.266E-05	7.477E-03	9.322E-12		
F	kg	5.018E+01	1.142E+04	5.947E-01	1.142E+04		3.591E+05			1.270E+05			4.174E+03	2.421E+05	2.630E-02		
Fe	kg	6.054E+01	2.423E+00	1.165E-12	2.423E+00	7.916E+06	2.028E+04			1.006E+06		5.064E+05	1.207E+02	9.078E+03	1.213E-01		
H	kg	9.308E+07	2.438E+07	4.049E+06	2.033E+07		1.522E+07	1.689E+02		6.011E+06	1.073E+02		9.506E+06	7.241E+06	1.770E+01	8.099E+06	3.473E+06
Hg	kg	3.742E+00	2.874E+02	2.157E+00	2.853E+02		6.089E+02			4.347E+03			3.360E+03	3.782E+02	2.445E-03		
I	kg	6.325E+00	1.138E+02	5.334E+00	1.085E+02		2.030E+02			6.234E+01			3.438E+01	1.015E+02	1.092E-03		
K	kg	4.392E+02	3.222E+03	1.998E-09	3.222E+03		4.880E+05		6.222E+01	5.498E+04			3.666E+02	3.393E+05	6.906E-01		
La	kg	4.947E-01	4.331E+00	5.427E-13	4.331E+00		2.167E+02			1.655E+04			3.309E+02	6.146E+01	7.630E-04		
Li	kg	1.212E-02	6.130E-02	3.028E-14	6.130E-02	5.900E+03	1.104E+02			1.728E+03		4.890E+05	9.673E-01	7.826E+01	1.942E-05		
Mg	kg	2.160E+00	3.952E-02	6.211E-14	3.952E-02	1.833E+06	6.674E+02			2.049E+04			1.229E+00	5.253E+02	7.835E-02		
Mn	kg	6.888E+01	1.678E+01	1.462E-11	1.678E+01		5.932E+04			3.255E+05			8.438E+02	1.728E+03	9.562E-03		
Mo	kg	4.926E-11	3.845E+01	4.926E-11	3.845E+01		1.964E+03			3.350E+03			6.695E+01	1.657E+03			
N	kg	6.146E+04	1.292E+05	5.855E+03	1.233E+05		9.968E+06	9.273E+07		2.821E+05	5.891E+07		4.173E+03	5.708E+06	8.988E+07		
Na	kg	3.208E+03	2.651E+05	8.313E+01	2.650E+05	4.781E+04	2.933E+07		2.370E+04	2.005E+06		1.556E+06	7.909E+04	1.684E+07	5.009E+00	1.663E+05	7.130E+04
Nb	kg	-1.034E-05					3.038E-03			6.372E-03				2.151E-03	-2.072E-08		
Nd	kg	6.874E-13	4.109E+00	6.874E-13	4.109E+00		8.226E+02			7.965E+03			3.981E+01	4.316E+02			
Ni	kg	7.370E-01	7.792E+00	4.806E-12	7.792E+00		7.835E+03			1.075E+05			1.074E+02	2.961E+03	1.137E-03		
Np	kg	9.926E-02	9.620E-03	6.749E-15	9.620E-03		2.846E+01			1.110E+02			3.771E-02	3.050E+01	1.531E-04		
O	kg	7.407E+08	1.959E+08	3.380E+07	1.621E+08	7.553E+07	1.651E+08	2.816E+07	9.773E+01	5.319E+07	1.789E+07	1.214E+07	7.564E+07	8.284E+07	2.730E+07	6.434E+07	2.759E+07
P	kg	2.359E+03	3.817E+02	2.059E-09	3.817E+02		7.126E+05			1.112E+05			6.222E+01	3.923E+05	3.638E+00		
Pa	kg						2.428E-02			6.624E-02				1.229E-02			
Pb	kg	3.678E+00	4.361E+01	3.954E-11	4.361E+01		5.315E+03			6.491E+04			5.401E+02	2.231E+03	1.317E-04		
Pd	kg	1.046E-02	2.803E-02	1.974E-14	2.803E-02		8.293E+01			1.890E+02			6.427E-02	7.947E+01	1.614E-05		
Pr	kg	9.276E-15	1.272E-02	9.276E-15	1.272E-02		2.560E+00			7.633E+02			3.816E+00	1.900E+00			
Pu	kg	6.721E-06	2.336E-03	1.654E-15	2.336E-03		6.912E+00			7.834E+02			2.663E-01	4.808E+00	2.151E-09		
Ra	kg	-9.943E-09	1.720E-07	4.426E-12	1.720E-07		5.710E-04			2.127E-05			7.198E-09	8.676E-04	-1.534E-11		
Rb	kg	1.845E-13	2.720E-01	1.845E-13	2.720E-01		4.106E+01			3.519E+02			2.357E+00	4.418E+01			
Rh	kg	4.790E-12	8.726E-01	4.790E-12	8.726E-01		1.362E+02			3.182E+02			2.130E+00	5.267E+01			
Ru	kg	6.924E-11	4.899E+01	6.924E-11	4.899E+01		2.507E+02			2.077E+03			4.153E+02	1.900E+02			
S	kg	1.283E+03	1.367E+05	1.376E+00	1.367E+05		6.001E+05			4.973E+04			1.526E+04	3.499E+05	3.044E-01		

Stream Number on Summary Graphic-->		26	27	27A	27B	28	29	30	31	32	33	34	35	36	37	38	39
	Standard Units of Measure	Waste Treatment and Immobilization Plant Liquid Effluent	Low-Activity Waste Melter Off-Gas Treatment Recycle	Low-Activity Waste Melter Off-Gas Liquid Effluent	Low-Activity Waste Melter Off-Gas Submerged Bed Scrubber Condensate Recycle	Immobilized Low-Activity Waste Glass Formers	Pretreated Low-Activity Waste	Low-Activity Waste Melter Air Supply	Waste Treatment and Immobilization Plant Pretreatment Solid Waste (Spent Resin)	Pretreated High-Level Waste	High-Level Waste Melter Air Supply	Immobilized High-Level Waste Glass Formers	High-Level Waste Melter Off-Gas Treatment Recycle	"Excess" Pretreated Low-Activity Waste	Waste Treatment and Immobilization Plant Pretreatment Off-Gas	Low-Activity Waste Melter System Makeup Chemicals (Excluding Glass Formers)	High-Level Waste Melter System Makeup Chemicals (Excluding Glass Formers)
Sb	kg	4.443E-01	4.332E-01	4.899E-12	4.332E-01		4.986E+02			2.011E+03			1.827E+00	4.082E+02	1.591E-05		
Se	kg	1.723E-10	1.914E+03	1.723E-10	1.914E+03		3.842E+03			4.756E+02			2.375E+02	2.279E+03			
Si	kg	6.219E+02	2.535E+01	7.187E-12	2.535E+01	4.222E+07	1.956E+05			3.669E+05		6.982E+06	4.769E+01	9.577E+04	2.717E+00		
Sm	kg	6.346E-06					7.622E+00			1.200E+02				5.906E+00	2.031E-09		
Sn	kg	9.388E-03	4.148E-03	2.725E-14	4.148E-03		1.287E+01			1.803E+01			6.123E-03	6.877E+00	3.361E-07		
Sr	kg	3.635E-02	5.378E+00	1.250E-12	5.378E+00		5.234E+03			2.392E+05			2.463E+02	6.732E+02	3.108E-06		
Ta	kg	2.422E-13	3.606E-01	2.422E-13	3.606E-01		7.252E+01			1.042E+01			5.212E-02	3.925E+00			
Tc	kg	2.782E+00	3.685E+02	5.035E-10	3.685E+02		1.018E+03		1.900E+00	3.459E+02			1.281E+02	6.337E+02	4.290E-03		
Te	kg	1.729E-13	4.126E-01	1.729E-13	4.126E-01		4.155E+00			4.004E+02			4.003E+01	3.705E+00			
Th	kg	5.141E+00	5.928E-01	6.117E-16	5.928E-01		1.744E+03			7.270E+04			2.470E+01	1.169E+03	7.929E-03		
Ti	kg	2.856E-01	4.666E-02	7.009E-14	4.666E-02	2.453E+06	8.662E+01			1.365E+03			7.370E-01	7.141E+01	5.724E-04		
Tl	kg	7.819E-11	3.533E+02	7.819E-11	3.533E+02		7.091E+02			9.226E+03			4.612E+03	4.423E+02			
U	kg	3.655E+01	3.923E+00	2.821E-12	3.923E+00		1.161E+04		4.186E+00	5.336E+05			1.813E+02	6.650E+03	5.637E-02		
V	kg	1.348E-12	1.102E+00	1.348E-12	1.102E+00		2.248E+02			2.049E+03			1.023E+01	1.919E+02			
W	kg	1.974E-12	2.754E+00	1.974E-12	2.754E+00		5.541E+02			9.608E+02			4.804E+00	4.730E+02			
Y	kg	1.078E-08	2.981E-01	1.522E-13	2.981E-01		9.060E+01			4.753E+02			1.568E+00	5.497E+01	9.218E-13		
Zn	kg	7.754E-01	1.960E-02	5.361E-14	1.960E-02	4.859E+06	2.506E+02			5.430E+03			4.342E-01	1.498E+02	1.259E-03		
Zr	kg	1.953E+01	5.663E-02	6.048E-14	5.663E-02	4.416E+06	6.083E+03			1.288E+05		1.141E+05	1.281E+00	4.591E+03	3.913E-02		
		8.345E+08	**2.214E+08**	**3.847E+07**	**1.829E+08**	**1.523E+08**	**2.281E+08**	**1.209E+08**	**2.395E+04**	**6.781E+07**	**7.681E+07**	**2.327E+07**	**8.526E+07**	**1.176E+08**	**1.172E+08**	**7.260E+07**	**3.114E+07**

Stream Number on Summary Graphic-->		40	41	41A	41B	41C	41D	41E	42	43	43A	43B	43C	43D	43E	43F	44
	Standard Units of Measure	Immobilized Low-Activity Waste Product	Total Low-Activity Waste Melter Solid Waste	Low-Activity Waste Melter Solid Waste - HEPA-1	Low-Activity Waste Melter Solid Waste - HEPA-2	Low-Activity Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	Low-Activity Waste Melter Solid Waste - NOx Scrubber	Low-Activity Waste Melter Solid Waste - Failed Melters	Low-Activity Waste Melter Off-Gas	Total High-Level Waste Melter Solid Waste	High-Level Waste Melter Solid Waste - HEPA-1	High-Level Waste Melter Solid Waste - HEPA-2	High-Level Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	High-Level Waste Melter Solid Waste - NOx Scrubber	High-Level Waste Melter Solid Waste - Spent Ag-Mordenite	High-Level Waste Melter Solid Waste - Failed Melters	High-Level Waste Melter Off-Gas
Waste Radionulides																	
106Ru	Ci	4.169E+02	2.710E-01	3.400E-03	1.018E-06	1.837E-09		2.676E-01	2.039E-10	4.588E-01						4.588E-01	4.503E-05
113mCd	Ci	1.390E+03	5.099E+00					5.099E+00		3.583E+00						3.583E+00	
125Sb	Ci	1.733E+03	5.773E+00	7.264E-02	2.175E-05	3.924E-08		5.700E+00	4.342E-09	1.588E+01	3.140E-03	9.403E-07	1.696E-09		1.696E-10	1.587E+01	1.884E-11
126Sn	Ci	1.455E+02	5.094E-01	2.577E-03	7.718E-07	1.392E-09		5.069E-01	1.544E-10	1.094E+00	3.955E-05	1.185E-08	2.136E-11		2.136E-12	1.094E+00	2.374E-13
129I	Ci	7.150E+00	8.574E+00			8.558E+00		1.638E-02	9.509E-03	2.739E+00					2.731E+00	7.754E-03	2.734E-03
134Cs	Ci	9.690E-01	2.305E-03	2.312E-04	6.924E-08	1.249E-10		2.074E-03	1.386E-11	1.340E+01	1.061E-02	3.178E-06	5.732E-09		5.732E-10	1.339E+01	6.369E-11
137Cs	Ci	2.133E+04	5.070E+01	5.059E+00	1.515E-03	2.732E-06		4.564E+01	3.033E-07	2.031E+05	1.631E+02	4.883E-02	8.808E-05		8.808E-06	2.029E+05	9.786E-07
137mBa	Ci	2.018E+04	4.796E+01	4.785E+00	1.433E-03	2.585E-06		4.318E+01	2.869E-07	1.921E+05	1.542E+02	4.620E-02	8.332E-05		8.332E-06	1.920E+05	9.258E-07
14C	Ci																
151Sm	Ci	2.002E+05	3.201E+02					3.201E+02		1.485E+04						1.485E+04	
152Eu	Ci	5.102E+01	2.012E-01	1.015E-04	3.039E-08	5.482E-11		2.011E-01	6.079E-12	3.439E+00	2.656E-05	7.955E-09	1.435E-11		1.435E-12	3.439E+00	1.594E-13
154Eu	Ci	2.974E+03	1.173E+01	5.810E-03	1.740E-06	3.139E-09		1.172E+01	3.480E-10	1.461E+02	1.128E-03	3.378E-07	6.093E-10		6.093E-11	1.461E+02	6.770E-12
155Eu	Ci	1.692E+03	6.669E+00	3.320E-03	9.942E-07	1.793E-09		6.666E+00	1.988E-10	9.001E+01	6.925E-04	2.074E-07	3.741E-10		3.741E-11	9.001E+01	4.156E-12
226Ra	Ci	5.566E-01	1.295E-03			1.936E-05		1.275E-03	2.147E-06	3.782E-05						3.782E-05	4.639E-09
227Ac	Ci	4.426E-02	1.255E-04					1.255E-04		8.372E-03						8.372E-03	
228Ra	Ci	1.866E+00	4.369E-03			9.443E-05		4.275E-03	1.047E-05	9.993E-03						9.993E-03	1.167E-05
229Th	Ci	6.601E-02	1.289E-04					1.289E-04		3.240E-03						3.240E-03	
231Pa	Ci	1.143E+00	2.618E-03					2.618E-03		1.101E-02						1.101E-02	
232Th	Ci	1.913E-01	3.736E-04					3.736E-04		1.931E-02						1.931E-02	
232U	Ci	1.407E-01	2.813E-04	2.803E-07	8.393E-11	1.514E-13		2.810E-04	1.679E-14	3.673E-02						3.673E-02	1.378E-07
233U	Ci	5.151E+00	1.030E-02	1.034E-05	3.097E-09	5.586E-12		1.029E-02	6.194E-13	3.938E+00	1.475E-05	4.417E-09	7.966E-12		7.966E-13	3.938E+00	8.851E-14
234U	Ci	3.662E+00	7.323E-03	7.358E-06	2.204E-09	3.974E-12		7.316E-03	4.407E-13	1.090E+00						1.090E+00	4.098E-06
235U	Ci	1.548E-01	3.097E-04	3.113E-07	9.324E-11	1.682E-13		3.094E-04	1.865E-14	4.492E-02	1.689E-07	5.059E-11	9.125E-14		9.125E-15	4.492E-02	1.014E-15
236U	Ci	1.067E-01	2.133E-04	2.124E-07	6.363E-11	1.148E-13		2.131E-04	1.273E-14	2.354E-02						2.354E-02	8.850E-08
237Np	Ci	2.003E+01	2.831E-02	3.963E-05	1.187E-08	2.141E-11		2.827E-02	2.374E-12	1.408E-01	1.650E-06	4.942E-10	8.914E-13		8.914E-14	1.408E-01	9.905E-15
238Pu	Ci	2.714E+01	9.553E-02	5.377E-05	1.610E-08	2.905E-11		9.548E-02	3.221E-12	7.074E+00	3.263E-05	9.773E-09	1.763E-11		1.763E-12	7.073E+00	1.959E-13
238U	Ci	3.867E+00	7.734E-03	7.845E-06	2.349E-09	4.238E-12		7.726E-03	4.699E-13	1.005E+00						1.005E+00	3.781E-06
239Pu	Ci	4.036E+02	1.421E+00	8.076E-04	2.419E-07	4.362E-10		1.420E+00	4.837E-11	2.107E+02	9.746E-04	2.919E-07	5.264E-10		5.264E-11	2.107E+02	5.849E-12
240Pu	Ci	8.411E+01	2.961E-01	1.683E-04	5.041E-08	9.092E-11		2.959E-01	1.008E-11	4.428E+01	2.047E-04	6.131E-08	1.106E-10		1.106E-11	4.428E+01	1.229E-12
241Am	Ci	2.886E+03	1.123E+01	8.337E-02	2.497E-05	4.503E-08		1.115E+01	4.993E-09	3.051E+02	3.612E-02	1.082E-05	1.951E-08		1.951E-09	3.050E+02	2.168E-10
241Pu	Ci	9.365E+02	3.296E+00	1.860E-03	5.569E-07	1.004E-09		3.294E+00	1.114E-10	3.553E+02	1.638E-03	4.905E-07	8.847E-10		8.847E-11	3.553E+02	9.830E-12
242Cm	Ci	8.732E+00	1.621E-02			1.574E-05		1.620E-02	1.746E-06	1.652E-01						1.652E-01	5.414E-06
242Pu	Ci	6.645E-03	2.339E-05	1.324E-08	3.964E-12	7.150E-15		2.337E-05	7.929E-16	2.906E-03	1.340E-08	4.014E-12	7.240E-15		7.240E-16	2.906E-03	8.044E-17
243Am	Ci	1.390E+00	5.409E-03	3.991E-05	1.195E-08	2.156E-11		5.369E-03	2.391E-12	1.402E-01						1.402E-01	1.645E-05
243Cm	Ci	4.942E-01	9.177E-04	9.914E-07	2.969E-10	5.355E-13		9.167E-04	5.939E-14	1.380E-02	4.513E-07	1.352E-10	2.438E-13		2.438E-14	1.380E-02	2.709E-15
244Cm	Ci	1.135E+01	2.107E-02	2.277E-05	6.819E-09	1.230E-11		2.104E-02	1.364E-12	3.214E-01	1.051E-05	3.149E-09	5.680E-12		5.680E-13	3.214E-01	6.311E-14
3H	Ci																
59Ni	Ci	1.578E+02	4.602E-01					4.602E-01		4.168E+00						4.168E+00	
60Co	Ci	7.133E+02	2.895E+00	5.683E-03	1.702E-06	3.070E-09		2.889E+00	3.407E-10	1.637E+01	6.989E-04	2.093E-07	3.775E-10		3.775E-11	1.637E+01	4.195E-12
63Ni	Ci	1.309E+04	3.819E+01					3.819E+01		3.895E+02						3.895E+02	
79Se	Ci	4.784E+01	1.395E-01					1.395E-01		1.795E-02						1.795E-02	
90Sr	Ci	3.291E+05	1.400E+03	6.731E-01	2.016E-04	3.636E-07		1.400E+03	4.032E-08	4.037E+05	8.286E-01	2.482E-04	4.476E-07		4.476E-08	4.037E+05	4.973E-09
90Y	Ci	3.291E+05	1.400E+03	6.731E-01	2.016E-04	3.636E-07		1.400E+03	4.032E-08	4.037E+05	8.286E-01	2.482E-04	4.476E-07		4.476E-08	4.037E+05	4.973E-09
93Zr	Ci	9.414E+02	5.810E+00					5.810E+00		9.112E+00						9.112E+00	
93mNb	Ci	7.238E+02	1.761E+00					1.761E+00		4.165E+00						4.165E+00	
99Tc	Ci	1.084E+04	1.640E+02	1.422E+02	4.258E-02	7.680E-05		2.181E+01	8.525E-06	1.180E+01						1.180E+01	7.901E-01
	Ci	**9.393E+05**	**3.488E+03**	**1.536E+02**	**4.599E-02**	**8.558E+00**		**3.326E+03**	**9.533E-03**	**1.219E+06**	**3.190E+02**	**9.554E-02**	**1.723E-04**		**2.731E+00**	**1.219E+06**	**7.930E-01**

Stream Number on Summary Graphic-->		40	41	41A	41B	41C	41D	41E	42	43	43A	43B	43C	43D	43E	43F	44
	Standard Units of Measure	Immobilized Low-Activity Waste Product	Total Low-Activity Waste Melter Solid Waste	Low-Activity Waste Melter Solid Waste - HEPA-1	Low-Activity Waste Melter Solid Waste - HEPA-2	Low-Activity Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	Low-Activity Waste Melter Solid Waste - NOx Scrubber	Low-Activity Waste Melter Solid Waste - Failed Melters	Low-Activity Waste Melter Off-Gas	Total High-Level Waste Melter Solid Waste	High-Level Waste Melter Solid Waste - HEPA-1	High-Level Waste Melter Solid Waste - HEPA-2	High-Level Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	High-Level Waste Melter Solid Waste - NOx Scrubber	High-Level Waste Melter Solid Waste - Spent Ag-Mordenite	High-Level Waste Melter Solid Waste - Failed Melters	High-Level Waste Melter Off-Gas
Chemical Species																	
Ag+	kg		9.373E-03	9.370E-03	2.806E-06	5.061E-09			5.618E-10	2.298E-03	2.297E-03	6.879E-07	1.241E-09				1.379E-10
Al(OH)4-	kg																2.967E-03
Al+3	kg		1.094E+00	1.094E+00	3.275E-04	5.908E-07			6.544E-08	1.007E-02	1.007E-02	3.015E-06	5.439E-09				6.043E-10
As+5	kg		4.289E-02	4.288E-02	1.284E-05	2.316E-08			2.571E-09	5.772E-03	5.770E-03	1.728E-06	3.117E-09				3.463E-10
B+3	kg		5.677E-03	5.676E-03	1.700E-06	3.066E-09			3.400E-10	5.483E-04	5.482E-04	1.642E-07	2.961E-10				3.290E-11
Ba+2	kg		1.813E-03	1.812E-03	5.427E-07	9.788E-10			1.083E-10	9.196E-04	9.194E-04	2.753E-07	4.966E-10				5.518E-11
Be+2	kg		9.042E-04	9.039E-04	2.707E-07	4.883E-10			5.414E-11	2.138E-04	2.137E-04	6.400E-08	1.154E-10				1.283E-11
Bi+3	kg		4.435E-02	4.434E-02	1.328E-05	2.395E-08			2.658E-09	8.637E-02	8.635E-02	2.586E-05	4.664E-08				5.182E-09
C10H12N2O8-4	kg																
C10H15N2O7-3	kg																
C12H27O4P	kg																
C13H28	kg																
C2Cl4	kg																
C2H3O2-	kg																
C2H3O3-	kg																
C2HCl3	kg																
C2O4-2	kg																
C3H6O	kg																
C4H10O	kg																
C4H8O	kg																
C5H5N	kg																
C6H5NO2	kg																
C6H5O7-3	kg																
C6H6	kg																
C7H6N2O4	kg																
C7H8O	kg																
Ca+2	kg		3.300E-02	3.299E-02	9.881E-06	1.782E-08			1.976E-09	3.933E-03	3.931E-03	1.177E-06	2.124E-09				2.360E-10
Cd+2	kg		9.957E-02	9.954E-02	2.981E-05	5.377E-08			5.962E-09	1.629E-02	1.629E-02	4.878E-06	8.797E-09				9.775E-10
Ce+3	kg		2.883E-04	2.882E-04	8.632E-08	1.557E-10			1.726E-11	3.781E-05	3.780E-05	1.132E-08	2.042E-11				2.269E-12
CH2Cl2	kg																
CHCl3	kg																
CHO2-	kg																
Cl-	kg																
CN-	kg		1.206E+00	1.206E+00	3.612E-04	6.514E-07			7.224E-08	7.310E-01	7.307E-01	2.188E-04	3.947E-07		3.947E-08		4.386E-09
Co+3	kg		1.184E-03	1.184E-03	3.545E-07	6.394E-10			7.097E-11	1.687E-04	1.686E-04	5.050E-08	9.108E-11				1.012E-11
CO3-2	kg																
Cr(OH)4-	kg		7.465E+01			7.465E+01			8.286E+00								1.668E-01
Cr(TOTAL)	kg		2.136E+01	2.135E+01	6.395E-03	1.153E-05			1.280E-06								3.135E-01
Cs+	kg		3.080E-01	3.079E-01	9.220E-05	1.663E-07			1.846E-08	2.071E-03	2.070E-03	6.200E-07	1.118E-09				1.243E-10
Cu+2	kg		3.233E-04	3.232E-04	9.680E-08	1.746E-10			1.938E-11	2.788E-05	2.787E-05	8.348E-09	1.506E-11				1.673E-12
F-	kg		4.912E+02	4.910E+02	1.471E-01	2.652E-04			7.833E-03								3.063E+00
Fe+3	kg		9.707E-03	9.704E-03	2.906E-06	5.242E-09			5.813E-10	4.962E-03	4.961E-03	1.486E-06	2.680E-09				2.977E-10
H+	kg																
H2O	kg																
H2O2	kg																
Hg+2	kg		3.202E+02			3.202E+02			1.078E+00	9.849E+02			9.849E+02				9.859E-01
K+	kg		3.330E+01	3.329E+01	9.970E-03	1.798E-05			1.996E-06	8.659E-02	8.657E-02	2.593E-05	4.676E-08				5.196E-09

Stream Number on Summary Graphic-->		40	41	41A	41B	41C	41D	41E	42	43	43A	43B	43C	43D	43E	43F	44
	Standard Units of Measure	Immobilized Low-Activity Waste Product	Total Low-Activity Waste Melter Solid Waste	Low-Activity Waste Melter Solid Waste - HEPA-1	Low-Activity Waste Melter Solid Waste - HEPA-2	Low-Activity Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	Low-Activity Waste Melter Solid Waste - NOx Scrubber	Low-Activity Waste Melter Solid Waste - Failed Melters	Low-Activity Waste Melter Off-Gas	Total High-Level Waste Melter Solid Waste	High-Level Waste Melter Solid Waste - HEPA-1	High-Level Waste Melter Solid Waste - HEPA-2	High-Level Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	High-Level Waste Melter Solid Waste - NOx Scrubber	High-Level Waste Melter Solid Waste - Spent Ag-Mordenite	High-Level Waste Melter Solid Waste - Failed Melters	High-Level Waste Melter Off-Gas
La+3	kg		3.025E-03	3.024E-03	9.057E-07	1.633E-09			1.810E-10	2.389E-03	2.388E-03	7.153E-07	1.290E-09				1.433E-10
Li+	kg		5.046E-04	5.045E-04	1.511E-07	2.725E-10			3.025E-11	1.097E-04	1.096E-04	3.283E-08	5.922E-11				6.580E-12
Mg+2	kg		5.176E-04	5.174E-04	1.550E-07	2.795E-10			3.099E-11	1.854E-04	1.853E-04	5.551E-08	1.001E-10				1.112E-11
Mn+4	kg		1.219E-01	1.218E-01	3.648E-05	6.580E-08			7.297E-09	6.788E-02	6.786E-02	2.032E-05	3.666E-08				4.073E-09
MnO2	kg																
MnO4-	kg																
Mo+6	kg		8.211E-01	8.208E-01	2.458E-04	4.434E-07			4.922E-08	2.216E-02	2.216E-02	6.635E-06	1.197E-08				1.330E-09
Na+	kg		4.915E+03	4.913E+03	1.472E+00	2.654E-03			8.305E+04	1.299E+02	1.299E+02	3.890E-02	7.016E-05				7.796E-06
Nd+3	kg		3.832E-03	3.830E-03	1.147E-06	2.069E-09			2.292E-10	3.857E-04	3.856E-04	1.155E-07	2.083E-10				2.314E-11
NH3	kg																
NH4+	kg																
Ni+2	kg		4.005E-02	4.004E-02	1.199E-05	2.163E-08			2.398E-09	6.118E-03	6.117E-03	1.832E-06	3.304E-09				3.671E-10
NO2-	kg								6.019E+04								
NO3-	kg																
OH(BOUND)	kg																
OH-	kg		2.177E+03	2.177E+03	6.518E-01	1.176E-03			1.037E+01								3.371E+02
Pb+2	kg		6.590E-01	6.588E-01	1.973E-04	3.559E-07			3.950E-08	1.360E-01	1.360E-01	4.072E-05	7.344E-08				8.160E-09
Pd+2	kg		1.645E-04	1.645E-04	4.926E-08	8.885E-11			9.852E-12	3.951E-06	3.950E-06	1.183E-09	2.134E-12				2.371E-13
PO4-3	kg		5.261E+01	5.259E+01	1.575E-02	2.841E-05			3.150E-06	1.408E-01	1.407E-01	4.214E-05	7.601E-08				8.446E-09
Pr+3	kg		7.730E-05	7.727E-05	2.314E-08	4.174E-11			4.629E-12	2.359E-04	2.358E-04	7.063E-08	1.274E-10				1.416E-11
Pu+4	kg																
Rb+	kg		3.074E-03	3.073E-03	9.204E-07	1.660E-09			1.843E-10	4.255E-04	4.254E-04	1.274E-07	2.298E-10				2.553E-11
Rh+3	kg		3.992E-02	3.990E-02	1.195E-05	2.156E-08			2.390E-09	1.702E-03	1.701E-03	5.095E-07	9.190E-10				1.021E-10
Ru+3	kg		1.154E+00	1.154E+00	3.455E-04	6.232E-07			6.918E-08	1.607E-01	1.607E-01	4.812E-05	8.680E-08				9.644E-09
Sb+5	kg		2.051E-02	2.051E-02	6.142E-06	1.108E-08			1.226E-09	1.520E-03	1.519E-03	4.550E-07	8.206E-10				9.117E-11
Se+6	kg		2.872E+00	2.871E+00	8.599E-04	1.551E-06			1.721E-07	3.490E-03	3.489E-03	1.045E-06	1.885E-09				2.094E-10
Si+4	kg		5.990E-02	5.988E-02	1.793E-05	3.234E-08			3.587E-09	1.131E-03	1.130E-03	3.385E-07	6.105E-10				6.783E-11
SO4-2	kg								2.057E+03								
Sr+2	kg		1.041E-02	1.041E-02	3.117E-06	5.622E-09			6.234E-10	4.921E-03	4.920E-03	1.473E-06	2.657E-09				2.953E-10
Ta+5	kg		2.018E-03	2.018E-03	6.043E-07	1.090E-09			1.209E-10	3.239E-06	3.238E-06	9.696E-10	1.749E-12				1.943E-13
Tc+7	kg																
Te+6	kg		2.882E-03	2.881E-03	8.629E-07	1.556E-09			1.728E-10	5.278E-03	5.277E-03	1.580E-06	2.850E-09				3.167E-10
Th+4	kg		5.098E-06	5.096E-06	1.526E-09	2.753E-12			3.052E-13	5.282E-06	5.280E-06	1.581E-09	2.852E-12				3.169E-13
Ti+4	kg		1.168E-04	1.168E-04	3.469E-08	3.154E-10			3.497E-11	1.907E-05	1.906E-05	5.663E-09	5.149E-11				5.721E-12
Tl+3	kg		1.303E+00	1.303E+00	3.902E-04	7.037E-07			7.811E-08	1.688E-01	1.687E-01	5.053E-05	9.114E-08				1.013E-08
TOC	kg																
U(TOTAL)	kg																
V+5	kg		2.246E-02	2.245E-02	6.725E-06	1.213E-08			1.346E-09	4.826E-03	4.825E-03	1.445E-06	2.606E-09				2.896E-10
W+6	kg		1.645E-02	1.645E-02	4.926E-06	8.885E-09			9.852E-10	3.042E-04	3.041E-04	9.107E-08	1.643E-10				1.825E-11
Y+3	kg		8.482E-04	8.479E-04	2.539E-07	4.580E-10			5.074E-11	4.575E-05	4.574E-05	1.370E-08	2.471E-11				2.745E-12
Zn+2	kg		4.467E-04	4.466E-04	1.338E-07	2.412E-10			2.675E-11	1.321E-04	1.320E-04	3.954E-08	7.131E-11				7.923E-12
Zr+4	kg		5.040E-04	5.038E-04	1.509E-07	2.721E-10			3.018E-11	1.224E-04	1.224E-04	3.665E-08	6.610E-11				7.344E-12

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project (35 Sheets)

Stream Number on Summary Graphic-->		40	41	41A	41B	41C	41D	41E	42	43	43A	43B	43C	43D	43E	43F	44
	Standard Units of Measure	Immobilized Low-Activity Waste Product	Total Low-Activity Waste Melter Solid Waste	Low-Activity Waste Melter Solid Waste - HEPA-1	Low-Activity Waste Melter Solid Waste - HEPA-2	Low-Activity Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	Low-Activity Waste Melter Solid Waste - NOx Scrubber	Low-Activity Waste Melter Solid Waste - Failed Melters	Low-Activity Waste Melter Off-Gas	Total High-Level Waste Melter Solid Waste	High-Level Waste Melter Solid Waste - HEPA-1	High-Level Waste Melter Solid Waste - HEPA-2	High-Level Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	High-Level Waste Melter Solid Waste - NOx Scrubber	High-Level Waste Melter Solid Waste - Spent Ag-Mordenite	High-Level Waste Melter Solid Waste - Failed Melters	High-Level Waste Melter Off-Gas
Glass Formers																	
Al2O3	kg	7.206E+06	1.456E+04					1.456E+04		2.562E+03						2.562E+03	
B2O3	kg	2.005E+07	4.629E+04					4.629E+04		1.135E+04						1.135E+04	
C12H22O11	kg																
CaO	kg	4.077E+06	9.378E+03					9.378E+03									
Fe2O3	kg	1.129E+07	2.601E+04					2.601E+04		1.183E+03						1.183E+03	
Li2O	kg	1.270E+04	8.680E-01					8.680E-01		3.714E+03						3.714E+03	
MgO	kg	3.033E+06	7.001E+03					7.001E+03									
Na2O	kg	6.444E+04	1.693E-07					1.693E-07		6.991E+03						6.991E+03	
SiO2	kg	9.011E+07	2.072E+05					2.072E+05		5.256E+04						5.256E+04	
TiO2	kg	4.082E+06	9.435E+03					9.435E+03									
ZnO	kg	6.035E+06	1.393E+04					1.393E+04									
ZrO2	kg	5.951E+06	1.386E+04					1.386E+04		1.038E+02						1.038E+02	
Gas Phase																	
129-I	Ci																
134-Cs	Ci																
137-Cs	Ci																
99-Tc	Ci																
CO	kg																
CO2	kg								2.592E+07								2.858E+06
Cs+	kg																
H2O	kg								6.925E+06								1.420E+05
HCl	kg																
HF	kg		5.485E+02			5.485E+02			2.115E-01	1.917E+02					1.917E+02		1.919E-01
K+	kg																
N2	kg								1.061E+08								5.923E+07
Na+	kg																
NH3	kg								1.855E+06								6.269E+04
NO	kg								1.956E+05	1.196E+04				1.196E+04			6.293E+02
NO2	kg								6.019E+04	1.063E+05				1.063E+05			5.593E+03
O2	kg								2.924E+07								1.694E+07
P2O5	kg																
SO2	kg		2.665E+04			2.665E+04			2.805E+01	1.982E+03				1.982E+03			1.043E+02
Waste Oxides																	
Ac2O3	kg	6.101E-06	1.730E-08					1.730E-08		1.352E-07						1.352E-07	
Ag2O	kg	1.701E+02	5.527E-01					5.527E-01		1.766E+01						1.766E+01	
Al2O3	kg	7.170E+06	1.455E+04					1.455E+04		1.067E+04						1.067E+04	
Am2O3	kg	9.212E-01	3.558E-03					3.558E-03		9.766E-02						9.766E-02	
As2O5	kg	7.910E+02	1.590E+00					1.590E+00		2.677E+01						2.677E+01	
B2O3	kg	4.063E+03	9.802E+00					9.802E+00		1.147E+02						1.147E+02	
BaO	kg	2.502E+02	6.372E-01					6.372E-01		7.507E+01						7.507E+01	
BeO	kg	8.619E+01	1.891E-01					1.891E-01		8.249E+00						8.249E+00	
Bi2O3	kg	3.259E+03	7.502E+00					7.502E+00		1.036E+03						1.036E+03	
CaO	kg	2.613E+04	5.732E+01					5.732E+01		1.049E+03						1.049E+03	
CdO	kg	7.596E+02	2.787E+00					2.787E+00		1.341E+01						1.341E+01	
CeO2	kg	6.406E+02	2.452E+00					2.452E+00		3.135E+01						3.135E+01	

Stream Number on Summary Graphic-->		40	41	41A	41B	41C	41D	41E	42	43	43A	43B	43C	43D	43E	43F	44
	Standard Units of Measure	Immobilized Low-Activity Waste Product	Total Low-Activity Waste Melter Solid Waste	Low-Activity Waste Melter Solid Waste - HEPA-1	Low-Activity Waste Melter Solid Waste - HEPA-2	Low-Activity Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	Low-Activity Waste Melter Solid Waste - NOx Scrubber	Low-Activity Waste Melter Solid Waste - Failed Melters	Low-Activity Waste Melter Off-Gas	Total High-Level Waste Melter Solid Waste	High-Level Waste Melter Solid Waste - HEPA-1	High-Level Waste Melter Solid Waste - HEPA-2	High-Level Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	High-Level Waste Melter Solid Waste - NOx Scrubber	High-Level Waste Melter Solid Waste - Spent Ag-Mordenite	High-Level Waste Melter Solid Waste - Failed Melters	High-Level Waste Melter Off-Gas
Cl-	kg	4.867E+05	9.909E+02					9.909E+02		3.667E+01						3.667E+01	
Cm2O3	kg	1.063E-04	1.971E-07					1.971E-07		3.416E-06						3.416E-06	
Co2O3	kg	2.085E+02	8.447E-01					8.447E-01		5.546E+00						5.546E+00	
Cr2O3	kg	4.197E+05	7.491E+02					7.491E+02		4.378E+02						4.378E+02	
Cs2O	kg	8.582E+02	1.837E+00					1.837E+00		2.729E+00						2.729E+00	
CuO	kg	3.345E+02	1.280E+00					1.280E+00		1.481E+01						1.481E+01	
Dy2O3	kg																
Eu2O3	kg	6.277E-03	2.473E-05					2.473E-05		2.961E-04						2.961E-04	
F-	kg	3.452E+05	1.217E+03					1.217E+03		4.808E+02						4.808E+02	
Fe2O3	kg	2.887E+04	1.153E+02					1.153E+02		5.692E+03						5.692E+03	
HgO	kg																
K2O	kg	5.826E+05	1.339E+03					1.339E+03		3.369E+02						3.369E+02	
La2O3	kg	2.477E+02	1.295E+00					1.295E+00		3.025E+01						3.025E+01	
Li2O	kg	2.366E+02	8.675E-01					8.675E-01		1.498E+01						1.498E+01	
MgO	kg	1.104E+03	2.682E+00					2.682E+00		2.058E+02						2.058E+02	
MnO2	kg	9.338E+04	4.647E+02					4.647E+02		1.739E+03						1.739E+03	
MoO3	kg	2.881E+03	5.963E+00					5.963E+00		2.078E+01						2.078E+01	
Na2O	kg	3.928E+07	9.281E+04					9.281E+04		9.796E+03						9.796E+03	
Nb2O5	kg	4.960E-03	1.207E-05					1.207E-05		2.711E-05						2.711E-05	
Nd2O3	kg	9.498E+02	4.811E+00					4.811E+00		3.133E+01						3.133E+01	
NiO	kg	9.931E+03	2.896E+01					2.896E+01		4.635E+02						4.635E+02	
NpO2	kg	3.225E+01	4.552E-02					4.552E-02		2.265E-01						2.265E-01	
P2O5	kg	1.628E+06	2.966E+03					2.966E+03		8.694E+02						8.694E+02	
PbO	kg	5.657E+03	2.038E+01					2.038E+01		3.067E+02						3.067E+02	
PdO	kg	9.536E+01	3.459E-03					3.459E-03		5.539E-01						5.539E-01	
Pr2O3	kg	2.975E+00	5.753E-03					5.753E-03		3.025E+00						3.025E+00	
PuO2	kg	7.799E+00	2.743E-02					2.743E-02		4.071E+00						4.071E+00	
Rb2O	kg	4.457E+01	2.940E-02					2.940E-02		1.006E+00						1.006E+00	
Re2O3	kg																
Rh2O3	kg	1.659E+02	9.410E-01					9.410E-01		1.362E+00						1.362E+00	
Ru2O3	kg	2.458E+02	1.578E-01					1.578E-01		1.342E+01						1.342E+01	
Sb2O3	kg	5.944E+02	1.955E+00					1.955E+00		9.085E+00						9.085E+00	
SeO2	kg	2.696E+03	7.861E+00					7.861E+00		2.169E+00						2.169E+00	
SiO2	kg	4.176E+05	6.558E+02					6.558E+02		3.129E+03						3.129E+03	
Sm2O3	kg	7.971E+00	1.275E-02					1.275E-02		5.851E-01						5.851E-01	
SnO2	kg	1.607E+01	5.600E-02					5.600E-02		1.208E-01						1.208E-01	
SO3	kg	1.119E+06	2.567E+03					2.567E+03		2.679E+02						2.679E+02	
SrO	kg	6.155E+03	2.618E+01					2.618E+01		2.808E+03						2.808E+03	
Ta2O5	kg	8.728E+01	8.319E-01					8.319E-01		2.917E-02						2.917E-02	
Tc2O7	kg	1.001E+03	2.015E+00					2.015E+00		1.089E+00						1.089E+00	
TeO2	kg	4.671E+00	6.169E-03					6.169E-03		2.790E+00						2.790E+00	
ThO2	kg	1.980E+03	3.867E+00					3.867E+00		2.000E+02						2.000E+02	
TiO2	kg	1.442E+02	2.534E-01					2.534E-01		1.117E+01						1.117E+01	
Tl2O3	kg	3.957E+02	5.205E-01					5.205E-01		1.858E+01						1.858E+01	
U3O8	kg	1.366E+04	2.729E+01					2.729E+01		3.551E+03						3.551E+03	
V2O5	kg	3.982E+02	1.146E+00					1.146E+00		1.451E+01						1.451E+01	
WO3	kg	6.946E+02	6.938E-01					6.938E-01		9.342E+00						9.342E+00	
Y2O3	kg	1.139E+02	4.503E-01					4.503E-01		2.862E+00						2.862E+00	
ZnO	kg	3.105E+02	1.377E+00					1.377E+00		2.966E+01						2.966E+01	
ZrO2	kg	8.166E+03	5.040E+01					5.040E+01		8.838E+02						8.838E+02	

Stream Number on Summary Graphic-->		40	41	41A	41B	41C	41D	41E	42	43	43A	43B	43C	43D	43E	43F	44
	Standard Units of Measure	Immobilized Low-Activity Waste Product	Total Low-Activity Waste Melter Solid Waste	Low-Activity Waste Melter Solid Waste - HEPA-1	Low-Activity Waste Melter Solid Waste - HEPA-2	Low-Activity Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	Low-Activity Waste Melter Solid Waste - NOx Scrubber	Low-Activity Waste Melter Solid Waste - Failed Melters	Low-Activity Waste Melter Off-Gas	Total High-Level Waste Melter Solid Waste	High-Level Waste Melter Solid Waste - HEPA-1	High-Level Waste Melter Solid Waste - HEPA-2	High-Level Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	High-Level Waste Melter Solid Waste - NOx Scrubber	High-Level Waste Melter Solid Waste - Spent Ag-Mordenite	High-Level Waste Melter Solid Waste - Failed Melters	High-Level Waste Melter Off-Gas
Total Stream by Element																	
Ac	kg	6.123E-07	1.403E-09					1.403E-09		1.895E-07						1.895E-07	
Ag	kg	1.584E+02	5.239E-01	9.370E-03	2.806E-06	5.061E-09		5.146E-01	5.618E-10	1.644E+01	2.297E-03	6.879E-07	1.241E-09			1.644E+01	1.379E-10
Al	kg	7.608E+06	1.541E+04	1.094E+00	3.275E-04	5.908E-07		1.541E+04	6.544E-08	7.004E+03	1.007E-02	3.015E-06	5.439E-09			7.004E+03	8.425E-04
Am	kg	8.501E-01	1.972E-03	2.452E-05	7.343E-09	1.324E-11		1.948E-03	1.469E-12	1.190E-01	1.054E-05	3.156E-09	5.692E-12		5.692E-13	1.190E-01	8.242E-08
As	kg	5.157E+02	1.080E+00	4.288E-02	1.284E-05	2.316E-08		1.037E+00	2.571E-09	1.746E+01	5.770E-03	1.728E-06	3.117E-09			1.745E+01	3.463E-10
B	kg	6.228E+06	1.438E+04	5.676E-03	1.700E-06	3.066E-09		1.438E+04	3.400E-10	3.562E+03	5.482E-04	1.642E-07	2.961E-10			3.562E+03	3.290E-11
Ba	kg	2.241E+02	5.152E-01	1.812E-03	5.427E-07	9.788E-10		5.134E-01	1.083E-10	3.783E+01	9.194E-04	2.753E-07	4.966E-10		1.549E-17	3.783E+01	5.518E-11
Be	kg	3.106E+01	6.905E-02	9.039E-04	2.707E-07	4.883E-10		6.815E-02	5.414E-11	2.973E+00	2.137E-04	6.400E-08	1.154E-10			2.972E+00	1.283E-11
Bi	kg	2.923E+03	6.774E+00	4.434E-02	1.328E-05	2.395E-08		6.729E+00	2.658E-09	9.291E+02	8.635E-02	2.586E-05	4.664E-08			9.290E+02	5.182E-09
C	kg		6.568E+00	5.567E-01	1.667E-04	3.007E-07		6.011E+00	7.075E+06	1.731E+00	3.373E-01	1.010E-04	1.822E-07		1.822E-08	1.394E+00	7.799E+05
Ca	kg	2.933E+06	6.743E+03	3.299E-02	9.881E-06	1.782E-08		6.743E+03	1.976E-09	7.499E+02	3.931E-03	1.177E-06	2.124E-09			7.499E+02	2.360E-10
Cd	kg	6.659E+02	1.625E+00	9.954E-02	2.981E-05	5.377E-08		1.526E+00	5.962E-09	2.251E+01	1.629E-02	4.878E-06	8.797E-09			2.250E+01	9.775E-10
Ce	kg	5.215E+02	1.996E+00	2.882E-04	8.632E-08	1.557E-10		1.996E+00	1.726E-11	2.552E+01	3.780E-05	1.132E-08	2.042E-11			2.552E+01	2.269E-12
Cl	kg	4.867E+05	9.909E+02					9.909E+02		3.667E+01						3.667E+01	
Cm	kg	1.525E-04	3.497E-07	3.009E-10	9.011E-14	4.749E-12		3.494E-07	5.267E-13	2.389E-05	1.388E-10	4.158E-14	7.499E-17		7.499E-18	2.389E-05	1.633E-12
Co	kg	1.485E+02	3.413E-01	1.184E-03	3.545E-07	6.394E-10		3.401E-01	7.097E-11	4.319E+00	1.686E-04	5.050E-08	9.108E-11		3.341E-17	4.318E+00	1.012E-11
Cr	kg	2.871E+05	5.662E+02	2.135E+01	6.395E-03	3.234E+01		5.125E+02	3.590E+00	2.995E+02						2.995E+02	3.858E-01
Cs	kg	8.108E+02	2.166E+00	3.079E-01	9.222E-05	1.663E-07		1.858E+00	1.846E-08	2.327E+00	3.949E-03	1.183E-06	2.133E-09		1.015E-10	2.323E+00	1.355E-10
Cu	kg	2.672E+02	1.023E+00	3.232E-04	9.680E-08	1.746E-10		1.023E+00	1.938E-11	1.183E+01	2.787E-05	8.348E-09	1.506E-11			1.183E+01	1.673E-12
Dy	kg																
Eu	kg	1.481E-02	3.396E-05	2.892E-08	8.663E-12	1.562E-14		3.393E-05	1.733E-15	9.601E-04	5.754E-09	1.723E-12	3.108E-15		3.108E-16	9.601E-04	3.453E-17
F	kg	3.452E+05	2.229E+03	4.910E+02	1.471E-01	5.209E+02		1.217E+03	2.087E-01	6.628E+02					1.821E+02	4.808E+02	3.245E+00
Fe	kg	7.918E+06	1.827E+04	9.704E-03	2.906E-06	5.242E-09		1.827E+04	5.813E-10	4.809E+03	4.961E-03	1.486E-06	2.680E-09			4.809E+03	2.977E-10
H	kg		1.567E+02	1.290E+02	3.863E-02	2.763E+01			1.104E+06	9.658E+00					9.658E+00		2.704E+04
Hg	kg		3.202E+02			3.202E+02			1.078E+00	9.849E+02			9.849E+02				9.859E-01
I	kg	4.051E+01	4.858E+01			4.849E+01		9.281E-02	5.388E-02	1.552E+01					1.547E+01	4.393E-02	1.549E-02
K	kg	4.836E+05	1.145E+03	3.329E+01	9.970E-03	1.798E-05		1.112E+03	1.996E-06	2.798E+02	8.657E-02	2.593E-05	4.676E-08			2.797E+02	5.196E-09
La	kg	2.112E+02	1.107E+00	3.024E-03	9.057E-07	1.633E-09		1.104E+00	1.810E-10	2.579E+01	2.388E-03	7.153E-07	1.290E-09			2.579E+01	1.433E-10
Li	kg	6.009E+03	8.067E-01	5.045E-04	1.511E-07	2.725E-10		8.062E-01	3.025E-11	1.732E+03	1.096E-04	3.283E-08	5.922E-11			1.732E+03	6.580E-12
Mg	kg	1.830E+06	4.223E+03	5.174E-04	1.550E-07	2.795E-10		4.223E+03	3.099E-11	1.241E+02	1.853E-04	5.551E-08	1.001E-10			1.241E+02	1.112E-11
Mn	kg	5.901E+04	2.938E+02	1.218E-01	3.648E-05	6.580E-08		2.936E+02	7.297E-09	1.099E+03	6.786E-02	2.032E-05	3.666E-08			1.099E+03	4.073E-09
Mo	kg	1.920E+03	4.795E+00	8.208E-01	2.458E-04	4.434E-07		3.974E+00	4.922E-08	1.387E+01	2.216E-02	6.635E-06	1.197E-08			1.385E+01	1.330E-09
N	kg		6.494E-01	6.493E-01	1.944E-04	3.507E-07			1.077E+08	3.794E+04	3.934E-01	1.178E-04	2.125E-07	3.793E+04	2.125E-08	2.217E-03	5.928E+07
Na	kg	2.919E+07	7.376E+04	4.913E+03	1.472E+00	2.654E-03		6.885E+04	8.305E+04	1.258E+04	1.299E+02	3.890E-02	7.016E-05			1.245E+04	7.796E-06
Nb	kg	3.032E-03	6.945E-06					6.945E-06		2.245E-05						2.245E-05	
Nd	kg	8.143E+02	4.128E+00	3.830E-03	1.147E-06	2.069E-09		4.125E+00	2.292E-10	2.686E+01	3.856E-04	1.155E-07	2.083E-10			2.686E+01	2.314E-11
Ni	kg	7.809E+03	1.793E+01	4.004E-02	1.199E-05	2.163E-08		1.789E+01	2.398E-09	3.784E+02	6.117E-03	1.832E-06	3.304E-09			3.784E+02	3.671E-10
Np	kg	2.839E+01	6.509E-02	5.622E-05	1.684E-08	3.037E-11		6.503E-02	3.368E-12	3.908E-01	2.341E-06	7.012E-10	1.265E-12		1.265E-13	3.908E-01	1.405E-14
O	kg	9.098E+07	2.231E+05	2.083E+03	6.238E-01	1.335E+04		2.076E+05	5.443E+07	1.369E+05	9.482E-02	2.840E-05	5.122E-08	8.128E+04		5.562E+04	1.915E+07
P	kg	7.107E+05	1.312E+03	1.715E+01	5.137E-03	9.265E-06		1.294E+03	1.027E-06	3.795E+02	4.589E-02	1.374E-05	2.479E-08			3.794E+02	2.754E-09
Pa	kg	2.422E-02	5.549E-05					5.549E-05		2.334E-04						2.334E-04	
Pb	kg	5.252E+03	1.958E+01	6.588E-01	1.973E-04	3.559E-07		1.892E+01	3.950E-08	2.848E+02	1.360E-01	4.072E-05	7.344E-08			2.847E+02	8.160E-09
Pd	kg	8.289E+01	3.171E-03	1.645E-04	4.926E-08	8.885E-11		3.007E-03	9.852E-12	4.815E-01	3.950E-06	1.183E-09	2.134E-12			4.815E-01	2.371E-13
Pr	kg	2.542E+00	4.993E-03	7.727E-05	2.314E-08	4.174E-11		4.916E-03	4.629E-12	2.585E+00	2.358E-04	7.063E-08	1.274E-10			2.585E+00	1.416E-11
Pu	kg	6.894E+00	1.581E-02	1.378E-05	4.126E-09	7.442E-12		1.579E-02	8.252E-13	2.759E+00	1.662E-05	4.979E-09	8.980E-12		8.980E-13	2.759E+00	9.977E-14
Ra	kg	5.695E-04	1.325E-06			1.992E-08		1.305E-06	2.208E-09	7.494E-08						7.494E-08	4.758E-11
Rb	kg	4.075E+01	2.996E-02	3.073E-03	9.204E-07	1.660E-09		2.688E-02	1.843E-10	9.200E-01	4.254E-04	1.274E-07	2.298E-10			9.196E-01	2.553E-11
Rh	kg	1.345E+02	8.029E-01	3.990E-02	1.195E-05	2.156E-08		7.630E-01	2.390E-09	1.106E+00	1.701E-03	5.095E-07	9.190E-10			1.104E+00	1.021E-10
Ru	kg	2.001E+02	1.613E+00	1.154E+00	3.455E-04	6.232E-07		4.584E-01	6.918E-08	6.017E+00	1.607E-01	4.812E-05	8.680E-08			5.856E+00	9.658E-09
S	kg	4.479E+05	1.436E+04			1.334E+04		1.028E+03	7.005E+02	1.099E+03				9.920E+02		1.073E+02	5.221E+01

Stream Number on Summary Graphic-->		40	41	41A	41B	41C	41D	41E	42	43	43A	43B	43C	43D	43E	43F	44
	Standard Units of Measure	Immobilized Low-Activity Waste Product	Total Low-Activity Waste Melter Solid Waste	Low-Activity Waste Melter Solid Waste - HEPA-1	Low-Activity Waste Melter Solid Waste - HEPA-2	Low-Activity Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	Low-Activity Waste Melter Solid Waste - NOx Scrubber	Low-Activity Waste Melter Solid Waste - Failed Melters	Low-Activity Waste Melter Off-Gas	Total High-Level Waste Melter Solid Waste	High-Level Waste Melter Solid Waste - HEPA-1	High-Level Waste Melter Solid Waste - HEPA-2	High-Level Waste Melter Solid Waste - Used Volatile Organic Carbon Beds	High-Level Waste Melter Solid Waste - NOx Scrubber	High-Level Waste Melter Solid Waste - Spent Ag-Mordenite	High-Level Waste Melter Solid Waste - Failed Melters	High-Level Waste Melter Off-Gas
Sb	kg	4.970E+02	1.159E+00	2.051E-02	6.142E-06	1.108E-08		1.139E+00	1.226E-09	7.082E+00	1.519E-03	4.550E-07	8.206E-10		1.635E-16	7.081E+00	9.117E-11
Se	kg	1.920E+03	7.271E+00	2.871E+00	8.599E-04	1.551E-06		4.399E+00	1.721E-07	8.420E-01	3.489E-03	1.045E-06	1.885E-09			8.385E-01	2.094E-10
Si	kg	4.232E+07	9.717E+04	5.988E-02	1.793E-05	3.234E-08		9.717E+04	3.587E-09	2.603E+04	1.130E-03	3.385E-07	6.105E-10			2.603E+04	6.783E-11
Sm	kg	7.605E+00	1.742E-02					1.742E-02		4.227E-01						4.227E-01	
Sn	kg	1.283E+01	2.963E-02	2.271E-04	6.800E-08	1.226E-10		2.940E-02	1.360E-11	6.349E-02	3.485E-06	1.044E-09	1.882E-12		1.882E-13	6.349E-02	2.091E-14
Sr	kg	5.216E+03	1.196E+01	1.041E-02	3.119E-06	5.625E-09		1.195E+01	6.237E-10	8.419E+02	4.926E-03	1.475E-06	2.661E-09		3.243E-13	8.419E+02	2.953E-10
Ta	kg	7.148E+01	6.833E-01	2.018E-03	6.043E-07	1.090E-09		6.813E-01	1.209E-10	2.389E-02	3.238E-06	9.696E-10	1.749E-12			2.389E-02	1.943E-13
Tc	kg	6.393E+02	9.856E+00	8.388E+00	2.512E-03	4.531E-06		1.465E+00	5.029E-07	7.674E-01						7.674E-01	4.662E-02
Te	kg	3.735E+00	7.814E-03	2.881E-03	8.629E-07	1.556E-09		4.932E-03	1.728E-10	2.236E+00	5.277E-03	1.580E-06	2.850E-09			2.231E+00	3.167E-10
Th	kg	1.739E+03	3.985E+00	5.096E-06	1.526E-09	2.753E-12		3.985E+00	3.052E-13	2.561E+02	5.280E-06	1.581E-09	2.852E-12			2.561E+02	3.169E-13
Ti	kg	2.447E+06	5.656E+03	1.168E-04	3.469E-08	3.154E-10		5.656E+03	3.497E-11	6.696E+00	1.906E-05	5.663E-09	5.149E-11			6.696E+00	5.721E-12
Tl	kg	3.541E+02	1.769E+00	1.303E+00	3.902E-04	7.037E-07		4.658E-01	7.811E-08	1.680E+01	1.687E-01	5.053E-05	9.114E-08			1.663E+01	1.013E-08
U	kg	1.158E+04	2.655E+01	2.350E-02	7.037E-06	1.269E-08		2.653E+01	1.407E-09	1.879E+03	7.970E-05	2.387E-08	4.305E-11		4.305E-12	1.879E+03	1.126E-02
V	kg	2.231E+02	6.647E-01	2.245E-02	6.725E-06	1.213E-08		6.422E-01	1.346E-09	8.133E+00	4.825E-03	1.445E-06	2.606E-09			8.128E+00	2.896E-10
W	kg	5.508E+02	5.666E-01	1.645E-02	4.926E-06	8.885E-09		5.502E-01	9.852E-10	7.408E+00	3.041E-04	9.107E-08	1.643E-10			7.408E+00	1.825E-11
Y	kg	9.010E+01	2.073E-01	8.479E-04	2.539E-07	4.580E-10		2.064E-01	5.074E-11	1.669E+00	4.574E-05	1.370E-08	2.471E-11		8.237E-17	1.669E+00	2.745E-12
Zn	kg	4.848E+06	1.120E+04	4.466E-04	1.338E-07	2.412E-10		1.120E+04	2.675E-11	2.383E+01	1.320E-04	3.954E-08	7.131E-11			2.383E+01	7.923E-12
Zr	kg	4.412E+06	1.030E+04	5.038E-04	1.509E-07	2.721E-10		1.030E+04	3.018E-11	7.314E+02	1.224E-04	3.665E-08	6.610E-11			7.314E+02	7.344E-12
		2.036E+08	**5.017E+05**	**7.707E+03**	**2.308E+00**	**2.764E+04**		**4.664E+05**	**1.704E+08**	**2.419E+05**	**1.316E+02**	**3.940E-02**	**9.849E+02**	**1.202E+05**	**2.072E+02**	**1.204E+05**	**7.924E+07**

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project (35 Sheets)

Stream Number on Summary Graphic-->		45	46	47	48	49	50	51	52	53	54	55	56
	Standard Units of Measure	Immobilized High-Level Waste Product	Low-Curie Feed to Supplemental Treatment Process (Tank Farms to Bulk Vitrification System)	Supplemental Treatment Process Air Supply	Supplemental Treatment Process Glass Formers	Supplemental Treatment Process Makeup Chemicals	Supplemental Treatment Process Immobilized Low-Activity Waste Product	Supplemental Treatment Process Off-Gas	Supplemental Treatment Process Liquid Effluent	Supplemental Treatment Process Off-Gas Treatment Recycle	Effluent Treatment Facility Treated Liquid Effluent	Effluent Treatment Facility Solid Waste	Total Disposed to Integrated Disposal Facility
Waste Radionulides													
106Ru	Ci	6.922E+01	1.360E-05				1.864E+02				1.279E-06	1.279E-01	6.041E+02
113mCd	Ci	1.945E+03	1.960E+02				1.257E+03		5.681E-02		2.259E-05	2.259E+00	2.669E+03
125Sb	Ci	4.184E+03	2.198E+01				2.996E+03		7.491E-01		1.088E-04	1.088E+01	4.762E+03
126Sn	Ci	2.034E+02	7.749E+00				8.578E+01		2.145E-02		2.166E-06	2.166E-01	2.332E+02
129I	Ci	2.193E+00	3.908E+00				2.085E+01		4.735E-01	1.876E+02	1.596E-05	1.596E+00	4.092E+01
134Cs	Ci	2.773E+03	1.311E+00				3.065E+00		3.280E-08		6.763E-10	6.763E-05	1.749E+01
137Cs	Ci	4.203E+07	4.686E+05				4.858E+05		1.463E+00	4.906E+03	2.151E-05	2.151E+00	7.156E+05
137mBa	Ci	3.976E+07	4.433E+05				4.596E+05		1.384E+00	4.641E+03	2.035E-05	2.035E+00	6.769E+05
14C	Ci		7.644E+01					7.850E+02	7.778E-01		5.261E-05	5.260E+00	5.260E+00
151Sm	Ci	3.142E+06	4.589E+03				1.600E+05		4.271E-02		3.372E-03	3.372E+02	3.758E+05
152Eu	Ci	1.253E+03	6.339E-01				5.201E+01		3.688E-05		1.261E-06	1.261E-01	1.068E+02
154Eu	Ci	5.322E+04	6.631E+01				1.259E+03		1.268E-01		1.685E-05	1.685E+00	4.394E+03
155Eu	Ci	3.279E+04	1.665E+01				1.360E+03		9.640E-04		1.915E-05	1.915E+00	3.150E+03
226Ra	Ci	1.070E-02	3.431E-04				8.539E-01				6.558E-08	6.558E-03	1.418E+00
227Ac	Ci	3.882E+00	-6.473E-03				1.072E-02				-6.602E-08	7.315E-05	6.358E-02
228Ra	Ci	2.826E+00	1.079E-01				1.344E+00		-6.225E-04		-3.909E-06	-1.649E-03	3.223E+00
229Th	Ci	1.335E+00	1.233E-03				4.927E-02		4.883E-05		3.492E-09	3.492E-04	1.190E-01
231Pa	Ci	3.114E+00	2.082E-01				7.878E-01				4.441E-07	4.436E-04	1.946E+00
232Th	Ci	7.954E+00	5.522E-03				1.337E-01		1.325E-04		1.067E-06	1.066E-03	3.457E-01
232U	Ci	6.465E+00	2.141E-02				1.120E-01		1.110E-04		7.718E-07	7.710E-04	2.904E-01
233U	Ci	6.932E+02	1.330E+00				4.412E+00		4.371E-03		2.980E-05	2.977E-02	1.354E+01
234U	Ci	1.918E+02	5.422E-01				2.818E+00		2.792E-03		2.134E-05	2.132E-02	7.599E+00
235U	Ci	7.907E+00	2.330E-02				1.187E-01		1.176E-04		8.996E-07	8.987E-04	3.197E-01
236U	Ci	4.144E+00	9.460E-03				8.934E-02		8.853E-05		6.857E-07	6.850E-04	2.205E-01
237Np	Ci	7.804E+01	1.800E+00				2.327E+01		2.306E-02		9.320E-05	9.310E-02	4.372E+01
238Pu	Ci	1.534E+03	5.378E+00				2.010E+01		5.368E-06		3.643E-08	3.639E-05	5.443E+01
238U	Ci	1.769E+02	5.212E-01				2.732E+00		2.707E-03		2.176E-05	2.173E-02	7.636E+00
239Pu	Ci	4.570E+04	2.274E+02				5.085E+02		1.509E-04	5.084E-02	6.975E-07	6.968E-04	1.125E+03
240Pu	Ci	9.604E+03	4.627E+01				1.073E+02		2.864E-05		1.239E-04	1.238E-01	2.362E+02
241Am	Ci	1.146E+05	1.742E+02				2.203E+03		1.570E-03		-2.556E-06	-2.553E-03	5.406E+03
241Pu	Ci	7.706E+04	3.224E+02				1.090E+03		2.911E-04		1.883E-03	1.881E+00	2.388E+03
242Cm	Ci	2.607E+02	1.834E+00				6.368E+00		6.310E-03		4.338E-05	4.333E-02	1.533E+01
242Pu	Ci	6.302E-01	2.992E-03				8.229E-03		2.197E-09		1.401E-08	1.400E-05	1.782E-02
243Am	Ci	5.265E+01	9.087E-02				1.036E+00		7.342E-07		5.602E-09	5.596E-06	2.571E+00
243Cm	Ci	2.177E+01	8.943E-02				4.382E-01		4.342E-04		2.852E-06	2.849E-03	9.501E-01
244Cm	Ci	5.072E+02	2.082E+00				1.004E+01		9.952E-03		6.572E-05	6.566E-02	2.180E+01
3H	Ci		5.303E+02				3.341E+02		4.991E+02		4.001E+03		3.392E+02
59Ni	Ci	1.224E+03	4.893E+01				1.103E+02		3.740E-03		6.723E-05	6.716E-02	2.737E+02
60Co	Ci	5.073E+03	8.022E+01				3.799E+02		4.145E-01		2.279E-05	2.279E+00	1.117E+03
63Ni	Ci	1.144E+05	4.593E+03				1.016E+04		3.444E-01		5.598E-05	5.598E+00	2.377E+04
79Se	Ci	2.750E+00	7.621E+00				4.096E+01				3.917E-07	3.917E-02	8.934E+01
90Sr	Ci	4.021E+07	6.742E+04				2.342E+05		2.443E+01		3.107E-05	3.107E+01	9.698E+05
90Y	Ci	4.021E+07	6.742E+04				2.342E+05		2.443E+01		3.107E-05	3.107E+01	9.698E+05
93Zr	Ci	1.785E+03	1.066E+02				7.999E+02		7.927E-01		4.938E-05	4.937E+00	1.765E+03
93mNb	Ci	1.517E+03	8.428E+01				5.985E+02		-6.182E-01		-2.324E-05	-2.324E+00	1.328E+03
99Tc	Ci	3.680E+03	8.269E+02				1.156E+04		1.224E+01	6.082E+02	5.945E-04	5.944E+01	2.276E+04
	Ci	**1.658E+08**	**1.059E+06**				**1.609E+06**	**7.850E+02**	**5.663E+02**	**1.034E+04**	**4.001E+03**	**4.999E+02**	**3.785E+06**

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project (35 Sheets)

Stream Number on Summary Graphic-->		45	46	47	48	49	50	51	52	53	54	55	56
	Standard Units of Measure	Immobilized High-Level Waste Product	Low-Curie Feed to Supplemental Treatment Process (Tank Farms to Bulk Vitrification System)	Supplemental Treatment Process Air Supply	Supplemental Treatment Process Glass Formers	Supplemental Treatment Process Makeup Chemicals	Supplemental Treatment Process Immobilized Low-Activity Waste Product	Supplemental Treatment Process Off-Gas	Supplemental Treatment Process Liquid Effluent	Supplemental Treatment Process Off-Gas Treatment Recycle	Effluent Treatment Facility Treated Liquid Effluent	Effluent Treatment Facility Solid Waste	Total Disposed to Integrated Disposal Facility
Chemical Species													
Ag+	kg		4.323E+00						1.430E+00		2.113E-03	2.111E+00	2.123E+00
Al(OH)4-	kg		-6.659E-08						2.178E+03		1.680E+01	1.679E+04	1.679E+04
Al+3	kg		2.205E+05						9.852E+02		5.908E+00	5.902E+03	5.903E+03
As+5	kg		1.256E+01						1.248E+02		1.269E-01	1.267E+02	1.268E+02
B+3	kg		2.176E+01						9.651E-01		6.483E-03	6.477E+00	6.483E+00
Ba+2	kg		7.565E+00						1.772E+00		2.696E-03	2.693E+00	2.696E+00
Be+2	kg		9.017E-01								2.683E-05	2.681E-02	2.792E-02
Bi+3	kg		6.064E+02						5.428E-01		5.189E-03	5.184E+00	5.315E+00
C10H12N2O8-4	kg												
C10H15N2O7-3	kg												
C12H27O4P	kg												
C13H28	kg												
C2Cl4	kg												
C2H3O2-	kg												
C2H3O3-	kg												
C2HCl3	kg												
C2O4-2	kg		1.049E+05						1.794E+04		8.833E+04		
C3H6O	kg												
C4H10O	kg												
C4H8O	kg												
C5H5N	kg												
C6H5NO2	kg												
C6H5O7-3	kg												
C6H6	kg												
C7H6N2O4	kg												
C7H8O	kg												
Ca+2	kg		9.421E+03						1.825E+01		9.808E-02	9.798E+01	9.801E+01
Cd+2	kg		8.380E+01						1.005E+02		1.013E-01	1.012E+02	1.013E+02
Ce+3	kg		1.031E+01						3.450E-01		2.329E-03	2.327E+00	2.327E+00
CH2Cl2	kg												
CHCl3	kg												
CHO2-	kg												
Cl-	kg		4.403E+04						1.785E+05		1.823E+02	1.822E+05	1.822E+05
CN-	kg		4.978E+01								4.914E-01		1.937E+00
Co+3	kg		9.465E+00						1.164E-01		8.014E-04	8.006E-01	8.020E-01
CO3-2	kg		1.895E+06						4.928E+06		7.989E+03	7.981E+06	7.981E+06
Cr(OH)4-	kg		-3.492E-09						6.051E+00		4.483E-02	4.479E+01	3.027E+02
Cr(TOTAL)	kg		2.401E+04						2.836E+00		1.649E-02	1.648E+01	3.784E+01
Cs+	kg		2.801E+01						6.697E-06		7.503E-04	7.496E-01	1.060E+00
Cu+2	kg		5.848E+00						9.679E-02		8.783E-04	8.774E-01	8.778E-01
F-	kg		2.838E+05						8.023E+04		8.011E+01	8.003E+04	8.052E+04
Fe+3	kg		3.714E+03						1.265E+01		8.269E-02	8.261E+01	8.263E+01
H+	kg								1.189E+04		1.103E+05		
H2O	kg		5.888E+07			5.975E+07			1.753E+08		1.068E+09		
H2O2	kg												
Hg+2	kg		2.652E+01						4.002E-01		5.543E-03	5.537E+00	1.311E+03
K+	kg		5.038E+04						1.099E+02		6.829E-01	6.822E+02	7.778E+02

Stream Number on Summary Graphic-->		45	46	47	48	49	50	51	52	53	54	55	56
	Standard Units of Measure	Immobilized High-Level Waste Product	Low-Curie Feed to Supplemental Treatment Process (Tank Farms to Bulk Vitrification System)	Supplemental Treatment Process Air Supply	Supplemental Treatment Process Glass Formers	Supplemental Treatment Process Makeup Chemicals	Supplemental Treatment Process Immobilized Low-Activity Waste Product	Supplemental Treatment Process Off-Gas	Supplemental Treatment Process Liquid Effluent	Supplemental Treatment Process Off-Gas Treatment Recycle	Effluent Treatment Facility Treated Liquid Effluent	Effluent Treatment Facility Solid Waste	Total Disposed to Integrated Disposal Facility
La+3	kg		2.265E+00						6.306E-02		7.022E-04	7.015E-01	7.070E-01
Li+	kg		8.804E+00						2.873E-03		4.950E-05	4.945E-02	5.006E-02
Mg+2	kg		1.278E+01						5.327E-01		3.355E-03	3.351E+00	3.352E+00
Mn+4	kg		1.198E+02						6.217E-01		7.376E-03	7.368E+00	7.558E+00
MnO2	kg												
MnO4-	kg								2.610E+00		1.391E+02		
Mo+6	kg		2.973E+01								3.259E-03	3.256E+00	4.099E+00
Na+	kg		7.182E+06			4.938E+05			4.946E+05		5.422E+02	5.417E+05	5.704E+05
Nd+3	kg		1.118E+01								2.583E-04	2.581E-01	2.623E-01
NH3	kg		1.909E+01			1.816E+06			1.816E+06		1.982E+03	1.980E+06	1.980E+06
NH4+	kg												
Ni+2	kg		7.843E+02						1.269E-01		4.182E-03	4.178E+00	4.224E+00
NO2-	kg		4.577E+05						4.914E+06		4.926E+03	4.921E+06	4.921E+06
NO3-	kg		1.015E+07						2.938E+07		3.025E+04	3.022E+07	3.022E+07
OH(BOUND)	kg		1.041E+05						1.407E+03		7.702E+00	7.694E+03	7.694E+03
OH-	kg		4.674E+05			3.653E+05			3.692E+05		4.233E+02	4.229E+05	4.250E+05
Pb+2	kg		3.120E+02						2.545E+02		3.719E-01	3.715E+02	3.723E+02
Pd+2	kg		3.411E-13						2.694E-03		1.577E-04	1.575E-01	1.577E-01
PO4-3	kg		9.543E+05						2.124E+03		1.094E+01	1.093E+04	1.098E+04
Pr+3	kg		2.220E-14								2.848E-03		3.132E-04
Pu+4	kg												
Rb+	kg		1.137E-13								8.790E-05	8.781E-02	9.131E-02
Rh+3	kg		9.237E-14								1.794E-04	1.792E-01	2.208E-01
Ru+3	kg		-1.933E-12								7.762E-04	7.754E-01	2.090E+00
Sb+5	kg		3.738E+01						1.559E-01		8.313E-04	8.304E-01	8.525E-01
Se+6	kg		4.602E+02						2.734E+01		2.983E-02	2.980E+01	3.268E+01
Si+4	kg		2.491E+04						1.190E+02		8.136E-01	8.128E+02	8.128E+02
SO4-2	kg		1.014E+06						2.052E+06		2.059E+03	2.057E+06	2.057E+06
Sr+2	kg		6.000E+02						1.259E+03		1.251E+00	1.250E+03	1.250E+03
Ta+5	kg		8.882E-16								2.925E-06	2.922E-03	4.943E-03
Tc+7	kg												
Te+6	kg		1.821E-14								1.498E-05	1.496E-02	2.312E-02
Th+4	kg		3.819E-02						1.838E-03		1.116E-05	1.115E-02	1.116E-02
Ti+4	kg		1.314E+00						7.199E-02		4.024E-04	4.020E-01	4.021E-01
Tl+3	kg		2.759E-01								4.498E-04	4.494E-01	1.921E+00
TOC	kg		3.610E+04						1.871E+05		1.310E+04	1.741E+05	1.741E+05
U(TOTAL)	kg												
V+5	kg		6.480E+00								1.241E-01		2.729E-02
W+6	kg		-1.478E-12								1.001E+00		1.676E-02
Y+3	kg		2.973E-01								1.061E-02		8.939E-04
Zn+2	kg		3.028E+00						1.513E-01		1.036E-03	1.035E+00	1.035E+00
Zr+4	kg		7.727E+01						4.349E+00		4.573E-02	4.569E+01	4.569E+01

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project (35 Sheets)

Stream Number on Summary Graphic-->		45	46	47	48	49	50	51	52	53	54	55	56
	Standard Units of Measure	Immobilized High-Level Waste Product	Low-Curie Feed to Supplemental Treatment Process (Tank Farms to Bulk Vitrification System)	Supplemental Treatment Process Air Supply	Supplemental Treatment Process Glass Formers	Supplemental Treatment Process Makeup Chemicals	Supplemental Treatment Process Immobilized Low-Activity Waste Product	Supplemental Treatment Process Off-Gas	Supplemental Treatment Process Liquid Effluent	Supplemental Treatment Process Off-Gas Treatment Recycle	Effluent Treatment Facility Treated Liquid Effluent	Effluent Treatment Facility Solid Waste	Total Disposed to Integrated Disposal Facility
Glass Formers													
Al2O3	kg	6.613E+05											7.223E+06
B2O3	kg	3.635E+06			7.352E+06		7.352E+06						2.755E+07
C12H22O11	kg												
CaO	kg												4.087E+06
Fe2O3	kg	7.228E+05											1.132E+07
Li2O	kg	1.049E+06											1.641E+04
MgO	kg												3.040E+06
Na2O	kg	2.090E+06			3.517E+06		3.517E+06						3.629E+06
SiO2	kg	1.488E+07			9.828E+07		9.828E+07						1.898E+08
TiO2	kg												4.091E+06
ZnO	kg												6.049E+06
ZrO2	kg	1.540E+05			1.028E+07		1.028E+07						1.637E+07
Gas Phase													
129-I	Ci												
134-Cs	Ci												
137-Cs	Ci												
99-Tc	Ci												
CO	kg												
CO2	kg							7.504E+04					
Cs+	kg												
H2O	kg			2.747E+03				2.141E+07					
HCl	kg												
HF	kg							8.526E+03					7.402E+02
K+	kg												
N2	kg			1.687E+08				1.687E+08					
Na+	kg												
NH3	kg												
NO	kg							2.382E+00					1.196E+04
NO2	kg							4.566E+00					1.063E+05
O2	kg			5.124E+07				4.466E+07					
P2O5	kg												
SO2	kg							2.738E+01					2.863E+04
Waste Oxides													
Ac2O3	kg	6.269E-05					4.546E-06						1.080E-05
Ag2O	kg	4.065E+03					1.384E+02						3.271E+02
Al2O3	kg	3.334E+06					4.602E+06						1.181E+07
Am2O3	kg	3.668E+01					7.062E-01						1.729E+00
As2O5	kg	5.201E+03					4.452E+02						1.266E+03
B2O3	kg	3.829E+04					3.136E+03						7.329E+03
BaO	kg	1.191E+04					1.783E+02						5.046E+02
BeO	kg	1.889E+03					7.032E+01						1.651E+02
Bi2O3	kg	3.505E+05					2.420E+03						6.722E+03
CaO	kg	2.936E+05					2.551E+04						5.278E+04
CdO	kg	7.280E+03					2.680E+02						1.045E+03
CeO2	kg	8.065E+03					4.276E+02						1.103E+03

Stream Number on Summary Graphic-->		45	46	47	48	49	50	51	52	53	54	55	56
	Standard Units of Measure	Immobilized High-Level Waste Product	Low-Curie Feed to Supplemental Treatment Process (Tank Farms to Bulk Vitrification System)	Supplemental Treatment Process Air Supply	Supplemental Treatment Process Glass Formers	Supplemental Treatment Process Makeup Chemicals	Supplemental Treatment Process Immobilized Low-Activity Waste Product	Supplemental Treatment Process Off-Gas	Supplemental Treatment Process Liquid Effluent	Supplemental Treatment Process Off-Gas Treatment Recycle	Effluent Treatment Facility Treated Liquid Effluent	Effluent Treatment Facility Solid Waste	Total Disposed to Integrated Disposal Facility
Cl-	kg	7.671E+03					1.778E+05						6.658E+05
Cm2O3	kg	5.390E-03					9.319E-05						2.031E-04
Co2O3	kg	1.718E+03					1.653E+02						3.806E+02
Cr2O3	kg	1.166E+05					2.828E+05						7.044E+05
Cs2O	kg	5.652E+02					6.663E+02						1.530E+03
CuO	kg	2.872E+03					1.223E+02						4.730E+02
Dy2O3	kg												
Eu2O3	kg	1.079E-01					3.223E-03						9.824E-03
F-	kg	1.219E+05					4.357E+05						7.829E+05
Fe2O3	kg	1.432E+06					1.825E+04						5.303E+04
HgO	kg						4.361E+02						4.366E+02
K2O	kg	6.545E+04					4.692E+05						1.054E+06
La2O3	kg	1.899E+04					7.463E+01						3.539E+02
Li2O	kg	3.702E+03					1.874E+02						4.398E+02
MgO	kg	3.377E+04					8.914E+02						2.205E+03
MnO2	kg	5.119E+05					2.918E+03						9.850E+04
MoO3	kg	4.903E+03					2.531E+03						5.441E+03
Na2O	kg	2.681E+06					3.233E+07						7.207E+07
Nb2O5	kg	9.879E-03					4.115E-03						9.130E-03
Nd2O3	kg	9.209E+03					5.165E+02						1.503E+03
NiO	kg	1.361E+05					4.764E+03						1.519E+04
NpO2	kg	1.256E+02					3.747E+01						7.025E+01
P2O5	kg	2.538E+05					1.602E+06						3.242E+06
PbO	kg	6.897E+04					2.461E+03						8.447E+03
PdO	kg	2.168E+02					9.142E+01						1.873E+02
Pr2O3	kg	8.858E+02					2.224E+00						8.230E+00
PuO2	kg	8.829E+02					9.828E+00						2.174E+01
Rb2O	kg	3.813E+02					4.832E+01						9.392E+01
Re2O3	kg												
Rh2O3	kg	3.884E+02					6.495E+01						2.331E+02
Ru2O3	kg	2.025E+03					2.330E+02						4.924E+02
Sb2O3	kg	2.395E+03					5.332E+02						1.145E+03
SeO2	kg	3.321E+02					3.812E+03						6.608E+03
SiO2	kg	7.816E+05					2.569E+05						6.788E+05
Sm2O3	kg	1.238E+02					6.397E+00						1.497E+01
SnO2	kg	2.247E+01					9.191E+00						2.574E+01
SO3	kg	8.311E+04					1.368E+03						1.123E+06
SrO	kg	2.797E+05					2.847E+00						8.992E+03
Ta2O5	kg	1.264E+01					4.792E+00						9.293E+01
Tc2O7	kg	3.398E+02					1.068E+03						2.081E+03
TeO2	kg	4.479E+02					4.634E+00						1.210E+01
ThO2	kg	8.242E+04					1.384E+03						3.568E+03
TiO2	kg	2.264E+03					1.212E+02						2.769E+02
Tl2O3	kg	5.135E+03					4.946E+02						9.094E+02
U3O8	kg	6.250E+05					9.654E+03						2.690E+04
V2O5	kg	3.623E+03					3.541E+02						7.688E+02
WO3	kg	1.196E+03					5.965E+02						1.301E+03
Y2O3	kg	5.970E+02					7.001E+01						1.873E+02
ZnO	kg	6.727E+03					1.900E+02						5.317E+02
ZrO2	kg	1.731E+05					6.350E+03						1.545E+04

Table C-1. Projected Compositions of the Primary and Secondary Waste Streams in the River Protection Project (35 Sheets)

Stream Number on Summary Graphic-->		45	46	47	48	49	50	51	52	53	54	55	56
	Standard Units of Measure	Immobilized High-Level Waste Product	Low-Curie Feed to Supplemental Treatment Process (Tank Farms to Bulk Vitrification System)	Supplemental Treatment Process Air Supply	Supplemental Treatment Process Glass Formers	Supplemental Treatment Process Makeup Chemicals	Supplemental Treatment Process Immobilized Low-Activity Waste Product	Supplemental Treatment Process Off-Gas	Supplemental Treatment Process Liquid Effluent	Supplemental Treatment Process Off-Gas Treatment Recycle	Effluent Treatment Facility Treated Liquid Effluent	Effluent Treatment Facility Solid Waste	Total Disposed to Integrated Disposal Facility
Total Stream by Element													
Ac	kg	5.360E-05	-8.949E-08				1.484E-07				-9.128E-13	1.011E-09	9.528E-07
Ag	kg	3.785E+03	4.323E+00				1.288E+02		1.430E+00		2.113E-03	2.111E+00	3.067E+02
Al	kg	2.115E+06	2.205E+05				2.436E+06		1.604E+03		1.068E+01	1.067E+04	1.008E+07
Am	kg	3.366E+01	5.127E-02				6.480E-01		4.616E-07		-7.175E-10	-7.168E-07	1.619E+00
As	kg	3.391E+03	1.256E+01				2.902E+02		1.248E+02		1.269E-01	1.267E+02	9.518E+02
B	kg	1.141E+06	2.176E+01		2.283E+06		2.284E+06		9.651E-01		6.483E-03	6.477E+00	8.557E+06
Ba	kg	1.070E+04	7.565E+00				1.596E+02		1.772E+00	8.629E-09	2.696E-03	2.693E+00	4.252E+02
Be	kg	6.806E+02	9.017E-01				2.534E+01				2.683E-05	2.681E-02	5.950E+01
Bi	kg	3.144E+05	6.064E+02				2.171E+03		5.428E-01		5.189E-03	5.184E+00	6.035E+03
C	kg		4.440E+05					2.048E+04	1.178E+06		3.881E+04	1.772E+06	1.772E+06
Ca	kg	2.098E+05	9.421E+03				1.823E+04		1.825E+01		9.808E-02	9.798E+01	2.959E+06
Cd	kg	6.363E+03	8.380E+01				2.346E+02		1.005E+02		1.013E-01	1.012E+02	1.027E+03
Ce	kg	6.566E+03	1.031E+01				3.481E+02		3.450E-01		2.329E-03	2.327E+00	9.003E+02
Cl	kg	7.671E+03	4.403E+04				1.778E+05		1.785E+05		1.823E+02	1.822E+05	8.479E+05
Cm	kg	6.755E-03	2.805E-05				1.347E-04		1.334E-07		8.814E-10	8.805E-07	3.123E-04
Co	kg	1.221E+03	9.465E+00				1.175E+02		1.164E-01		8.014E-04	8.006E-01	2.716E+02
Cr	kg	7.977E+04	2.401E+04				1.935E+05		5.457E+00		3.592E-02	3.588E+01	4.821E+05
Cs	kg	6.569E+02	3.341E+01				6.315E+02		2.355E-05	5.653E-02	7.503E-04	7.496E-01	1.448E+03
Cu	kg	2.295E+03	5.848E+00				9.767E+01		9.679E-02		8.783E-04	8.774E-01	3.787E+02
Dy	kg												
Eu	kg	2.715E-01	2.833E-04				7.761E-03		4.716E-07		1.090E-10	1.090E-05	2.358E-02
F	kg	1.219E+05	2.838E+05				4.357E+05	8.097E+03	8.023E+04		8.011E+01	8.003E+04	8.641E+05
Fe	kg	1.507E+06	3.714E+03				1.277E+04		1.265E+01		8.269E-02	8.261E+01	7.954E+06
H	kg		6.622E+06	3.074E+02		7.030E+06	3.454E-05	2.396E+06	1.997E+07		1.196E+08	3.778E+05	3.779E+05
Hg	kg		2.652E+01				4.038E+02		4.002E-01		5.543E-03	5.537E+00	1.715E+03
I	kg	1.242E+01	2.214E+01				1.181E+02		2.682E+00	1.063E+03	9.043E-05	9.043E+00	2.318E+02
K	kg	5.433E+04	5.038E+04				3.895E+05		1.099E+02		6.829E-01	6.822E+02	8.757E+05
La	kg	1.619E+04	2.265E+00				6.363E+01		6.306E-02		7.022E-04	7.015E-01	3.025E+02
Li	kg	4.890E+05	8.804E+00				8.706E+01		2.873E-03		4.950E-05	4.945E-02	7.830E+03
Mg	kg	2.036E+04	1.278E+01				5.375E+02		5.327E-01		3.355E-03	3.351E+00	1.835E+06
Mn	kg	3.235E+05	1.198E+02				1.844E+03		1.827E+00		6.428E+01	7.368E+00	6.226E+04
Mo	kg	3.268E+03	2.973E+01				1.687E+03				3.259E-03	3.256E+00	3.631E+03
N	kg		2.432E+06	1.687E+08		1.494E+06		1.687E+08	9.626E+06		9.963E+03	9.952E+06	9.990E+06
Na	kg	3.540E+06	7.182E+06		2.609E+06	4.938E+05	2.660E+07		4.946E+05		5.422E+02	5.417E+05	5.672E+07
Nb	kg	6.350E-03	3.529E-04				2.505E-03		-2.589E-06		-9.733E-11	-9.733E-06	5.567E-03
Nd	kg	7.895E+03	1.118E+01				4.428E+02				2.583E-04	2.581E-01	1.289E+03
Ni	kg	1.070E+05	7.850E+02				3.744E+03		1.269E-01		4.183E-03	4.179E+00	1.196E+04
Np	kg	1.105E+02	2.553E+00				3.302E+01		3.272E-02		1.322E-04	1.321E-01	6.222E+01
O	kg	1.605E+07	6.392E+07	5.125E+07	6.099E+07	5.341E+07	7.273E+07	6.373E+07	1.875E+08		9.488E+08	3.499E+07	1.999E+08
P	kg	1.107E+05	3.112E+05				6.990E+05		6.926E+02		3.568E+00	3.565E+03	1.419E+06
Pa	kg	6.601E-02	4.412E-03				1.670E-02				9.412E-09	9.403E-06	4.124E-02
Pb	kg	6.403E+04	3.120E+02				2.285E+03		2.545E+02		3.719E-01	3.715E+02	8.214E+03
Pd	kg	1.885E+02	3.411E-13				7.947E+01		2.694E-03		1.577E-04	1.575E-01	1.630E+02
Pr	kg	7.569E+02	2.220E-14				1.900E+00				2.848E-03		7.032E+00
Pu	kg	7.803E+02	3.871E+00				8.678E+00		2.561E-06	8.190E-04	5.787E-07	5.782E-04	1.836E+01
Ra	kg	2.119E-05	7.434E-07				8.681E-04		-2.287E-09		5.193E-11	6.623E-06	1.446E-03
Rb	kg	3.486E+02	1.137E-13				4.418E+01				8.790E-05	8.781E-02	8.598E+01
Rh	kg	3.150E+02	9.237E-14				5.267E+01				1.794E-04	1.792E-01	1.893E+02
Ru	kg	1.656E+03	2.163E-12				1.900E+02				7.762E-04	7.754E-01	3.985E+02
S	kg	3.328E+04	3.384E+05				5.480E+02	1.370E+01	6.850E+05		6.871E+02	6.864E+05	1.150E+06

Stream Number on Summary Graphic-->		45	46	47	48	49	50	51	52	53	54	55	56
	Standard Units of Measure	Immobilized High-Level Waste Product	Low-Curie Feed to Supplemental Treatment Process (Tank Farms to Bulk Vitrification System)	Supplemental Treatment Process Air Supply	Supplemental Treatment Process Glass Formers	Supplemental Treatment Process Makeup Chemicals	Supplemental Treatment Process Immobilized Low-Activity Waste Product	Supplemental Treatment Process Off-Gas	Supplemental Treatment Process Liquid Effluent	Supplemental Treatment Process Off-Gas Treatment Recycle	Effluent Treatment Facility Treated Liquid Effluent	Effluent Treatment Facility Solid Waste	Total Disposed to Integrated Disposal Facility
Sb	kg	2.002E+03	3.738E+01				4.454E+02		1.559E-01		8.313E-04	8.304E-01	9.567E+02
Se	kg	2.371E+02	4.613E+02				2.713E+03		2.734E+01		2.983E-02	2.981E+01	4.734E+03
Si	kg	7.322E+06	2.491E+04		4.594E+07		4.606E+07		1.190E+02		8.136E-01	8.128E+02	8.903E+07
Sm	kg	1.195E+02	1.744E-01				6.080E+00		1.623E-06		1.282E-07	1.282E-02	1.414E+01
Sn	kg	1.796E+01	6.828E-01				7.330E+00		1.890E-03		1.908E-07	1.908E-02	2.052E+01
Sr	kg	2.381E+05	6.005E+02				2.958E+00		1.259E+03		1.251E+00	1.250E+03	7.323E+03
Ta	kg	1.035E+01					3.925E+00				2.925E-06	2.922E-03	7.611E+01
Tc	kg	2.170E+02	4.879E+01				6.820E+02		7.221E-01	3.588E+01	3.507E-05	3.507E+00	1.343E+03
Te	kg	3.581E+02	1.821E-14				3.705E+00				1.498E-05	1.496E-02	9.699E+00
Th	kg	7.241E+04	5.019E+01				1.216E+03		1.205E+00		9.702E-03	9.693E+00	3.225E+03
Ti	kg	1.357E+03	1.314E+00				7.265E+01		7.199E-02		4.024E-04	4.020E-01	2.453E+06
Tl	kg	4.595E+03	2.759E-01				4.426E+02				4.498E-04	4.494E-01	8.157E+02
U	kg	5.315E+05	1.562E+03				8.187E+03		8.113E+00		6.518E-02	6.512E+01	2.175E+04
V	kg	2.029E+03	6.480E+00				1.984E+02				1.241E-01		4.307E+02
W	kg	9.486E+02	-1.478E-12				4.730E+02				1.001E+00		1.032E+03
Y	kg	4.720E+02	2.974E-01				5.527E+01		4.496E-08		1.061E-02	5.719E-08	1.472E+02
Zn	kg	5.404E+03	3.028E+00				1.527E+02		1.513E-01		1.036E-03	1.035E+00	4.860E+06
Zr	kg	2.421E+05	1.189E+02		7.614E+06		7.618E+06		4.658E+00		4.575E-02	4.761E+01	1.213E+07
		3.478E+07	**8.191E+07**	**2.200E+08**	**1.194E+08**	**6.243E+07**	**1.597E+08**	**2.349E+08**	**2.198E+08**	**1.099E+03**	**1.068E+09**	**4.860E+07**	**4.144E+08**

APPENDIX D

SUPPLEMENTAL DATA

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APPENDIX D

SUPPLEMENTAL DATA

Appendix D provides supplemental data for the inventory of residual waste left in the Hanford Site tanks at the end of the River Protection Project mission, and for the projected concentrations of the liquid portion of retrieved single-shell tank wastes. Tables D1 and D-2 provide the projected residual inventory of radionuclides and chemical species by tank left in the Hanford Site tanks at the end of the mission. Tables D-3 and D-4 provide the projected concentrations of radionuclides and chemical species in the liquid portion of retrieved single-shell tank waste by tank.

Table D-5 lists some specific output files from this HTWOS run that were provided to others for input to separate work efforts. Copies of these data files have been saved to a folder within the Hanford Site Integrated Document Management System under the CH2M HILL Hanford Group, Inc., Flowsheet and Process Models folder.

Table D-1. Projected Residual Radionuclide Inventory. (13 Sheets)

TANK	Total for All Tanks	A-101	A-102	A-103	A-104	A-105	A-106	AN-101	AN-102	AN-103	AN-104	AN-105	AN-106	AN-107
^{106}Ru	1.454E-03	2.706E-06	3.010E-07	5.852E-07	3.030E-07	3.361E-06	2.420E-05	1.277E-09	2.042E-06	8.292E-10	1.097E-09	8.098E-08	2.932E-10	1.223E-08
^{113m}Cd	8.885E+01	6.938E+00	1.501E+00	7.535E-01	4.481E-02	1.219E-01	2.268E-01	2.600E-03	5.104E-03	1.263E-04	2.399E-03	1.575E-03	1.075E-03	1.205E-03
^{125}Sb	1.783E+02	3.010E-01	5.286E-02	7.443E-02	1.870E-01	1.290E+00	6.335E-01	1.036E-03	3.963E-03	3.514E-04	9.226E-04	4.986E-04	1.645E-04	5.499E-04
^{126}Sn	7.620E+00	2.704E-01	5.504E-02	3.259E-02	3.468E-03	1.810E-02	1.338E-02	2.312E-04	7.885E-04	6.483E-06	2.416E-04	1.514E-04	6.857E-05	1.341E-04
^{129}I	1.307E-01	2.931E-04	3.700E-04	5.051E-04	1.543E-05	9.096E-06	1.944E-04	1.635E-05	6.750E-06	4.589E-06	1.635E-05	1.474E-05	2.971E-05	5.415E-06
^{134}Cs	1.801E+01	2.206E-04	1.299E-03	2.531E-04	8.801E-04	1.504E-03	7.708E-04	8.112E-06	3.603E-05	3.300E-06	7.752E-06	6.236E-06	1.903E-06	2.128E-06
^{137}Cs	1.140E+05	3.802E+02	1.775E+03	4.684E+02	2.938E+02	5.764E+02	4.800E+02	1.730E+01	6.788E+00	1.678E+00	1.800E+01	1.195E+01	4.709E+00	5.744E+00
^{137m}Ba	1.078E+05	3.597E+02	1.679E+03	4.432E+02	2.780E+02	5.453E+02	4.540E+02	1.637E+01	6.421E+00	1.587E+00	1.703E+01	1.130E+01	4.455E+00	5.434E+00
^{14}C	9.164E+00	8.272E-03	4.377E-03	5.411E-03	7.630E-03	1.823E-02	1.596E-03	7.498E-04	2.051E-04	4.039E-05	4.548E-03	3.597E-04	2.628E-04	1.938E-03
^{151}Sm	1.101E+05	2.099E+03	2.445E+02	5.467E+02	9.369E+02	6.953E+03	8.261E+03	2.464E+00	9.423E+00	1.519E+00	2.049E+00	1.482E+00	3.581E-01	1.724E+00
^{152}Eu	9.646E+01	9.204E-01	4.376E-02	9.730E-02	2.290E-01	6.087E+00	1.738E+00	1.238E-04	4.874E-04	1.297E-03	9.533E-05	1.420E-04	6.110E-05	3.687E-04
^{154}Eu	1.721E+03	6.624E+01	2.997E+00	6.686E+00	5.785E+01	1.402E+02	1.221E+02	7.843E-03	6.047E-02	3.117E-02	6.478E-03	8.381E-03	4.239E-03	2.346E-02
^{155}Eu	7.083E+02	2.672E+01	1.143E+00	2.591E+00	7.201E+00	2.357E+01	4.944E+01	3.068E-03	2.573E-02	5.215E-03	2.426E-03	3.351E-03	1.668E-03	8.103E-03
^{226}Ra	4.160E+02	6.711E-06	1.337E-06	2.423E-06	2.761E-08	1.458E-07	2.634E-07	4.168E-09	1.173E-08	9.937E-10	3.639E-09	3.573E-09	2.123E-09	4.553E-09
^{227}Ac	5.101E-02	4.436E-03	1.489E-04	3.840E-04	2.891E-07	1.004E-06	2.081E-05	2.203E-07	1.012E-06	8.803E-07	1.168E-07	6.330E-07	7.694E-07	3.364E-07
^{228}Ra	4.200E-02	2.198E-03	4.397E-04	7.947E-04	9.974E-07	-1.172E-12	6.378E-05	9.096E-07	3.798E-05	5.276E-06	4.631E-07	-9.069E-06	2.644E-06	4.697E-07
^{229}Th	1.762E-02	2.915E-06	5.564E-07	1.046E-06	1.480E-08	1.176E-09	9.257E-08	4.185E-07	6.537E-08	4.507E-06	1.350E-07	2.293E-06	8.726E-07	4.437E-08
^{231}Pa	1.130E-01	1.040E-04	1.507E-03	2.689E-03	5.453E-07	1.276E-06	2.055E-04	1.298E-06	1.106E-05	7.516E-08	1.135E-06	1.529E-06	6.261E-06	1.929E-06
^{232}Th	8.625E-02	1.057E-05	2.017E-06	3.789E-06	3.762E-08	1.651E-12	3.164E-07	1.554E-06	2.437E-06	2.056E-05	3.278E-07	1.042E-05	3.975E-06	2.023E-07
^{232}U	1.952E-01	6.112E-03	4.076E-02	3.567E-03	7.090E-05	3.237E-09	1.743E-04	1.280E-06	2.014E-06	3.157E-05	5.239E-07	2.614E-06	7.660E-06	2.037E-06
^{233}U	1.278E+01	3.788E-01	2.526E+00	2.211E-01	4.468E-03	6.033E-09	1.080E-02	7.917E-05	9.258E-05	1.959E-03	3.243E-05	1.614E-04	4.760E-04	1.253E-04
^{234}U	6.684E+00	6.805E-02	4.417E-01	3.962E-02	1.189E-02	4.272E-05	4.656E-03	1.011E-04	1.052E-04	3.271E-04	3.950E-05	1.530E-04	7.105E-05	4.902E-04
^{235}U	2.844E-01	2.761E-03	1.790E-02	1.607E-03	5.001E-04	1.785E-06	1.933E-04	4.181E-06	4.372E-06	1.308E-05	1.641E-06	6.429E-06	2.831E-06	2.164E-05
^{236}U	1.192E-01	1.783E-03	1.158E-02	1.036E-03	2.856E-04	1.099E-06	1.196E-04	2.237E-06	4.103E-06	7.328E-06	8.825E-07	3.125E-06	1.587E-06	6.927E-06
^{237}Np	3.215E+00	1.504E-01	2.737E-02	5.338E-02	1.190E-03	3.698E-03	5.771E-03	1.245E-04	3.867E-04	2.024E-06	1.040E-04	6.695E-05	1.900E-05	5.533E-05
^{238}Pu	6.238E+01	4.083E-01	2.355E+00	2.481E-01	9.883E-01	1.272E+00	1.017E+00	2.700E-04	1.766E-03	3.209E-04	9.060E-05	4.378E-04	9.011E-06	1.045E-03
^{238}U	6.456E+00	6.124E-02	3.965E-01	3.566E-02	1.182E-02	4.174E-05	4.418E-03	9.046E-05	9.572E-05	3.015E-04	3.570E-05	1.420E-04	6.499E-05	4.853E-04
^{239}Pu	1.635E+03	9.149E+00	5.726E+01	6.287E+00	2.980E+01	2.707E+01	2.611E+01	1.058E-02	4.115E-02	9.010E-03	3.376E-03	1.700E-02	6.407E-04	5.687E-02
^{240}Pu	3.443E+02	2.196E+00	1.328E+01	1.441E+00	6.514E+00	6.643E+00	5.955E+00	2.162E-03	8.987E-03	1.911E-03	6.996E-04	3.407E-03	9.271E-05	9.235E-03
^{241}Am	2.840E+03	4.375E+01	4.647E+01	7.511E+00	1.852E+01	2.737E+02	1.494E+01	1.335E-02	1.754E-01	5.873E-02	5.166E-03	1.667E-02	1.767E-04	2.812E-02
^{241}Pu	2.238E+03	1.699E+01	1.034E+02	1.060E+01	3.635E+01	5.121E+01	4.185E+01	1.090E-02	8.672E-02	1.282E-02	3.691E-03	1.784E-02	3.949E-04	4.182E-02
^{242}Cm	2.314E+00	5.137E-03	2.088E-02	1.091E-03	1.162E-02	2.238E-01	6.493E-03	9.142E-06	1.617E-04	5.208E-05	3.730E-06	7.978E-06	3.778E-07	1.722E-05
^{242}Pu	2.090E-02	1.610E-04	9.932E-04	1.008E-04	3.254E-04	4.809E-04	3.947E-04	9.810E-08	6.623E-07	1.189E-07	3.332E-08	1.559E-07	3.471E-09	3.940E-07
^{243}Am	1.682E+00	2.447E-02	2.667E-02	4.341E-03	9.335E-03	1.462E-01	7.881E-03	7.288E-06	7.771E-05	3.130E-05	2.837E-06	8.406E-06	6.596E-08	1.241E-05
^{243}Cm	4.476E-01	2.608E-04	7.863E-04	4.167E-05	5.506E-04	1.266E-02	3.419E-04	3.059E-07	3.188E-06	2.941E-06	1.244E-07	2.791E-07	1.247E-08	1.000E-06
^{244}Cm	1.058E+01	5.911E-03	1.848E-02	9.768E-04	1.250E-02	2.838E-01	7.957E-03	7.121E-06	7.343E-05	6.595E-05	2.898E-06	6.451E-06	2.970E-07	2.323E-05
^{3}H	4.871E+00	2.474E-02	3.702E-02	2.046E-02	3.691E-03	8.900E-03	1.487E-02	2.489E-03	4.773E-04	2.109E-04	2.357E-03	2.082E-03	1.878E-03	9.489E-04
^{59}Ni	4.692E+01	1.520E+00	2.662E-01	3.382E-01	2.034E-01	6.269E-01	2.858E-01	7.996E-04	2.163E-03	3.549E-04	6.187E-04	1.095E-03	8.992E-04	1.268E-03
^{60}Co	1.894E+02	4.673E+00	3.360E+00	4.185E-01	6.005E+00	1.484E+01	1.265E+00	1.911E-03	9.444E-03	3.507E-03	1.362E-03	2.217E-03	2.207E-03	3.996E-03
^{63}Ni	4.456E+03	1.421E+02	2.487E+01	3.160E+01	1.892E+01	5.903E+01	2.657E+01	7.442E-02	2.013E-01	3.351E-02	5.728E-02	1.024E-01	8.460E-02	1.189E-01
^{79}Se	1.344E-01	1.993E-03	2.177E-03	4.244E-03	9.924E-05	4.857E-04	3.940E-04	5.213E-05	1.413E-05	1.529E-06	5.722E-05	2.794E-05	1.763E-05	7.247E-06
^{90}Sr	1.437E+06	1.354E+04	1.437E+04	5.647E+03	1.039E+05	1.402E+05	1.263E+04	1.076E+01	2.684E+01	3.239E+01	2.428E+01	7.613E+00	4.736E-01	9.908E+00
^{90}Y	1.437E+06	1.354E+04	1.437E+04	5.647E+03	1.039E+05	1.402E+05	1.263E+04	1.076E+01	2.684E+01	3.239E+01	2.428E+01	7.613E+00	4.736E-01	9.908E+00
^{93}Zr	7.851E+01	5.090E-02	7.332E-01	1.313E+00	5.365E-02	2.228E-01	1.941E-01	2.981E-03	9.839E-03	1.015E-04	2.770E-03	1.923E-03	9.811E-04	1.724E-03
^{93m}Nb	7.077E+01	4.272E+00	6.032E-01	6.027E-01	-3.928E-02	2.082E-01	1.316E-01	2.516E-03	8.776E-03	8.581E-05	2.392E-03	1.672E-03	8.370E-04	1.579E-03
^{99}Tc	1.369E+02	2.885E-01	3.390E+00	1.343E+00	3.096E-02	1.515E-01	2.222E-01	1.732E-02	5.289E-03	5.992E-04	1.693E-02	1.111E-02	5.557E-03	6.086E-03

Table D-1. Projected Residual Radionuclide Inventory. (13 Sheets)

TANK	Total for All Tanks	AP-101	AP-102	AP-103	AP-104	AP-105	AP-106	AP-107	AP-108	AW-101	AW-102	AW-103	AW-104	AW-105	AW-106
^{106}Ru	1.454E-03	1.052E-05	9.605E-09	3.803E-09	3.317E-06	8.317E-10	1.235E-06	1.380E-10	2.324E-05	5.052E-10	1.813E-09	8.682E-10	5.670E-09	2.772E-05	3.681E-05
^{113m}Cd	8.885E+01	5.133E-04	1.583E-02	7.208E-03	2.235E-03	1.935E-03	9.199E-04	2.205E-04	1.759E-02	1.135E-03	2.335E-03	1.287E-03	1.702E-03	9.842E-05	1.861E-03
^{125}Sb	1.783E+02	1.915E-04	6.486E-03	1.940E-03	8.380E-04	6.092E-04	2.196E-04	6.121E-05	6.474E-03	3.252E-04	8.015E-04	4.784E-04	5.609E-04	6.712E-03	5.118E-04
^{126}Sn	7.620E+00	3.836E-05	1.442E-03	6.580E-04	2.012E-04	1.992E-04	1.008E-04	8.591E-06	6.701E-04	1.086E-04	2.021E-04	1.155E-04	1.603E-04	4.799E-06	1.903E-04
^{129}I	1.307E-01	3.472E-06	1.371E-05	1.657E-05	1.434E-05	1.414E-05	8.491E-06	2.246E-06	9.810E-05	4.164E-06	3.182E-06	1.434E-05	1.780E-05	1.999E-06	1.005E-05
^{134}Cs	1.801E+01	4.853E-05	1.509E-05	1.106E-05	9.114E-06	5.844E-06	3.922E-06	1.568E-06	1.368E-03	2.179E-06	2.586E-06	2.687E-06	5.595E-06	1.637E-04	4.115E-06
^{137}Cs	1.140E+05	4.245E+00	3.449E+01	1.764E+01	1.468E+01	1.439E+01	8.712E+00	2.148E+00	8.852E+01	5.619E+00	5.849E+00	7.246E+00	1.187E+01	8.802E+00	6.343E+00
^{137m}Ba	1.078E+05	4.016E+00	3.263E+01	1.669E+01	1.388E+01	1.362E+01	8.241E+00	2.032E+00	8.374E+01	5.316E+00	5.533E+00	6.855E+00	1.123E+01	8.327E+00	6.001E+00
^{14}C	9.164E+00	2.183E-04	7.191E-04	5.016E-04	6.368E-04	5.669E-04	3.294E-04	2.512E-05	9.224E-04	1.534E-04	1.522E-04	4.234E-04	1.825E-03	2.421E-05	2.301E-04
^{151}Sm	1.101E+05	4.555E-01	1.790E+01	7.047E+00	2.042E+00	1.564E+00	7.466E-01	4.440E-02	3.606E+00	1.122E+00	2.346E+00	1.176E+00	1.381E+00	9.887E+00	1.633E+00
^{152}Eu	9.646E+01	5.750E-05	8.371E-04	4.770E-04	1.134E-04	1.100E-04	1.084E-04	9.963E-06	8.303E-04	8.871E-05	1.431E-04	1.825E-04	1.017E-04	9.283E-03	2.777E-04
^{154}Eu	1.721E+03	4.114E-03	6.036E-02	3.222E-02	6.708E-03	7.774E-03	7.594E-03	4.115E-04	6.489E-03	5.119E-03	9.095E-03	1.260E-02	6.448E-03	1.652E-02	1.648E-02
^{155}Eu	7.083E+02	1.706E-03	2.346E-02	1.420E-02	2.743E-03	3.191E-03	2.935E-03	3.445E-04	9.378E-03	2.015E-03	3.495E-03	5.011E-03	2.517E-03	9.377E-03	7.247E-03
^{226}Ra	4.160E+02	3.811E-09	2.554E-08	1.109E-08	3.736E-09	3.572E-09	2.513E-09	5.887E-10	4.754E-08	2.087E-09	3.811E-09	2.619E-09	3.045E-09	1.045E-09	4.348E-09
^{227}Ac	5.101E-02	2.528E-08	3.108E-06	1.010E-06	1.934E-07	2.908E-07	1.631E-07	5.977E-09	5.633E-07	1.257E-07	2.986E-07	5.667E-07	3.192E-07	2.755E-07	7.860E-07
^{228}Ra	4.200E-02	7.389E-08	4.510E-06	9.751E-07	7.721E-07	1.138E-06	4.515E-07	3.964E-07	3.044E-05	1.557E-07	3.352E-07	1.419E-06	1.176E-06	1.972E-06	1.053E-06
^{229}Th	1.762E-02	1.617E-09	4.506E-06	4.771E-09	3.599E-07	8.280E-07	8.632E-08	1.778E-08	1.766E-06	5.325E-10	1.130E-09	4.766E-08	4.087E-07	1.336E-06	8.304E-08
^{231}Pa	1.130E-01	1.358E-07	7.283E-06	3.338E-06	1.142E-06	1.148E-06	1.117E-06	1.804E-08	1.304E-06	5.592E-07	1.143E-06	4.806E-06	2.411E-06	6.811E-08	4.033E-06
^{232}Th	8.625E-02	8.054E-09	7.426E-06	1.063E-07	1.223E-06	1.732E-06	1.734E-07	7.786E-09	1.965E-06	5.688E-09	5.591E-09	2.040E-07	1.744E-06	6.095E-06	2.705E-07
^{232}U	1.952E-01	1.209E-07	8.520E-06	1.868E-06	1.058E-06	1.457E-06	1.497E-06	1.115E-08	1.303E-06	4.293E-07	8.144E-07	2.570E-06	2.621E-06	2.952E-07	3.602E-06
^{233}U	1.278E+01	7.228E-06	5.318E-04	1.155E-04	6.536E-05	8.990E-05	9.173E-05	5.189E-08	5.537E-06	2.633E-05	4.984E-05	1.599E-04	1.625E-04	9.431E-06	2.235E-04
^{234}U	6.684E+00	7.666E-05	9.509E-04	1.590E-04	9.480E-05	1.706E-04	1.227E-04	2.556E-08	3.933E-06	7.297E-05	1.400E-04	1.578E-04	7.485E-05	7.356E-04	1.430E-04
^{235}U	2.844E-01	3.274E-06	3.932E-05	6.617E-06	3.937E-06	7.069E-06	5.156E-06	1.060E-09	1.544E-07	3.130E-06	5.915E-06	6.679E-06	3.081E-06	2.867E-05	6.080E-06
^{236}U	1.192E-01	1.713E-06	2.040E-05	3.647E-06	2.066E-06	3.569E-06	2.990E-06	7.622E-10	2.310E-07	1.521E-06	3.491E-06	3.595E-06	1.677E-06	6.492E-05	2.969E-06
^{237}Np	3.215E+00	1.736E-05	7.593E-04	3.526E-04	1.031E-04	7.943E-05	3.422E-05	4.710E-06	3.713E-05	4.729E-05	1.019E-04	3.959E-05	6.730E-05	1.682E-05	7.341E-05
^{238}Pu	6.238E+01	4.664E-04	1.922E-03	1.018E-03	2.965E-04	6.992E-04	1.573E-03	6.017E-08	3.339E-05	7.587E-04	6.972E-04	5.637E-04	1.989E-04	5.451E-03	1.090E-03
^{238}U	6.456E+00	7.572E-05	8.384E-04	1.444E-04	8.577E-05	1.510E-04	1.116E-04	2.379E-08	3.112E-06	7.322E-05	1.295E-04	1.463E-04	6.786E-05	5.306E-04	1.370E-04
^{239}Pu	1.635E+03	2.248E-02	7.316E-02	3.314E-02	1.256E-02	2.588E-02	4.969E-02	1.716E-06	1.907E-04	3.860E-02	2.773E-02	2.271E-02	7.618E-03	7.399E-02	3.926E-02
^{240}Pu	3.443E+02	4.446E-03	1.520E-02	6.796E-03	2.519E-03	5.278E-03	1.036E-02	3.069E-07	3.830E-05	7.498E-03	5.715E-03	4.721E-03	1.538E-03	1.638E-02	7.835E-03
^{241}Am	2.840E+03	1.388E-02	9.258E-02	4.653E-02	1.280E-02	2.615E-02	6.493E-02	7.851E-06	3.770E-04	2.440E-02	2.369E-02	1.722E-02	8.218E-03	4.696E-02	4.642E-02
^{241}Pu	2.238E+03	1.610E-02	8.163E-02	3.866E-02	1.145E-02	2.861E-02	6.704E-02	2.304E-06	3.990E-04	2.473E-02	3.014E-02	2.542E-02	8.158E-03	3.506E-01	4.471E-02
^{242}Cm	2.314E+00	3.121E-06	3.775E-05	2.864E-05	7.375E-06	1.239E-05	2.974E-05	6.043E-08	9.063E-07	3.878E-06	9.012E-06	6.685E-06	4.484E-06	1.314E-05	2.453E-05
^{242}Pu	2.090E-02	1.590E-07	7.119E-07	3.588E-07	1.050E-07	2.590E-07	6.281E-07	1.794E-11	2.869E-09	2.467E-07	2.884E-07	2.409E-07	7.154E-08	1.779E-06	4.224E-07
^{243}Am	1.682E+00	5.455E-06	4.822E-05	2.469E-05	6.573E-06	1.283E-05	3.269E-05	4.422E-10	2.172E-08	1.023E-05	9.578E-06	5.653E-06	4.236E-06	7.626E-06	2.315E-05
^{243}Cm	4.476E-01	1.143E-07	1.287E-06	9.959E-07	2.472E-07	4.310E-07	1.082E-06	8.156E-09	2.888E-07	1.294E-07	3.423E-07	2.534E-07	1.544E-07	9.268E-06	8.739E-07
^{244}Cm	1.058E+01	2.616E-06	2.994E-05	2.316E-05	5.750E-06	9.995E-06	2.500E-05	1.631E-07	5.803E-06	2.985E-06	7.861E-06	5.810E-06	3.579E-06	2.128E-04	2.027E-05
^{3}H	4.871E+00	1.114E-03	2.288E-03	2.136E-03	2.340E-03	2.849E-03	2.625E-03	7.470E-05	2.935E-03	1.196E-03	2.520E-03	2.631E-03	2.036E-03	4.403E-04	1.537E-03
^{59}Ni	4.692E+01	3.034E-04	5.582E-03	2.369E-03	7.656E-04	7.891E-04	8.710E-04	2.637E-06	4.016E-04	6.090E-04	9.529E-04	1.702E-03	8.124E-04	2.211E-04	1.806E-03
^{60}Co	1.894E+02	5.917E-04	1.477E-02	5.125E-03	1.638E-03	2.080E-03	2.833E-03	5.685E-05	1.498E-03	9.426E-04	3.276E-03	3.173E-03	1.812E-03	2.222E-03	3.813E-03
^{63}Ni	4.456E+03	2.767E-02	5.194E-01	2.209E-01	7.123E-02	7.351E-02	8.154E-02	2.417E-04	3.344E-02	5.620E-02	8.873E-02	1.596E-01	7.584E-02	2.103E-02	1.691E-01
^{79}Se	1.344E-01	7.091E-06	5.596E-05	4.586E-05	4.521E-05	4.113E-05	1.410E-05	8.415E-06	2.326E-04	1.102E-05	1.137E-05	8.416E-06	3.521E-05	1.190E-07	1.223E-05
^{90}Sr	1.437E+06	1.483E+01	9.695E+01	1.152E+01	1.170E+01	1.656E+01	7.019E+00	2.202E-02	5.009E-01	1.748E+01	9.260E+00	9.525E+00	1.158E+01	3.629E+01	1.260E+01
^{90}Y	1.437E+06	1.483E+01	9.695E+01	1.152E+01	1.170E+01	1.656E+01	7.019E+00	2.202E-02	5.009E-01	1.748E+01	9.260E+00	9.525E+00	1.158E+01	3.629E+01	1.260E+01
^{93}Zr	7.851E+01	5.310E-04	1.757E-02	7.031E-03	2.547E-03	2.220E-03	1.205E-03	5.309E-05	4.992E-03	1.280E-03	2.493E-03	1.524E-03	1.951E-03	2.618E-04	2.097E-03
^{93m}Nb	7.077E+01	4.333E-04	1.533E-02	4.685E-03	2.144E-03	1.871E-03	1.064E-03	4.403E-05	4.255E-03	1.094E-03	2.140E-03	1.251E-03	1.686E-03	1.824E-04	2.358E-03
^{99}Tc	1.369E+02	2.066E-03	1.858E-02	2.341E-02	1.492E-02	1.347E-02	7.099E-03	1.851E-03	6.794E-02	4.347E-03	5.091E-03	6.059E-03	1.157E-02	2.441E-03	8.215E-03

Table D-1. Projected Residual Radionuclide Inventory. (13 Sheets)

TANK	Total for All Tanks	AX-101	AX-102	AX-103	AX-104	AY-101	AY-102	AZ-101	AZ-102	B-101	B-102	B-103	B-104	B-105
^{106}Ru	1.454E-03	6.683E-06	2.391E-04	4.404E-06	5.043E-06	2.616E-08	6.151E-09	5.266E-04	3.292E-04	5.748E-05	5.263E-13	4.959E-13	1.672E-12	7.841E-13
^{113m}Cd	8.885E+01	7.895E+00	1.350E+00	2.903E+00	1.221E-01	2.190E-03	1.916E-03	6.030E-03	7.689E-03	1.940E-02	1.527E-03	1.458E-03	1.439E-03	2.061E-03
^{125}Sb	1.783E+02	4.572E-01	7.907E+01	3.527E+00	6.419E-02	1.257E-02	8.482E-04	1.185E-02	8.344E-02	9.276E-01	2.721E-05	2.587E-05	2.947E-05	3.703E-05
^{126}Sn	7.620E+00	3.093E-01	2.374E-01	1.027E-01	9.578E-03	1.497E-04	3.200E-04	2.026E-04	1.402E-04	1.208E-03	2.341E-04	2.263E-04	2.066E-04	3.156E-04
^{129}I	1.307E-01	3.304E-04	3.672E-04	3.254E-04	4.467E-06	8.743E-07	1.397E-05	1.730E-05	1.008E-05	3.074E-06	3.266E-06	2.483E-06	1.568E-06	2.350E-06
^{134}Cs	1.801E+01	2.332E-04	2.778E-04	3.644E-04	7.383E-04	1.174E-04	1.748E-05	1.174E-03	4.163E-03	3.052E-06	1.206E-07	1.129E-07	6.259E-08	2.204E-07
^{137}Cs	1.140E+05	4.551E+02	5.348E+02	5.553E+02	6.071E+02	4.493E+01	1.607E+01	1.838E+01	2.144E+01	7.887E+00	3.667E+01	3.518E+01	4.298E+02	9.276E+01
^{137m}Ba	1.078E+05	4.305E+02	5.059E+02	5.253E+02	5.743E+02	4.250E+01	1.521E+01	1.739E+01	2.028E+01	7.461E+00	3.469E+01	3.328E+01	4.066E+02	8.775E+01
^{14}C	9.164E+00	1.003E-02	1.448E-03	8.580E-03	1.249E-02	1.993E-04	5.379E-04	6.164E-04	3.488E-04	2.374E-04	2.037E-04	1.570E-04	3.849E-04	1.645E-04
^{151}Sm	1.101E+05	2.967E+03	9.154E+03	3.224E+03	3.632E+03	5.435E+01	2.239E+00	3.119E+00	9.867E+00	1.798E+03	2.817E+00	2.714E+00	4.312E+00	3.897E+00
^{152}Eu	9.646E+01	5.882E-01	5.061E+00	2.505E+00	3.147E+00	4.708E-02	7.248E-04	1.512E-03	4.056E-03	1.008E+00	8.299E-05	7.883E-05	1.306E-04	1.150E-04
^{154}Eu	1.721E+03	4.076E+01	1.861E+02	2.951E+02	1.019E+02	1.128E+00	5.218E-02	6.267E-02	2.224E-01	6.632E+01	5.796E-03	5.517E-03	8.960E-03	8.022E-03
^{155}Eu	7.083E+02	1.605E+01	8.119E+01	8.275E+01	5.155E+01	1.877E-01	2.832E-02	6.698E-02	3.177E-01	1.997E+01	2.802E-03	2.678E-03	4.071E-03	3.862E-03
^{226}Ra	4.160E+02	8.258E-06	1.392E-06	2.610E-06	7.036E-08	1.629E-09	2.088E-06	4.575E-09	3.137E-09	4.096E-07	2.392E-07	3.313E-07	2.744E-07	2.749E-08
^{227}Ac	5.101E-02	8.902E-04	1.453E-04	2.719E-04	4.909E-07	1.679E-08	2.786E-07	1.880E-07	1.618E-07	2.383E-06	1.874E-06	2.209E-06	2.570E-06	2.370E-06
^{228}Ra	4.200E-02	2.714E-03	5.649E-04	8.366E-04	5.828E-13	2.822E-08	1.291E-06	7.465E-07	5.954E-07	3.768E-12	-2.604E-12	-2.343E-12	3.428E-12	-3.651E-12
^{229}Th	1.762E-02	3.326E-06	5.422E-07	1.015E-06	6.145E-10	1.186E-10	7.733E-07	3.407E-07	8.525E-08	2.063E-10	2.485E-10	2.360E-10	7.828E-10	3.686E-10
^{231}Pa	1.130E-01	8.751E-03	6.434E-04	2.672E-03	7.168E-07	1.079E-07	1.099E-06	1.103E-06	1.101E-06	2.556E-06	3.970E-06	3.734E-06	1.593E-05	5.956E-06
^{232}Th	8.625E-02	1.206E-05	2.868E-04	1.768E-05	8.625E-13	7.862E-10	2.296E-06	1.193E-06	5.448E-07	1.437E-12	2.093E-12	1.988E-12	6.593E-12	3.105E-12
^{232}U	1.952E-01	3.954E-03	4.148E-03	1.766E-03	5.039E-07	1.426E-07	1.388E-06	1.024E-06	1.550E-06	8.300E-06	3.440E-07	8.672E-07	4.984E-07	5.102E-07
^{233}U	1.278E+01	2.450E-01	2.570E-01	1.403E-02	9.390E-07	8.932E-06	8.544E-05	6.317E-05	9.395E-05	6.137E-06	2.830E-08	7.615E-08	4.202E-08	4.201E-08
^{234}U	6.684E+00	6.130E-02	4.876E-02	1.605E-02	6.649E-03	1.115E-05	1.673E-04	9.731E-05	1.758E-04	1.356E-01	2.638E-02	8.854E-02	4.235E-02	3.931E-02
^{235}U	2.844E-01	2.515E-03	1.986E-03	4.227E-04	2.779E-04	4.676E-07	6.943E-06	4.026E-06	7.287E-06	6.030E-03	1.178E-03	3.984E-03	1.893E-03	1.755E-03
^{236}U	1.192E-01	1.609E-03	1.366E-03	5.652E-04	1.710E-04	2.705E-07	3.524E-06	2.470E-06	7.704E-06	2.347E-03	3.087E-04	8.366E-04	4.628E-04	4.584E-04
^{237}Np	3.215E+00	1.713E-01	6.517E-02	6.830E-03	1.932E-03	3.076E-05	1.125E-04	1.534E-04	5.252E-04	2.881E-04	1.577E-04	1.486E-04	1.224E-04	2.150E-04
^{238}Pu	6.238E+01	4.869E-01	3.397E+00	6.663E-01	1.491E+00	1.063E-02	1.294E-03	1.427E-03	6.320E-03	9.564E-01	7.513E-03	3.913E-02	2.041E-02	1.169E-02
^{238}U	6.456E+00	5.641E-02	4.322E-02	9.921E-03	6.497E-03	1.099E-05	1.489E-04	8.725E-05	1.507E-04	1.316E-01	2.690E-02	9.015E-02	4.316E-02	4.007E-02
^{239}Pu	1.635E+03	1.178E+01	3.657E+01	1.425E+01	3.173E+01	2.336E-01	4.169E-02	2.419E-02	1.066E-01	5.338E+01	1.012E+00	5.271E+00	2.968E+00	1.586E+00
^{240}Pu	3.443E+02	2.733E+00	1.173E+01	3.594E+00	7.786E+00	5.666E-02	8.902E-03	5.794E-03	2.542E-02	7.634E+00	1.145E-01	5.963E-01	3.177E-01	1.785E-01
^{241}Am	2.840E+03	4.008E+01	5.162E+02	1.120E+02	1.118E+02	2.124E+00	7.363E-02	2.639E-01	7.660E-01	4.234E+00	7.348E-03	3.532E-02	1.611E-01	3.252E-02
^{241}Pu	2.238E+03	2.036E+01	1.735E+02	2.691E+01	6.002E+01	4.252E-01	5.362E-02	9.158E-02	3.860E-01	3.790E+01	1.993E-01	1.038E+00	5.291E-01	3.094E-01
^{242}Cm	2.314E+00	2.783E-02	6.396E-01	8.813E-02	9.785E-02	1.889E-03	1.802E-03	1.188E-04	3.843E-04	3.436E-02	1.373E-06	6.472E-06	2.642E-05	4.513E-06
^{242}Pu	2.090E-02	1.941E-04	1.792E-03	2.530E-04	5.637E-04	3.980E-06	4.974E-07	5.140E-07	2.267E-06	3.635E-04	1.660E-06	8.645E-06	4.309E-06	2.574E-06
^{243}Am	1.682E+00	2.467E-02	4.720E-01	6.009E-02	5.957E-02	1.134E-03	3.880E-05	9.890E-05	2.608E-04	3.283E-03	8.431E-07	3.992E-06	1.629E-05	3.403E-06
^{243}Cm	4.476E-01	1.750E-03	6.196E-02	4.936E-03	5.533E-03	1.067E-04	1.569E-04	1.055E-05	3.915E-05	3.057E-03	1.529E-08	7.205E-08	2.949E-07	5.035E-08
^{244}Cm	1.058E+01	4.083E-02	1.451E+00	1.108E-01	1.241E-01	2.394E-03	3.659E-03	2.451E-04	9.235E-04	7.144E-02	3.429E-07	1.615E-06	6.634E-06	1.131E-06
^{3}H	4.871E+00	2.758E-02	4.039E-02	2.489E-02	4.370E-03	7.009E-04	2.746E-03	2.292E-03	2.594E-03	3.338E-03	2.940E-03	2.277E-03	1.291E-03	2.108E-03
^{59}Ni	4.692E+01	1.700E+00	4.111E-01	7.646E-01	3.278E-01	5.017E-03	9.970E-04	8.813E-04	1.217E-03	3.324E-02	6.607E-03	6.405E-03	2.162E-03	9.259E-03
^{60}Co	1.894E+02	4.424E+00	2.427E+01	1.075E+01	1.146E+01	1.194E-01	2.691E-03	5.934E-03	2.254E-02	2.375E+00	1.252E-03	1.191E-03	2.402E-03	1.773E-03
^{63}Ni	4.456E+03	1.588E+02	3.861E+01	7.163E+01	3.086E+01	4.721E-01	9.228E-02	8.223E-02	1.146E-01	3.177E+00	6.668E-01	6.462E-01	2.298E-01	9.352E-01
^{79}Se	1.344E-01	1.134E-02	6.956E-04	1.165E-03	6.012E-04	3.734E-05	3.942E-05	4.934E-05	2.594E-05	3.084E-05	1.095E-05	9.108E-06	6.979E-06	1.014E-05
^{90}Sr	1.437E+06	2.227E+04	5.493E+04	6.837E+04	2.418E+05	1.167E+03	7.254E+01	6.645E+01	1.106E+02	1.290E+04	1.454E+00	2.594E+00	6.757E+01	1.409E+00
^{90}Y	1.437E+06	2.227E+04	5.493E+04	6.837E+04	2.418E+05	1.167E+03	7.254E+01	6.645E+01	1.106E+02	1.290E+04	1.454E+00	2.594E+00	6.757E+01	1.409E+00
^{93}Zr	7.851E+01	4.264E+00	3.308E-01	1.400E+00	1.303E-01	2.123E-03	2.170E-03	2.637E-03	1.625E-03	1.562E-02	5.229E-03	4.913E-03	4.671E-02	9.322E-03
^{93m}Nb	7.077E+01	3.530E+00	5.536E-01	1.164E+00	1.157E-02	1.731E-03	1.827E-03	2.166E-03	1.295E-03	1.260E-02	5.884E-03	5.563E-03	4.318E-02	9.707E-03
^{99}Tc	1.369E+02	3.240E-01	1.934E-02	3.377E-01	1.143E+00	1.163E-02	1.300E-02	1.516E-02	1.115E-02	1.216E-02	2.354E-03	1.817E-03	3.522E-02	3.843E-03

Table D-1. Projected Residual Radionuclide Inventory. (13 Sheets)

TANK	Total for All Tanks	B-201	B-202	B-203	B-204	BX-101	BX-102	BX-103	BX-104	BX-105	BX-106	BX-107	BX-108	BX-109	BX-110
^{106}Ru	1.454E-03	4.198E-17	2.364E-15	2.322E-15	2.171E-15	4.962E-10	2.569E-10	5.982E-10	9.429E-11	4.841E-12	2.103E-12	1.167E-12	5.272E-13	4.579E-15	2.304E-07
^{113m}Cd	8.885E+01	1.370E-07	2.707E-07	2.659E-07	2.486E-07	9.640E-03	4.877E-03	1.130E-02	4.634E-03	1.802E-02	7.999E-03	1.125E-03	1.806E-03	1.511E-03	1.442E-01
^{125}Sb	1.783E+02	9.825E-10	5.156E-09	5.065E-09	4.734E-09	5.876E-05	2.850E-05	7.013E-05	2.833E-05	2.994E-05	1.655E-05	1.832E-05	2.923E-05	5.658E-05	1.246E-01
^{126}Sn	7.620E+00	2.442E-08	3.663E-08	3.599E-08	3.364E-08	4.440E-05	5.726E-06	6.656E-05	4.483E-05	1.090E-04	7.682E-05	1.039E-04	2.750E-04	5.035E-04	2.070E-02
^{129}I	1.307E-01	6.069E-12	0.000E+00	0.000E+00	5.831E-19	3.136E-04	1.616E-04	3.800E-04	2.189E-05	1.615E-05	7.025E-05	6.093E-07	1.658E-06	3.140E-06	8.866E-04
^{134}Cs	1.801E+01	4.414E-05	1.919E-13	1.885E-13	1.762E-13	2.183E-06	1.118E-06	2.781E-07	2.044E-07	1.036E-07	1.990E-07	1.182E-08	9.936E-08	4.689E-07	4.333E-04
^{137}Cs	1.140E+05	1.506E-01	8.126E-02	6.871E-03	2.719E-02	3.154E+01	1.325E+00	4.453E+00	2.050E+02	1.012E+02	4.119E+02	2.487E+02	1.930E+02	5.155E+02	1.419E+03
^{137m}Ba	1.078E+05	1.424E-01	7.687E-02	6.500E-03	2.572E-02	2.983E+01	1.254E+00	4.213E+00	1.939E+02	9.578E+01	3.897E+02	2.353E+02	1.826E+02	4.877E+02	1.343E+03
^{14}C	9.164E+00	1.514E-07	2.094E-07	2.057E-07	1.923E-07	3.975E-04	1.983E-04	5.870E-04	1.164E-04	1.199E-03	4.682E-04	4.241E-04	2.684E-04	3.036E-04	9.502E-03
^{151}Sm	1.101E+05	4.630E-03	6.330E-03	6.219E-03	5.813E-03	4.296E-01	5.619E-02	6.433E-01	4.656E-01	1.162E+00	7.449E-01	2.421E+00	3.292E+00	4.896E+00	2.727E+02
^{152}Eu	9.646E+01	5.038E-08	2.654E-07	2.607E-07	2.437E-07	3.460E-05	1.262E-05	4.487E-05	1.375E-05	5.675E-05	3.391E-05	7.766E-05	1.055E-04	1.567E-04	4.656E-02
^{154}Eu	1.721E+03	1.505E-03	1.780E-05	1.748E-05	1.634E-05	2.426E-03	8.879E-04	3.143E-03	9.949E-04	3.883E-03	2.316E-03	5.238E-03	7.262E-03	1.090E-02	3.231E+00
^{155}Eu	7.083E+02	8.925E-04	8.044E-06	7.903E-06	7.386E-06	1.120E-03	4.031E-04	1.457E-03	4.941E-04	1.639E-03	9.988E-04	2.261E-03	3.375E-03	5.236E-03	1.271E+00
^{226}Ra	4.160E+02	4.964E-11	3.423E-11	3.362E-11	3.143E-11	5.455E-08	6.569E-09	8.221E-08	9.305E-07	4.682E-07	8.562E-08	7.914E-08	3.540E-07	6.299E-07	5.439E-07
^{227}Ac	5.101E-02	5.980E-09	4.410E-09	4.333E-09	4.050E-09	1.937E-04	1.002E-04	2.220E-04	3.836E-05	1.623E-06	3.839E-07	1.377E-06	1.886E-06	2.835E-06	2.782E-04
^{228}Ra	4.200E-02	4.298E-15	5.317E-15	5.224E-15	4.882E-15	1.814E-03	9.394E-04	2.120E-03	2.554E-04	1.322E-12	3.733E-13	-4.029E-12	1.991E-12	2.451E-12	3.870E-04
^{229}Th	1.762E-02	1.648E-12	2.008E-12	1.973E-12	1.844E-12	9.298E-04	4.814E-04	1.059E-03	1.831E-04	4.071E-11	2.293E-11	4.060E-10	2.704E-10	1.395E-10	3.013E-06
^{231}Pa	1.130E-01	4.457E-08	3.352E-08	3.293E-08	3.078E-08	1.009E-05	5.224E-06	1.176E-05	1.867E-06	9.231E-08	4.321E-08	9.511E-06	4.267E-06	2.682E-08	1.772E-03
^{232}Th	8.625E-02	1.380E-14	1.708E-14	1.678E-14	1.568E-14	4.240E-03	2.196E-03	4.828E-03	8.352E-04	3.364E-13	1.909E-13	3.415E-12	2.278E-12	1.182E-12	1.147E-05
^{232}U	1.952E-01	4.816E-10	1.667E-09	4.178E-11	3.045E-14	1.355E-03	7.013E-04	1.490E-03	3.289E-03	2.241E-06	5.617E-07	1.599E-07	1.038E-06	2.740E-06	1.080E-03
^{233}U	1.278E+01	4.378E-11	1.344E-10	3.370E-12	2.456E-15	8.405E-02	4.352E-02	9.243E-02	2.039E-01	1.721E-07	3.153E-08	1.331E-08	8.695E-08	2.297E-07	6.741E-02
^{234}U	6.684E+00	5.733E-05	1.502E-04	2.816E-06	2.052E-09	2.312E-02	6.000E-03	3.057E-02	1.865E-01	1.897E-01	1.948E-02	1.284E-02	8.548E-02	2.262E-01	1.388E-02
^{235}U	2.844E-01	2.540E-06	5.134E-06	1.248E-07	9.095E-11	9.671E-04	2.341E-04	1.293E-03	8.026E-03	8.517E-03	8.505E-04	5.736E-04	3.817E-03	1.010E-02	5.866E-04
^{236}U	1.192E-01	5.933E-07	1.619E-06	3.831E-08	2.792E-11	4.175E-04	1.479E-04	5.180E-04	3.031E-03	1.871E-03	3.330E-04	1.434E-04	9.759E-04	2.587E-03	2.175E-04
^{237}Np	3.215E+00	1.636E-07	2.353E-07	8.483E-07	2.160E-07	3.087E-05	3.729E-06	4.443E-05	3.407E-05	8.672E-05	5.431E-05	4.466E-05	1.732E-04	3.625E-04	7.891E-03
^{238}Pu	6.238E+01	6.970E-03	2.161E-03	2.096E-03	1.789E-03	1.025E-01	3.329E-03	6.292E-01	3.474E-02	2.638E-02	5.191E-02	7.661E-03	6.004E-03	3.138E-03	6.426E-03
^{238}U	6.456E+00	5.778E-05	1.150E-04	2.880E-06	2.101E-09	2.219E-02	5.408E-03	2.964E-02	1.831E-01	1.931E-01	1.990E-02	1.310E-02	8.705E-02	2.303E-01	1.326E-02
^{239}Pu	1.635E+03	8.325E-01	1.363E-01	2.424E-01	2.069E-01	5.156E+00	1.410E-01	3.345E+01	3.125E+00	1.827E+00	4.030E+00	1.089E+00	8.589E-01	4.510E-01	7.403E-01
^{240}Pu	3.443E+02	4.796E-02	2.309E-02	3.056E-02	2.609E-02	1.069E+00	3.330E-02	6.655E+00	4.402E-01	3.298E-01	6.659E-01	1.185E-01	9.263E-02	4.831E-02	8.562E-02
^{241}Am	2.840E+03	3.149E-02	7.103E-02	3.586E-02	3.987E-02	1.067E+00	1.608E-02	7.605E+00	4.839E+00	3.076E-01	9.462E-01	2.425E-01	3.411E-01	2.491E-01	1.913E-01
^{241}Pu	2.238E+03	1.028E-02	8.489E-02	5.826E-02	4.974E-02	6.118E+00	2.082E-01	3.691E+01	1.469E+00	1.127E+00	2.120E+00	1.992E-01	1.565E-01	8.192E-02	2.038E-01
^{242}Cm	2.314E+00	2.394E-06	1.856E-05	9.399E-06	1.046E-05	1.692E-04	6.427E-07	1.387E-03	2.193E-04	6.577E-05	2.244E-04	4.944E-05	6.048E-05	5.307E-05	4.152E-05
^{242}Pu	2.090E-02	2.861E-06	4.516E-06	4.894E-07	4.179E-07	4.971E-05	1.692E-06	2.999E-04	1.268E-05	9.355E-06	1.757E-05	1.647E-06	1.279E-06	6.645E-07	1.768E-06
^{243}Am	1.682E+00	1.385E-06	1.092E-05	5.532E-06	6.154E-06	9.796E-05	4.046E-07	7.703E-04	1.316E-04	3.999E-05	1.285E-04	2.483E-05	4.590E-05	3.529E-05	4.424E-05
^{243}Cm	4.476E-01	1.335E-08	2.118E-07	1.072E-07	1.193E-07	2.593E-06	3.172E-08	1.975E-05	2.689E-06	7.397E-07	2.520E-06	5.520E-07	6.777E-07	5.950E-07	1.040E-06
^{244}Cm	1.058E+01	3.004E-07	4.756E-06	2.408E-06	2.679E-06	6.485E-05	9.410E-07	4.838E-04	6.904E-05	1.669E-05	5.682E-05	1.242E-05	1.527E-05	1.341E-05	2.454E-05
^{3}H	4.871E+00	1.664E-02	4.283E-09	4.208E-09	3.933E-09	1.417E-03	6.204E-04	1.774E-02	1.431E-02	7.697E-02	3.083E-02	3.373E-04	1.704E-03	3.410E-03	4.024E-02
^{59}Ni	4.692E+01	3.957E-08	5.479E-08	5.383E-08	5.031E-08	4.198E-02	2.171E-02	5.097E-02	1.063E-02	4.887E-02	2.584E-02	2.633E-04	4.773E-04	7.760E-04	5.045E-01
^{60}Co	1.894E+02	5.549E-04	1.296E-07	1.273E-07	1.190E-07	4.391E-02	2.269E-02	5.193E-02	7.344E-02	1.609E-01	3.607E-02	1.676E-03	1.306E-03	1.553E-03	1.302E+00
^{63}Ni	4.456E+03	3.313E-06	4.735E-06	4.652E-06	4.348E-06	3.959E+00	2.048E+00	4.807E+00	1.006E+00	4.477E+00	2.367E+00	3.652E-02	4.770E-02	6.627E-02	4.746E+01
^{79}Se	1.344E-01	6.765E-09	9.518E-09	9.351E-09	8.740E-09	1.217E-06	1.464E-07	1.895E-06	8.343E-07	1.648E-06	2.133E-06	3.549E-06	3.935E-06	1.678E-05	9.604E-04
^{90}Sr	1.437E+06	1.893E+00	3.192E+00	7.180E-02	2.716E-03	2.910E+02	7.073E-02	4.985E+02	1.705E+03	1.592E+03	1.253E+03	1.031E+02	2.358E+03	5.053E+03	3.148E+02
^{90}Y	1.437E+06	1.893E+00	3.192E+00	7.180E-02	2.716E-03	2.910E+02	7.073E-02	4.985E+02	1.705E+03	1.592E+03	1.253E+03	1.031E+02	2.358E+03	5.053E+03	3.148E+02
^{93}Zr	7.851E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.575E-04	8.034E-05	1.846E-04	1.104E-04	3.752E-04	1.730E-04	3.842E-02	1.710E-02	3.626E-05	2.755E-01
^{93m}Nb	7.077E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.282E-04	6.529E-05	1.504E-04	9.432E-05	3.298E-04	1.486E-04	3.517E-02	1.139E-02	3.257E-05	3.146E-01
^{99}Tc	1.369E+02	1.368E-08	5.538E-03	1.889E-08	1.766E-08	1.238E-03	1.706E-04	1.866E-03	1.089E-01	1.945E-01	1.390E-01	1.019E-01	3.513E-02	3.110E-02	1.347E+00

Table D-1. Projected Residual Radionuclide Inventory. (13 Sheets)

TANK	Total for All Tanks	BX-111	BX-112	BY-101	BY-102	BY-103	BY-104	BY-105	BY-106	BY-107	BY-108	BY-109	BY-110	BY-111	BY-112
^{106}Ru	1.454E-03	4.879E-07	9.910E-13	4.159E-07	4.730E-07	4.004E-07	8.104E-07	4.158E-07	1.599E-06	3.776E-07	2.834E-07	2.395E-07	5.230E-07	2.508E-07	3.454E-07
^{113m}Cd	8.885E+01	6.654E-01	9.573E-04	5.669E-01	5.783E-01	5.479E-01	1.111E+00	5.670E-01	1.492E+00	2.481E-01	1.805E-01	3.371E-01	6.567E-01	1.712E-01	4.210E-01
^{125}Sb	1.783E+02	2.426E-01	1.554E-05	2.070E-01	2.099E-01	1.993E-01	4.383E-01	2.071E-01	1.325E+00	2.034E-01	1.382E-01	1.194E-01	2.603E-01	1.351E-01	1.535E-01
^{126}Sn	7.620E+00	4.282E-02	9.673E-05	3.655E-02	3.977E-02	3.518E-02	7.106E-02	3.650E-02	2.386E-01	3.693E-02	2.548E-02	2.136E-02	4.173E-02	2.454E-02	2.895E-02
^{129}I	1.307E-01	1.071E-02	5.395E-07	9.368E-03	1.033E-02	9.083E-03	1.718E-02	9.523E-03	1.576E-03	1.130E-03	1.334E-03	5.889E-03	1.227E-02	1.241E-03	7.663E-03
^{134}Cs	1.801E+01	6.024E-04	1.068E-08	5.193E-04	3.768E-04	5.026E-04	9.897E-04	5.247E-04	3.890E-04	3.229E-04	6.768E-04	3.161E-04	7.761E-05	2.272E-04	2.765E-04
^{137}Cs	1.140E+05	1.769E+03	9.139E+02	2.789E+03	1.052E+03	1.409E+03	4.073E+03	9.014E+02	1.898E+03	2.016E+03	1.193E+03	8.782E+02	3.278E+02	6.321E+02	7.735E+02
^{137m}Ba	1.078E+05	1.673E+03	8.646E+02	2.639E+03	9.948E+02	1.333E+03	3.854E+03	8.527E+02	1.796E+03	1.907E+03	1.129E+03	8.308E+02	3.101E+02	5.980E+02	7.318E+02
^{14}C	9.164E+00	6.621E-02	3.224E-04	5.671E-02	8.936E-03	5.505E-02	1.061E-01	5.719E-02	5.113E-02	1.292E-02	1.240E-02	3.632E-02	7.526E-02	1.088E-02	6.936E-03
^{151}Sm	1.101E+05	5.747E+02	2.035E+00	4.907E+02	5.562E+02	4.708E+02	9.539E+02	4.892E+02	3.218E+03	4.922E+02	3.340E+02	2.814E+02	6.667E+02	3.259E+02	4.061E+02
^{152}Eu	9.646E+01	9.741E-02	6.531E-05	8.307E-02	9.440E-02	7.991E-02	1.617E-01	8.300E-02	5.520E-01	8.443E-02	5.722E-02	4.779E-02	1.130E-01	5.592E-02	6.893E-02
^{154}Eu	1.721E+03	6.759E+00	4.405E-03	5.764E+00	6.550E+00	5.545E+00	1.122E+01	5.759E+00	7.232E+00	1.459E+00	3.971E+00	3.316E+00	2.340E+00	3.880E+00	4.783E+00
^{155}Eu	7.083E+02	2.658E+00	1.901E-03	2.267E+00	2.576E+00	2.181E+00	4.413E+00	2.265E+00	1.506E+01	2.304E+00	1.562E+00	1.304E+00	3.084E+00	1.526E+00	1.881E+00
^{226}Ra	4.160E+02	1.443E-06	1.258E-07	1.369E-06	1.376E-06	1.141E-06	2.674E-06	1.222E-06	5.102E-06	8.637E-07	9.858E-07	6.969E-07	1.533E-06	5.659E-07	1.033E-06
^{227}Ac	5.101E-02	4.617E-04	1.086E-06	3.842E-04	4.025E-04	3.931E-04	6.860E-04	3.865E-04	2.305E-03	5.137E-04	3.487E-04	3.326E-04	4.797E-04	3.382E-04	2.931E-04
^{228}Ra	4.200E-02	1.167E-03	1.142E-12	9.971E-04	1.161E-03	1.024E-03	2.139E-03	9.981E-04	3.961E-03	6.780E-04	7.594E-04	8.110E-04	1.200E-03	4.582E-04	8.446E-04
^{229}Th	1.762E-02	6.744E-06	4.023E-10	5.751E-06	6.774E-06	1.193E-04	1.176E-05	5.752E-06	3.676E-05	5.644E-06	4.124E-06	5.332E-04	7.490E-06	3.747E-06	4.945E-06
^{231}Pa	1.130E-01	3.895E-03	8.126E-06	3.312E-03	3.848E-03	3.201E-03	6.566E-03	3.318E-03	2.204E-02	3.153E-03	2.177E-03	1.948E-03	4.591E-03	2.101E-03	2.800E-03
^{232}Th	8.625E-02	2.568E-05	3.383E-12	2.190E-05	2.580E-05	5.397E-04	4.478E-05	9.232E-06	1.400E-04	2.149E-05	1.571E-05	2.429E-03	2.853E-05	1.427E-05	1.883E-05
^{232}U	1.952E-01	1.139E-04	1.061E-07	1.053E-04	2.414E-03	2.140E-03	6.542E-03	1.408E-03	4.412E-03	3.827E-03	1.480E-03	1.233E-03	5.558E-03	1.416E-03	1.763E-03
^{233}U	1.278E+01	7.106E-03	8.829E-09	6.560E-03	1.507E-01	1.335E-01	4.083E-01	8.789E-02	2.753E-01	2.389E-01	9.228E-02	7.697E-02	3.469E-01	8.840E-02	1.101E-01
^{234}U	6.684E+00	6.234E-03	8.520E-03	2.067E-02	9.848E-03	9.443E-03	1.497E-01	3.900E-02	2.202E-01	5.393E-02	1.280E-01	5.245E-03	1.097E-01	5.777E-03	3.305E-02
^{235}U	2.844E-01	2.749E-04	3.806E-04	9.200E-04	3.656E-04	3.531E-04	6.482E-03	1.698E-03	9.693E-03	2.290E-03	5.667E-03	1.955E-04	4.727E-03	2.144E-04	1.410E-03
^{236}U	1.192E-01	7.620E-05	9.514E-05	2.380E-04	2.497E-04	2.385E-04	2.089E-03	5.275E-04	2.778E-03	8.358E-04	1.553E-03	1.327E-04	1.574E-03	1.465E-04	5.335E-04
^{237}Np	3.215E+00	1.750E-02	4.425E-05	1.500E-02	1.668E-02	1.436E-02	3.054E-02	2.342E-03	8.447E-02	1.308E-02	1.080E-02	8.654E-03	1.947E-02	8.712E-03	1.217E-02
^{238}Pu	6.238E+01	6.848E-03	2.445E-02	2.643E-03	4.770E-02	9.276E-03	8.547E-02	2.192E-02	3.584E-02	9.273E-03	1.590E-02	2.643E-02	3.726E-02	3.408E-02	2.758E-02
^{238}U	6.456E+00	6.264E-03	8.688E-03	2.098E-02	8.057E-03	7.840E-03	1.471E-01	3.858E-02	2.207E-01	5.180E-02	1.292E-01	4.325E-03	1.072E-01	4.727E-03	3.230E-02
^{239}Pu	1.635E+03	8.581E-01	3.476E+00	2.600E-01	1.239E+00	2.537E-01	3.097E+00	1.064E+00	2.397E+00	4.670E-01	9.197E-01	7.258E-01	1.668E+00	8.853E-01	7.179E-01
^{240}Pu	3.443E+02	9.676E-02	3.784E-01	3.203E-02	2.959E-01	6.050E-02	5.996E-01	1.751E-01	3.384E-01	7.542E-02	1.388E-01	1.730E-01	2.865E-01	2.114E-01	1.712E-01
^{241}Am	2.840E+03	1.888E-01	6.035E-01	2.138E+00	2.859E+00	4.975E-01	5.668E+00	1.519E+00	4.109E+00	6.981E-01	1.274E+00	1.408E+00	1.886E+00	2.126E+00	1.653E+00
^{241}Pu	2.238E+03	2.025E-01	6.357E-01	9.299E-02	2.416E+00	4.791E-01	4.146E+00	1.007E+00	1.508E+00	4.224E-01	6.995E-01	1.367E+00	1.741E+00	1.726E+00	1.397E+00
^{242}Cm	2.314E+00	4.420E-05	1.014E-04	5.119E-04	8.821E-04	1.700E-04	3.967E-04	4.804E-04	9.259E-06	2.809E-05	1.530E-04	4.830E-04	1.170E-04	5.173E-04	5.111E-04
^{242}Pu	2.090E-02	1.730E-06	5.258E-06	8.170E-07	2.262E-05	4.425E-06	3.857E-05	9.289E-06	1.372E-05	3.893E-06	6.410E-06	1.261E-05	1.611E-05	1.616E-05	1.308E-05
^{243}Am	1.682E+00	3.624E-05	6.109E-05	2.985E-04	1.140E-03	1.970E-04	2.025E-03	4.803E-04	9.578E-04	2.165E-04	3.681E-04	5.571E-04	6.006E-04	8.467E-04	6.586E-04
^{243}Cm	4.476E-01	9.402E-07	1.133E-06	6.166E-06	2.913E-05	5.616E-06	1.204E-05	1.317E-05	1.899E-07	7.730E-07	3.875E-06	1.596E-05	3.228E-06	1.708E-05	1.688E-05
^{244}Cm	1.058E+01	2.204E-05	2.548E-05	1.396E-04	6.938E-04	1.338E-04	2.860E-04	3.118E-04	4.447E-06	1.831E-05	9.151E-05	3.803E-04	7.646E-05	4.069E-04	4.020E-04
^{3}H	4.871E+00	4.847E-02	4.562E-04	5.191E-02	4.777E-02	5.305E-02	5.208E-02	5.937E-02	5.129E-02	4.589E-02	5.837E-02	5.273E-02	4.873E-02	4.780E-02	3.789E-02
^{59}Ni	4.692E+01	1.292E+00	2.503E-04	1.154E+00	1.194E+00	1.065E+00	2.210E+00	1.105E+00	3.553E+00	1.137E+00	6.467E-01	6.579E-01	1.428E+00	6.078E-01	8.721E-01
^{60}Co	1.894E+02	3.081E+00	1.594E-03	2.627E+00	2.823E+00	2.533E+00	4.224E-01	1.507E-01	8.614E-01	3.607E-01	1.492E+00	1.537E+00	4.062E-01	1.565E+00	2.062E+00
^{63}Ni	4.456E+03	1.215E+02	3.472E-02	1.083E+02	1.123E+02	1.002E+02	2.077E+02	1.039E+02	3.341E+02	1.069E+02	6.076E+01	6.189E+01	1.342E+02	5.716E+01	8.203E+01
^{79}Se	1.344E-01	3.801E-03	2.563E-05	1.239E-03	7.173E-04	1.232E-03	1.135E-03	1.040E-03	1.296E-03	1.054E-03	5.915E-04	7.387E-04	8.353E-04	8.094E-04	1.529E-03
^{90}Sr	1.437E+06	5.865E+02	7.598E+01	3.355E+03	5.077E+02	3.797E+02	1.482E+04	1.845E+03	1.359E+04	2.543E+03	4.308E+03	2.548E+02	5.326E+03	2.976E+02	3.724E+02
^{90}Y	1.437E+06	5.865E+02	7.598E+01	3.355E+03	5.077E+02	3.797E+02	1.482E+04	1.845E+03	1.359E+04	2.543E+03	4.308E+03	2.548E+02	5.326E+03	2.976E+02	3.724E+02
^{93}Zr	7.851E+01	6.257E-01	3.281E-02	5.200E-01	5.709E-01	5.013E-01	1.024E+00	5.196E-01	3.439E+00	4.481E-01	3.108E-01	3.044E-01	7.162E-01	2.994E-01	4.155E-01
^{93m}Nb	7.077E+01	4.381E-01	2.956E-02	3.730E-01	4.007E-01	3.598E-01	8.504E-01	3.704E-01	2.227E+00	4.262E-01	2.937E-01	2.181E-01	4.071E-01	2.836E-01	2.866E-01
^{99}Tc	1.369E+02	3.040E+00	6.072E-02	2.426E+00	9.388E-01	2.335E+00	4.695E+00	3.948E-01	1.193E+01	1.888E+00	1.330E+00	1.426E+00	3.289E+00	1.272E+00	6.901E-01

Table D-1. Projected Residual Radionuclide Inventory. (13 Sheets)

TANK	Total for All Tanks	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110	C-111	C-112
^{106}Ru	1.454E-03	3.519E-12	1.689E-09	8.622E-08	1.264E-06	2.813E-12	0.000E+00	1.769E-05	5.925E-13	1.730E-06	1.178E-12	1.158E-06	1.519E-12
^{113m}Cd	8.885E+01	1.288E-02	1.975E-02	3.082E-02	2.138E-02	9.603E-03	0.000E+00	3.194E-02	2.367E-03	8.769E-03	1.249E-03	7.213E-03	6.907E-03
^{125}Sb	1.783E+02	2.207E-05	3.546E-04	4.334E-03	5.793E-01	1.250E-05	6.488E+01	1.108E+00	3.497E-05	3.742E-03	1.929E-05	2.374E-03	5.200E-03
^{126}Sn	7.620E+00	7.799E-05	8.703E-05	2.064E-03	5.330E-04	2.053E-05	0.000E+00	5.276E-01	2.824E-04	4.441E-04	1.133E-04	3.200E-04	4.725E-04
^{129}I	1.307E-01	1.684E-03	1.583E-03	4.631E-04	4.234E-03	5.989E-04	6.305E-04	2.723E-03	7.029E-06	4.283E-04	1.180E-06	2.004E-04	3.408E-04
^{134}Cs	1.801E+01	1.756E-07	3.216E-05	1.748E-04	2.819E-04	2.542E-07	1.795E+01	1.095E-03	3.879E-06	1.860E-05	7.092E-09	2.540E-06	2.393E-03
^{137}Cs	1.140E+05	2.443E+02	1.212E+02	6.534E+02	4.619E+02	5.714E+02	1.448E+03	3.982E+02	3.508E+03	5.741E+03	2.068E+02	1.223E+02	6.566E+03
^{137m}Ba	1.078E+05	2.311E+02	1.147E+02	6.181E+02	4.369E+02	5.406E+02	1.369E+03	3.767E+02	3.318E+03	5.431E+03	1.957E+02	1.157E+02	6.212E+03
^{14}C	9.164E+00	3.646E-03	4.716E-03	3.945E-03	7.223E-03	3.281E-03	8.226E-03	3.461E-03	5.901E-04	1.301E-04	1.185E-03	1.312E-03	2.290E-02
^{151}Sm	1.101E+05	7.994E-01	5.523E-01	4.688E+02	4.013E+02	2.108E-01	0.000E+00	5.354E+03	3.481E+00	3.667E+01	1.969E+00	2.370E+01	5.111E+00
^{152}Eu	9.646E+01	4.216E-05	1.436E-04	7.718E-02	1.074E-01	1.999E-05	6.294E+01	1.153E+00	1.089E-04	5.984E-03	6.311E-05	3.813E-03	1.630E-04
^{154}Eu	1.721E+03	2.863E-03	2.478E-01	3.795E+01	5.986E+00	1.335E-03	8.180E+01	1.057E+01	7.525E-03	1.356E-01	4.257E-03	2.737E-01	4.939E+00
^{155}Eu	7.083E+02	1.190E-03	1.356E-01	2.614E+01	3.602E+00	4.935E-04	7.895E+01	5.473E+00	3.510E-03	1.878E-01	1.838E-03	1.196E-01	2.674E+00
^{226}Ra	4.160E+02	8.550E-08	1.463E-07	2.365E-08	9.213E-07	1.269E-08	4.160E+02	7.335E-08	3.710E-07	4.023E-07	1.214E-07	3.005E-07	5.899E-07
^{227}Ac	5.101E-02	3.861E-07	1.349E-02	1.683E-07	1.412E-02	6.077E-08	0.000E+00	2.429E-05	1.972E-06	1.977E-06	1.053E-06	1.492E-06	2.929E-06
^{228}Ra	4.200E-02	1.102E-11	3.727E-03	8.800E-07	1.375E-02	5.322E-12	-3.181E-18	2.337E-04	1.134E-11	1.653E-11	4.144E-12	8.795E-12	1.149E-04
^{229}Th	1.762E-02	2.959E-11	5.347E-03	6.516E-09	3.875E-03	1.268E-11	0.000E+00	1.066E-04	2.863E-10	2.282E-10	4.893E-10	1.846E-10	3.076E-10
^{231}Pa	1.130E-01	6.769E-08	1.065E-03	3.216E-07	1.189E-03	5.163E-08	0.000E+00	4.515E-06	5.055E-06	2.792E-06	9.486E-06	2.275E-06	4.149E-06
^{232}Th	8.625E-02	3.287E-12	1.149E-02	1.657E-08	3.885E-02	1.368E-11	5.600E-04	5.336E-04	3.325E-12	2.458E-12	4.910E-12	3.592E-12	4.124E-04
^{232}U	1.952E-01	2.119E-06	1.673E-02	1.612E-05	1.342E-02	1.017E-06	1.376E-05	5.608E-04	2.679E-08	2.268E-06	2.479E-07	1.373E-06	3.867E-06
^{233}U	1.278E+01	1.140E-07	1.094E+00	9.804E-04	2.876E+00	5.157E-08	1.829E-03	3.477E-02	2.429E-09	4.804E-06	2.093E-08	1.518E-06	2.656E-07
^{234}U	6.684E+00	6.306E-02	5.716E-02	1.490E-02	1.447E-01	2.407E-02	9.405E-04	2.298E-02	2.183E-03	5.163E-02	1.992E-02	4.655E-02	2.193E-01
^{235}U	2.844E-01	2.736E-03	2.152E-03	6.343E-04	4.196E-03	1.032E-03	3.860E-05	9.905E-04	9.747E-05	2.068E-03	8.896E-04	2.036E-03	9.724E-03
^{236}U	1.192E-01	1.180E-03	7.218E-04	3.427E-04	4.761E-03	5.210E-04	1.730E-05	3.764E-04	2.462E-05	7.555E-04	2.224E-04	7.643E-04	2.870E-03
^{237}Np	3.215E+00	5.876E-05	2.613E-05	5.043E-04	3.055E-02	1.511E-05	5.411E-02	3.893E-04	1.808E-04	3.524E-03	5.004E-05	1.951E-04	2.088E-02
^{238}Pu	6.238E+01	1.136E-01	8.438E-01	8.403E-01	1.605E+00	2.419E-01	2.703E+00	3.741E-01	1.008E-03	5.461E-02	1.400E-02	9.483E-02	2.223E-01
^{238}U	6.456E+00	6.449E-02	4.926E-02	1.520E-02	8.162E-02	2.466E-02	9.023E-04	2.270E-02	2.224E-03	4.880E-02	2.031E-02	4.745E-02	2.237E-01
^{239}Pu	1.635E+03	8.066E+00	3.261E+01	4.257E+01	3.626E+01	1.499E+01	1.674E+01	1.845E+01	1.429E-01	2.167E+00	1.990E+00	5.157E+00	2.391E+00
^{240}Pu	3.443E+02	1.428E+00	7.814E+00	8.923E+00	9.334E+00	2.955E+00	3.574E+00	2.996E+00	1.553E-02	3.721E-01	2.166E-01	1.003E+00	3.007E-01
^{241}Am	2.840E+03	1.430E+00	9.549E+00	1.935E+01	4.440E+01	8.011E+00	6.521E+01	5.680E+01	4.596E-01	1.671E+00	1.202E+00	5.880E+00	1.342E+01
^{241}Pu	2.238E+03	4.808E+00	5.283E+01	3.606E+01	8.788E+01	1.072E+01	3.979E+01	1.507E+01	2.642E-02	1.885E+00	3.639E-01	3.899E+00	6.774E-01
^{242}Cm	2.314E+00	3.245E-04	6.303E-04	1.165E-02	1.438E-02	3.343E-04	1.574E-01	2.215E-02	1.028E-04	9.941E-03	2.015E-04	2.789E-03	2.454E-03
^{242}Pu	2.090E-02	3.990E-05	4.519E-04	3.049E-04	8.674E-04	8.912E-05	4.158E-04	1.375E-04	2.167E-07	3.353E-05	3.010E-06	3.303E-05	5.596E-06
^{243}Am	1.682E+00	1.890E-04	4.041E-04	9.326E-03	9.629E-03	1.873E-04	3.055E-03	1.383E-02	5.675E-05	2.419E-04	1.241E-04	7.844E-04	1.462E-03
^{243}Cm	4.476E-01	3.648E-06	4.602E-05	5.057E-04	1.277E-03	3.561E-06	3.022E-01	1.311E-03	1.152E-06	4.934E-04	2.250E-06	9.001E-05	7.107E-04
^{244}Cm	1.058E+01	8.230E-05	1.198E-03	1.156E-02	2.854E-02	7.198E-05	7.264E+00	3.054E-02	2.593E-05	1.114E-02	5.061E-05	2.031E-03	1.444E-02
^{3}H	4.871E+00	2.932E-01	1.101E-01	1.846E-01	1.792E-01	6.725E-01	1.025E-02	1.194E-02	8.154E-03	9.237E-03	1.681E-03	9.022E-02	3.642E-02
^{59}Ni	4.692E+01	4.297E-02	8.163E-02	1.254E-01	3.906E-02	3.465E-02	0.000E+00	2.382E-02	5.207E-02	1.226E-01	3.123E-04	9.478E-02	2.287E-01
^{60}Co	1.894E+02	5.738E-02	8.875E-01	4.300E+00	1.251E+00	4.379E-01	1.824E+01	1.421E+00	2.011E-03	2.845E-02	1.987E-03	3.998E-02	7.009E-02
^{63}Ni	4.456E+03	3.936E+00	7.668E+00	1.163E+01	3.630E+00	3.175E+00	7.287E+01	2.214E+00	4.645E+00	1.098E+01	4.332E-02	8.501E+00	2.041E+01
^{79}Se	1.344E-01	6.509E-06	8.346E-06	2.295E-04	2.424E-02	4.514E-06	9.573E-03	2.002E-04	1.190E-05	3.103E-05	3.671E-06	1.662E-05	4.073E-03
^{90}Sr	1.437E+06	6.407E+02	2.521E+02	2.483E+04	3.120E+03	3.336E+03	6.613E+04	1.765E+04	3.542E+02	8.451E+03	9.083E+01	2.800E+04	1.725E+04
^{90}Y	1.437E+06	6.407E+02	2.521E+02	2.483E+04	3.120E+03	3.336E+03	6.613E+04	1.765E+04	3.542E+02	8.451E+03	9.083E+01	2.800E+04	1.725E+04
^{93}Zr	7.851E+01	2.690E-04	2.146E-03	2.966E-02	1.253E-02	2.176E-04	0.000E+00	3.816E-02	1.760E-02	7.571E-03	3.829E-02	6.448E-03	8.613E-03
^{93m}Nb	7.077E+01	2.374E-04	1.774E-03	2.475E-02	1.015E-02	1.839E-04	0.000E+00	3.160E-02	1.590E-02	6.709E-03	3.682E-02	6.003E-03	7.774E-03
^{99}Tc	1.369E+02	2.786E-03	3.198E-03	7.170E-02	2.350E-01	5.565E-01	1.647E-01	2.131E-01	4.045E-02	4.960E-01	1.670E-01	1.584E-02	7.230E-01

Table D-1. Projected Residual Radionuclide Inventory. (13 Sheets)

TANK	Total for All Tanks	C-201	C-202	C-203	C-204	S-101	S-102	S-103	S-104	S-105	S-106	S-107	S-108	S-109	S-110
^{106}Ru	1.454E-03	2.231E-06	2.159E-06	2.141E-06	1.722E-06	3.661E-08	1.353E-06	1.135E-06	1.006E-08	4.869E-06	1.276E-06	6.727E-09	1.306E-06	2.531E-06	2.210E-07
^{113m}Cd	8.885E+01	1.902E-03	1.841E-03	1.826E-03	1.468E-03	9.795E-02	1.522E+00	2.700E+00	3.756E-02	9.408E+00	2.467E+00	2.116E-02	2.527E+00	2.204E+00	4.372E-01
^{125}Sb	1.783E+02	4.523E-03	4.377E-03	4.341E-03	3.491E-03	2.004E-02	6.209E-01	5.814E-01	3.813E-03	1.895E+00	8.697E-01	3.245E-03	8.905E-01	2.103E+00	1.520E-01
^{126}Sn	7.620E+00	1.528E-04	1.478E-04	1.466E-04	1.179E-04	7.626E-03	2.876E-01	2.090E-01	3.285E-03	7.256E-01	1.900E-01	1.229E-03	1.945E-01	4.152E-01	3.417E-02
^{129}I	1.307E-01	6.883E-07	6.661E-07	6.606E-07	5.313E-07	8.407E-04	1.839E-04	1.420E-04	2.836E-04	1.711E-04	2.201E-04	8.971E-05	2.124E-04	1.997E-04	1.591E-04
^{134}Cs	1.801E+01	1.337E-05	1.294E-05	1.283E-05	1.032E-05	3.423E-05	3.616E-03	6.850E-05	3.577E-05	6.167E-03	3.907E-04	5.326E-05	3.955E-04	1.176E-04	7.557E-05
^{137}Cs	1.140E+05	1.261E+01	1.083E+01	2.022E+00	6.620E+00	1.430E+02	6.135E+03	1.700E+02	8.208E+01	1.288E+03	7.589E+02	1.832E+02	7.877E+02	3.062E+01	1.240E+02
^{137m}Ba	1.078E+05	1.193E+01	1.025E+01	1.913E+00	6.263E+00	1.353E+02	5.804E+03	1.608E+02	7.765E+01	1.218E+03	7.179E+02	1.733E+02	7.452E+02	2.897E+01	1.173E+02
^{14}C	9.164E+00	1.009E-03	2.894E-04	2.870E-04	2.308E-04	1.955E-03	4.320E-02	3.853E-03	1.018E-03	5.159E-03	6.888E-03	8.880E-04	7.033E-03	6.249E-02	4.797E-03
^{151}Sm	1.101E+05	4.058E+01	3.927E+01	3.895E+01	3.133E+01	8.801E+01	1.578E+03	1.548E+03	6.095E+01	9.372E+03	2.456E+03	1.207E+01	2.517E+03	5.427E+03	4.336E+02
^{152}Eu	9.646E+01	7.174E-03	6.942E-03	6.885E-03	5.537E-03	1.316E-02	4.583E-01	2.722E-01	8.676E-03	3.987E-01	1.044E-01	1.567E-03	1.071E-01	2.314E-01	1.887E-02
^{154}Eu	1.721E+03	4.953E-02	1.333E-01	4.854E-02	5.052E-02	6.420E-01	2.486E+00	1.830E+01	5.818E-01	2.676E+01	7.012E+00	1.920E-01	7.191E+00	1.326E+01	1.263E+00
^{155}Eu	7.083E+02	1.001E-01	5.701E-02	2.015E-02	2.565E-02	3.027E-01	1.152E+01	6.839E+00	1.842E-01	1.000E+01	2.620E+00	3.503E-02	2.687E+00	5.801E+00	4.702E-01
^{226}Ra	4.160E+02	1.526E-09	1.476E-09	1.464E-09	1.178E-09	1.367E-07	4.121E-06	3.953E-06	4.826E-08	1.225E-05	3.431E-06	2.817E-08	3.515E-06	4.993E-06	6.098E-07
^{227}Ac	5.101E-02	7.240E-09	7.006E-09	6.949E-09	5.589E-09	3.843E-06	2.084E-04	6.500E-04	4.829E-07	1.599E-03	3.106E-04	8.949E-07	3.639E-04	2.721E-04	3.772E-05
^{228}Ra	4.200E-02	1.101E-14	1.065E-14	1.056E-14	4.382E-07	9.174E-06	3.652E-04	3.508E-04	1.069E-06	1.107E-03	3.170E-04	1.591E-06	3.264E-04	4.545E-04	5.471E-05
^{229}Th	1.762E-02	1.771E-11	1.714E-11	1.700E-11	1.367E-11	3.445E-08	1.703E-06	1.295E-06	4.610E-09	4.263E-06	8.946E-07	6.095E-09	9.154E-07	2.283E-06	1.572E-07
^{231}Pa	1.130E-01	1.022E-08	9.892E-09	9.811E-09	7.891E-09	3.389E-05	1.767E-03	6.408E-04	2.968E-06	2.758E-03	8.750E-04	6.289E-06	8.953E-04	2.305E-03	1.540E-04
^{232}Th	8.625E-02	1.127E-14	1.090E-14	1.082E-14	9.050E-07	1.236E-07	5.887E-06	4.475E-06	1.971E-08	1.459E-05	3.062E-06	3.260E-08	3.133E-06	7.813E-06	5.425E-07
^{232}U	1.952E-01	4.001E-06	3.486E-06	5.201E-06	2.098E-06	6.270E-05	1.719E-03	7.165E-04	3.722E-06	8.973E-04	3.176E-04	2.555E-05	6.971E-04	1.758E-04	7.529E-05
^{233}U	1.278E+01	1.740E-05	1.516E-05	2.262E-05	9.122E-06	3.827E-03	1.060E-01	4.434E-02	1.984E-04	5.565E-02	1.970E-02	1.484E-03	4.323E-02	1.087E-02	4.618E-03
^{234}U	6.684E+00	5.480E-02	5.172E-02	7.064E-02	1.505E-02	2.434E-02	2.337E-01	3.936E-02	1.325E-02	3.937E-02	1.247E-02	2.578E-02	2.967E-02	2.112E-02	2.608E-02
^{235}U	2.844E-01	2.340E-03	2.185E-03	3.016E-03	6.914E-04	1.041E-03	9.990E-03	1.661E-03	5.683E-04	1.649E-03	5.208E-04	1.084E-03	1.242E-03	9.007E-04	1.117E-03
^{236}U	1.192E-01	8.348E-04	5.493E-04	7.693E-04	1.570E-04	5.146E-04	5.053E-03	9.130E-04	2.756E-04	9.579E-04	3.088E-04	6.962E-04	7.252E-04	4.652E-04	5.507E-04
^{237}Np	3.215E+00	1.401E-03	1.167E-03	4.683E-05	3.766E-05	3.735E-03	9.995E-02	1.004E-01	1.406E-03	4.754E-01	1.029E-01	7.402E-04	1.055E-01	2.265E-01	1.845E-02
^{238}Pu	6.238E+01	2.845E-01	2.511E-01	4.917E-02	2.541E-04	5.014E-02	3.725E-01	4.080E-01	7.050E-02	1.942E-01	3.595E-02	1.231E-01	1.455E-01	1.015E-01	8.322E-02
^{238}U	6.456E+00	5.626E-02	4.901E-02	7.312E-02	2.952E-02	2.449E-02	2.345E-01	3.812E-02	1.340E-02	3.736E-02	1.172E-02	2.331E-02	2.809E-02	2.107E-02	2.626E-02
^{239}Pu	1.635E+03	8.947E+00	7.898E+00	1.546E+00	7.991E-03	2.415E+00	1.113E+01	1.371E+01	2.454E+00	1.704E+00	1.021E+00	5.084E+00	4.498E+00	4.991E+00	4.005E+00
^{240}Pu	3.443E+02	1.932E+00	1.705E+00	3.338E-01	1.725E-03	4.749E-01	2.377E+00	2.860E+00	4.999E-01	3.406E-01	2.228E-01	1.064E+00	9.626E-01	9.816E-01	7.903E-01
^{241}Am	2.840E+03	1.417E+00	6.669E-01	7.877E-02	1.951E-03	1.628E+00	2.080E+01	1.981E+01	1.422E+00	1.371E+00	3.304E+00	3.126E+00	1.245E+01	4.068E+00	3.910E+00
^{241}Pu	2.238E+03	1.023E+01	9.028E+00	1.767E+00	9.134E-03	1.603E+00	1.482E+01	1.573E+01	2.046E+00	1.327E+00	1.425E+00	5.603E+00	5.653E+00	3.348E+00	2.885E+00
^{242}Cm	2.314E+00	5.541E-02	2.616E-02	3.101E-03	7.739E-05	5.636E-04	8.009E-03	2.999E-02	3.350E-04	1.622E-05	1.382E-03	8.806E-04	5.047E-03	3.272E-04	9.475E-04
^{242}Pu	2.090E-02	9.082E-05	8.017E-05	1.569E-05	8.111E-08	1.594E-05	1.414E-04	1.511E-04	1.949E-05	1.311E-05	1.366E-05	5.370E-05	5.443E-05	3.343E-05	2.836E-05
^{243}Am	1.682E+00	6.038E-04	2.850E-04	3.379E-05	8.433E-07	7.120E-04	1.217E-02	1.118E-02	5.883E-04	6.691E-04	1.997E-03	8.572E-04	7.436E-03	1.907E-03	1.784E-03
^{243}Cm	4.476E-01	2.800E-03	1.322E-03	5.392E-04	3.066E-05	1.913E-05	2.707E-04	1.013E-03	1.296E-05	5.327E-07	4.610E-05	3.720E-05	1.683E-04	1.068E-05	3.120E-05
^{244}Cm	1.058E+01	6.325E-02	2.986E-02	1.291E-02	7.332E-04	4.409E-04	6.323E-03	2.368E-02	2.822E-04	1.242E-05	1.074E-03	8.425E-04	3.922E-03	2.489E-04	7.271E-04
^{3}H	4.871E+00	5.814E-04	5.626E-04	5.580E-04	4.186E-04	1.678E-02	1.463E-02	1.211E-02	3.699E-03	1.851E-02	2.466E-02	3.075E-02	2.544E-02	2.369E-02	2.526E-02
^{59}Ni	4.692E+01	6.128E-03	5.930E-03	5.881E-03	4.730E-03	4.288E-02	3.862E-01	4.287E-01	3.796E-02	2.312E+00	6.000E-01	3.340E-02	6.202E-01	1.093E+00	1.272E-01
^{60}Co	1.894E+02	1.365E-02	2.842E-02	1.453E-02	1.555E-02	7.217E-02	2.384E-01	1.700E+00	3.178E-02	3.248E+00	1.451E+00	3.925E-01	1.486E+00	2.625E+00	1.906E-01
^{63}Ni	4.456E+03	1.657E-01	3.884E-02	4.443E-03	1.252E-01	3.917E+00	3.578E+01	3.981E+01	3.458E+00	2.153E+02	5.589E+01	3.077E+00	5.774E+01	1.017E+02	1.175E+01
^{79}Se	1.344E-01	3.689E-05	3.569E-05	3.540E-05	2.847E-05	3.693E-04	8.494E-04	5.091E-04	5.100E-05	5.750E-04	4.009E-03	1.879E-05	2.601E-03	1.362E-03	8.436E-04
^{90}Sr	1.437E+06	1.080E+02	2.037E+02	2.777E+01	1.523E+01	3.232E+03	1.046E+04	5.734E+03	2.776E+03	3.448E+02	1.847E+03	1.236E+03	3.132E+03	4.929E+03	2.965E+03
^{90}Y	1.437E+06	1.080E+02	2.037E+02	2.777E+01	1.523E+01	3.232E+03	1.046E+04	5.734E+03	2.776E+03	3.448E+02	1.847E+03	1.236E+03	3.132E+03	4.929E+03	2.965E+03
^{93}Zr	7.851E+01	2.193E-03	2.122E-03	2.105E-03	1.693E-03	1.131E-01	3.498E+00	1.437E+00	4.842E-02	6.682E+00	2.294E+00	2.249E-02	2.351E+00	5.075E+00	4.127E-01
^{93m}Nb	7.077E+01	1.830E-03	1.771E-03	1.757E-03	1.413E-03	1.018E-01	3.131E+00	3.430E+00	4.123E-02	2.120E+00	1.906E+00	2.027E-02	1.951E+00	4.547E+00	3.439E-01
^{99}Tc	1.369E+02	1.215E-02	1.128E-02	1.885E-03	6.020E-03	6.765E-02	5.873E-01	7.099E-01	2.800E-02	2.148E+00	7.266E-01	9.770E-03	7.002E-01	1.213E+00	2.111E-01

Table D-1. Projected Residual Radionuclide Inventory. (13 Sheets)

TANK	Total for All Tanks	S-111	S-112	SX-101	SX-102	SX-103	SX-104	SX-105	SX-106	SX-107	SX-108	SX-109	SX-110	SX-111
^{106}Ru	1.454E-03	2.398E-07	2.313E-06	5.379E-07	8.102E-07	2.533E-07	1.123E-07	6.081E-07	8.201E-07	2.810E-09	1.389E-10	2.881E-08	1.631E-08	7.604E-09
^{113m}Cd	8.885E+01	2.254E-01	1.864E+01	1.407E+00	1.661E+00	5.035E-01	2.335E-01	1.202E+00	9.640E-01	1.823E-02	4.669E-02	9.183E-02	5.835E-02	3.309E-02
^{125}Sb	1.783E+02	1.931E-01	3.723E+00	2.542E-01	5.212E-01	1.730E-01	7.535E-02	4.157E-01	2.575E-01	1.336E-03	1.603E-03	1.050E-02	6.160E-03	3.069E-03
^{126}Sn	7.620E+00	4.017E-02	7.361E-01	1.141E-01	1.293E-01	3.944E-02	1.849E-02	9.405E-02	1.781E-01	1.733E-03	5.038E-03	7.514E-03	5.278E-03	3.137E-03
^{129}I	1.307E-01	2.215E-04	1.053E-03	1.857E-04	2.221E-04	1.881E-04	9.235E-05	2.154E-04	2.894E-04	1.647E-04	5.076E-04	6.883E-04	4.961E-05	2.696E-05
^{134}Cs	1.801E+01	8.403E-04	2.932E-07	4.301E-04	1.051E-04	9.053E-05	6.982E-05	2.321E-04	9.540E-04	1.805E-05	1.225E-05	1.645E-04	2.128E-05	9.938E-06
^{137}Cs	1.140E+05	2.062E+03	2.446E+01	1.199E+03	3.792E+02	2.789E+02	1.795E+02	5.486E+02	2.050E+03	1.683E+02	2.109E+03	3.322E+02	6.323E+01	4.489E+01
^{137m}Ba	1.078E+05	1.951E+03	2.314E+01	1.134E+03	3.587E+02	2.638E+02	1.698E+02	5.190E+02	1.940E+03	1.592E+02	1.995E+03	3.143E+02	5.982E+01	4.247E+01
^{14}C	9.164E+00	1.102E-02	7.056E-02	4.828E-03	6.044E-03	5.707E-03	2.795E-03	6.050E-03	3.221E-02	6.991E-04	4.156E-03	1.938E-03	1.528E-03	1.384E-03
^{151}Sm	1.101E+05	5.047E+02	3.987E+03	1.395E+03	1.490E+03	5.092E+02	2.460E+02	1.197E+03	6.264E+02	2.665E+01	5.501E+01	1.635E+02	1.000E+02	5.302E+01
^{152}Eu	9.646E+01	2.205E-02	8.263E-01	1.985E-01	9.409E-02	2.410E-02	1.405E-02	5.227E-02	3.328E-01	3.271E-03	4.891E-03	2.400E-02	1.424E-02	7.170E-03
^{154}Eu	1.721E+03	1.476E+00	1.231E+00	1.273E+01	6.310E+00	1.599E+00	9.150E-01	3.497E+00	2.239E+01	2.024E-01	3.033E-01	1.483E+00	8.803E-01	4.434E-01
^{155}Eu	7.083E+02	5.489E-01	2.120E+00	4.547E+00	2.353E+00	5.903E-01	3.318E-01	1.301E+00	8.373E+00	6.920E-02	1.024E-01	5.100E-01	3.024E-01	1.521E-01
^{226}Ra	4.160E+02	4.860E-07	5.176E-05	1.972E-06	2.357E-06	7.011E-07	3.235E-07	1.677E-06	2.452E-06	2.657E-08	6.499E-08	1.173E-07	7.635E-08	4.520E-08
^{227}Ac	5.101E-02	4.135E-05	6.631E-04	1.039E-04	1.739E-04	5.202E-05	2.597E-05	1.541E-04	1.738E-04	1.935E-07	3.449E-07	1.286E-06	7.740E-07	7.610E-07
^{228}Ra	4.200E-02	4.249E-05	5.489E-03	1.374E-04	2.127E-04	6.240E-05	2.715E-05	1.517E-04	2.141E-04	2.928E-07	3.750E-13	3.034E-06	1.707E-06	7.934E-07
^{229}Th	1.762E-02	1.699E-07	3.428E-04	4.809E-07	6.049E-07	1.789E-07	7.787E-08	4.291E-07	1.087E-06	1.558E-09	1.622E-09	1.277E-08	7.463E-09	3.678E-09
^{231}Pa	1.130E-01	2.134E-04	1.177E-03	3.833E-04	5.945E-04	1.748E-04	7.544E-05	4.195E-04	1.135E-03	9.066E-07	4.893E-07	8.371E-06	3.944E-06	1.865E-06
^{232}Th	8.625E-02	5.850E-07	1.867E-04	1.657E-06	2.073E-06	6.117E-07	2.658E-07	1.467E-06	3.780E-06	4.330E-09	4.636E-13	4.483E-08	2.541E-08	1.182E-08
^{232}U	1.952E-01	5.399E-05	2.280E-02	1.023E-03	5.710E-04	1.130E-04	5.918E-05	2.470E-04	5.626E-04	1.357E-06	1.925E-06	9.512E-06	5.744E-06	2.926E-06
^{233}U	1.278E+01	3.348E-03	9.622E-02	6.307E-02	3.539E-02	6.998E-03	3.643E-03	1.529E-02	3.480E-02	5.624E-05	9.777E-06	5.667E-04	3.252E-04	1.506E-04
^{234}U	6.684E+00	2.530E-03	8.306E-02	9.019E-02	2.551E-02	7.084E-03	1.395E-02	2.237E-02	1.839E-02	1.210E-02	4.873E-02	7.076E-03	1.193E-02	1.287E-02
^{235}U	2.844E-01	1.061E-04	3.516E-03	3.761E-03	1.070E-03	2.979E-04	5.972E-04	9.508E-04	7.676E-04	5.207E-04	2.099E-03	3.016E-04	5.121E-04	5.536E-04
^{236}U	1.192E-01	6.096E-05	2.267E-03	2.117E-03	6.156E-04	1.666E-04	2.988E-04	5.024E-04	4.472E-04	2.509E-04	1.009E-03	1.518E-04	2.501E-04	2.679E-04
^{237}Np	3.215E+00	1.920E-02	2.174E-01	5.231E-02	6.542E-02	2.117E-02	9.785E-03	5.068E-02	5.283E-02	1.022E-03	3.716E-03	3.055E-03	2.283E-03	1.536E-03
^{238}Pu	6.238E+01	7.981E-03	2.004E-01	7.902E-01	2.447E-01	8.376E-02	8.545E-02	6.923E-01	4.343E-01	7.313E-02	1.031E+00	5.555E-02	7.783E-02	7.922E-02
^{238}U	6.456E+00	2.410E-03	7.885E-02	8.468E-02	2.427E-02	6.799E-03	1.408E-02	2.211E-02	1.721E-02	1.239E-02	4.998E-02	7.058E-03	1.212E-02	1.315E-02
^{239}Pu	1.635E+03	2.838E-01	8.869E+00	2.859E+01	8.151E+00	3.116E+00	4.232E+00	3.595E+01	1.243E+01	3.889E+00	5.557E+01	2.423E+00	3.873E+00	4.123E+00
^{240}Pu	3.443E+02	5.900E-02	1.574E+00	5.835E+00	1.714E+00	6.377E-01	8.305E-01	7.015E+00	2.673E+00	7.558E-01	1.079E+01	4.804E-01	7.574E-01	8.029E-01
^{241}Am	2.840E+03	6.242E-01	1.464E+01	3.141E+01	1.816E+01	8.959E+00	3.066E+00	2.243E+01	2.211E+01	1.941E+00	2.812E+01	1.653E+00	2.236E+00	2.212E+00
^{241}Pu	2.238E+03	3.011E-01	8.147E+00	2.531E+01	9.343E+00	2.854E+00	2.764E+00	2.224E+01	1.753E+01	2.295E+00	3.246E+01	1.667E+00	2.405E+00	2.473E+00
^{242}Cm	2.314E+00	3.518E-04	1.000E-04	4.428E-03	2.114E-03	3.739E-04	4.942E-04	2.365E-03	2.967E-02	9.265E-05	7.395E-04	4.051E-04	2.665E-04	1.572E-04
^{242}Pu	2.090E-02	2.914E-06	7.450E-05	2.442E-04	9.022E-05	2.772E-05	2.762E-05	2.236E-04	1.666E-04	2.314E-05	3.279E-04	1.639E-05	2.403E-05	2.487E-05
^{243}Am	1.682E+00	3.577E-04	1.077E-03	1.661E-02	1.064E-02	5.191E-03	1.381E-03	9.378E-03	1.294E-02	7.220E-04	1.026E-02	7.400E-04	8.961E-04	8.443E-04
^{243}Cm	4.476E-01	1.171E-05	1.689E-06	1.553E-04	7.070E-05	1.258E-05	1.623E-05	7.457E-05	1.005E-03	2.402E-06	1.253E-05	1.557E-05	9.448E-06	4.933E-06
^{244}Cm	1.058E+01	2.730E-04	4.188E-05	3.556E-03	1.648E-03	2.919E-04	3.761E-04	1.739E-03	2.349E-02	5.400E-05	2.959E-04	3.392E-04	2.070E-04	1.091E-04
^{3}H	4.871E+00	2.965E-02	1.273E-03	5.099E-02	2.417E-02	2.706E-02	2.009E-02	2.579E-02	2.973E-02	7.345E-03	4.995E-02	2.410E-02	2.157E-02	1.220E-02
^{59}Ni	4.692E+01	1.511E-01	1.729E+00	6.314E-01	4.215E-01	1.500E-01	8.994E-02	3.551E-01	1.469E-01	3.404E-02	1.363E-01	7.304E-02	6.056E-02	4.535E-02
^{60}Co	1.894E+02	3.013E-01	4.674E-01	9.329E-01	9.914E-01	2.977E-01	1.411E-01	7.044E-01	1.379E+00	1.248E-02	2.617E-02	7.562E-02	4.711E-02	2.525E-02
^{63}Ni	4.456E+03	1.394E+01	1.579E+02	5.779E+01	3.899E+01	1.385E+01	8.241E+00	3.275E+01	1.372E+01	3.037E+00	1.205E+01	6.729E+00	5.511E+00	4.082E+00
^{79}Se	1.344E-01	1.243E-03	1.493E-05	1.588E-03	2.019E-03	1.192E-03	2.575E-04	1.635E-03	1.932E-03	3.162E-05	1.697E-04	1.276E-04	8.556E-05	4.617E-05
^{90}Sr	1.437E+06	7.873E+03	1.756E+04	1.933E+04	1.182E+04	6.325E+03	3.424E+03	8.841E+03	1.646E+03	3.128E+03	7.468E+04	1.766E+03	3.084E+03	3.293E+03
^{90}Y	1.437E+06	7.873E+03	1.756E+04	1.933E+04	1.182E+04	6.325E+03	3.424E+03	8.841E+03	1.646E+03	3.128E+03	7.468E+04	1.766E+03	3.084E+03	3.293E+03
^{93}Zr	7.851E+01	4.853E-01	5.013E+00	1.389E+00	1.556E+00	4.779E-01	2.258E-01	1.133E+00	2.172E+00	2.660E-02	8.021E-02	1.150E-01	6.460E-02	3.801E-02
^{93m}Nb	7.077E+01	4.823E-01	4.178E+00	1.162E+00	1.295E+00	3.980E-01	1.883E-01	9.419E-01	2.036E+00	2.515E-02	7.009E-02	1.043E-01	6.671E-02	5.126E-02
^{99}Tc	1.369E+02	3.281E-01	4.836E-03	1.932E-01	9.797E-01	2.087E-01	1.359E-01	4.275E-01	7.335E-01	1.516E-02	7.155E-02	6.010E-02	4.700E-02	2.578E-02

Table D-1. Projected Residual Radionuclide Inventory. (13 Sheets)

TANK	Total for All Tanks	SX-112	SX-113	SX-114	SX-115	SY-101	SY-102	SY-103	T-101	T-102	T-103	T-104	T-105	T-106
^{106}Ru	1.454E-03	5.162E-09	2.666E-12	2.372E-08	3.038E-08	1.220E-09	3.655E-11	1.360E-09	3.571E-08	1.777E-09	8.795E-10	8.956E-13	2.616E-13	2.152E-11
^{113m}Cd	8.885E+01	2.601E-02	8.199E-04	7.753E-02	6.606E-02	2.705E-03	2.005E-04	2.718E-03	1.276E-01	1.541E-02	1.041E-02	1.061E-03	1.470E-03	6.069E-03
^{125}Sb	1.783E+02	2.203E-03	3.060E-05	8.712E-03	2.043E+00	9.662E-04	4.752E-04	1.110E-03	1.726E-02	8.106E-04	3.419E-04	1.405E-05	2.074E-01	3.451E-05
^{126}Sn	7.620E+00	2.538E-03	5.123E-06	6.398E-03	5.252E-03	2.794E-04	4.315E-05	2.354E-04	1.067E-02	4.703E-04	1.888E-04	8.810E-05	9.581E-06	4.151E-05
^{129}I	1.307E-01	2.137E-05	7.702E-07	5.920E-04	4.207E-05	1.779E-05	7.798E-06	1.683E-05	1.500E-04	1.202E-04	8.507E-05	1.383E-06	6.493E-08	5.245E-07
^{134}Cs	1.801E+01	6.832E-06	5.236E-07	1.409E-04	1.218E-03	8.086E-06	5.423E-06	8.536E-06	1.863E-04	1.790E-06	1.273E-06	9.663E-09	3.405E-09	1.790E-07
^{137}Cs	1.140E+05	3.931E+01	1.434E+02	3.221E+02	1.683E+01	2.393E+01	9.798E-01	1.762E+01	3.820E+02	4.835E+01	5.900E+00	3.943E+00	2.673E+01	5.116E+01
^{137m}Ba	1.078E+05	3.718E+01	1.356E+02	3.048E+02	1.593E+01	2.264E+01	9.268E-01	1.667E+01	3.613E+02	4.573E+01	5.582E+00	3.730E+00	2.529E+01	4.840E+01
^{14}C	9.164E+00	1.200E-03	2.232E-04	1.929E-03	7.211E-04	7.713E+00	4.124E-04	7.962E-04	3.849E-03	2.561E-02	9.103E-04	1.872E-04	3.365E-03	4.759E-04
^{151}Sm	1.101E+05	4.016E+01	1.066E+00	1.352E+02	1.906E+03	2.267E+00	2.108E-02	2.632E+00	7.654E+01	1.565E+00	6.792E-01	1.854E+00	3.841E-01	7.823E-01
^{152}Eu	9.646E+01	5.234E-03	9.372E-05	1.970E-02	4.540E-01	1.039E-04	2.761E-06	1.307E-04	1.215E-02	2.544E-04	1.101E-04	5.886E-05	1.241E-05	3.507E-05
^{154}Eu	1.721E+03	3.237E-01	5.812E-03	1.218E+00	2.762E+01	7.096E-03	2.188E-04	8.089E-03	8.181E-01	1.037E+00	7.504E-03	3.836E-02	9.367E-01	2.277E-03
^{155}Eu	7.083E+02	1.109E-01	1.961E-03	4.187E-01	9.509E+00	2.624E-03	7.012E-05	3.158E-03	3.078E-01	5.814E-01	2.944E-03	1.987E-02	4.914E-01	9.398E-04
^{226}Ra	4.160E+02	3.645E-08	1.432E-09	9.970E-08	7.907E-08	3.966E-09	8.679E-10	4.347E-09	3.156E-07	1.044E-07	5.649E-08	8.875E-08	1.071E-08	4.594E-08
^{227}Ac	5.101E-02	5.568E-07	6.763E-09	1.073E-06	3.466E-07	1.415E-07	-2.339E-07	2.125E-07	1.139E-05	1.893E-04	1.459E-04	9.911E-07	2.353E-07	3.854E-07
^{228}Ra	4.200E-02	5.374E-07	2.296E-07	2.496E-06	6.877E-13	4.066E-07	5.823E-08	8.822E-07	2.586E-05	4.918E-04	5.844E-04	9.964E-13	2.181E-09	2.804E-09
^{229}Th	1.762E-02	2.617E-09	3.048E-11	1.058E-08	4.352E-10	5.909E-08	8.359E-11	3.414E-07	9.014E-08	9.768E-04	7.531E-04	3.640E-10	6.334E-11	1.402E-10
^{231}Pa	1.130E-01	1.284E-06	9.380E-09	6.910E-06	3.817E-07	1.218E-06	4.265E-07	1.369E-06	1.040E-04	9.935E-06	7.638E-06	7.172E-06	1.730E-06	2.762E-06
^{232}Th	8.625E-02	8.006E-09	4.139E-07	3.690E-08	7.123E-13	9.811E-08	2.862E-10	1.556E-06	3.251E-07	1.585E-03	3.435E-03	3.061E-12	6.292E-09	1.805E-08
^{232}U	1.952E-01	2.157E-06	1.248E-08	7.811E-06	3.178E-06	3.994E-07	1.036E-09	1.325E-06	1.695E-04	7.726E-04	1.060E-03	1.030E-07	1.628E-07	9.543E-07
^{233}U	1.278E+01	1.029E-04	6.335E-08	4.602E-04	9.317E-06	2.474E-05	6.359E-08	8.197E-05	1.019E-02	4.788E-02	6.575E-02	8.576E-09	1.046E-08	3.761E-08
^{234}U	6.684E+00	1.315E-02	3.157E-04	8.147E-03	4.301E-02	2.569E-05	1.588E-07	9.165E-05	7.747E-02	7.432E-02	4.677E-02	1.144E-02	1.340E-02	2.305E-02
^{235}U	2.844E-01	5.660E-04	1.360E-05	3.483E-04	1.628E-03	6.663E-06	7.034E-09	3.792E-06	2.955E-03	3.287E-03	2.019E-03	3.691E-04	5.564E-04	9.145E-04
^{236}U	1.192E-01	2.733E-04	6.537E-06	1.730E-04	1.243E-03	5.877E-07	2.145E-09	2.056E-06	2.162E-03	1.023E-03	7.435E-04	1.104E-04	1.401E-04	5.589E-04
^{237}Np	3.215E+00	1.328E-03	6.983E-05	2.664E-03	1.209E-03	1.149E-04	6.189E-07	1.328E-04	3.787E-03	2.783E-03	5.372E-05	4.003E-05	8.974E-06	2.183E-05
^{238}Pu	6.238E+01	7.974E-02	6.579E-03	5.936E-02	1.571E+01	1.356E-04	1.016E-06	2.777E-04	2.065E-01	5.319E-03	5.046E-03	4.611E-02	3.019E-01	1.618E-02
^{238}U	6.456E+00	1.345E-02	3.238E-04	8.194E-03	2.995E-02	1.471E-04	1.597E-07	8.260E-05	5.468E-02	7.587E-02	4.664E-02	8.452E-03	1.258E-02	1.811E-02
^{239}Pu	1.635E+03	4.199E+00	3.547E-01	2.736E+00	2.353E+02	4.303E-03	5.826E-05	1.075E-02	7.895E+00	2.273E-01	2.168E-01	3.545E+00	5.083E+00	1.341E+00
^{240}Pu	3.443E+02	8.168E-01	6.885E-02	5.393E-01	5.514E+01	8.371E-04	8.395E-06	2.194E-03	1.724E+00	5.312E-02	5.065E-02	4.279E-01	5.405E-01	2.006E-01
^{241}Am	2.840E+03	2.210E+00	2.269E-01	1.716E+00	2.123E+02	3.094E-02	4.297E-05	1.474E-02	2.509E+00	1.211E+00	2.964E-02	5.105E-01	8.491E-01	4.249E-01
^{241}Pu	2.238E+03	2.497E+00	2.072E-01	1.803E+00	3.616E+02	8.352E-03	3.174E-05	1.105E-02	9.923E+00	3.297E-01	3.119E-01	1.437E+00	1.528E+00	6.048E-01
^{242}Cm	2.314E+00	1.271E-04	6.902E-06	3.414E-04	3.165E-01	2.656E-06	2.680E-07	1.041E-05	1.094E-03	7.015E-05	4.571E-06	8.540E-05	6.706E-05	2.576E-05
^{242}Pu	2.090E-02	2.514E-05	2.093E-06	1.784E-05	3.179E-03	4.751E-08	2.912E-10	1.008E-07	7.787E-05	2.683E-06	2.540E-06	2.111E-05	2.685E-05	5.158E-06
^{243}Am	1.682E+00	8.316E-04	8.324E-05	7.375E-04	1.815E-01	2.016E-06	2.102E-08	8.236E-06	1.036E-03	4.172E-05	1.219E-06	5.020E-05	3.128E-05	1.557E-05
^{243}Cm	4.476E-01	3.690E-06	1.169E-07	1.288E-05	2.320E-02	8.846E-08	9.037E-09	3.484E-07	3.921E-05	1.686E-07	1.492E-07	9.536E-07	1.050E-06	3.210E-07
^{244}Cm	1.058E+01	8.213E-05	2.762E-06	2.809E-04	4.882E-01	2.061E-06	2.102E-07	8.112E-06	9.077E-04	4.223E-06	3.830E-06	2.145E-05	2.439E-05	7.307E-06
^{3}H	4.871E+00	9.971E-03	4.239E-04	2.601E-02	4.556E-02	3.303E-03	1.525E-03	2.403E-03	1.230E-01	6.241E-03	1.674E-02	1.016E-03	3.289E-03	5.260E-02
^{59}Ni	4.692E+01	4.125E-02	2.652E-03	6.495E-02	1.697E-01	6.761E-04	1.122E-05	8.291E-04	1.498E-01	4.282E-02	3.344E-02	2.280E-04	1.974E-03	1.606E-02
^{60}Co	1.894E+02	1.912E-02	5.093E-04	6.332E-02	6.045E+00	1.409E-03	4.405E-05	1.935E-03	8.459E-01	3.828E-02	3.683E-02	1.451E-03	6.628E-04	1.509E-01
^{63}Ni	4.456E+03	3.697E+00	2.346E-01	5.963E+00	1.572E+01	6.246E-02	1.054E-03	7.720E-02	1.405E+01	4.039E+00	3.157E+00	3.162E-02	1.886E-01	1.517E+00
^{79}Se	1.344E-01	3.638E-05	1.269E-06	1.308E-04	7.266E-05	6.096E-05	4.570E-05	5.358E-05	5.584E-04	1.096E-04	4.249E-05	3.530E-06	6.247E-07	1.350E-06
^{90}Sr	1.437E+06	3.371E+03	1.269E+02	2.051E+03	2.004E+05	3.449E+01	2.875E-01	8.175E+00	1.625E+00	9.522E+02	6.005E+00	3.806E+01	9.395E+02	7.174E+00
^{90}Y	1.437E+06	3.371E+03	1.269E+02	2.051E+03	2.004E+05	3.449E+01	2.875E-01	8.175E+00	1.625E+00	9.522E+02	6.005E+00	3.806E+01	9.395E+02	7.174E+00
^{93}Zr	7.851E+01	3.051E-02	1.538E-03	9.786E-02	6.156E-02	3.014E-03	1.030E-03	3.128E-03	1.386E-01	6.650E-03	2.662E-03	2.897E-02	1.558E-03	1.109E-02
^{93m}Nb	7.077E+01	4.197E-02	1.327E-03	9.117E-02	5.202E-02	2.513E-03	1.602E-03	2.643E-03	1.153E-01	5.532E-03	2.216E-03	2.683E-02	1.401E-03	9.976E-03
^{99}Tc	1.369E+02	2.100E-02	7.523E-04	5.866E-02	4.252E-02	1.840E-02	7.881E-03	1.802E-02	3.424E-01	6.837E-02	1.615E-02	2.640E-03	5.499E-01	6.638E-02

Table D-1. Projected Residual Radionuclide Inventory. (13 Sheets)

TANK	Total for All Tanks	T-107	T-108	T-109	T-110	T-111	T-112	T-201	T-202	T-203	T-204	TX-101	TX-102	TX-103	TX-104
^{106}Ru	1.454E-03	6.219E-11	7.185E-13	1.359E-12	1.431E-13	9.657E-14	9.009E-14	3.931E-17	2.349E-15	2.338E-15	2.425E-15	1.436E-08	2.216E-07	2.343E-07	4.790E-08
^{113m}Cd	8.885E+01	2.322E-03	1.394E-03	4.138E-03	6.259E-05	2.840E-05	2.982E-05	1.283E-07	2.690E-07	2.677E-07	2.777E-07	8.333E-02	3.727E-01	3.926E-01	1.023E-01
^{125}Sb	1.783E+02	2.688E-05	2.400E-05	5.751E-05	9.365E-07	4.472E-07	4.688E-07	9.201E-10	5.124E-09	5.099E-09	5.290E-09	8.062E-03	1.073E-01	1.135E-01	2.417E-02
^{126}Sn	7.620E+00	1.309E-04	1.916E-04	5.660E-04	9.751E-06	4.340E-06	4.565E-06	2.287E-08	3.641E-08	3.623E-08	3.759E-08	7.734E-03	6.668E-02	7.022E-02	1.939E-02
^{129}I	1.307E-01	3.695E-05	3.564E-06	2.191E-05	2.485E-09	9.982E-10	8.751E-10	5.684E-12	0.000E+00	0.000E+00	0.000E+00	5.955E-04	2.267E-04	2.160E-04	2.019E-04
^{134}Cs	1.801E+01	1.576E-07	8.575E-08	1.483E-07	1.318E-10	5.682E-11	6.097E-11	1.283E-14	1.907E-13	1.898E-13	1.969E-13	7.386E-05	8.738E-04	9.154E-04	2.360E-04
^{137}Cs	1.140E+05	1.427E+02	1.034E+02	4.509E+01	4.951E-01	2.886E+00	7.853E-02	2.533E-02	7.134E-03	7.099E-03	7.215E-03	7.174E+02	1.668E+03	1.740E+03	1.008E+03
^{137m}Ba	1.078E+05	1.350E+02	9.779E+01	4.266E+01	4.684E-01	2.730E+00	7.429E-02	2.397E-02	6.749E-03	6.716E-03	6.826E-03	6.787E+02	1.578E+03	1.646E+03	9.537E+02
^{14}C	9.164E+00	1.136E-03	3.880E-04	3.108E-04	2.526E-05	1.175E-05	1.153E-05	1.418E-07	2.081E-07	2.071E-07	2.149E-07	5.232E-03	1.437E-02	1.490E-02	6.708E-03
^{151}Sm	1.101E+05	2.588E+00	2.641E+00	7.207E+00	5.410E-01	3.187E-01	3.003E-01	4.336E-03	6.291E-03	6.261E-03	6.495E-03	6.923E+01	5.389E+02	5.706E+02	1.505E+02
^{152}Eu	9.646E+01	8.481E-05	7.944E-05	2.116E-04	1.469E-05	1.034E-05	9.385E-06	4.717E-08	2.637E-07	2.624E-07	2.723E-07	8.372E-03	8.801E-02	9.320E-02	2.164E-02
^{154}Eu	1.721E+03	5.745E-03	5.498E-03	1.481E-02	1.049E-03	7.173E-04	6.551E-04	4.184E-06	1.769E-05	1.760E-05	1.826E-05	5.456E-01	5.929E+00	6.279E+00	1.440E+00
^{155}Eu	7.083E+02	2.511E-03	2.560E-03	7.105E-03	5.276E-04	3.444E-04	3.175E-04	2.790E-06	7.994E-06	7.955E-06	8.253E-06	1.970E-01	2.230E+00	2.362E+00	5.336E-01
^{226}Ra	4.160E+02	1.351E-07	2.511E-07	7.282E-07	1.394E-08	5.880E-09	6.197E-09	4.648E-11	3.401E-11	3.385E-11	3.512E-11	2.901E-07	1.449E-06	1.473E-06	3.425E-07
^{227}Ac	5.101E-02	2.461E-05	1.493E-06	4.169E-06	3.550E-07	2.137E-07	1.973E-07	5.600E-09	4.383E-09	4.362E-09	4.525E-09	5.060E-06	1.091E-04	1.154E-04	2.306E-05
^{228}Ra	4.200E-02	1.308E-04	1.818E-11	7.793E-14	3.474E-13	2.253E-13	2.049E-13	4.025E-15	5.284E-15	5.259E-15	5.455E-15	1.037E-05	1.123E-04	1.186E-04	2.512E-05
^{229}Th	1.762E-02	1.167E-04	1.657E-10	6.290E-10	1.220E-10	8.247E-11	7.393E-11	1.543E-12	1.996E-12	1.986E-12	2.061E-12	3.716E-08	5.770E-07	6.101E-07	1.253E-07
^{231}Pa	1.130E-01	1.006E-05	5.883E-06	1.087E-05	2.213E-06	1.342E-06	1.225E-06	4.174E-08	3.331E-08	3.315E-08	3.439E-08	4.197E-05	6.616E-04	6.998E-04	1.428E-04
^{232}Th	8.625E-02	5.323E-04	1.396E-12	5.305E-12	1.031E-12	6.991E-13	6.262E-13	1.292E-14	1.698E-14	1.689E-14	1.753E-14	1.299E-07	2.081E-06	2.200E-06	4.480E-07
^{232}U	1.952E-01	3.634E-04	6.159E-08	1.853E-07	3.565E-09	5.417E-07	6.252E-08	2.076E-14	5.450E-10	1.666E-11	5.738E-12	6.825E-05	1.166E-03	1.233E-03	7.374E-04
^{233}U	1.278E+01	2.251E-02	5.100E-09	1.528E-08	3.048E-10	4.476E-08	5.353E-09	1.887E-15	4.396E-11	1.344E-12	4.628E-13	4.018E-03	7.150E-02	7.573E-02	4.527E-02
^{234}U	6.684E+00	5.646E-02	4.828E-03	1.421E-02	3.206E-04	4.148E-02	5.658E-03	2.447E-09	3.673E-05	1.123E-06	3.866E-07	1.340E-01	1.087E-01	2.544E-02	1.802E-02
^{235}U	2.844E-01	2.504E-03	2.159E-04	6.365E-04	1.435E-05	1.847E-03	2.532E-04	1.104E-10	1.628E-06	4.976E-08	1.714E-08	5.877E-03	4.742E-03	1.058E-03	7.529E-04
^{236}U	1.192E-01	6.737E-04	5.540E-05	1.671E-04	3.419E-06	5.059E-04	6.001E-05	2.093E-11	4.997E-07	1.527E-08	5.261E-09	2.118E-03	1.705E-03	5.874E-04	4.116E-04
^{237}Np	3.215E+00	6.855E-05	6.607E-05	3.840E-04	1.426E-03	9.255E-06	8.228E-06	1.532E-07	2.338E-07	7.368E-07	6.359E-07	4.027E-03	2.231E-02	2.362E-02	6.770E-03
^{238}Pu	6.238E+01	5.356E-02	1.060E-02	6.421E-03	1.707E-02	2.222E-02	4.422E-02	2.595E-03	1.527E-03	2.060E-03	1.729E-03	6.454E-01	2.298E-01	2.438E-01	1.910E-01
^{238}U	6.456E+00	5.719E-02	4.930E-03	1.453E-02	3.266E-04	4.237E-02	5.763E-03	2.493E-09	3.761E-05	1.150E-06	3.959E-07	1.369E-01	1.083E-01	2.313E-02	1.670E-02
^{239}Pu	1.635E+03	6.885E+00	1.459E+00	8.630E-01	2.555E+00	4.448E+00	6.007E+00	7.675E-01	1.766E-01	2.383E-01	2.000E-01	1.948E+01	6.530E+00	6.969E+00	6.475E+00
^{240}Pu	3.443E+02	7.882E-01	1.626E-01	9.788E-02	2.679E-01	5.153E-01	6.739E-01	5.176E-02	2.226E-02	3.004E-02	2.522E-02	4.143E+00	1.370E+00	1.457E+00	1.324E+00
^{241}Am	2.840E+03	1.298E+00	5.233E-02	6.327E-03	2.254E-01	1.689E+00	4.265E-01	4.537E-02	3.402E-02	3.999E-02	2.389E-02	1.342E+01	1.340E+01	1.425E+01	9.914E+00
^{241}Pu	2.238E+03	1.662E+00	2.786E-01	1.701E-01	4.401E-01	9.230E-01	1.176E+00	4.333E-02	4.244E-02	5.728E-02	4.808E-02	3.003E+01	9.716E+00	1.030E+01	7.630E+00
^{242}Cm	2.314E+00	2.347E-04	1.534E-05	1.178E-06	3.296E-05	1.483E-04	1.094E-04	3.386E-06	8.921E-06	1.048E-05	6.256E-06	6.248E-04	5.764E-03	6.102E-03	3.845E-03
^{242}Pu	2.090E-02	1.366E-05	2.316E-06	1.419E-06	3.529E-06	7.612E-06	9.619E-06	2.337E-07	3.565E-07	4.811E-07	4.039E-07	2.377E-04	9.057E-05	9.602E-05	7.214E-05
^{243}Am	1.682E+00	1.402E-04	5.659E-06	7.322E-07	1.967E-05	8.869E-05	6.520E-05	1.958E-06	5.251E-06	6.170E-06	3.682E-06	2.686E-03	7.316E-03	7.749E-03	5.185E-03
^{243}Cm	4.476E-01	2.677E-06	1.712E-07	1.312E-08	3.634E-07	1.728E-06	1.247E-06	1.888E-08	1.018E-07	1.196E-07	7.137E-08	1.881E-05	2.065E-04	2.186E-04	1.373E-04
^{244}Cm	1.058E+01	6.073E-05	3.852E-06	2.947E-07	8.154E-06	3.882E-05	2.802E-05	4.248E-07	2.286E-06	2.686E-06	1.603E-06	4.370E-04	4.781E-03	5.061E-03	3.178E-03
^{3}H	4.871E+00	3.494E-03	3.137E-03	3.589E-03	1.045E-06	5.193E-07	6.002E-07	5.371E-11	4.257E-09	4.236E-09	4.395E-09	5.218E-02	3.324E-02	3.342E-02	3.623E-02
^{59}Ni	4.692E+01	5.560E-03	4.499E-03	1.665E-02	1.526E-05	1.848E-03	7.105E-06	3.705E-08	5.445E-08	5.419E-08	5.621E-08	1.345E-01	5.788E-01	6.132E-01	1.968E-01
^{60}Co	1.894E+02	7.153E-03	1.424E-03	3.052E-03	2.772E-05	1.281E-05	1.345E-05	4.532E-08	1.288E-07	1.282E-07	1.330E-07	1.133E-01	1.547E+00	1.638E+00	3.379E-01
^{63}Ni	4.456E+03	5.368E-01	4.562E-01	1.675E+00	1.298E-03	1.937E-01	6.057E-04	3.102E-06	4.706E-06	4.683E-06	4.858E-06	1.211E+01	5.429E+01	5.752E+01	1.806E+01
^{79}Se	1.344E-01	2.337E-05	3.460E-05	1.842E-05	4.336E-07	2.110E-07	3.459E-07	6.335E-09	9.460E-09	9.414E-09	9.766E-09	4.018E-04	1.095E-03	1.066E-03	7.627E-04
^{90}Sr	1.437E+06	2.262E+03	1.073E+01	1.145E+00	1.523E-01	1.135E+02	4.813E-03	7.702E-02	2.360E-03	2.361E-03	4.249E-03	1.067E+04	1.702E+01	1.937E+00	1.029E+04
^{90}Y	1.437E+06	2.262E+03	1.073E+01	1.145E+00	1.523E-01	1.135E+02	4.813E-03	7.702E-02	2.360E-03	2.361E-03	4.249E-03	1.067E+04	1.702E+01	1.937E+00	1.029E+04
^{93}Zr	7.851E+01	3.596E-02	1.618E-02	1.409E-02	1.433E-03	5.032E-04	6.106E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.084E-01	8.055E-01	8.517E-01	2.214E-01
^{93m}Nb	7.077E+01	3.347E-02	1.462E-02	1.006E-02	1.432E-03	5.420E-04	6.103E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.892E-02	7.669E-01	8.114E-01	2.108E-01
^{99}Tc	1.369E+02	3.004E-01	2.265E-02	1.453E-02	1.104E-05	1.065E-01	4.700E-06	1.281E-08	1.911E-08	1.902E-08	1.973E-08	1.671E-01	3.506E+00	3.695E+00	1.047E+00

Table D-1. Projected Residual Radionuclide Inventory. (13 Sheets)

TANK	Total for All Tanks	TX-105	TX-106	TX-107	TX-108	TX-109	TX-110	TX-111	TX-112	TX-113	TX-114	TX-115	TX-116	TX-117	TX-118
^{106}Ru	1.454E-03	2.157E-07	3.651E-07	2.966E-07	2.011E-07	2.706E-12	2.038E-07	1.885E-07	2.333E-07	2.738E-07	1.420E-07	2.363E-07	8.994E-08	1.074E-07	1.751E-07
^{113m}Cd	8.885E+01	3.623E-01	5.449E-01	4.777E-01	3.389E-01	2.648E-03	3.426E-01	3.177E-01	3.900E-01	4.542E-01	2.422E-01	3.954E-01	1.393E-01	1.823E-01	2.949E-01
^{125}Sb	1.783E+02	1.045E-01	1.575E-01	1.360E-01	9.739E-02	4.241E-05	9.869E-02	9.130E-02	1.130E-01	1.326E-01	6.877E-02	1.145E-01	3.945E-02	5.204E-02	8.483E-02
^{126}Sn	7.620E+00	6.413E-02	9.931E-02	8.831E-02	6.011E-02	2.639E-04	6.045E-02	5.586E-02	6.929E-02	8.107E-02	4.206E-02	7.025E-02	3.929E-02	3.195E-02	5.287E-02
^{129}I	1.307E-01	1.998E-04	2.079E-04	2.351E-04	2.062E-04	2.529E-06	1.890E-04	1.828E-04	1.911E-04	1.758E-04	1.714E-04	1.998E-04	1.065E-04	1.103E-04	1.867E-04
^{134}Cs	1.801E+01	8.419E-04	9.822E-05	1.312E-03	7.919E-04	2.918E-09	7.949E-04	7.378E-04	9.022E-04	1.042E-03	5.665E-04	9.161E-04	9.236E-04	4.218E-04	6.934E-04
^{137}Cs	1.140E+05	1.586E+03	2.104E+02	2.392E+03	1.509E+03	7.822E+01	1.521E+03	1.424E+03	1.697E+03	1.808E+02	1.068E+03	1.728E+03	1.581E+03	8.053E+02	7.268E+02
^{137m}Ba	1.078E+05	1.500E+03	1.991E+02	2.262E+03	1.428E+03	7.400E+01	1.439E+03	1.347E+03	1.606E+03	1.710E+02	1.010E+03	1.635E+03	1.495E+03	7.618E+02	6.876E+02
^{14}C	9.164E+00	1.451E-02	5.158E-03	1.698E-02	1.366E-02	1.134E-03	1.397E-02	1.331E-02	1.509E-02	1.690E-02	1.093E-02	1.534E-02	5.146E-03	7.916E-03	1.129E-02
^{151}Sm	1.101E+05	5.261E+02	8.055E+02	9.404E+02	4.899E+02	5.557E+00	4.976E+02	4.606E+02	5.697E+02	6.703E+02	3.466E+02	5.767E+02	1.747E+02	2.649E+02	4.255E+02
^{152}Eu	9.646E+01	8.598E-02	1.314E-01	1.483E-01	8.000E-02	1.764E-04	8.128E-02	7.521E-02	9.309E-02	1.094E-01	5.658E-02	9.425E-02	2.671E-02	4.294E-02	6.947E-02
^{154}Eu	1.721E+03	5.792E+00	8.854E+00	9.689E+00	5.389E+00	1.190E-02	5.475E+00	5.066E+00	6.271E+00	1.308E+00	3.812E+00	6.349E+00	1.801E+00	2.893E+00	7.449E+00
^{155}Eu	7.083E+02	2.179E+00	3.330E+00	3.537E+00	2.027E+00	5.135E-03	2.060E+00	1.906E+00	2.359E+00	1.770E+00	1.434E+00	2.389E+00	6.777E-01	1.089E+00	3.339E+00
^{226}Ra	4.160E+02	1.430E-06	3.085E-06	1.629E-06	1.376E-06	3.370E-07	1.293E-06	1.209E-06	1.476E-06	1.746E-06	9.357E-07	1.481E-06	7.606E-07	8.710E-07	1.092E-06
^{227}Ac	5.101E-02	1.090E-04	4.317E-04	1.265E-04	1.043E-04	7.329E-06	1.057E-04	9.792E-05	1.241E-04	1.467E-04	7.531E-05	1.255E-04	4.526E-05	5.871E-05	9.276E-05
^{228}Ra	4.200E-02	1.088E-04	2.520E-04	1.224E-04	1.011E-04	2.099E-12	1.024E-04	9.478E-05	1.163E-04	1.361E-04	7.136E-05	1.179E-04	4.085E-05	5.379E-05	8.759E-05
^{229}Th	1.762E-02	5.616E-07	9.238E-07	6.426E-07	5.234E-07	1.099E-09	5.306E-07	4.908E-07	6.076E-07	7.132E-07	3.695E-07	6.154E-07	2.120E-07	2.798E-07	4.559E-07
^{231}Pa	1.130E-01	6.440E-04	5.903E-04	7.234E-04	6.002E-04	1.564E-05	6.104E-04	5.657E-04	6.972E-04	8.220E-04	4.247E-04	7.057E-04	2.479E-04	3.246E-04	5.228E-04
^{232}Th	8.625E-02	2.026E-06	3.331E-06	2.316E-06	1.888E-06	9.242E-12	1.913E-06	1.770E-06	2.191E-06	2.572E-06	1.333E-06	2.220E-06	7.638E-07	1.008E-06	1.644E-06
^{232}U	1.952E-01	1.140E-03	1.775E-03	1.264E-03	1.061E-03	4.146E-07	1.076E-03	9.959E-04	1.233E-03	2.822E-04	7.494E-04	1.248E-03	3.324E-04	5.679E-04	1.340E-03
^{233}U	1.278E+01	6.992E-02	1.089E-01	7.764E-02	6.502E-02	3.451E-08	6.609E-02	6.116E-02	7.570E-02	1.732E-02	4.602E-02	7.664E-02	2.041E-02	3.487E-02	8.227E-02
^{234}U	6.684E+00	1.322E-01	7.767E-02	2.795E-02	1.593E-01	3.330E-02	2.522E-02	2.505E-02	2.577E-02	1.276E-02	1.682E-02	2.971E-02	1.477E-02	1.802E-02	2.715E-02
^{235}U	2.844E-01	5.785E-03	3.335E-03	1.158E-03	6.991E-03	1.488E-03	1.058E-03	1.055E-03	1.073E-03	5.519E-04	7.038E-04	1.248E-03	6.396E-04	7.695E-04	1.128E-03
^{236}U	1.192E-01	2.020E-03	1.423E-03	6.560E-04	2.353E-03	3.719E-04	5.461E-04	5.243E-04	5.911E-04	2.118E-04	3.728E-04	6.396E-04	2.513E-04	3.446E-04	6.324E-04
^{237}Np	3.215E+00	2.182E-02	4.043E-02	2.904E-02	2.031E-02	1.209E-04	2.064E-02	1.911E-02	2.362E-02	2.774E-02	1.442E-02	2.391E-02	6.674E-03	1.103E-02	1.760E-02
^{238}Pu	6.238E+01	2.248E-01	3.630E-01	3.752E+00	2.092E-01	3.197E-02	2.157E-01	2.012E-01	2.441E-01	1.429E-02	1.495E-01	2.464E-01	7.345E-02	1.185E-01	7.414E+00
^{238}U	6.456E+00	1.324E-01	7.524E-02	2.522E-02	1.602E-01	3.396E-02	2.326E-02	2.326E-02	2.347E-02	1.237E-02	1.544E-02	2.744E-02	1.433E-02	1.710E-02	2.463E-02
^{239}Pu	1.635E+03	6.388E+00	1.069E+01	1.064E+02	5.968E+00	4.544E+00	6.492E+00	6.238E+00	7.012E+00	1.167E+00	4.416E+00	7.006E+00	2.919E+00	4.039E+00	2.105E+02
^{240}Pu	3.443E+02	1.340E+00	2.232E+00	2.235E+01	1.249E+00	4.947E-01	1.316E+00	1.243E+00	1.462E+00	1.488E-01	9.061E-01	1.469E+00	5.108E-01	7.652E-01	4.419E+01
^{241}Am	2.840E+03	1.316E+01	2.071E+01	2.188E+02	1.225E+01	7.554E-01	1.251E+01	1.162E+01	1.424E+01	6.065E-01	8.665E+00	1.443E+01	3.854E+00	6.566E+00	3.316E+02
^{241}Pu	2.238E+03	9.502E+00	1.518E+01	1.579E+02	8.841E+00	8.311E-01	9.064E+00	8.430E+00	1.031E+01	4.952E-01	6.296E+00	1.041E+01	2.981E+00	4.907E+00	3.134E+02
^{242}Cm	2.314E+00	5.642E-03	1.023E-02	9.325E-02	5.252E-03	1.064E-04	5.346E-03	4.955E-03	6.101E-03	2.107E-04	3.732E-03	6.179E-03	2.188E-03	2.821E-03	1.417E-01
^{242}Pu	2.090E-02	8.858E-05	1.419E-04	1.472E-03	8.241E-05	6.874E-06	8.441E-05	7.846E-05	9.605E-05	4.434E-06	5.865E-05	9.709E-05	2.759E-05	4.558E-05	2.922E-03
^{243}Am	1.682E+00	7.153E-03	1.119E-02	1.190E-01	6.654E-03	7.654E-05	6.770E-03	6.268E-03	7.745E-03	2.584E-04	4.708E-03	7.842E-03	2.092E-03	3.568E-03	1.799E-01
^{243}Cm	4.476E-01	2.022E-04	3.664E-04	3.344E-03	1.881E-04	1.189E-06	1.913E-04	1.772E-04	2.186E-04	7.049E-06	1.337E-04	2.214E-04	7.836E-05	1.011E-04	5.076E-03
^{244}Cm	1.058E+01	4.680E-03	8.483E-03	7.737E-02	4.354E-03	2.674E-05	4.428E-03	4.102E-03	5.061E-03	1.630E-04	3.095E-03	5.125E-03	1.814E-03	2.340E-03	1.175E-01
^{3}H	4.871E+00	3.600E-02	3.280E-02	4.762E-02	3.442E-02	1.858E-03	3.542E-02	3.502E-02	3.511E-02	3.455E-02	3.335E-02	3.593E-02	1.606E-02	2.283E-02	2.591E-02
^{59}Ni	4.692E+01	5.662E-01	1.070E+00	7.277E-01	5.267E-01	6.799E-04	5.354E-01	4.957E-01	6.132E-01	7.193E-01	3.750E-01	6.202E-01	1.759E-01	2.886E-01	4.567E-01
^{60}Co	1.894E+02	1.512E+00	2.567E+00	1.803E+00	1.407E+00	4.326E-03	1.430E+00	1.323E+00	1.636E+00	3.878E-01	9.967E-01	1.657E+00	4.575E-01	7.555E-01	1.013E+00
^{63}Ni	4.456E+03	5.311E+01	1.003E+02	6.817E+01	4.941E+01	9.430E-02	5.023E+01	4.650E+01	5.753E+01	6.748E+01	3.519E+01	5.818E+01	1.655E+01	2.712E+01	4.284E+01
^{79}Se	1.344E-01	9.379E-04	6.563E-04	1.178E-03	9.581E-04	6.311E-06	8.741E-04	8.241E-04	9.365E-04	9.405E-04	7.121E-04	9.731E-04	5.335E-04	4.796E-04	9.025E-04
^{90}Sr	1.437E+06	4.566E+01	6.176E+02	5.136E+02	3.200E+02	2.284E+02	2.791E+00	3.231E+00	1.901E+00	3.069E+00	1.912E+00	6.097E+01	8.349E-01	1.304E+00	1.110E+04
^{90}Y	1.437E+06	4.566E+01	6.176E+02	5.136E+02	3.200E+02	2.284E+02	2.791E+00	3.231E+00	1.901E+00	3.069E+00	1.912E+00	6.097E+01	8.349E-01	1.304E+00	1.110E+04
^{93}Zr	7.851E+01	7.839E-01	7.922E-01	1.075E+00	7.308E-01	6.317E-02	7.484E-01	6.963E-01	8.483E-01	1.010E+00	5.180E-01	8.587E-01	3.023E-01	3.954E-01	6.366E-01
^{93m}Nb	7.077E+01	7.511E-01	1.539E+00	1.040E+00	7.043E-01	1.076E-01	7.220E-01	6.719E-01	8.237E-01	9.832E-01	5.018E-01	8.337E-01	2.933E-01	3.837E-01	6.175E-01
^{99}Tc	1.369E+02	3.392E+00	1.959E-01	4.763E+00	3.175E+00	1.198E-01	3.292E+00	3.092E+00	3.661E+00	4.463E+00	2.248E+00	3.711E+00	1.542E+00	1.700E+00	2.776E+00

Table D-1. Projected Residual Radionuclide Inventory. (13 Sheets)

TANK	Total for All Tanks	TY-101	TY-102	TY-103	TY-104	TY-105	TY-106	U-101	U-102	U-103	U-104	U-105
^{106}Ru	1.454E-03	4.424E-12	1.375E-07	1.315E-08	8.822E-12	3.781E-15	2.652E-16	1.328E-10	2.401E-07	1.080E-06	1.056E-10	3.006E-07
^{113m}Cd	8.885E+01	4.640E-04	2.722E-01	3.919E-02	8.792E-04	1.815E-03	1.647E-04	4.458E-02	3.820E-01	2.396E+00	3.536E-02	8.206E-01
^{125}Sb	1.783E+02	1.481E-05	5.538E-02	6.459E-03	3.066E-05	4.041E-05	2.881E-06	1.532E-03	8.342E-02	6.055E-01	1.218E-03	6.029E-02
^{126}Sn	7.620E+00	6.815E-05	3.474E-02	3.953E-03	1.476E-04	3.686E-04	2.452E-05	5.117E-03	6.911E-02	1.848E-01	3.817E-03	6.610E-02
^{129}I	1.307E-01	5.737E-07	7.214E-05	2.983E-05	1.226E-06	4.927E-05	9.818E-07	4.584E-05	2.403E-04	2.286E-04	3.260E-05	2.020E-03
^{134}Cs	1.801E+01	2.866E-07	4.158E-04	1.519E-04	5.387E-07	1.211E-07	1.919E-08	1.569E-06	9.223E-04	1.234E-04	1.113E-06	5.074E-04
^{137}Cs	1.140E+05	1.354E+00	1.160E+02	2.853E+02	3.976E+02	6.285E+01	3.645E+02	1.309E+02	3.244E+03	2.891E+02	6.785E+01	1.149E+03
^{137m}Ba	1.078E+05	1.281E+00	1.097E+02	2.699E+02	3.761E+02	5.946E+01	3.448E+02	1.238E+02	3.069E+03	2.735E+02	6.419E+01	1.087E+03
^{14}C	9.164E+00	2.799E-03	3.340E-03	4.504E-03	1.994E-02	1.099E-04	9.829E-06	3.481E-03	1.581E-02	6.724E-03	1.265E-03	8.237E-03
^{151}Sm	1.101E+05	1.404E+00	3.060E+02	3.090E+01	2.809E+00	3.560E+00	2.497E-01	5.258E+01	3.642E+02	1.701E+03	4.174E+01	1.898E+02
^{152}Eu	9.646E+01	2.448E-05	4.937E-02	4.714E-03	5.035E-05	1.127E-04	7.906E-06	4.675E-03	1.149E-01	1.960E-01	3.713E-03	1.442E-01
^{154}Eu	1.721E+03	2.438E-03	3.326E+00	3.186E-01	5.001E-03	7.840E-03	5.499E-04	2.899E-01	7.727E+00	1.317E+01	2.301E-01	2.178E+01
^{155}Eu	7.083E+02	2.298E-03	1.252E+00	1.216E-01	4.712E-03	3.766E-03	2.641E-04	9.785E-02	2.893E+00	4.924E+00	7.765E-02	1.327E+01
^{226}Ra	4.160E+02	9.594E-08	1.076E-06	3.103E-07	2.018E-07	3.585E-07	3.060E-08	7.251E-08	1.205E-06	3.512E-06	5.795E-08	1.435E-06
^{227}Ac	5.101E-02	8.026E-07	1.026E-04	6.342E-06	1.669E-06	2.061E-06	1.446E-07	3.731E-07	8.750E-05	2.506E-04	3.236E-07	1.324E-04
^{228}Ra	4.200E-02	8.205E-13	6.378E-05	9.603E-06	1.540E-12	9.025E-13	1.062E-13	4.010E-13	9.944E-05	3.212E-04	3.246E-13	1.242E-04
^{229}Th	1.762E-02	2.004E-10	3.333E-07	3.362E-08	3.725E-10	1.041E-10	7.311E-12	1.551E-09	5.049E-07	5.989E-07	1.232E-09	5.001E-07
^{231}Pa	1.130E-01	5.182E-06	2.385E-04	4.184E-05	9.495E-06	1.942E-08	1.359E-09	3.744E-07	5.597E-04	8.965E-04	2.509E-07	4.008E-04
^{232}Th	8.625E-02	1.777E-12	1.201E-06	1.204E-07	3.319E-12	8.825E-13	6.196E-14	4.432E-13	1.796E-06	2.063E-06	3.524E-13	1.777E-06
^{232}U	1.952E-01	7.121E-08	1.364E-04	2.022E-03	1.244E-06	6.055E-07	1.892E-07	2.168E-06	3.689E-04	3.491E-04	6.202E-07	7.087E-04
^{233}U	1.278E+01	5.651E-09	8.376E-03	1.241E-01	3.703E-07	5.076E-08	1.587E-08	1.101E-05	2.265E-02	2.162E-02	3.149E-06	4.350E-02
^{234}U	6.684E+00	6.489E-03	4.798E-03	1.360E-01	1.191E-01	4.998E-02	1.562E-02	5.487E-02	2.739E-02	1.623E-02	1.570E-02	1.178E-01
^{235}U	2.844E-01	2.914E-04	2.059E-04	5.958E-03	5.346E-03	2.232E-03	6.974E-04	2.363E-03	1.167E-03	6.820E-04	6.761E-04	4.992E-03
^{236}U	1.192E-01	6.523E-05	8.828E-05	1.939E-03	1.157E-03	5.716E-04	1.786E-04	1.136E-03	5.912E-04	3.865E-04	3.250E-04	2.480E-03
^{237}Np	3.215E+00	3.774E-05	1.466E-02	1.519E-03	8.502E-05	2.706E-04	2.190E-03	3.552E-03	2.096E-02	5.266E-02	2.816E-03	2.268E-02
^{238}Pu	6.238E+01	7.468E-03	1.991E-03	2.567E-02	1.389E-02	4.119E-03	1.043E-03	2.697E-02	2.467E-01	2.196E-01	9.101E-02	4.903E-01
^{238}U	6.456E+00	6.617E-03	4.587E-03	1.339E-01	1.212E-01	5.089E-02	1.591E-02	5.627E-02	2.717E-02	1.552E-02	1.610E-02	1.142E-01
^{239}Pu	1.635E+03	1.492E+00	9.073E-02	1.960E+00	3.059E+00	5.920E-01	1.498E-01	1.454E+00	9.835E+00	7.241E+00	4.907E+00	1.598E+01
^{240}Pu	3.443E+02	1.268E-01	1.486E-02	2.363E-01	2.427E-01	6.341E-02	1.605E-02	2.823E-01	1.977E+00	1.522E+00	9.524E-01	3.331E+00
^{241}Am	2.840E+03	1.100E-01	1.350E-01	5.483E-01	1.342E+00	2.136E-01	1.336E-01	7.963E-01	1.035E+01	1.359E+01	2.567E+00	2.268E+01
^{241}Pu	2.238E+03	1.815E-01	7.909E-02	9.469E-01	3.275E-01	1.075E-01	2.721E-02	8.495E-01	9.153E+00	8.449E+00	2.866E+00	1.990E+01
^{242}Cm	2.314E+00	2.256E-05	1.298E-04	1.470E-04	1.361E-04	5.122E-05	3.209E-05	2.318E-05	6.328E-03	4.046E-03	1.700E-04	2.632E-02
^{242}Pu	2.090E-02	1.156E-06	7.289E-07	8.352E-06	1.862E-06	8.722E-07	2.208E-07	8.580E-06	8.836E-05	8.135E-05	2.895E-05	1.879E-04
^{243}Am	1.682E+00	1.316E-05	7.281E-05	1.233E-04	8.015E-05	3.021E-05	1.892E-05	2.903E-04	5.154E-03	7.906E-03	9.368E-04	1.166E-02
^{243}Cm	4.476E-01	2.315E-07	4.608E-06	4.615E-06	1.244E-06	5.743E-07	3.598E-07	3.927E-07	2.177E-04	1.359E-04	2.876E-06	8.954E-04
^{244}Cm	1.058E+01	5.252E-06	1.067E-04	1.069E-04	2.878E-05	1.295E-05	8.109E-06	9.274E-06	5.071E-03	3.173E-03	6.792E-05	2.092E-02
^{3}H	4.871E+00	1.801E-04	1.846E-02	3.805E-03	4.769E-04	2.399E-03	1.639E-04	2.523E-02	3.530E-02	2.441E-02	1.793E-02	4.660E-02
^{59}Ni	4.692E+01	3.359E-03	3.859E-01	4.038E-02	5.478E-03	5.623E-04	3.926E-05	1.304E-01	3.624E-01	4.406E-01	3.870E-02	1.254E-01
^{60}Co	1.894E+02	3.695E-04	6.704E-03	2.773E-03	6.026E-04	1.125E-03	7.858E-05	2.504E-02	1.084E+00	1.481E+00	1.993E-02	8.528E-01
^{63}Ni	4.456E+03	3.045E-01	3.627E+01	3.769E+00	4.818E-01	4.802E-02	3.353E-03	1.153E+01	3.379E+01	4.099E+01	3.423E+00	1.176E+01
^{79}Se	1.344E-01	9.579E-07	6.584E-04	1.509E-04	1.077E-05	1.028E-05	7.253E-07	7.551E-05	1.875E-03	5.443E-03	5.368E-05	1.716E-03
^{90}Sr	1.437E+06	2.665E+01	1.513E+02	1.563E+03	1.490E+03	4.130E+03	9.127E+02	1.435E+04	7.370E+03	3.704E+03	4.056E+03	3.849E+02
^{90}Y	1.437E+06	2.665E+01	1.513E+02	1.563E+03	1.490E+03	4.130E+03	9.127E+02	1.435E+04	7.370E+03	3.704E+03	4.056E+03	3.849E+02
^{93}Zr	7.851E+01	2.539E-01	3.194E-01	3.294E-01	5.051E-01	2.626E-05	1.837E-06	6.138E-02	8.392E-01	2.228E+00	4.112E-02	9.552E-01
^{93m}Nb	7.077E+01	2.262E-01	4.414E-01	3.143E-01	4.622E-01	2.307E-05	1.664E-06	7.748E-02	7.903E-01	1.852E+00	6.834E-02	6.842E-01
^{99}Tc	1.369E+02	2.875E-02	9.338E-02	1.379E-01	1.741E-01	4.712E-02	1.680E-02	2.863E-02	3.663E+00	1.315E+00	2.037E-02	9.746E-01

Table D-1. Projected Residual Radionuclide Inventory. (13 Sheets)

TANK	Total for All Tanks	U-106	U-107	U-108	U-109	U-110	U-111	U-112	U-201	U-202	U-203	U-204
^{106}Ru	1.454E-03	8.575E-07	4.793E-07	2.854E-07	6.288E-07	2.493E-11	5.282E-07	3.030E-11	1.051E-13	9.644E-14	8.418E-14	9.596E-14
^{113m}Cd	8.885E+01	1.572E-01	6.884E-01	3.282E-01	6.983E-01	1.182E-02	6.335E-01	1.562E-02	1.075E-03	9.862E-04	8.608E-04	9.813E-04
^{125}Sb	1.783E+02	6.120E-01	1.037E-01	1.684E-01	3.647E-01	3.031E-04	2.560E-01	3.743E-04	5.779E-06	5.303E-06	4.628E-06	5.276E-06
^{126}Sn	7.620E+00	7.011E-02	1.252E-01	5.751E-02	1.277E-01	8.669E-04	1.165E-01	1.179E-03	1.831E-06	1.680E-06	1.466E-06	1.672E-06
^{129}I	1.307E-01	2.784E-04	3.137E-04	2.566E-04	2.681E-04	7.192E-06	2.744E-04	5.571E-06	2.780E-07	2.551E-07	2.226E-07	2.538E-07
^{134}Cs	1.801E+01	1.260E-04	1.737E-03	7.938E-04	1.654E-03	3.901E-06	1.532E-03	1.890E-07	1.411E-08	1.295E-08	1.130E-08	1.288E-08
^{137}Cs	1.140E+05	4.037E+02	1.754E+03	1.800E+03	3.108E+03	1.903E+02	3.405E+03	1.863E+01	6.538E+00	5.298E+00	5.262E+00	6.217E+00
^{137m}Ba	1.078E+05	3.819E+02	1.659E+03	1.703E+03	2.940E+03	1.800E+02	3.221E+03	1.763E+01	6.185E+00	5.012E+00	4.978E+00	5.881E+00
^{14}C	9.164E+00	6.141E-03	2.568E-02	1.553E-02	2.479E-02	1.978E-04	2.313E-02	2.808E-04	4.224E-04	3.065E-04	2.675E-04	3.049E-04
^{151}Sm	1.101E+05	1.725E+03	2.503E+02	4.245E+02	9.218E+02	1.005E+01	6.504E+02	1.224E+01	1.854E-02	1.702E-02	1.485E-02	1.693E-02
^{152}Eu	9.646E+01	7.346E-02	3.799E-02	7.589E-02	1.725E-01	8.580E-04	1.828E-01	1.064E-03	1.822E-06	1.672E-06	1.460E-06	1.664E-06
^{154}Eu	1.721E+03	8.960E+01	2.551E+00	1.857E+00	1.160E+01	5.324E-02	1.229E+01	6.603E-02	1.112E-04	1.021E-04	8.907E-05	1.015E-04
^{155}Eu	7.083E+02	3.908E+01	9.548E-01	1.908E+00	4.337E+00	1.802E-02	4.594E+00	2.238E-02	3.796E-05	3.483E-05	3.040E-05	3.466E-05
^{226}Ra	4.160E+02	6.420E-07	1.791E-06	3.517E-07	1.680E-06	3.157E-08	1.582E-06	4.770E-08	7.901E-10	7.251E-10	6.328E-10	7.214E-10
^{227}Ac	5.101E-02	1.116E-04	1.359E-04	5.647E-05	1.272E-04	2.217E-07	1.208E-04	3.343E-07	4.141E-09	3.800E-09	3.317E-09	3.781E-09
^{228}Ra	4.200E-02	4.979E-05	1.538E-04	2.803E-05	1.467E-04	3.525E-05	1.343E-04	8.129E-09	2.143E-09	7.048E-10	2.492E-09	1.200E-09
^{229}Th	1.762E-02	7.894E-07	7.843E-07	3.362E-07	7.482E-07	3.431E-10	6.875E-07	4.391E-10	1.089E-12	9.992E-13	8.721E-13	9.942E-13
^{231}Pa	1.130E-01	7.583E-04	8.263E-04	3.467E-04	7.720E-04	1.175E-06	7.152E-04	1.792E-06	7.991E-09	7.333E-09	6.400E-09	7.297E-09
^{232}Th	8.625E-02	2.702E-06	2.756E-06	1.162E-06	2.619E-06	6.741E-04	2.382E-06	2.725E-08	6.426E-09	2.039E-09	8.881E-09	3.458E-09
^{232}U	1.952E-01	8.093E-04	2.705E-04	8.489E-05	1.271E-04	2.267E-06	3.781E-04	6.596E-07	2.355E-10	2.314E-10	1.175E-10	1.639E-08
^{233}U	1.278E+01	5.020E-02	1.670E-02	5.150E-03	7.869E-03	9.352E-06	2.338E-02	2.459E-06	1.247E-11	1.225E-11	6.221E-12	8.682E-10
^{234}U	6.684E+00	3.179E-02	1.115E-02	3.778E-02	5.822E-03	6.164E-02	2.734E-02	1.882E-02	6.429E-06	6.315E-06	3.207E-06	4.475E-04
^{235}U	2.844E-01	1.327E-03	4.674E-04	1.446E-03	2.441E-04	2.658E-03	1.166E-03	8.127E-04	2.733E-07	2.684E-07	1.363E-07	1.902E-05
^{236}U	1.192E-01	7.869E-04	2.585E-04	1.052E-03	1.371E-04	1.225E-03	5.817E-04	3.631E-04	1.315E-07	1.292E-07	6.561E-08	9.156E-06
^{237}Np	3.215E+00	8.743E-02	3.193E-02	2.294E-02	5.019E-02	6.667E-04	4.082E-02	8.066E-04	1.308E-06	1.201E-06	1.048E-06	2.777E-05
^{238}Pu	6.238E+01	1.077E+00	4.735E-01	1.041E-01	3.832E-02	3.769E-02	2.798E-01	2.707E-03	3.999E-05	5.178E-05	3.184E-05	1.233E-03
^{238}U	6.456E+00	2.988E-02	1.053E-02	2.703E-02	5.512E-03	6.270E-02	2.688E-02	1.910E-02	6.258E-06	6.144E-06	3.116E-06	4.373E-04
^{239}Pu	1.635E+03	3.060E+01	1.357E+01	3.905E+00	1.162E+00	2.446E+00	9.988E+00	3.749E-01	2.569E-03	3.326E-03	2.045E-03	7.919E-02
^{240}Pu	3.443E+02	6.674E+00	2.909E+00	8.551E-01	2.478E-01	4.196E-01	2.026E+00	4.147E-02	4.882E-04	6.321E-04	3.887E-04	1.505E-02
^{241}Am	2.840E+03	1.029E+02	2.105E+01	1.830E+00	2.443E+00	9.818E-01	1.247E+01	6.610E-02	2.127E-03	2.436E-03	2.083E-03	2.756E-02
^{241}Pu	2.238E+03	4.269E+01	1.919E+01	4.905E+00	1.535E+00	1.173E+00	1.068E+01	7.200E-02	1.556E-03	2.014E-03	1.239E-03	4.796E-02
^{242}Cm	2.314E+00	3.022E-02	3.811E-02	3.457E-04	1.391E-03	4.298E-05	1.700E-02	1.029E-05	3.933E-08	4.469E-08	3.829E-08	5.045E-07
^{242}Pu	2.090E-02	4.093E-04	1.820E-04	3.911E-05	1.461E-05	1.159E-05	1.026E-04	6.007E-07	1.450E-08	1.877E-08	1.154E-08	4.469E-07
^{243}Am	1.682E+00	6.218E-02	1.216E-02	9.161E-04	1.406E-03	3.077E-04	6.871E-03	6.232E-06	2.330E-08	2.648E-08	2.269E-08	2.989E-07
^{243}Cm	4.476E-01	1.008E-03	1.293E-03	1.166E-05	4.692E-05	6.236E-07	5.749E-04	1.155E-07	6.828E-10	7.759E-10	6.647E-10	8.759E-09
^{244}Cm	1.058E+01	2.349E-02	3.023E-02	2.722E-04	1.096E-03	1.450E-05	1.343E-02	2.599E-06	1.598E-08	1.816E-08	1.555E-08	2.050E-07
^{3}H	4.871E+00	2.162E-02	4.100E-02	5.149E-02	4.013E-02	5.360E-04	2.835E-02	1.658E-02	8.263E-02	7.583E-02	6.618E-02	7.545E-02
^{59}Ni	4.692E+01	3.271E-01	9.472E-02	1.358E-01	1.991E-01	2.811E-02	1.595E-01	3.564E-02	1.291E-03	1.185E-03	1.034E-03	1.179E-03
^{60}Co	1.894E+02	5.393E+00	4.091E-01	8.007E-01	5.609E-01	1.692E-02	8.720E-01	2.654E-02	3.999E-03	3.670E-03	3.203E-03	3.652E-03
^{63}Ni	4.456E+03	3.047E+01	8.876E+00	1.267E+01	1.858E+01	2.516E+00	1.478E+01	3.203E+00	1.233E-01	1.131E-01	9.875E-02	1.126E-01
^{79}Se	1.344E-01	1.860E-03	1.052E-03	8.403E-04	1.593E-03	1.902E-05	1.558E-03	9.235E-06	4.531E-07	4.157E-07	3.629E-07	4.137E-07
^{90}Sr	1.437E+06	7.652E+03	8.269E+01	3.216E+02	5.893E+02	2.106E+03	4.092E+03	3.219E+03	2.001E-01	7.917E-02	1.700E-01	4.763E+00
^{90}Y	1.437E+06	7.652E+03	8.269E+01	3.216E+02	5.893E+02	2.106E+03	4.092E+03	3.219E+03	2.001E-01	7.917E-02	1.700E-01	4.763E+00
^{93}Zr	7.851E+01	1.836E+00	1.527E+00	7.036E-01	1.557E+00	1.847E-02	1.426E+00	2.262E-02	2.713E-05	2.489E-05	2.173E-05	2.477E-05
^{93m}Nb	7.077E+01	1.185E+00	1.453E+00	6.677E-01	1.485E+00	1.650E-02	1.368E+00	2.156E-02	2.372E-05	2.177E-05	1.900E-05	2.166E-05
^{99}Tc	1.369E+02	2.932E-01	6.618E+00	3.070E+00	6.735E+00	4.530E-02	6.227E+00	7.425E-03	3.755E-03	3.409E-03	3.344E-03	1.990E-03

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	A-101	A-102	A-103	A-104	A-105	A-106	AN-101	AN-102	AN-103	AN-104	AN-105	AN-106	AN-107
Ag^{+}	7.691E+01	3.400E+00	0.000E+00	1.665E+00	0.000E+00	0.000E+00	4.621E+00	4.482E-04	9.201E-03	1.057E-04	1.741E-03	1.498E-04	1.617E-06	2.418E-03
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	5.590E+02	1.923E+02	1.363E+02	3.651E+02	3.951E+02	2.640E+02	6.718E+00	9.880E-01	4.565E+00	8.879E+00	8.693E+00	2.652E+00	1.098E+01
As^{+5}	1.367E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.430E-03	3.724E-02	2.117E-04	5.520E-03	4.011E-04	3.238E-06	2.751E-03
B^{+3}	5.102E+02	1.706E+01	5.329E-01	1.633E+00	0.000E+00	0.000E+00	3.131E-01	3.345E-03	2.788E-01	1.352E-03	1.305E-02	1.193E-03	2.148E-05	1.136E-02
Ba^{+2}	2.957E+02	9.373E+00	0.000E+00	4.149E+01	5.932E+00	0.000E+00	2.748E+01	8.312E-04	1.893E-02	2.898E-04	2.775E-03	4.770E-04	1.920E-06	2.178E-03
Be^{+2}	3.181E+01	9.373E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.084E-05	1.840E-03	6.332E-04	2.759E-04	3.338E-03	1.200E-04	5.870E-04
Bi^{+3}	1.455E+04	2.477E+00	1.119E+01	4.784E+00	1.698E-04	0.000E+00	2.476E+00	7.059E-02	2.059E-01	3.543E-01	2.169E-02	1.975E-01	1.800E+00	9.192E-01
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2C_{l4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	1.625E+03	2.621E+02	7.548E+02	0.000E+00	0.000E+00	1.028E+02	9.710E-01	1.771E+00	3.134E-01	8.789E-01	6.442E-01	7.396E-01	8.739E-01
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	7.562E+01	2.258E+01	1.163E+02	5.338E+01	8.536E+01	8.681E+01	9.400E-02	1.375E-01	8.510E-02	4.691E-02	1.361E-01	1.251E-01	1.620E-01
Cd^{+2}	4.870E+01	2.540E+00	0.000E+00	2.901E-01	0.000E+00	0.000E+00	4.756E-01	1.962E-04	5.617E-03	5.577E-04	7.641E-04	2.939E-03	1.048E-04	9.162E-04
Ce^{+3}	1.816E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.429E-03	3.683E-02	2.770E-04	5.520E-03	4.294E-04	4.255E-06	2.684E-03
CH_2C_{l2}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	9.022E+00	2.450E+01	1.198E+01	2.764E-01	5.001E-01	1.348E+01	6.100E-01	6.791E-02	1.144E-01	5.595E-01	4.577E-01	2.759E-01	1.762E-01
CN^{-}	1.564E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.948E-18	3.686E-04	1.670E-07	2.697E-14	2.164E-05	2.881E-10	4.746E-04
Co^{+3}	4.627E+01	6.700E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.237E-01	2.859E-04	7.127E-03	4.349E-05	1.104E-03	1.024E-04	6.474E-07	8.362E-04
CO_3^{-2}	2.793E+04	2.192E+02	8.445E+01	1.500E+02	6.879E+01	7.692E+02	3.666E+01	7.663E+00	4.581E+00	9.646E-01	5.837E+00	4.755E+00	4.137E+00	1.494E+00
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	6.516E+02	2.915E+02	1.083E+02	3.552E+00	1.886E+01	7.840E+01	8.265E-01	8.733E-01	1.509E-01	8.301E-01	4.393E-01	2.657E-01	4.682E-01
Cs^{+}	4.683E+00	1.563E-02	7.294E-02	1.925E-02	1.207E-02	2.369E-02	1.972E-02	7.111E-04	2.853E-04	6.876E-05	7.419E-04	4.823E-04	1.935E-04	2.327E-04
Cu^{+2}	6.217E+01	2.557E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.394E+00	1.906E-04	6.031E-03	6.478E-05	5.578E-04	1.522E-04	9.770E-07	1.312E-03
F-	6.398E+03	1.242E+00	1.178E+00	2.472E+00	5.742E-03	1.615E-01	1.768E-01	2.276E-01	2.149E+00	2.025E+00	2.820E-01	6.289E-01	8.988E-01	1.942E+00
Fe^{+3}	3.644E+04	1.326E+02	6.612E+02	5.421E+01	1.337E+03	9.349E+02	4.387E+02	3.871E-01	8.374E-01	7.616E-01	1.132E-01	5.449E-01	1.421E+00	1.195E+00
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	8.245E+03	8.118E+03	8.175E+03	8.619E+03	8.522E+03	8.430E+03	3.481E+02	3.621E+02	3.661E+02	3.547E+02	3.480E+02	3.567E+02	3.539E+02
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	4.400E-03	3.201E-03	3.300E-02	5.569E-01	1.381E+00	7.959E-01	4.972E-04	8.582E-04	7.348E-04	7.638E-04	6.995E-04	3.620E-04	1.241E-03

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	A-101	A-102	A-103	A-104	A-105	A-106	AN-101	AN-102	AN-103	AN-104	AN-105	AN-106	AN-107
K^{+}	1.531E+03	6.954E+00	2.652E+01	1.932E+01	1.222E-01	2.004E-01	1.256E+01	1.806E-01	1.110E-01	2.385E-02	1.603E-01	1.364E-01	1.847E-01	5.343E-02
La^{+3}	5.251E+02	2.388E+00	3.475E+00	2.880E-05	3.317E-01	2.125E+01	1.462E+00	9.988E-04	1.209E-02	7.434E-03	6.974E-04	2.948E-03	2.005E-03	1.070E-03
Li^{+}	5.916E+01	7.534E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.399E-04	1.849E-03	3.599E-04	1.309E-03	2.219E-04	5.749E-06	3.999E-03
Mg^{+2}	6.038E+02	0.000E+00	0.000E+00	5.783E+01	1.284E+01	0.000E+00	4.729E+01	8.402E-03	4.024E-02	1.581E-03	6.373E-03	1.094E-02	1.912E-05	1.074E-02
Mn^{+4}	4.661E+03	1.995E+01	1.116E+02	5.417E+00	1.872E+02	3.157E+01	2.222E+01	6.404E-02	1.105E-01	5.170E-02	2.376E-02	7.833E-02	1.643E-02	9.503E-02
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	1.033E+01	1.224E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.225E-03	1.952E-02	1.136E-04	4.785E-03	4.089E-04	1.634E-06	2.697E-03
Na^{+}	1.044E+05	4.854E+02	7.723E+02	8.369E+02	1.338E+02	4.834E+02	4.904E+02	3.690E+01	2.408E+01	1.802E+01	3.510E+01	2.639E+01	2.192E+01	1.515E+01
Nd^{+3}	1.805E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.432E-03	4.014E-02	2.160E-04	5.521E-03	4.114E-04	3.236E-06	3.483E-03
NH_3	6.077E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.877E-16	4.171E-03	1.412E-05	8.445E-13	1.563E-05	0.000E+00	1.256E-04
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	3.614E+01	1.360E+01	6.251E+00	3.979E+01	1.353E+02	1.021E+01	1.600E-02	3.198E-02	9.258E-02	7.097E-03	4.632E-02	2.590E-02	6.073E-02
NO_2^{-}	1.001E+04	1.670E+02	2.557E+02	2.224E+02	1.425E+01	3.581E+00	1.407E+02	7.124E+00	9.619E-01	7.296E-01	5.996E+00	4.587E+00	4.886E+00	1.567E+00
NO_3^{-}	6.976E+04	3.078E+02	3.743E+02	3.159E+02	1.359E+00	9.158E+01	1.549E+02	5.165E+01	1.802E+01	1.270E+01	4.779E+01	3.707E+01	2.188E+01	1.381E+01
$OH_{(BOUND)}$	2.767E+05	1.359E+03	2.110E+03	2.485E+03	2.433E+03	1.961E+03	2.753E+03	1.069E+01	8.253E+00	1.011E+01	1.125E+01	1.811E+01	8.443E+00	2.332E+01
OH^{-}	9.299E+03	1.356E+02	2.206E+02	1.397E+02	4.888E+01	1.442E+02	6.124E+00	8.486E+00	1.189E+00	2.147E+00	1.087E+01	3.884E+00	1.882E+00	2.018E+00
Pb^{+2}	2.331E+03	3.603E+01	4.702E+01	2.382E+00	2.011E+00	1.324E+02	1.684E+01	9.065E-02	6.595E-02	1.312E-01	3.238E-02	1.583E-01	1.079E-01	6.389E-02
Pd^{+2}	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.469E-13	0.000E+00	1.965E-12	1.666E-26	5.041E-15
PO_4^{-3}	5.079E+04	8.269E+01	5.602E+01	2.246E+01	1.528E+01	1.087E+02	1.785E+02	2.552E+00	9.156E+00	8.121E+00	3.103E+00	2.949E+00	4.940E+00	5.303E+00
Pr^{+3}	8.227E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.052E-19	0.000E+00	2.062E-08	4.840E-16	1.387E-07	2.172E-19	3.648E-07
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.324E-20	0.000E+00	7.377E-08	9.450E-17	4.152E-08	8.294E-19	6.882E-08
Rh^{+3}	5.365E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.099E-06	0.000E+00	5.797E-08	2.565E-07	2.842E-06	4.801E-19	8.316E-08
Ru^{+3}	1.754E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.247E-05	0.000E+00	1.618E-07	2.753E-06	3.005E-05	9.297E-25	1.041E-06
Sb^{+5}	8.891E+01	8.190E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.510E-04	2.075E-02	1.279E-04	3.319E-03	2.662E-04	1.941E-06	1.868E-03
Se^{+6}	1.680E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.434E-03	1.073E-03	2.233E-04	5.609E-03	2.929E-04	3.428E-06	6.096E-04
Si^{+4}	1.770E+04	1.152E+01	1.314E+02	8.069E+02	8.403E+01	1.688E+02	6.383E+02	7.789E-01	2.492E-01	5.101E-01	1.451E-01	1.168E+00	7.921E-01	6.232E-01
SO_4^{-2}	1.131E+04	1.407E+02	8.770E+01	8.822E+01	3.541E+00	4.733E+01	7.575E+00	2.635E+00	8.154E+00	5.233E+00	2.564E+00	2.254E+00	2.959E+00	2.547E+00
Sr^{+2}	1.289E+03	1.991E+00	9.478E-01	8.793E-01	1.964E+00	2.411E+00	7.727E-01	2.509E-03	4.761E-02	8.298E-03	5.219E-04	1.157E-02	2.838E-02	2.356E-02
Ta^{+5}	2.519E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.571E-21	0.000E+00	5.294E-10	1.669E-17	4.884E-09	5.418E-21	1.238E-08
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.906E-21	0.000E+00	1.324E-10	2.940E-17	1.113E-08	1.786E-25	1.738E-08
Th^{+4}	1.943E+00	1.622E-07	7.927E-07	3.414E-07	4.794E-07	0.000E+00	0.000E+00	8.981E-06	6.208E-05	1.350E-04	1.157E-06	6.823E-05	2.610E-05	1.344E-06
Ti^{+4}	4.390E+01	1.871E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.844E-04	4.179E-03	1.241E-04	6.549E-04	1.235E-03	1.866E-06	1.980E-03
Tl^{+3}	7.736E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.823E-03	1.083E-02	1.676E-05	1.103E-02	1.871E-04	3.049E-19	5.043E-03
TOC	1.093E+04	3.984E+02	2.493E+02	1.558E+02	0.000E+00	0.000E+00	3.976E+01	2.911E-01	1.286E+00	3.876E-02	1.401E-01	2.707E-01	3.628E-01	4.104E-01
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	9.373E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.345E-03	1.713E-02	1.120E-04	2.838E-03	1.064E-03	1.625E-06	1.939E-03
W^{+6}	1.459E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.415E-19	0.000E+00	1.694E-08	4.465E-15	1.513E-06	6.171E-25	2.929E-06
Y^{+3}	3.836E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.213E-05	1.024E-03	6.271E-07	3.927E-06	4.608E-05	5.628E-09	1.934E-04
Zn^{+2}	1.873E+02	4.633E+00	0.000E+00	3.944E+00	0.000E+00	0.000E+00	0.000E+00	6.573E-04	1.416E-02	3.526E-04	1.720E-03	6.077E-04	5.432E-06	9.467E-03
Zr^{+4}	1.053E+03	1.538E-01	1.589E+01	1.275E+01	8.328E-01	4.878E+01	1.969E+01	3.386E-03	3.615E-02	1.691E-02	9.051E-04	9.149E-03	1.700E-03	4.150E-01

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	AP-101	AP-102	AP-103	AP-104	AP-105	AP-106	AP-107	AP-108	AW-101	AW-102	AW-103	AW-104	AW-105
Ag^{+}	7.691E+01	5.552E-04	5.247E-03	2.695E-03	5.410E-04	1.143E-03	1.579E-03	6.646E-07	7.782E-04	9.174E-04	3.894E-03	3.157E-03	6.639E-04	6.840E-02
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	7.913E+00	3.465E+01	7.654E+00	6.806E+00	9.411E+00	6.664E+00	1.677E-01	1.023E+01	7.682E+00	8.319E+00	7.343E+00	6.176E+00	2.305E+00
As^{+5}	1.367E+02	9.229E-04	1.671E-02	9.702E-03	1.689E-03	3.626E-03	1.202E-03	5.805E-06	6.320E-03	3.238E-03	8.019E-03	5.763E-03	2.098E-03	1.670E-02
B^{+3}	5.102E+02	3.604E-03	3.998E-02	1.820E-02	3.990E-03	8.885E-03	5.567E-03	1.150E-05	1.409E-02	7.942E-03	2.076E-02	1.470E-02	4.908E-03	5.480E-02
Ba^{+2}	2.957E+02	5.607E-04	8.487E-03	5.149E-03	9.528E-04	1.979E-03	1.007E-03	2.561E-06	2.011E-03	1.852E-03	4.439E-03	4.689E-03	1.158E-03	1.949E-02
Be^{+2}	3.181E+01	4.886E-05	8.428E-04	4.924E-04	8.396E-05	2.122E-04	7.525E-05	2.001E-07	2.047E-04	1.609E-04	4.082E-04	3.246E-04	1.334E-04	8.270E-03
Bi^{+3}	1.455E+04	9.501E-03	5.646E-01	1.377E-01	8.418E-02	1.150E-01	4.776E-02	2.003E-04	7.527E-03	5.177E-02	1.164E-01	1.557E-02	4.448E-01	5.682E+00
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2C_{l4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	2.146E-01	4.743E+00	1.212E+00	8.106E-01	7.134E-01	4.881E-01	5.085E-03	4.611E-01	4.249E-01	6.690E-01	1.014E+00	7.142E-01	5.611E-01
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	2.827E-02	8.091E-01	9.732E-02	8.518E-02	1.478E-01	6.229E-02	7.313E-04	1.073E-02	5.215E-02	5.261E-02	3.554E-01	8.962E-02	3.163E-01
Cd^{+2}	4.870E+01	1.535E-04	1.188E-03	1.150E-03	2.295E-04	5.085E-04	2.290E-04	8.866E-07	6.241E-04	3.878E-04	1.215E-03	6.315E-04	3.129E-04	4.334E-03
Ce^{+3}	1.816E+02	9.967E-04	1.690E-02	1.078E-02	1.802E-03	3.753E-03	1.343E-03	3.590E-06	3.510E-03	3.383E-03	8.222E-03	5.981E-03	2.099E-03	2.273E-02
CH_2C_{l2}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	1.871E-01	4.945E-01	4.668E-01	5.245E-01	4.923E-01	2.824E-01	6.801E-02	2.236E+00	2.352E-01	1.580E-01	1.558E-01	4.209E-01	8.599E-03
CN^{-}	1.564E+02	1.998E-04	1.683E-06	5.301E-04	1.156E-07	2.253E-04	4.026E-05	0.000E+00	7.400E-06	1.395E-06	3.281E-05	2.471E-04	7.833E-06	2.238E-04
Co^{+3}	4.627E+01	1.889E-04	3.405E-03	2.009E-03	3.552E-04	7.782E-04	2.794E-04	1.039E-06	8.653E-04	6.829E-04	1.631E-03	1.309E-03	4.280E-04	1.056E-02
CO_3^{-2}	2.793E+04	8.991E-01	7.999E+00	5.431E+00	6.640E+00	5.517E+00	2.846E+00	2.694E-01	1.138E+01	1.628E+00	2.092E+00	1.059E+00	4.830E+00	1.929E+00
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	2.378E-01	5.032E+00	1.118E+00	6.818E-01	5.755E-01	2.654E-01	9.839E-03	5.777E-01	3.500E-01	7.809E-01	3.644E-01	5.197E-01	2.875E-01
Cs^{+}	4.683E+00	1.717E-04	1.417E-03	7.151E-04	6.029E-04	5.887E-04	3.424E-04	8.828E-05	3.619E-03	2.308E-04	2.397E-04	2.954E-04	4.854E-04	3.617E-04
Cu^{+2}	6.217E+01	3.589E-04	1.843E-03	1.734E-03	2.873E-04	5.809E-04	9.760E-04	1.098E-06	1.700E-03	9.236E-04	1.967E-03	1.828E-03	2.483E-04	3.194E-02
F-	6.398E+03	1.060E-01	5.087E-01	3.851E-01	2.604E-01	3.025E-01	6.395E-01	1.376E-03	2.470E-01	9.226E-02	7.231E-01	8.119E-01	3.646E-01	3.504E+00
Fe^{+3}	3.644E+04	1.783E-01	2.775E+00	9.544E-01	3.582E-01	4.964E-01	2.944E-01	1.307E-04	4.264E-03	3.586E-01	3.946E-01	3.096E-01	5.367E-01	5.970E+00
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	3.632E+02	3.111E+02	3.430E+02	3.503E+02	3.537E+02	3.601E+02	3.772E+02	2.855E+02	3.616E+02	3.637E+02	3.663E+02	3.551E+02	3.392E+02
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	9.634E-04	3.073E-03	6.835E-04	5.771E-04	7.357E-04	4.612E-04	4.138E-07	1.074E-04	1.128E-03	5.761E-04	6.439E-04	5.639E-04	1.423E-03

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	AP-101	AP-102	AP-103	AP-104	AP-105	AP-106	AP-107	AP-108	AW-101	AW-102	AW-103	AW-104	AW-105
K^{+}	1.531E+03	4.992E-02	2.530E-01	1.394E-01	1.610E-01	1.564E-01	7.929E-02	2.833E-02	3.543E+00	7.017E-02	5.009E-02	5.020E-02	1.489E-01	8.410E-02
La^{+3}	5.251E+02	1.661E-03	8.031E-03	2.238E-03	1.116E-03	1.931E-03	1.568E-03	1.206E-05	7.802E-04	2.219E-03	1.035E-03	1.106E-03	1.347E-03	8.176E-02
Li^{+}	5.916E+01	4.366E-04	4.278E-03	5.948E-03	4.225E-04	9.464E-04	7.605E-04	3.359E-07	2.650E-04	1.003E-03	8.802E-03	2.250E-03	4.938E-04	2.335E-03
Mg^{+2}	6.038E+02	1.946E-03	1.734E-02	1.255E-02	7.052E-03	7.188E-03	5.531E-03	5.884E-06	6.704E-03	4.952E-03	1.284E-02	1.313E-02	6.337E-03	1.704E-01
Mn^{+4}	4.661E+03	7.090E-02	4.333E-01	1.093E-01	6.150E-02	6.321E-02	6.276E-02	1.211E-05	7.204E-04	1.154E-01	5.861E-02	3.672E-02	3.922E-02	1.627E-01
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	7.517E-04	1.325E-02	6.757E-03	1.507E-03	3.339E-03	9.646E-04	1.815E-05	2.401E-02	3.263E-03	4.443E-03	4.064E-03	1.855E-03	2.073E-02
Na^{+}	1.044E+05	9.725E+00	4.031E+01	3.419E+01	3.317E+01	2.923E+01	1.553E+01	1.788E+00	8.551E+01	1.237E+01	9.718E+00	8.739E+00	2.650E+01	2.832E+01
Nd^{+3}	1.805E+02	1.192E-03	1.698E-02	1.160E-02	1.872E-03	3.846E-03	2.103E-03	2.792E-06	1.653E-03	3.538E-03	9.228E-03	7.229E-03	2.102E-03	3.514E-02
NH_3	6.077E+01	7.227E-06	9.238E-04	4.085E-03	7.019E-04	6.497E-04	1.055E-05	1.391E-05	3.146E-03	2.777E-04	1.040E-04	1.103E-04	6.049E-06	3.509E-02
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	1.535E-02	8.187E-02	2.812E-02	1.375E-02	1.299E-02	4.254E-02	7.186E-04	7.148E-03	1.536E-02	5.164E-02	9.672E-02	1.609E-02	1.939E-02
NO_2^{-}	1.001E+04	1.707E+00	5.986E+00	4.788E+00	6.085E+00	5.564E+00	2.931E+00	1.323E+00	3.442E+01	2.457E+00	1.889E+00	2.039E+00	5.035E+00	2.189E+01
NO_3^{-}	6.976E+04	1.446E+01	4.359E+01	5.208E+01	4.728E+01	3.961E+01	2.246E+01	1.936E+00	7.498E+01	1.831E+01	1.183E+01	9.123E+00	3.517E+01	5.733E+00
$OH_{(BOUND)}$	2.767E+05	1.517E+01	7.592E+01	1.654E+01	1.092E+01	1.534E+01	1.261E+01	4.264E-01	2.531E+01	1.478E+01	1.623E+01	1.487E+01	1.115E+01	1.960E+01
OH^{-}	9.299E+03	2.120E+00	7.152E+00	5.485E+00	7.359E+00	7.443E+00	2.040E+00	4.088E-01	1.581E+01	2.955E+00	2.113E+00	2.176E+00	5.710E+00	8.666E+00
Pb^{+2}	2.331E+03	5.283E-03	8.382E-01	1.134E-01	7.823E-02	1.536E-01	3.127E-02	2.087E-04	1.706E-02	1.572E-02	2.003E-02	2.297E-02	7.087E-02	3.059E-01
Pd^{+2}	1.275E+01	5.651E-07	1.103E-11	8.794E-15	6.053E-09	1.053E-08	2.254E-09	0.000E+00	2.751E-06	0.000E+00	6.407E-10	3.297E-17	5.563E-18	0.000E+00
PO_4^{-3}	5.079E+04	4.841E-01	4.584E+00	2.887E+00	2.501E+00	3.318E+00	2.396E+00	5.038E-01	1.448E+00	7.357E-01	1.358E+00	1.279E+00	2.921E+00	1.014E+01
Pr^{+3}	8.227E+00	2.222E-08	1.290E-06	9.441E-05	6.976E-09	4.913E-07	3.460E-08	0.000E+00	2.541E-08	8.677E-08	5.861E-07	3.193E-06	5.074E-08	0.000E+00
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	7.206E-07	4.811E-06	1.957E-05	3.593E-08	7.374E-08	1.873E-08	0.000E+00	3.140E-06	1.465E-08	7.642E-08	1.611E-06	1.540E-08	0.000E+00
Rh^{+3}	5.365E+00	1.053E-06	2.789E-06	2.869E-05	1.538E-06	9.958E-07	9.035E-08	0.000E+00	4.956E-06	2.168E-08	1.125E-07	2.426E-06	1.199E-06	3.473E-03
Ru^{+3}	1.754E+01	1.236E-06	9.354E-08	1.489E-04	1.629E-05	1.029E-05	8.611E-07	0.000E+00	3.245E-06	1.223E-07	7.144E-07	9.833E-06	1.269E-05	1.552E-02
Sb^{+5}	8.891E+01	5.598E-04	9.120E-03	5.576E-03	1.007E-03	2.211E-03	1.040E-03	3.498E-06	3.171E-03	1.662E-03	4.554E-03	3.136E-03	1.271E-03	1.342E-02
Se^{+6}	1.680E+01	2.893E-04	2.663E-03	5.828E-03	1.776E-03	3.777E-03	1.240E-03	2.039E-05	7.120E-03	1.038E-03	2.709E-03	2.422E-03	2.086E-03	1.151E-03
Si^{+4}	1.770E+04	1.152E-01	9.334E-01	5.848E-01	6.341E-01	5.220E-01	3.848E-01	1.177E-03	4.824E-02	3.953E-01	2.093E-01	2.835E-01	6.718E-01	3.004E+00
SO_4^{-2}	1.131E+04	6.242E-01	2.978E+00	1.673E+00	2.730E+00	2.277E+00	1.083E+00	1.281E-01	2.188E+00	9.496E-01	4.760E-01	2.845E-01	2.200E+00	1.039E+00
Sr^{+2}	1.289E+03	1.124E-02	6.570E-03	6.327E-03	3.527E-03	5.681E-03	1.260E-02	2.541E-06	1.540E-04	9.953E-03	1.148E-02	7.772E-02	1.042E-02	6.317E-02
Ta^{+5}	2.519E+00	2.186E-08	3.247E-08	3.261E-06	4.366E-09	1.370E-08	2.722E-09	0.000E+00	2.107E-08	2.975E-09	1.977E-08	1.178E-07	1.790E-09	0.000E+00
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	2.811E-08	1.809E-09	5.874E-06	4.630E-09	1.331E-07	3.476E-09	0.000E+00	2.757E-08	4.805E-09	2.902E-08	3.944E-07	4.142E-09	4.171E-03
Th^{+4}	1.943E+00	8.270E-09	4.726E-06	6.232E-07	6.460E-06	3.913E-06	5.400E-07	1.917E-08	1.983E-06	3.340E-08	7.161E-08	1.250E-06	1.102E-05	4.002E-05
Ti^{+4}	4.390E+01	3.769E-04	1.791E-03	1.353E-03	8.267E-04	8.659E-04	1.149E-03	3.065E-07	3.169E-03	8.950E-04	2.106E-03	2.192E-03	6.957E-04	5.691E-03
Tl^{+3}	7.736E+01	7.401E-04	3.301E-02	1.175E-02	3.339E-03	5.913E-03	2.418E-03	1.113E-05	1.569E-02	3.418E-04	1.604E-02	3.020E-03	4.024E-03	4.125E-02
TOC	1.093E+04	8.294E-02	1.270E+00	5.476E-01	2.310E-01	1.842E-01	1.932E-01	4.598E-02	1.530E+00	1.112E-01	1.715E-01	1.711E-01	2.256E-01	3.020E-01
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	4.821E-04	8.424E-03	5.082E-03	1.304E-03	2.111E-03	7.403E-04	1.403E-06	6.932E-04	1.613E-03	4.166E-03	3.289E-03	1.413E-03	1.460E-02
W^{+6}	1.459E+01	6.775E-06	2.705E-07	8.826E-04	1.356E-06	3.839E-06	7.833E-07	0.000E+00	7.878E-06	7.600E-07	4.699E-06	4.687E-05	5.599E-07	1.850E-03
Y^{+3}	3.836E+00	2.554E-08	2.334E-06	6.505E-05	2.312E-05	1.342E-05	3.746E-06	8.852E-08	1.475E-04	4.682E-08	2.206E-07	6.380E-06	1.930E-05	1.921E-03
Zn^{+2}	1.873E+02	2.009E-03	5.909E-03	6.427E-03	9.168E-04	1.930E-03	7.099E-03	5.269E-07	1.730E-03	3.208E-03	1.184E-02	1.092E-02	7.920E-04	5.970E-02
Zr^{+4}	1.053E+03	9.330E-02	2.191E-02	9.760E-02	6.473E-03	8.207E-03	3.904E-01	1.532E-06	1.939E-04	1.508E-02	5.137E-01	5.114E-01	2.635E-03	1.016E+01

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	AW-106	AX-101	AX-102	AX-103	AX-104	AY-101	AY-102	AZ-101	AZ-102	B-101	B-102	B-103	B-104
Ag^{+}	7.691E+01	9.476E-04	4.235E+00	0.000E+00	0.000E+00	0.000E+00	4.697E-05	5.633E-03	6.916E-04	1.043E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	7.022E+00	2.789E+02	2.743E+02	4.100E+02	3.075E+02	3.469E+00	9.601E+00	7.103E+00	7.214E+00	6.810E+02	7.526E+02	7.293E+02	1.177E+02
As^{+5}	1.367E+02	1.169E-03	1.250E+01	0.000E+00	0.000E+00	0.000E+00	7.089E-09	3.661E-03	1.790E-03	1.509E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
B^{+3}	5.102E+02	4.119E-03	2.233E+01	0.000E+00	0.000E+00	0.000E+00	5.475E-05	8.843E-03	4.033E-03	1.115E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ba^{+2}	2.957E+02	1.306E-03	6.247E+00	1.155E+01	0.000E+00	9.509E+00	5.885E-03	6.770E-03	2.325E-03	4.775E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Be^{+2}	3.181E+01	1.249E-03	6.251E-01	0.000E+00	0.000E+00	0.000E+00	3.101E-07	2.133E-04	1.080E-04	1.468E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Bi^{+3}	1.455E+04	1.085E-01	3.746E+00	5.583E-01	1.149E+00	0.000E+00	1.663E-04	1.122E-01	8.009E-02	4.879E-02	8.101E+01	1.310E+02	1.270E+02	7.401E+02
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2C_{l4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	9.872E-01	1.657E+03	4.782E+02	3.456E+02	0.000E+00	2.919E-02	6.995E-01	7.855E-01	5.225E-01	3.099E+01	1.974E+02	2.222E+01	9.582E+01
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	1.090E-01	9.997E+01	5.833E+01	5.315E+01	4.986E+01	9.554E-01	1.741E-01	8.852E-02	8.656E-02	7.618E+01	1.507E+01	1.601E+01	2.131E+01
Cd^{+2}	4.870E+01	8.196E-04	2.141E+00	0.000E+00	0.000E+00	4.977E+00	4.602E-05	1.368E-03	1.361E-02	1.025E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ce^{+3}	1.816E+02	7.009E-04	1.250E+01	0.000E+00	0.000E+00	0.000E+00	4.601E-08	1.100E-02	2.825E-03	6.637E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CH_2C_{l2}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	1.747E-01	9.656E+00	2.376E+00	1.546E+01	1.924E-01	5.027E-02	4.699E-01	5.038E-01	2.932E-01	8.421E-01	3.178E+00	2.437E+00	7.882E+00
CN^{-}	1.564E+02	8.245E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.320E-09	3.663E-04	2.630E-05	3.035E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Co^{+3}	4.627E+01	4.401E-04	2.492E+00	0.000E+00	0.000E+00	0.000E+00	2.189E-06	1.016E-03	4.336E-04	7.042E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CO_3^{-2}	2.793E+04	2.907E+00	2.774E+02	2.713E+02	1.627E+02	5.270E+02	8.127E+00	5.943E+00	6.505E+00	3.417E+00	4.599E+01	1.527E+01	1.680E+01	8.600E+02
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	5.075E-01	5.985E+02	2.374E+01	2.811E+02	2.074E+00	2.497E-01	5.667E-01	6.566E-01	2.723E-01	1.859E+01	2.280E+01	2.203E+01	3.241E+01
Cs^{+}	4.683E+00	2.576E-04	1.870E-02	2.198E-02	2.282E-02	2.495E-02	1.846E-03	6.580E-04	6.869E-04	6.570E-04	3.241E-04	1.507E-03	1.446E-03	1.766E-02
Cu^{+2}	6.217E+01	6.023E-04	1.287E+00	0.000E+00	0.000E+00	0.000E+00	8.483E-07	2.714E-03	9.687E-04	2.366E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
F-	6.398E+03	3.962E-01	1.814E+00	1.290E+00	2.591E+00	6.208E-02	1.326E-02	2.886E-01	2.646E-01	6.311E-01	6.813E-01	3.580E+02	3.462E+02	9.409E+01
Fe^{+3}	3.644E+04	5.318E-01	1.417E+02	1.542E+03	6.988E+02	1.608E+03	8.316E+00	1.350E+00	5.368E-01	1.160E+00	1.901E+02	1.601E+02	1.579E+02	6.845E+02
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	3.601E+02	8.184E+03	8.083E+03	8.178E+03	8.620E+03	3.623E+02	3.528E+02	3.504E+02	3.577E+02	8.333E+03	8.386E+03	8.419E+03	7.993E+03
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	8.537E-04	1.518E-02	1.655E-01	2.519E-02	7.197E-01	1.518E-02	2.250E-03	5.875E-04	6.328E-04	1.039E+00	8.085E-02	7.828E-02	1.691E-01

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	AW-106	AX-101	AX-102	AX-103	AX-104	AY-101	AY-102	AZ-101	AZ-102	B-101	B-102	B-103	B-104
K^{+}	1.531E+03	7.028E-02	5.051E+02	1.342E+00	1.996E+02	7.144E-01	2.246E-02	1.548E-01	1.670E-01	1.322E-01	1.213E+00	1.206E+00	1.038E+00	5.274E+00
La^{+3}	5.251E+02	8.793E-03	9.092E-05	1.647E+00	8.473E+00	8.707E+00	1.643E-01	7.852E-03	6.243E-03	3.138E-02	0.000E+00	0.000E+00	0.000E+00	1.063E+00
Li^{+}	5.916E+01	8.229E-04	4.451E+00	0.000E+00	0.000E+00	0.000E+00	2.400E-06	1.295E-03	6.194E-04	7.859E-04	1.598E+00	0.000E+00	0.000E+00	2.362E+00
Mg^{+2}	6.038E+02	7.833E-03	1.273E+01	1.519E+01	0.000E+00	9.081E+00	1.200E-02	1.471E-02	8.013E-03	1.198E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mn^{+4}	4.661E+03	1.073E-01	6.712E+00	1.248E+02	9.433E+01	2.783E+01	3.992E-01	1.920E-01	6.488E-02	7.979E-02	4.600E+00	6.367E+00	6.169E+00	8.999E+00
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	1.045E-03	1.096E+01	0.000E+00	0.000E+00	0.000E+00	3.863E-06	3.364E-03	1.858E-03	2.177E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Na^{+}	1.044E+05	1.313E+01	5.924E+02	5.343E+02	9.371E+02	2.649E+01	2.261E+01	2.872E+01	3.211E+01	1.679E+01	4.044E+02	1.055E+03	1.012E+03	9.325E+02
Nd^{+3}	1.805E+02	1.046E-03	1.250E+01	0.000E+00	0.000E+00	0.000E+00	9.941E-08	1.331E-02	5.418E-03	2.051E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_3	6.077E+01	1.247E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.178E-04	6.679E-04	1.619E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	7.749E-02	1.975E+01	3.574E+01	4.123E+01	8.664E+01	1.076E+00	3.613E-02	2.149E-02	9.566E-02	5.802E+00	1.267E+00	1.223E+00	3.358E+00
NO_2^{-}	1.001E+04	1.945E+00	1.850E+02	1.105E+02	2.593E+02	1.377E+00	6.364E-01	5.447E+00	6.011E+00	3.421E+00	9.441E+01	1.477E+01	1.298E+01	9.627E+00
NO_3^{-}	6.976E+04	1.727E+01	3.751E+02	5.617E+02	3.283E+02	2.809E+01	6.993E+00	3.774E+01	4.541E+01	2.311E+01	3.416E+02	2.435E+02	2.022E+02	1.044E+03
$OH_{(BOUND)}$	2.767E+05	1.517E+01	9.650E+02	1.536E+03	2.121E+03	1.921E+03	1.724E+01	1.715E+01	1.184E+01	1.483E+01	2.947E+03	1.445E+03	1.570E+03	3.913E+02
OH^{-}	9.299E+03	1.768E+00	1.394E+02	1.102E+02	1.492E+02	1.385E+01	1.111E+01	7.116E+00	7.079E+00	2.109E+00	1.697E+02	5.374E+01	5.046E+01	3.603E+00
Pb^{+2}	2.331E+03	3.201E-02	1.817E+01	1.063E+02	5.889E+01	5.500E+01	1.039E+00	1.853E-01	7.565E-02	4.032E-02	2.317E+01	8.743E+00	8.472E+00	6.382E+01
Pd^{+2}	1.275E+01	1.063E-09	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.655E-05	1.462E-03	6.259E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PO_4^{-3}	5.079E+04	1.848E+00	2.901E+02	1.971E+02	3.574E+02	1.486E+01	3.733E+00	3.224E+00	2.404E+00	2.468E+00	2.023E+01	8.098E+02	8.006E+02	8.739E+02
Pr^{+3}	8.227E+00	4.420E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.786E-09	2.714E-03	7.567E-04	3.492E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	7.982E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.974E-08	2.055E-05	7.737E-04	6.864E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rh^{+3}	5.365E+00	1.183E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.724E-08	2.069E-04	2.682E-04	3.946E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ru^{+3}	1.754E+01	6.483E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.214E-14	4.148E-03	2.028E-03	1.679E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Sb^{+5}	8.891E+01	6.397E-04	7.227E+00	0.000E+00	0.000E+00	0.000E+00	3.761E-06	2.155E-03	9.840E-04	1.375E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Se^{+6}	1.680E+01	4.176E-04	1.876E+00	0.000E+00	0.000E+00	0.000E+00	9.247E-09	3.582E-03	1.710E-03	1.394E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Si^{+4}	1.770E+04	7.166E-01	1.616E+01	2.211E+01	8.381E+01	5.090E+00	1.962E+00	5.896E-01	6.156E-01	4.713E-01	5.443E+02	3.971E+01	3.844E+01	3.666E+02
SO_4^{-2}	1.131E+04	1.489E+00	2.874E+02	1.008E+01	3.965E+01	2.914E+00	3.525E+00	2.185E+00	2.697E+00	1.298E+00	1.738E+02	3.344E+02	3.259E+02	1.825E+02
Sr^{+2}	1.289E+03	3.919E-02	3.138E-01	2.724E+01	6.544E+00	3.903E+00	2.023E-02	6.835E-03	4.345E-03	1.319E-02	1.548E+00	1.042E-01	1.005E-01	9.176E+00
Ta^{+5}	2.519E+00	1.519E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.942E-10	1.953E-05	1.060E-05	2.474E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	2.554E-07	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.604E-04	5.709E-04	5.809E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Th^{+4}	1.943E+00	1.884E-06	1.921E-07	0.000E+00	2.947E-07	0.000E+00	2.681E-08	2.253E-05	6.192E-06	3.625E-06	1.004E-11	1.750E-11	1.640E-11	0.000E+00
Ti^{+4}	4.390E+01	7.827E-04	1.250E+00	0.000E+00	0.000E+00	0.000E+00	6.253E-07	2.137E-03	9.817E-04	1.486E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tl^{+3}	7.736E+01	8.508E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.094E-08	5.564E-03	3.187E-03	2.353E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
TOC	1.093E+04	2.874E-01	2.154E+02	8.160E+02	1.226E+02	0.000E+00	9.101E-03	2.055E-01	2.222E-01	2.136E-01	2.304E+01	1.104E+02	1.243E+01	5.913E+01
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	8.464E-04	6.247E+00	0.000E+00	0.000E+00	0.000E+00	3.059E-06	2.127E-03	1.323E-03	8.061E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
W^{+6}	1.459E+01	3.960E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.615E-06	2.405E-04	2.867E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Y^{+3}	3.836E+00	2.612E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.348E-08	1.032E-03	3.488E-04	1.287E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Zn^{+2}	1.873E+02	4.181E-03	8.918E+00	0.000E+00	0.000E+00	0.000E+00	1.097E-04	3.386E-03	1.168E-03	7.609E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Zr^{+4}	1.053E+03	1.800E-01	4.263E+00	1.846E+00	2.224E+01	2.231E+01	4.452E-01	1.025E-02	6.505E-02	5.095E-01	9.251E-01	1.396E+00	1.349E+00	4.344E+00

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	B-105	B-106	B-107	B-108	B-109	B-110	B-111	B-112	B-201	B-202	B-203	B-204
Ag^{+}	7.691E+01	0.000E+00	1.584E+00	3.809E-01	0.000E+00	0.000E+00	1.809E+00	1.963E-01	0.000E+00	9.426E-03	6.317E-03	4.365E-03	5.384E-03
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	1.083E+03	2.450E+02	4.770E+02	1.371E+03	9.931E+02	4.331E+01	3.528E+01	1.546E+02	1.203E+00	1.823E+00	5.391E-02	6.050E-02
As^{+5}	1.367E+02	0.000E+00	3.186E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.084E-01	0.000E+00	4.990E-04	3.530E-04	5.962E-02	4.676E-02
B^{+3}	5.102E+02	0.000E+00	2.109E+01	1.005E+01	0.000E+00	0.000E+00	1.913E+00	2.019E+00	0.000E+00	5.713E+00	5.561E-02	1.397E-01	1.055E-01
Ba^{+2}	2.957E+02	0.000E+00	1.885E+00	1.890E+00	0.000E+00	0.000E+00	5.461E-01	1.106E+00	0.000E+00	6.599E-02	1.130E+00	1.018E-01	1.677E-01
Be^{+2}	3.181E+01	0.000E+00	1.592E-01	1.890E-01	2.010E+00	0.000E+00	4.260E-03	3.925E-02	0.000E+00	0.000E+00	1.036E-04	1.628E-03	2.338E-03
Bi^{+3}	1.455E+04	2.602E+02	3.266E+02	2.799E+02	4.307E+01	5.953E+01	7.152E+02	7.541E+02	5.462E+02	1.029E+02	3.635E+01	4.293E+01	5.043E+01
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2C_{l4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	5.185E+01	1.500E+01	2.159E+01	2.152E+01	7.491E+01	9.322E+00	2.860E+01	9.879E+01	6.654E+00	1.153E+01	2.056E+00	1.742E+00
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	1.858E+00	7.396E+01	1.362E+01	1.109E+01	8.614E+00	3.050E+01	2.676E+01	3.207E+01	6.741E+00	6.762E+00	2.303E-01	2.788E-01
Cd^{+2}	4.870E+01	0.000E+00	1.314E-01	1.607E-01	1.660E+00	0.000E+00	1.716E-01	8.832E-02	0.000E+00	7.068E-02	3.893E-03	1.628E-03	2.354E-03
Ce^{+3}	1.816E+02	0.000E+00	4.190E+00	0.000E+00	0.000E+00	0.000E+00	1.437E+00	8.145E-01	0.000E+00	5.035E-02	6.734E-02	5.228E-02	5.797E-02
CH_2C_{l2}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	2.561E+00	3.376E+00	6.233E+00	1.297E+00	1.074E+00	9.356E+00	7.148E+00	3.557E+00	1.857E+00	9.206E-01	8.705E-01	6.703E-01
CN^{-}	1.564E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.360E-02	0.000E+00	3.867E-03	2.357E-03	6.128E-03	0.000E+00
Co^{+3}	4.627E+01	0.000E+00	6.319E-01	6.559E-01	0.000E+00	0.000E+00	1.925E+00	1.227E-01	0.000E+00	7.023E-02	4.337E-03	6.518E-03	9.364E-03
CO_3^{-2}	2.793E+04	2.389E+01	6.950E+01	2.952E+02	1.207E+01	7.518E+00	1.386E+02	2.455E+02	5.523E+01	1.783E+01	1.045E+01	3.470E+00	7.063E+00
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	3.564E+01	1.486E+01	6.478E+00	2.057E+00	1.587E+01	2.964E+01	3.493E+01	4.096E+01	3.870E+00	2.884E+00	3.212E+00	3.409E+00
Cs^{+}	4.683E+00	3.812E-03	1.441E-02	6.903E-03	8.095E-03	6.280E-04	9.391E-03	1.141E-01	1.283E-02	6.187E-06	3.339E-06	2.824E-07	1.117E-06
Cu^{+2}	6.217E+01	0.000E+00	9.621E-01	7.083E-01	0.000E+00	0.000E+00	1.646E+00	7.880E+00	0.000E+00	3.171E-02	3.716E-02	7.181E-03	8.241E-03
F-	6.398E+03	5.094E+02	8.239E+01	4.328E+02	2.981E+02	2.068E+02	5.055E+01	4.168E+01	9.001E+01	6.654E+00	6.649E+00	7.874E+00	6.738E+00
Fe^{+3}	3.644E+04	2.751E+02	6.135E+02	4.080E+02	2.238E+01	1.052E+02	6.975E+02	6.414E+02	4.159E+02	1.271E+01	1.268E+01	3.422E+00	3.862E+00
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	8.331E+03	8.355E+03	7.901E+03	8.505E+03	8.529E+03	7.707E+03	8.020E+03	8.359E+03	3.192E-03	3.371E-03	3.493E-03	3.472E-03
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	1.190E-01	9.790E-01	5.707E-02	4.243E-02	2.949E-02	3.536E-02	3.660E-01	9.759E-02	6.640E-04	3.348E-04	0.000E+00	0.000E+00

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	B-105	B-106	B-107	B-108	B-109	B-110	B-111	B-112	B-201	B-202	B-203	B-204
K^{+}	1.531E+03	6.359E-01	3.636E+00	3.234E+00	7.395E-01	4.891E-01	5.665E+00	5.739E+00	1.209E+01	3.377E+00	7.980E+00	5.279E+00	6.007E+00
La^{+3}	5.251E+02	4.139E-02	7.849E-01	1.356E-01	6.860E-01	6.704E-01	1.232E+00	2.699E-01	4.644E-01	1.472E+01	1.271E+01	1.075E+01	1.082E+01
Li^{+}	5.916E+01	0.000E+00	7.151E-01	0.000E+00	0.000E+00	0.000E+00	4.260E-02	1.570E-01	0.000E+00	0.000E+00	0.000E+00	3.260E-03	4.026E-02
Mg^{+2}	6.038E+02	0.000E+00	1.875E+01	0.000E+00	0.000E+00	0.000E+00	6.932E+00	7.670E+00	0.000E+00	8.107E-01	9.988E-01	5.399E-02	8.064E-02
Mn^{+4}	4.661E+03	9.248E+00	5.768E+00	2.568E+00	3.911E+00	9.703E+00	2.587E+00	3.097E+00	2.561E+00	2.582E+01	1.332E+01	1.464E+01	1.554E+01
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	0.000E+00	1.592E+00	1.890E+00	0.000E+00	0.000E+00	5.228E-01	1.636E+00	0.000E+00	2.273E-02	0.000E+00	1.628E-02	2.338E-02
Na^{+}	1.044E+05	5.894E+02	7.662E+02	1.548E+03	4.802E+02	6.543E+02	9.952E+02	8.821E+02	9.965E+02	3.796E+01	4.183E+01	3.000E+01	2.729E+01
Nd^{+3}	1.805E+02	0.000E+00	3.186E+00	0.000E+00	0.000E+00	0.000E+00	3.873E-01	8.327E-01	0.000E+00	1.475E-01	0.000E+00	3.259E-02	4.676E-02
NH_3	6.077E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.043E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	1.851E+00	2.057E+00	1.018E+00	1.580E+01	1.510E+01	7.228E-01	7.330E-01	3.751E+00	4.987E-01	2.204E-01	1.895E-01	2.441E-01
NO_2^{-}	1.001E+04	2.000E+01	1.653E+01	2.634E+01	1.737E+01	6.415E+00	1.035E+02	4.242E+02	1.220E+02	9.773E-01	1.166E+00	7.337E-01	5.976E-01
NO_3^{-}	6.976E+04	2.570E+02	4.107E+02	1.247E+03	1.002E+02	1.177E+02	1.975E+03	8.235E+02	6.846E+02	5.600E+01	6.547E+01	6.457E+01	5.126E+01
$OH_{(BOUND)}$	2.767E+05	2.275E+03	5.942E+02	1.077E+03	2.515E+03	2.314E+03	1.135E+03	1.276E+03	1.399E+03	8.952E+01	5.003E+01	3.468E+01	3.954E+01
OH^{-}	9.299E+03	7.595E+01	3.637E+00	3.551E+00	2.290E+01	2.246E+01	3.569E+00	3.590E+00	2.120E+01	2.822E-06	2.561E-05	3.019E-06	3.034E-06
Pb^{+2}	2.331E+03	1.471E+01	1.395E+01	1.313E+01	3.905E+01	2.118E+01	2.045E+01	6.155E+01	2.688E+01	3.262E-01	7.014E-01	3.177E-01	2.969E-01
Pd^{+2}	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PO_4^{-3}	5.079E+04	1.493E+02	1.751E+03	1.191E+03	1.764E+02	3.120E+02	1.224E+03	1.116E+03	6.208E+02	1.607E+01	1.189E+01	6.902E+00	7.334E+00
Pr^{+3}	8.227E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rh^{+3}	5.365E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.447E-01	7.605E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ru^{+3}	1.754E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.278E+00	3.763E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Sb^{+5}	8.891E+01	0.000E+00	1.909E+00	0.000E+00	0.000E+00	0.000E+00	1.442E+00	4.210E-01	0.000E+00	4.297E-04	1.268E-01	1.954E-02	2.805E-02
Se^{+6}	1.680E+01	0.000E+00	6.246E-01	0.000E+00	0.000E+00	0.000E+00	1.524E-01	1.544E-01	0.000E+00	1.686E-03	2.663E-04	3.281E-02	4.690E-02
Si^{+4}	1.770E+04	1.113E+02	1.414E+00	1.484E+02	1.298E+00	6.654E+01	3.514E+02	3.845E+02	2.152E+02	6.757E+00	4.471E-01	9.391E-01	1.086E+00
SO_4^{-2}	1.131E+04	4.732E+02	1.419E+02	5.796E+02	2.441E+02	9.132E+01	1.190E+02	1.137E+02	6.937E+01	3.854E-01	1.702E+00	2.775E-01	2.916E-01
Sr^{+2}	1.289E+03	1.920E-01	1.490E+01	2.632E+00	7.554E-02	5.810E-02	8.100E+00	8.483E+00	2.021E+00	1.000E+00	5.248E-01	5.138E-01	4.008E-01
Ta^{+5}	2.519E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.035E-01	8.145E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Th^{+4}	1.943E+00	1.535E-11	0.000E+00	1.165E-02	3.408E-02	3.331E-02	0.000E+00	0.000E+00	1.554E-05	4.393E-13	6.200E-13	6.091E-13	5.693E-13
Ti^{+4}	4.390E+01	0.000E+00	1.824E+00	4.980E-01	0.000E+00	0.000E+00	3.257E-01	3.106E-01	0.000E+00	1.051E-01	2.161E-01	3.827E-03	5.746E-03
Tl^{+3}	7.736E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.783E+00	0.000E+00	0.000E+00	0.000E+00	6.518E-02	9.350E-02
TOC	1.093E+04	2.901E+01	1.376E+01	9.149E+00	1.540E+01	5.789E+00	7.072E+00	1.909E+01	1.819E+01	8.053E-01	9.626E-04	3.727E-04	2.233E-04
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	0.000E+00	1.592E+00	1.890E+00	0.000E+00	0.000E+00	1.081E-01	9.813E-02	0.000E+00	8.872E-03	1.092E-02	1.628E-02	2.338E-02
W^{+6}	1.459E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.084E-01	0.000E+00	1.996E-02	0.000E+00	0.000E+00	0.000E+00
Y^{+3}	3.836E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.812E-02	0.000E+00	4.103E-03	0.000E+00	0.000E+00	0.000E+00
Zn^{+2}	1.873E+02	0.000E+00	5.326E+00	6.720E+00	0.000E+00	0.000E+00	3.118E+00	4.337E+00	0.000E+00	5.393E-02	2.028E-01	5.838E-02	5.350E-02
Zr^{+4}	1.053E+03	2.158E+00	2.622E+00	3.493E+00	2.021E+00	6.733E-01	2.405E-01	5.568E-01	3.044E-01	2.052E-02	9.661E-04	2.734E-03	2.555E-03

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	BX-101	BX-102	BX-103	BX-104	BX-105	BX-106	BX-107	BX-108	BX-109	BX-110	BX-111	BX-112
Ag^{+}	7.691E+01	0.000E+00	0.000E+00	0.000E+00	5.055E-01	0.000E+00	3.453E-01	2.082E-02	0.000E+00	3.944E-01	0.000E+00	0.000E+00	8.194E-01
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	1.311E+03	6.864E+02	1.207E+03	1.097E+03	2.648E+02	4.449E+02	3.133E+02	1.914E+02	8.674E+01	9.045E+02	4.074E+02	3.052E+02
As^{+5}	1.367E+02	0.000E+00	0.000E+00	0.000E+00	2.343E+00	0.000E+00	2.141E+00	9.509E-03	0.000E+00	1.181E+00	0.000E+00	0.000E+00	1.771E-01
B^{+3}	5.102E+02	0.000E+00	0.000E+00	0.000E+00	2.826E+00	0.000E+00	7.477E-02	1.040E+00	0.000E+00	1.932E+00	0.000E+00	0.000E+00	6.281E+00
Ba^{+2}	2.957E+02	0.000E+00	0.000E+00	0.000E+00	3.663E-01	0.000E+00	4.503E+01	1.808E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.547E-01
Be^{+2}	3.181E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.245E-03	0.000E+00	1.184E+00	0.000E+00	0.000E+00	2.773E-01
Bi^{+3}	1.455E+04	1.580E+00	0.000E+00	2.544E+00	5.078E+00	1.291E+01	1.074E+01	5.287E+02	2.116E+02	2.368E+01	3.035E+02	1.727E+02	4.347E+02
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2C_{l4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	1.900E+00	5.640E-01	4.458E+01	2.132E+01	5.150E+00	1.133E+01	1.475E+01	1.132E+01	1.292E+01	1.142E+02	8.676E+01	2.486E+01
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	1.202E+01	1.250E+01	1.765E+01	1.600E+01	6.959E+01	8.634E+01	1.198E+01	6.101E+01	1.271E+02	2.722E+01	1.072E+01	1.702E+01
Cd^{+2}	4.870E+01	0.000E+00	0.000E+00	0.000E+00	1.455E+00	0.000E+00	5.819E-01	4.072E-02	0.000E+00	1.023E+00	0.000E+00	0.000E+00	6.731E-01
Ce^{+3}	1.816E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.614E+00	3.941E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CH_2C_{l2}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	3.226E-01	5.471E-02	5.233E-01	4.679E-01	6.565E-01	4.103E-01	1.251E+00	2.145E+00	3.316E+00	4.205E+00	2.504E+00	1.384E+00
CN^{-}	1.564E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.496E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Co^{+3}	4.627E+01	0.000E+00	0.000E+00	0.000E+00	1.032E-01	0.000E+00	1.606E-02	3.441E-02	0.000E+00	4.696E+00	0.000E+00	0.000E+00	0.000E+00
CO_3^{-2}	2.793E+04	6.247E+00	3.082E+00	3.420E+01	1.064E+01	9.113E+00	1.034E+01	2.566E+01	9.510E+01	6.227E+01	1.827E+01	2.294E+01	1.356E+01
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	4.759E-01	1.230E-01	8.317E-01	2.848E+01	4.265E+01	5.681E+01	1.795E+01	1.037E+01	5.274E+00	1.645E+02	7.376E+01	2.904E+01
Cs^{+}	4.683E+00	1.296E-03	5.445E-05	1.830E-04	8.424E-03	4.161E-03	1.693E-02	1.022E-02	7.933E-03	2.118E-02	5.833E-02	7.270E-02	3.756E-02
Cu^{+2}	6.217E+01	0.000E+00	0.000E+00	0.000E+00	1.931E+00	0.000E+00	3.841E-01	9.446E-01	0.000E+00	2.440E+00	0.000E+00	0.000E+00	0.000E+00
F-	6.398E+03	2.228E+00	7.737E-01	2.898E+00	4.005E-01	9.834E+00	2.008E+00	1.133E+02	7.899E+01	6.648E-01	1.567E+01	8.158E+01	3.018E+02
Fe^{+3}	3.644E+04	1.585E+02	7.333E+01	2.197E+02	4.550E+01	1.070E+02	7.966E+01	2.407E+02	5.318E+02	8.970E+02	1.634E+02	1.469E+02	2.060E+02
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	8.624E+03	8.645E+03	8.629E+03	8.634E+03	8.615E+03	8.618E+03	8.540E+03	8.465E+03	8.291E+03	8.032E+03	8.025E+03	8.574E+03
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	2.003E-01	0.000E+00	3.279E-01	2.763E-04	4.923E-01	3.921E-01	1.013E-02	1.427E+00	2.333E+00	1.340E-02	2.449E-02	7.392E-03

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	BX-101	BX-102	BX-103	BX-104	BX-105	BX-106	BX-107	BX-108	BX-109	BX-110	BX-111	BX-112
K^{+}	1.531E+03	2.629E-01	6.388E-02	4.486E-01	5.690E+00	8.207E+00	4.677E+00	2.679E+00	2.262E+00	7.250E-01	5.909E+00	7.800E+00	2.622E+00
La^{+3}	5.251E+02	7.092E-01	3.101E-01	8.633E-01	1.212E+00	2.574E-01	1.105E+00	3.331E-02	7.796E-01	1.681E+00	2.937E-02	1.695E-02	3.399E-02
Li^{+}	5.916E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.773E+00	0.000E+00	0.000E+00	2.315E+00
Mg^{+2}	6.038E+02	0.000E+00	0.000E+00	0.000E+00	2.098E+00	0.000E+00	4.588E+01	3.502E+00	0.000E+00	3.361E+01	0.000E+00	0.000E+00	7.841E+00
Mn^{+4}	4.661E+03	5.755E+00	2.718E+00	6.836E+00	1.037E+01	2.555E+01	2.066E+01	1.406E+00	4.312E+00	6.702E+00	2.904E+00	1.442E+00	7.480E+00
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	0.000E+00	0.000E+00	0.000E+00	5.996E-01	0.000E+00	5.476E-01	0.000E+00	0.000E+00	1.184E+01	0.000E+00	0.000E+00	1.658E+00
Na^{+}	1.044E+05	1.399E+02	2.975E+01	2.265E+02	1.924E+02	5.360E+02	3.744E+02	8.140E+02	7.987E+02	6.523E+02	9.484E+02	1.868E+03	4.849E+02
Nd^{+3}	1.805E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.771E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_3	6.077E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	1.292E+01	6.576E+00	1.553E+01	1.361E+00	1.905E+00	1.989E+00	2.386E-01	1.787E+00	3.506E+00	5.646E+00	8.398E-01	6.619E-02
NO_2^{-}	1.001E+04	6.197E+00	1.938E+00	9.806E+00	6.041E+01	2.309E+01	1.151E+01	2.344E+01	4.699E+01	4.745E+01	3.663E+01	4.691E+01	2.680E+02
NO_3^{-}	6.976E+04	5.831E+01	7.546E+00	9.273E+01	1.224E+02	6.145E+01	3.534E+01	3.946E+02	7.595E+02	5.063E+02	8.613E+02	1.463E+03	7.407E+02
$OH_{(BOUND)}$	2.767E+05	2.647E+03	3.065E+03	2.463E+03	2.508E+03	1.952E+03	2.408E+03	9.833E+02	4.398E+02	4.343E+02	2.501E+03	1.698E+03	5.177E+02
OH^{-}	9.299E+03	6.139E+00	6.910E+00	1.952E+01	1.357E+01	2.197E+01	2.951E+01	3.662E+00	3.651E+00	3.633E+00	3.310E+01	8.443E+01	1.969E+01
Pb^{+2}	2.331E+03	3.213E+01	1.588E+01	3.749E+01	7.096E+00	7.977E+00	7.920E+00	1.253E+00	1.199E+01	3.139E+01	6.068E+00	5.359E+00	3.919E+00
Pd^{+2}	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PO_4^{-3}	5.079E+04	2.558E+02	4.702E+01	3.221E+02	1.184E+01	6.933E+02	5.269E+02	1.278E+03	1.627E+03	1.988E+03	3.867E+02	4.138E+02	1.144E+03
Pr^{+3}	8.227E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rh^{+3}	5.365E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ru^{+3}	1.754E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Sb^{+5}	8.891E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.546E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Se^{+6}	1.680E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.587E-01	3.911E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Si^{+4}	1.770E+04	1.310E+01	6.975E+02	1.579E+01	1.973E+01	4.195E+02	5.682E+02	1.435E+02	7.484E+01	3.242E+01	9.524E+01	5.969E+01	2.089E+02
SO_4^{-2}	1.131E+04	7.633E+00	1.093E+00	1.146E+01	1.106E+00	3.198E+01	1.394E+00	3.523E+01	7.033E+01	1.121E+02	7.815E+01	1.019E+02	1.752E+02
Sr^{+2}	1.289E+03	1.698E+00	9.261E-03	2.761E+00	6.159E-01	7.389E-01	7.496E-01	2.281E+00	1.261E+01	2.799E+01	4.695E+00	1.499E+00	1.592E+00
Ta^{+5}	2.519E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Th^{+4}	1.943E+00	2.784E-02	1.442E-02	3.170E-02	5.484E-03	4.349E-12	3.428E-12	0.000E+00	0.000E+00	1.753E-11	3.466E-05	7.621E-05	0.000E+00
Ti^{+4}	4.390E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.476E-01	1.402E-01	0.000E+00	3.952E+00	0.000E+00	0.000E+00	1.374E+00
Tl^{+3}	7.736E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
TOC	1.093E+04	3.395E+00	1.173E+00	7.898E+01	1.918E+01	1.024E+01	2.175E+01	3.629E+00	8.628E+00	1.798E+01	2.596E+01	1.405E+01	6.117E+00
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	0.000E+00	0.000E+00	0.000E+00	4.420E-01	0.000E+00	4.038E-01	2.693E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.194E-01
W^{+6}	1.459E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Y^{+3}	3.836E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.713E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.547E-01
Zn^{+2}	1.873E+02	0.000E+00	0.000E+00	0.000E+00	1.819E+00	0.000E+00	2.010E+00	1.842E+00	0.000E+00	7.285E+00	0.000E+00	0.000E+00	2.344E+00
Zr^{+4}	1.053E+03	1.922E-01	8.557E-02	2.326E-01	7.616E+00	5.001E+00	4.637E+00	2.930E+00	1.603E+00	4.103E-01	2.284E+00	1.406E+00	1.361E+00

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	BY-101	BY-102	BY-103	BY-104	BY-105	BY-106	BY-107	BY-108	BY-109	BY-110	BY-111	BY-112
Ag^{+}	7.691E+01	0.000E+00	0.000E+00	0.000E+00	1.720E+00	6.946E-01	0.000E+00	0.000E+00	0.000E+00	6.437E-01	1.096E+00	0.000E+00	0.000E+00
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	4.473E+02	4.581E+02	5.894E+02	2.816E+02	3.526E+02	4.805E+01	2.116E+02	1.074E+03	1.035E+03	2.498E+02	3.400E+02	3.036E+02
As^{+5}	1.367E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.528E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.622E+00	0.000E+00	0.000E+00
B^{+3}	5.102E+02	0.000E+00	0.000E+00	0.000E+00	3.819E+00	4.328E+00	0.000E+00	0.000E+00	1.769E+01	0.000E+00	5.216E+00	0.000E+00	0.000E+00
Ba^{+2}	2.957E+02	0.000E+00	0.000E+00	0.000E+00	6.939E+00	2.870E+00	0.000E+00	0.000E+00	0.000E+00	2.278E+00	4.299E+00	0.000E+00	0.000E+00
Be^{+2}	3.181E+01	0.000E+00	0.000E+00	0.000E+00	2.681E-01	1.764E-01	0.000E+00	4.981E-01	0.000E+00	2.278E-01	2.152E-01	3.107E+00	0.000E+00
Bi^{+3}	1.455E+04	6.808E-01	5.512E-01	4.260E-01	3.033E+01	8.681E+00	3.869E+01	6.785E+00	9.379E+00	2.594E-01	1.433E+01	3.259E-01	4.027E-01
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2Cl_4	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HCl_3	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	1.898E+02	7.341E+02	1.308E+03	9.099E+02	1.468E+02	1.690E+03	4.768E+02	2.021E+02	3.988E+02	6.869E+02	3.986E+02	7.176E+02
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	1.125E+02	3.264E+01	2.671E+01	1.378E+02	4.554E+02	1.506E+02	4.452E+01	1.393E+02	8.675E+00	1.911E+02	1.709E+01	2.461E+01
Cd^{+2}	4.870E+01	0.000E+00	0.000E+00	0.000E+00	1.392E+00	1.926E-01	0.000E+00	2.109E-01	0.000E+00	7.747E-01	9.764E-01	1.361E+00	0.000E+00
Ce^{+3}	1.816E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.528E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CH_2Cl_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$CHCl_3$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	1.026E+00	4.703E+00	2.160E+00	6.316E+00	2.364E+00	4.417E+00	6.081E+00	4.801E+00	4.482E+00	6.302E+00	2.955E+00	2.823E+00
CN^{-}	1.564E+02	0.000E+00	0.000E+00	0.000E+00	1.327E+00	0.000E+00	8.417E+00	0.000E+00	1.526E+01	0.000E+00	1.544E+00	0.000E+00	0.000E+00
Co^{+3}	4.627E+01	0.000E+00	0.000E+00	0.000E+00	1.327E+00	7.411E-01	0.000E+00	0.000E+00	8.511E-01	1.747E+00	1.174E+00	0.000E+00	0.000E+00
CO_3^{-2}	2.793E+04	3.989E+01	2.951E+02	1.789E+02	2.420E+02	1.340E+02	1.555E+02	1.021E+02	7.427E+01	4.255E+01	3.697E+02	2.200E+02	3.307E+02
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	4.270E+01	4.018E+01	5.852E+01	1.903E+02	1.321E+01	1.626E+02	1.763E+01	8.564E+00	3.244E+01	6.595E+01	3.971E+01	4.041E+02
Cs^{+}	4.683E+00	1.146E-01	4.322E-02	5.791E-02	1.674E-01	3.704E-02	7.802E-02	8.283E-02	4.904E-02	3.609E-02	1.347E-02	2.598E-02	3.179E-02
Cu^{+2}	6.217E+01	0.000E+00	0.000E+00	0.000E+00	7.755E-01	3.675E-01	0.000E+00	0.000E+00	5.363E-01	5.163E-01	6.149E-01	0.000E+00	0.000E+00
F-	6.398E+03	8.327E+01	3.137E+02	1.716E+02	1.444E+02	3.099E+01	1.485E+01	8.733E+00	2.185E+01	4.146E+02	1.225E+02	1.954E+01	1.033E+02
Fe^{+3}	3.644E+04	1.184E+02	5.350E+01	5.793E+01	5.381E+02	1.420E+02	4.340E+02	1.547E+02	2.892E+02	3.201E+01	3.630E+02	1.485E+02	1.094E+02
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	8.134E+03	8.330E+03	8.207E+03	8.190E+03	7.959E+03	8.112E+03	8.285E+03	8.350E+03	8.341E+03	8.310E+03	8.318E+03	8.401E+03
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	3.846E-02	1.760E-02	1.753E-02	9.852E-01	2.451E-01	5.943E-01	1.871E-01	4.205E-01	1.056E-02	6.667E-01	1.043E-02	2.318E-02

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	BY-101	BY-102	BY-103	BY-104	BY-105	BY-106	BY-107	BY-108	BY-109	BY-110	BY-111	BY-112
K^{+}	1.531E+03	1.338E+01	2.844E+01	1.289E+01	8.639E+00	4.625E+00	5.504E+00	3.805E+01	5.562E+00	1.121E+01	1.811E+01	6.961E+00	2.117E+01
La^{+3}	5.251E+02	1.767E-01	4.011E-06	7.146E-02	3.305E+00	6.772E-02	1.035E+00	1.833E-01	4.334E-01	1.156E-01	3.399E-01	2.362E-06	2.918E-06
Li^{+}	5.916E+01	0.000E+00	0.000E+00	0.000E+00	5.218E-01	3.792E-01	2.312E+00	0.000E+00	4.575E-01	3.005E+00	1.280E+00	0.000E+00	0.000E+00
Mg^{+2}	6.038E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.512E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.896E+01	0.000E+00	0.000E+00
Mn^{+4}	4.661E+03	3.288E+00	2.668E+00	2.897E+00	9.885E+00	2.368E+00	1.238E+01	2.918E+00	1.318E+01	7.071E+00	5.815E+00	1.559E+00	1.948E+00
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	0.000E+00	0.000E+00	0.000E+00	2.895E+00	1.765E+00	0.000E+00	0.000E+00	2.510E+00	2.294E+00	2.413E+00	0.000E+00	0.000E+00
Na^{+}	1.044E+05	1.569E+03	1.810E+03	1.493E+03	5.431E+02	1.408E+03	4.848E+02	2.408E+03	7.471E+02	1.171E+03	1.396E+03	8.963E+02	1.637E+03
Nd^{+3}	1.805E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.855E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_3	6.077E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	7.261E+01	1.268E+01	1.281E+01	1.353E+02	3.684E+01	2.975E+02	3.263E+01	7.222E+01	5.115E+00	1.303E+02	6.450E+00	9.263E+00
NO_2^{-}	1.001E+04	2.212E+01	5.367E+01	2.794E+01	1.390E+02	3.652E+01	9.196E+01	1.047E+02	8.581E+01	9.194E+01	1.206E+02	3.847E+01	5.892E+01
NO_3^{-}	6.976E+04	1.168E+03	3.719E+02	7.464E+02	1.092E+03	1.559E+03	9.666E+02	4.443E+02	5.039E+02	2.683E+02	4.752E+02	3.182E+02	2.021E+02
$OH_{(BOUND)}$	2.767E+05	1.506E+03	1.761E+03	1.496E+03	1.112E+03	2.160E+03	8.740E+02	1.878E+03	2.580E+03	2.215E+03	1.401E+03	2.625E+03	1.694E+03
OH^{-}	9.299E+03	8.699E+01	1.213E+02	1.175E+02	1.235E+02	4.236E+01	1.307E+02	2.427E+02	2.822E+02	1.319E+02	1.146E+02	1.574E+02	1.601E+02
Pb^{+2}	2.331E+03	9.615E+00	5.424E+00	7.349E+00	1.668E+01	4.924E+00	4.277E+01	7.486E+00	1.521E+01	2.952E+00	3.049E+01	3.262E+00	3.952E+00
Pd^{+2}	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PO_4^{-3}	5.079E+04	1.127E+03	1.766E+02	2.835E+02	1.482E+02	9.572E+01	3.555E+01	2.632E+02	2.573E+02	2.913E+02	2.824E+02	4.230E+02	2.492E+02
Pr^{+3}	8.227E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rh^{+3}	5.365E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ru^{+3}	1.754E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Sb^{+5}	8.891E+01	0.000E+00	0.000E+00	0.000E+00	3.114E+00	1.950E+00	0.000E+00	0.000E+00	0.000E+00	2.548E+00	0.000E+00	0.000E+00	0.000E+00
Se^{+6}	1.680E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.955E-01	0.000E+00	0.000E+00	0.000E+00	3.393E-01	0.000E+00	0.000E+00	0.000E+00
Si^{+4}	1.770E+04	1.390E+02	1.539E+02	4.607E+01	5.283E+01	2.145E+02	6.562E+01	4.814E+01	2.656E+01	1.153E+02	1.049E+01	7.738E+02	7.830E+01
SO_4^{-2}	1.131E+04	1.045E+01	1.515E+02	7.355E+01	1.178E+02	3.324E+01	6.848E+01	9.849E+01	6.122E+01	2.836E+02	9.452E+01	1.437E+02	2.241E+02
Sr^{+2}	1.289E+03	6.927E+00	5.535E+00	4.234E+00	2.522E+02	6.239E+01	2.696E+02	3.686E+01	1.504E+02	2.502E+00	1.086E+02	3.250E+00	3.889E+00
Ta^{+5}	2.519E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Th^{+4}	1.943E+00	6.487E-05	7.675E-05	3.468E-03	1.327E-04	0.000E+00	4.130E-04	6.408E-05	4.739E-05	1.591E-02	8.462E-05	4.268E-05	5.585E-05
Ti^{+4}	4.390E+01	0.000E+00	0.000E+00	0.000E+00	1.191E+00	6.586E-01	0.000E+00	0.000E+00	0.000E+00	4.554E-01	1.520E+00	0.000E+00	0.000E+00
Tl^{+3}	7.736E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
TOC	1.093E+04	1.802E+01	2.608E-01	5.828E+00	1.823E+02	3.722E+01	2.296E+02	1.405E+01	6.029E+01	2.952E+01	7.990E+01	1.649E+01	3.043E+00
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	0.000E+00	0.000E+00	0.000E+00	2.593E+00	1.765E+00	0.000E+00	0.000E+00	0.000E+00	2.478E+00	2.164E+00	0.000E+00	0.000E+00
W^{+6}	1.459E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Y^{+3}	3.836E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Zn^{+2}	1.873E+02	0.000E+00	0.000E+00	0.000E+00	4.478E+00	7.426E-01	9.229E+00	2.330E+00	2.362E+00	1.459E+00	3.268E+00	0.000E+00	0.000E+00
Zr^{+4}	1.053E+03	6.683E-01	6.824E-01	6.196E-01	8.580E-01	1.657E-01	7.117E-01	1.302E-01	3.754E-01	1.597E+00	6.507E-01	3.552E-01	4.985E-01

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110	C-111	C-112	C-201	C-202	C-203	C-204
Ag^{+}	7.691E+01	2.354E-10	3.670E-10	0.000E+00	7.351E+00	3.927E-01	7.836E+00	2.486E+00	0.000E+00	0.000E+00	1.969E-02	1.630E-10	2.751E-02	1.596E-02	7.396E-03	9.437E-03	6.030E-03
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	1.300E+03	8.991E+02	8.902E+02	6.244E+02	1.177E+03	3.822E+02	4.945E+02	8.779E+02	8.446E+02	3.876E+02	9.386E+02	3.458E+02	3.453E+00	6.963E+00	1.190E+00	1.693E+01
As^{+5}	1.367E+02	2.187E-09	3.410E-09	0.000E+00	3.391E-01	0.000E+00	2.881E+00	8.405E-02	0.000E+00	0.000E+00	1.300E-02	1.514E-09	2.016E+00	1.480E-01	7.396E-02	7.141E-02	2.832E-02
B^{+3}	5.102E+02	4.834E-09	7.538E-09	0.000E+00	1.247E+01	7.220E-02	1.186E+00	9.351E-02	0.000E+00	0.000E+00	6.328E-01	3.347E-09	1.548E+00	6.093E-02	3.698E-02	2.980E-02	2.221E-02
Ba^{+2}	2.957E+02	1.094E-09	1.705E-09	0.000E+00	1.025E+00	1.503E+01	1.636E+00	6.169E+00	0.000E+00	0.000E+00	2.171E-01	7.572E-10	9.850E-01	7.701E-02	8.034E-02	3.947E-02	4.256E-02
Be^{+2}	3.181E+01	1.094E-10	1.705E-10	0.000E+00	2.656E-01	0.000E+00	5.650E-02	1.320E-02	0.000E+00	0.000E+00	3.951E-03	7.572E-11	6.152E-02	2.901E-03	2.668E-03	1.853E-03	7.349E-04
Bi^{+3}	1.455E+04	2.964E+00	2.291E+01	9.172E-04	4.913E-03	2.770E+00	2.938E+00	8.775E+01	1.923E+02	3.511E+01	4.727E+02	5.452E+01	5.328E+01	2.352E-01	2.386E-01	1.499E-01	7.073E-02
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2C_{l4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	7.364E+00	5.168E+00	1.579E+01	3.221E+01	9.697E+00	3.319E+02	1.500E+00	4.051E+00	1.316E+01	1.513E+01	4.319E+00	3.599E+01	4.503E+01	3.240E+01	2.909E+01	7.847E-01
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	3.473E+01	6.194E+01	3.893E+01	2.079E+01	1.496E+01	1.175E+02	1.050E+01	2.187E+02	2.043E+02	2.573E+01	1.356E+02	3.309E+02	5.402E+00	5.550E+00	6.398E+00	1.451E+00
Cd^{+2}	4.870E+01	9.289E-10	1.448E-09	5.498E-12	7.036E+00	3.485E-10	1.442E+00	8.059E-01	6.220E-10	4.634E-12	1.286E-01	6.432E-10	2.814E-01	7.020E-03	1.314E-02	2.939E-03	1.166E-03
Ce^{+3}	1.816E+02	2.187E-09	3.410E-09	0.000E+00	4.940E-01	0.000E+00	5.696E+00	6.587E+00	0.000E+00	0.000E+00	5.947E+00	1.514E-09	2.575E+00	6.093E-02	5.603E-02	2.922E-02	2.289E-01
CH_2C_{l2}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	3.014E+00	5.454E+00	2.126E+00	3.025E+00	1.999E+00	6.138E+00	3.291E+00	1.946E+00	2.254E+00	2.925E+00	2.009E+00	3.179E+00	1.591E+00	1.520E+00	1.179E+00	6.835E-01
CN^{-}	1.564E+02	0.000E+00	0.000E+00	7.230E-01	1.453E-01	1.665E-11	7.805E-02	5.159E-02	3.429E+01	6.681E+01	9.175E-02	0.000E+00	2.097E+01	6.869E-03	1.296E-02	1.734E-03	3.497E-03
Co^{+3}	4.627E+01	7.382E-10	1.151E-09	5.329E-14	6.665E-02	6.014E-02	3.755E-01	2.241E-01	4.057E-09	4.491E-14	7.584E-02	5.111E-10	5.620E-01	4.867E-02	4.330E-02	1.978E-02	6.394E-02
CO_3^{-2}	2.793E+04	4.081E+01	2.661E+02	1.625E+02	1.868E+02	8.818E+01	0.000E+00	9.641E+01	1.810E+02	7.669E+01	2.179E+02	2.275E+02	3.731E+02	1.593E+02	1.456E+02	1.660E+02	8.919E+01
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	4.183E+00	5.827E+00	6.018E+00	9.753E+00	2.561E+00	3.779E+00	6.253E+00	5.917E+00	1.685E+00	7.829E+00	2.194E+00	1.842E+00	8.655E+00	6.319E+00	1.691E+01	9.862E+00
Cs^{+}	4.683E+00	1.004E-02	4.982E-03	2.685E-02	1.898E-02	2.348E-02	5.947E-02	1.636E-02	1.441E-01	2.359E-01	8.500E-03	5.026E-03	2.698E-01	5.182E-04	4.451E-04	8.311E-05	2.721E-04
Cu^{+2}	6.217E+01	2.187E-10	3.410E-10	0.000E+00	9.318E-01	9.098E-01	2.307E+00	1.931E+00	0.000E+00	0.000E+00	2.368E+00	1.514E-10	1.467E+00	2.348E-01	1.165E-01	6.061E-02	1.251E-01
F-	6.398E+03	3.498E+00	1.262E+01	3.612E+00	1.308E+02	5.299E+00	5.431E-01	2.437E+01	1.133E+01	1.003E+01	1.400E+02	5.737E+00	5.082E+00	2.783E+00	2.285E+00	6.804E+00	1.365E-01
Fe^{+3}	3.644E+04	1.715E+02	1.690E+02	3.164E+02	1.920E+02	3.087E+01	2.068E+02	8.697E+02	1.148E+02	2.221E+02	3.008E+02	4.483E+02	3.762E+02	1.653E+02	1.274E+02	5.883E+01	1.712E+02
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	8.435E+03	8.426E+03	8.606E+03	8.359E+03	8.531E+03	3.235E+02	8.604E+03	8.557E+03	8.435E+03	8.444E+03	8.551E+03	8.350E+03	3.838E+02	3.344E+02	3.320E+02	2.686E+02
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	3.034E-01	4.429E-02	1.872E-01	4.617E-01	3.368E-02	1.927E+00	5.653E-01	5.710E-01	7.884E-02	1.096E-02	2.941E-01	7.496E-02	1.011E-01	2.653E-01	1.428E-02	3.612E-03

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110	C-111	C-112	C-201	C-202	C-203	C-204
K^{+}	1.531E+03	8.523E-01	6.330E+00	3.864E+00	8.183E+00	6.176E+00	1.769E+01	3.164E+00	1.039E+00	1.751E+00	5.707E+00	2.801E+00	2.867E+00	1.025E+00	6.811E-01	5.209E-01	2.665E-01
La^{+3}	5.251E+02	2.102E-01	1.136E+00	3.867E-09	3.388E-01	2.071E-02	2.444E+00	2.282E+00	4.737E-01	8.667E-02	3.293E-02	3.547E+00	1.292E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Li^{+}	5.916E+01	2.144E-10	3.343E-10	0.000E+00	4.210E-02	0.000E+00	1.130E-01	1.404E+00	0.000E+00	0.000E+00	5.601E-11	1.484E-10	9.779E-02	5.803E-03	5.336E-03	2.480E-03	9.833E-04
Mg^{+2}	6.038E+02	2.187E-09	3.410E-09	0.000E+00	1.435E+00	2.166E+01	7.100E+00	4.028E+00	0.000E+00	0.000E+00	4.285E+00	1.514E-09	9.467E+00	1.023E+00	1.318E+00	5.544E-01	1.034E+00
Mn^{+4}	4.661E+03	3.200E+00	1.435E+01	7.862E+00	4.885E+01	1.436E+01	5.493E+02	4.251E+01	3.117E+00	2.624E+00	1.471E+00	2.710E+00	3.508E+00	2.088E+01	1.814E+01	1.915E+00	1.131E+00
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	7.454E-09	1.162E-08	0.000E+00	1.673E-01	0.000E+00	3.051E-01	3.868E-01	0.000E+00	0.000E+00	1.948E-09	5.161E-09	5.546E-01	1.567E-02	1.441E-02	7.465E-03	5.076E-03
Na^{+}	1.044E+05	4.219E+02	4.761E+02	2.464E+02	8.962E+02	2.725E+02	1.885E+02	7.065E+02	7.775E+02	4.893E+02	6.888E+02	1.251E+02	5.094E+02	1.763E+02	1.605E+02	1.540E+02	7.032E+01
Nd^{+3}	1.805E+02	2.187E-09	3.410E-09	0.000E+00	7.443E-01	0.000E+00	9.000E+00	5.354E+00	0.000E+00	0.000E+00	5.715E-10	1.514E-09	2.868E+00	2.901E-02	2.668E-02	1.407E-02	2.773E-02
NH_3	6.077E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.133E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	1.062E+00	6.073E+01	8.232E+00	1.800E+01	1.256E+01	3.017E+01	2.612E+01	1.449E+02	1.650E+02	6.962E-01	1.657E+02	2.129E+02	2.756E+00	3.185E+00	7.676E-01	4.020E+00
NO_2^{-}	1.001E+04	3.841E+01	5.780E+01	5.941E+01	1.381E+02	4.335E+01	4.141E+01	1.337E+02	6.429E+01	1.030E+02	3.387E+01	6.585E+01	1.739E+02	3.035E+01	2.539E+01	7.955E+00	2.166E+01
NO_3^{-}	6.976E+04	3.373E+02	1.986E+02	5.810E+00	7.399E+01	5.240E+01	4.601E+01	3.336E+02	1.158E+02	1.607E+02	5.625E+02	1.271E+02	2.450E+02	8.598E+01	7.771E+01	1.602E+02	3.125E+01
$OH_{(BOUND)}$	2.767E+05	2.895E+03	2.845E+03	2.647E+03	2.369E+03	2.960E+03	1.768E+03	1.897E+03	2.197E+03	2.172E+03	1.128E+03	2.245E+03	1.386E+03	2.490E+02	2.120E+02	1.398E+02	8.394E+01
OH^{-}	9.299E+03	1.548E+01	3.627E+00	3.664E+00	3.621E+00	3.656E+00	2.260E+00	3.642E+00	3.638E+00	4.177E+00	3.645E+00	3.653E+00	3.635E+00	3.272E-01	2.850E-01	2.833E-01	2.293E-01
Pb^{+2}	2.331E+03	2.915E+01	1.465E+01	2.089E+01	5.346E+00	2.622E+00	2.563E+01	8.266E+01	1.103E+01	2.988E+01	6.633E+00	4.742E+01	4.230E+01	5.489E+00	5.004E+00	6.574E+00	1.810E+00
Pd^{+2}	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.062E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.919E+00	1.535E+00	1.979E+00	2.523E-01
PO_4^{-3}	5.079E+04	2.297E+02	7.086E+01	2.035E+01	1.714E+01	4.196E+01	9.002E+01	3.529E+02	4.170E+02	6.652E+02	1.136E+03	3.581E+02	7.720E+02	2.145E+01	1.326E+01	1.382E+01	8.897E+01
Pr^{+3}	8.227E+00	0.000E+00	0.000E+00	0.000E+00	4.879E-01	0.000E+00	5.388E+00	1.755E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.400E-01	1.486E-01
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	0.000E+00	0.000E+00	0.000E+00	1.857E+00	0.000E+00	2.401E+01	7.119E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rh^{+3}	5.365E+00	0.000E+00	0.000E+00	0.000E+00	1.004E+00	0.000E+00	2.448E+00	3.678E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.933E-01	0.000E+00	0.000E+00	7.159E-02	6.673E-02
Ru^{+3}	1.754E+01	0.000E+00	0.000E+00	2.274E-13	1.300E-13	1.101E-10	2.401E+00	8.027E+00	1.964E-10	1.916E-13	0.000E+00	0.000E+00	1.207E-01	1.669E-01	0.000E+00	4.842E-01	1.618E+00
Sb^{+5}	8.891E+01	2.369E-09	3.694E-09	1.012E-10	2.039E-01	3.023E-11	1.186E+00	2.033E-02	5.394E-11	8.525E-11	7.372E-01	1.640E-09	1.690E+00	7.049E-02	4.438E-02	5.645E-02	1.566E-02
Se^{+6}	1.680E+01	2.217E-08	3.457E-08	6.538E-10	1.806E-01	4.255E-08	2.936E+00	1.921E-02	6.929E-08	5.510E-10	2.556E-03	1.535E-08	6.371E-01	0.000E+00	7.396E-02	7.536E-02	2.852E-02
Si^{+4}	1.770E+04	5.647E+01	2.952E+02	2.234E+02	7.002E+01	2.340E+02	1.600E+01	1.542E+01	7.330E+01	7.276E+01	1.969E+02	4.907E+01	4.367E+01	1.772E+00	2.129E+00	8.075E+00	0.000E+00
SO_4^{-2}	1.131E+04	3.938E+01	2.435E+01	9.418E+00	1.293E+01	1.884E+01	3.902E+00	3.421E+01	1.785E+01	2.811E+01	3.277E+01	9.771E+00	5.048E+01	4.829E+00	3.945E+00	4.076E+00	3.851E+00
Sr^{+2}	1.289E+03	4.540E+00	1.388E+00	7.386E-01	5.840E-01	1.055E+00	1.347E+00	2.043E+00	6.527E+00	4.412E+00	2.936E+00	1.715E+00	5.420E+00	5.108E-01	6.658E-01	1.381E-01	4.100E-01
Ta^{+5}	2.519E+00	0.000E+00	0.000E+00	0.000E+00	1.217E-02	0.000E+00	2.401E+00	7.152E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.066E-02	2.802E-02
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.401E+00	1.516E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.339E-01	0.000E+00	0.000E+00	7.812E-02	2.840E-02
Th^{+4}	1.943E+00	2.912E-11	9.363E-02	2.111E-07	1.631E+00	6.274E-11	4.694E-03	2.399E-03	3.407E-12	5.385E-12	6.489E-12	1.707E-11	4.309E-12	8.945E-14	8.656E-14	8.585E-14	2.370E-06
Ti^{+4}	4.390E+01	2.187E-10	3.410E-10	0.000E+00	6.823E-01	0.000E+00	3.848E-01	1.045E+00	0.000E+00	0.000E+00	2.814E-01	1.514E-10	1.568E+00	3.772E-03	4.588E-02	4.408E-02	7.629E-02
Tl^{+3}	7.736E+01	3.373E-12	5.259E-12	0.000E+00	6.791E-01	0.000E+00	7.061E+00	4.588E-02	0.000E+00	0.000E+00	8.812E-13	2.335E-12	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.330E-02
TOC	1.093E+04	1.890E+01	1.171E+01	7.952E+01	7.250E+01	2.815E+01	7.369E-02	2.600E+00	2.315E+00	1.557E+01	3.723E+00	4.344E+00	3.843E+01	1.244E+01	1.677E+01	1.263E+01	1.452E+02
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	1.094E-09	1.705E-09	0.000E+00	1.895E-01	0.000E+00	2.938E-01	2.119E-01	0.000E+00	0.000E+00	1.903E-01	7.572E-10	3.986E-01	1.509E-02	1.387E-02	2.515E-02	2.843E-03
W^{+6}	1.459E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.724E+00	5.699E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.305E+00	1.035E+00	6.460E-01	5.490E-01
Y^{+3}	3.836E+00	0.000E+00	0.000E+00	0.000E+00	1.961E-01	0.000E+00	1.693E+00	8.006E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.901E-03	2.668E-03	1.684E-03	6.677E-04
Zn^{+2}	1.873E+02	2.276E-10	3.549E-10	4.211E+00	4.235E+00	9.040E-01	2.125E+00	1.496E+00	1.115E-12	1.763E-12	6.301E+00	1.576E-10	4.292E+00	4.551E-01	5.257E-01	2.246E-01	3.833E-01
Zr^{+4}	1.053E+03	3.475E+00	4.813E+01	8.621E+01	4.519E+02	1.228E+00	2.786E+00	6.103E-01	1.463E+00	3.676E-01	4.475E+00	1.685E+00	2.738E-01	8.312E-03	8.220E-02	1.314E-02	0.000E+00

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	S-101	S-102	S-103	S-104	S-105	S-106	S-107	S-108	S-109	S-110	S-111	S-112
Ag^{+}	7.691E+01	1.730E-01	3.388E+00	0.000E+00	1.057E-02	0.000E+00	2.622E+00	5.015E-01	0.000E+00	5.594E+00	4.783E-01	5.410E-01	0.000E+00
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	1.216E+03	2.437E+02	7.572E+02	1.338E+03	5.287E+02	7.215E+02	1.421E+03	7.326E+02	1.824E+02	1.488E+03	1.298E+03	3.664E+02
As^{+5}	1.367E+02	6.108E-01	1.390E+01	0.000E+00	2.999E-03	0.000E+00	9.259E+00	2.721E-01	0.000E+00	2.006E+01	1.226E+00	1.740E+00	0.000E+00
B^{+3}	5.102E+02	1.423E+00	1.555E+01	0.000E+00	1.739E-01	0.000E+00	1.917E+01	1.615E+00	0.000E+00	1.734E+02	3.162E+00	4.150E+00	0.000E+00
Ba^{+2}	2.957E+02	4.122E-01	7.255E+00	0.000E+00	2.644E-01	0.000E+00	4.621E+00	2.453E-01	0.000E+00	1.003E+01	7.675E-01	8.702E-01	0.000E+00
Be^{+2}	3.181E+01	3.057E-02	6.949E-01	0.000E+00	3.459E-03	0.000E+00	4.621E-01	1.563E-02	0.000E+00	1.003E+00	6.133E-02	8.702E-02	0.000E+00
Bi^{+3}	1.455E+04	7.438E-01	5.151E+00	3.948E+00	4.618E-02	4.408E+00	1.560E+01	3.738E-01	2.324E+00	6.779E+00	3.340E+00	8.139E-01	2.651E+01
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2C_{l4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	5.680E+01	1.235E+03	5.673E+02	2.172E+01	2.816E+02	4.888E+02	2.484E+01	6.023E+02	5.410E+02	1.379E+02	1.436E+02	6.440E+02
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	4.818E+00	9.915E+01	3.905E+01	2.939E+00	3.079E+01	1.845E+01	4.831E+00	2.854E+01	3.170E+01	4.562E+00	5.725E+00	4.195E+01
Cd^{+2}	4.870E+01	7.071E-02	5.177E-01	0.000E+00	1.133E-02	0.000E+00	1.350E+00	5.433E-02	0.000E+00	4.149E-01	8.335E-02	1.093E-01	0.000E+00
Ce^{+3}	1.816E+02	6.117E-01	1.404E+01	0.000E+00	2.242E-01	0.000E+00	9.259E+00	3.203E-01	0.000E+00	2.006E+01	1.235E+00	1.740E+00	0.000E+00
CH_2C_{l2}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	2.932E+00	7.017E+00	6.281E+00	1.971E+00	1.906E+00	6.845E+00	1.060E+00	8.210E+00	1.250E+00	3.210E+00	7.290E+00	2.344E-01
CN^{-}	1.564E+02	0.000E+00	0.000E+00	0.000E+00	4.413E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Co^{+3}	4.627E+01	1.222E-01	2.464E+00	0.000E+00	2.608E-02	0.000E+00	1.850E+00	6.114E-02	0.000E+00	3.994E+00	2.450E-01	3.480E-01	0.000E+00
CO_3^{-2}	2.793E+04	2.165E+01	6.404E+01	4.805E+01	3.745E+00	1.117E+01	8.231E+01	6.908E+00	1.093E+02	9.181E+01	5.445E+01	8.021E+01	4.966E+02
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	6.194E+01	5.902E+02	7.074E+02	7.543E+00	3.257E+02	7.256E+02	2.263E+01	6.663E+02	4.123E+02	9.688E+01	1.602E+02	1.817E+01
Cs^{+}	4.683E+00	5.877E-03	2.521E-01	6.986E-03	3.373E-03	5.293E-02	3.119E-02	7.528E-03	3.237E-02	1.258E-03	5.096E-03	8.476E-02	1.005E-03
Cu^{+2}	6.217E+01	1.945E-01	1.706E+00	0.000E+00	1.739E-01	0.000E+00	9.303E-01	3.195E-01	0.000E+00	2.037E+00	1.379E-01	1.740E-01	0.000E+00
F-	6.398E+03	1.954E-01	9.456E-01	6.651E-01	1.524E-01	5.650E-01	3.192E+01	8.946E+00	1.072E+01	4.666E-01	2.529E+00	3.222E+00	2.531E+00
Fe^{+3}	3.644E+04	2.002E+01	1.775E+02	1.791E+02	1.376E+01	8.783E+02	2.209E+02	2.385E+01	1.616E+02	2.039E+02	8.015E+01	4.826E+00	2.162E+02
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	8.541E+03	8.290E+03	8.385E+03	8.543E+03	8.154E+03	8.080E+03	8.617E+03	8.109E+03	7.852E+03	8.181E+03	8.286E+03	8.417E+03
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	8.239E-02	4.039E-01	2.051E-03	1.433E-03	1.838E-03	1.110E-01	7.938E-02	1.428E-01	4.161E-01	1.313E-01	1.650E-01	3.624E-01

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	S-101	S-102	S-103	S-104	S-105	S-106	S-107	S-108	S-109	S-110	S-111	S-112
K^{+}	1.531E+03	8.925E-01	3.283E+00	1.855E+00	7.896E-01	1.016E+00	1.320E+01	5.832E-01	1.919E+01	2.202E+00	1.026E+00	2.012E+00	5.545E-01
La^{+3}	5.251E+02	2.255E-01	3.139E-01	2.970E-01	2.226E-02	8.937E-02	9.781E-05	1.515E-01	5.301E-02	3.128E-01	5.361E-01	1.675E-01	2.195E+01
Li^{+}	5.916E+01	7.681E-02	2.107E+00	0.000E+00	0.000E+00	0.000E+00	1.083E+01	2.141E-01	0.000E+00	0.000E+00	3.049E-01	4.322E-01	0.000E+00
Mg^{+2}	6.038E+02	6.673E-01	1.516E+01	0.000E+00	5.704E-01	0.000E+00	9.259E+00	1.500E+00	0.000E+00	2.006E+01	1.913E+00	1.740E+00	0.000E+00
Mn^{+4}	4.661E+03	2.673E+01	8.240E+01	6.132E+01	1.285E+01	1.020E+01	9.631E+00	6.035E+00	5.566E+01	2.211E+01	2.301E+01	2.764E+00	4.505E+01
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	5.264E-01	7.847E+00	0.000E+00	0.000E+00	0.000E+00	4.789E+00	2.024E-01	0.000E+00	1.004E+01	8.313E-01	1.355E+00	0.000E+00
Na^{+}	1.044E+05	5.767E+02	2.792E+02	2.725E+02	4.485E+02	6.571E+02	6.527E+02	9.576E+01	6.584E+02	1.546E+03	3.360E+02	1.033E+03	6.615E+02
Nd^{+3}	1.805E+02	6.555E-01	1.463E+01	0.000E+00	0.000E+00	0.000E+00	9.259E+00	5.819E-01	0.000E+00	2.006E+01	1.352E+00	1.740E+00	0.000E+00
NH_3	6.077E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	1.446E+00	5.098E+00	1.406E+01	6.570E-01	1.074E+01	4.633E+00	1.164E+01	1.195E+01	4.719E+00	2.321E+00	1.228E+00	1.214E+01
NO_2^{-}	1.001E+04	4.139E+01	9.515E+01	7.221E+01	1.483E+01	1.498E+01	6.685E+01	1.538E+01	1.050E+02	2.007E+01	3.826E+01	8.366E+01	3.542E+00
NO_3^{-}	6.976E+04	1.195E+02	4.740E+02	3.164E+02	1.382E+02	7.082E+02	9.094E+02	2.921E+01	7.906E+02	1.631E+03	6.521E+02	5.974E+02	1.339E+01
$OH_{(BOUND)}$	2.767E+05	2.788E+03	1.252E+03	2.109E+03	2.886E+03	2.341E+03	2.145E+03	2.912E+03	2.142E+03	1.423E+03	3.037E+03	2.872E+03	1.674E+03
OH^{-}	9.299E+03	3.119E+01	4.582E+01	6.871E+01	3.665E+00	3.338E+01	9.426E+01	1.557E+01	1.053E+02	3.595E+00	3.339E+01	1.683E+02	1.660E+01
Pb^{+2}	2.331E+03	7.664E-01	1.830E+01	1.637E+01	2.084E-01	3.321E+01	1.057E+01	1.209E+00	1.498E+01	2.044E+01	1.289E+00	1.712E+00	1.732E+01
Pd^{+2}	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PO_4^{-3}	5.079E+04	1.226E+01	1.538E+02	1.176E+02	6.390E-01	3.386E+01	2.720E+02	1.645E+01	1.298E+02	4.395E+02	1.513E+01	1.269E+02	1.519E+02
Pr^{+3}	8.227E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rh^{+3}	5.365E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ru^{+3}	1.754E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Sb^{+5}	8.891E+01	3.661E-01	7.494E+00	0.000E+00	2.872E-01	0.000E+00	4.537E+00	2.609E-01	0.000E+00	1.078E+01	6.068E-01	9.415E-01	0.000E+00
Se^{+6}	1.680E+01	1.053E-01	1.012E-01	0.000E+00	9.932E-03	0.000E+00	7.910E-01	1.779E-02	0.000E+00	2.602E-01	1.353E-01	1.911E-01	0.000E+00
Si^{+4}	1.770E+04	1.378E+01	1.295E+01	4.598E-01	1.004E+01	8.028E-01	4.009E+01	8.914E+00	4.231E+01	4.442E+01	1.770E+01	6.301E+00	4.631E+02
SO_4^{-2}	1.131E+04	2.193E+01	6.391E+00	1.258E+01	7.135E-01	8.501E+00	1.014E+02	7.545E-01	1.363E+02	3.446E+01	2.827E+01	6.568E+01	1.216E+03
Sr^{+2}	1.289E+03	3.995E+00	2.105E-01	2.636E+00	3.393E+00	2.235E-01	9.072E-02	2.262E+00	5.202E-01	2.794E+00	5.809E+00	1.293E-04	7.085E+00
Ta^{+5}	2.519E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Th^{+4}	1.943E+00	1.460E-06	6.781E-05	6.035E-05	9.990E-08	2.829E-04	5.934E-05	3.486E-07	6.074E-05	1.515E-04	1.040E-05	1.120E-05	4.724E-03
Ti^{+4}	4.390E+01	9.247E-02	3.780E+00	0.000E+00	5.541E-02	0.000E+00	9.259E-01	3.675E-01	0.000E+00	2.010E+00	2.059E-01	1.740E-01	0.000E+00
Tl^{+3}	7.736E+01	1.222E+00	1.367E-11	0.000E+00	0.000E+00	0.000E+00	1.852E+01	5.972E-01	0.000E+00	0.000E+00	2.453E+00	3.480E+00	0.000E+00
TOC	1.093E+04	9.366E+00	2.109E+02	2.755E+02	5.556E+00	8.988E+01	8.727E+01	5.001E+00	1.927E+02	2.057E+00	6.159E+00	9.971E+00	2.045E+02
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	3.059E-01	7.417E+00	0.000E+00	0.000E+00	0.000E+00	4.687E+00	1.657E-01	0.000E+00	1.003E+01	6.134E-01	8.702E-01	0.000E+00
W^{+6}	1.459E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Y^{+3}	3.836E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Zn^{+2}	1.873E+02	4.380E-01	5.098E+00	0.000E+00	1.048E-01	0.000E+00	3.604E+00	2.383E+00	0.000E+00	6.684E+00	6.456E-01	5.648E-01	0.000E+00
Zr^{+4}	1.053E+03	2.983E-01	2.519E+00	1.097E+00	3.711E-01	0.000E+00	1.586E-02	1.309E+02	1.747E+00	4.256E-01	2.783E-01	3.751E-02	0.000E+00

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	SX-101	SX-102	SX-103	SX-104	SX-105	SX-106	SX-107	SX-108	SX-109	SX-110	SX-111	SX-112	SX-113	SX-114	SX-115
Ag^{+}	7.691E+01	2.881E+00	1.981E+00	6.391E-01	0.000E+00	1.429E+00	0.000E+00	0.000E+00	4.330E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.351E-03	0.000E+00	0.000E+00
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	4.111E+02	8.477E+02	1.475E+03	1.549E+03	1.207E+03	1.864E+02	1.424E+03	9.454E+02	1.214E+03	1.588E+03	1.568E+03	1.565E+03	8.375E+01	1.267E+03	6.720E+02
As^{+5}	1.367E+02	1.080E+01	7.696E+00	2.401E+00	0.000E+00	5.282E+00	0.000E+00	0.000E+00	8.125E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.785E-02	0.000E+00	0.000E+00
B^{+3}	5.102E+02	1.558E+01	1.750E+01	4.596E+00	0.000E+00	1.292E+01	0.000E+00	0.000E+00	2.351E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.351E-03	0.000E+00	0.000E+00
Ba^{+2}	2.957E+02	5.403E+00	3.919E+00	1.305E+00	0.000E+00	3.016E+00	0.000E+00	0.000E+00	4.045E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.643E-01	0.000E+00	0.000E+00
Be^{+2}	3.181E+01	5.403E-01	3.848E-01	1.201E-01	0.000E+00	2.620E-01	1.381E+01	0.000E+00	8.125E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.820E-04	0.000E+00	0.000E+00
Bi^{+3}	1.455E+04	4.320E+00	2.462E+00	7.894E-01	1.342E+00	4.423E+00	2.983E+00	1.301E+00	1.892E+00	6.378E-01	1.209E+00	1.350E+00	1.391E+00	3.192E-02	7.788E-01	0.000E+00
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2C_{l4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	3.683E+02	7.182E+02	2.489E+02	6.595E+01	4.093E+02	5.568E+02	1.399E+01	2.889E+01	2.440E+01	2.198E+01	1.747E+01	1.632E+01	1.124E+00	2.226E+01	2.529E+01
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	2.270E+01	2.947E+01	9.170E+00	6.477E+00	3.588E+01	2.907E+01	4.173E+00	4.291E+01	3.190E+00	4.513E+00	4.596E+00	4.623E+00	1.430E+01	3.415E+00	1.122E+02
Cd^{+2}	4.870E+01	1.200E+00	8.271E-01	2.920E-01	0.000E+00	6.309E-01	5.687E+00	0.000E+00	4.925E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.201E-03	0.000E+00	0.000E+00
Ce^{+3}	1.816E+02	1.250E+01	7.888E+00	2.584E+00	0.000E+00	5.450E+00	0.000E+00	0.000E+00	5.740E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.429E-02	0.000E+00	0.000E+00
CH_2C_{l2}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	1.767E+01	1.299E+01	8.052E+00	4.622E+00	1.107E+01	1.773E+01	1.344E+00	7.009E+00	4.869E+00	4.286E+00	2.224E+00	1.821E+00	7.807E-02	4.712E+00	1.139E+00
CN^{-}	1.564E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Co^{+3}	4.627E+01	2.167E+00	1.537E+00	4.797E-01	0.000E+00	1.106E+00	0.000E+00	0.000E+00	5.415E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.388E-03	0.000E+00	0.000E+00
CO_3^{-2}	2.793E+04	1.802E+01	1.135E+02	8.903E+01	3.696E+01	8.262E+01	8.006E+01	5.219E+00	4.300E+01	5.986E+00	8.353E+00	9.658E+00	9.489E+00	2.527E+00	5.965E+00	3.431E+01
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	1.176E+03	6.354E+02	1.790E+02	6.693E+01	2.759E+02	5.597E+02	8.330E+00	8.781E+01	1.784E+01	1.577E+01	1.114E+01	1.008E+01	4.379E-01	1.638E+01	2.919E+02
Cs^{+}	4.683E+00	4.925E-02	1.558E-02	1.146E-02	7.377E-03	2.254E-02	8.426E-02	6.917E-03	8.667E-02	1.365E-02	2.599E-03	1.845E-03	1.615E-03	5.893E-03	1.324E-02	6.918E-04
Cu^{+2}	6.217E+01	1.080E+00	7.845E-01	3.764E-01	0.000E+00	1.469E+00	0.000E+00	0.000E+00	1.358E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.015E-01	0.000E+00	0.000E+00
F-	6.398E+03	2.609E+00	4.033E+00	1.515E+00	1.422E+00	3.339E+00	1.438E+00	7.779E-02	1.401E+00	3.999E-02	9.564E-02	8.167E-02	8.380E-02	7.040E-03	4.862E-02	0.000E+00
Fe^{+3}	3.644E+04	2.730E+02	1.312E+02	5.554E+01	4.304E+01	1.862E+02	1.135E+02	2.958E+01	5.203E+02	1.873E+01	2.961E+01	3.142E+01	3.197E+01	9.510E+01	2.106E+01	7.662E+02
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	8.349E+03	8.126E+03	8.093E+03	8.392E+03	8.231E+03	8.127E+03	8.592E+03	7.886E+03	8.453E+03	8.471E+03	8.549E+03	8.568E+03	8.641E+03	8.440E+03	8.743E+03
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	1.188E+00	3.736E-01	1.556E-01	1.611E-01	4.037E-01	3.987E-02	1.370E-01	6.617E-01	8.588E-02	1.378E-01	1.454E-01	1.480E-01	1.340E-02	9.685E-02	6.310E-01

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	SX-101	SX-102	SX-103	SX-104	SX-105	SX-106	SX-107	SX-108	SX-109	SX-110	SX-111	SX-112	SX-113	SX-114	SX-115
K^{+}	1.531E+03	1.506E+01	5.649E+00	3.380E+00	3.087E+00	1.977E+01	8.671E+00	2.068E+00	2.948E+00	3.548E+00	5.486E-01	3.910E-01	3.515E-01	3.075E+00	3.404E+00	2.731E-01
La^{+3}	5.251E+02	3.328E+00	5.541E-01	2.405E-01	3.196E-01	5.478E-01	8.348E-05	2.901E-01	3.517E+00	4.379E-01	4.175E-01	3.507E-01	3.331E-01	2.290E-02	4.073E-01	0.000E+00
Li^{+}	5.916E+01	3.168E+00	7.845E-01	6.187E-01	0.000E+00	1.559E+00	0.000E+00	0.000E+00	9.247E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.324E-03	0.000E+00	0.000E+00
Mg^{+2}	6.038E+02	1.139E+01	7.845E+00	2.623E+00	0.000E+00	7.861E+00	0.000E+00	0.000E+00	7.807E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.485E+01	0.000E+00	4.067E+01
Mn^{+4}	4.661E+03	1.578E+02	4.781E+01	3.254E+01	1.839E+01	8.230E+01	5.095E+01	1.382E+01	1.737E+02	7.888E+00	1.340E+01	1.454E+01	1.487E+01	2.526E+00	9.156E+00	1.838E+02
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	5.885E+00	7.619E+00	1.818E+00	0.000E+00	5.304E+00	0.000E+00	0.000E+00	9.867E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Na^{+}	1.044E+05	6.634E+02	6.114E+02	4.568E+02	2.452E+02	5.806E+02	1.853E+03	2.618E+02	9.024E+02	7.568E+02	1.604E+02	9.282E+01	7.925E+01	4.331E+00	6.751E+02	2.325E+01
Nd^{+3}	1.805E+02	1.394E+01	7.845E+00	2.780E+00	0.000E+00	5.638E+00	0.000E+00	0.000E+00	1.024E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.733E-02	0.000E+00	0.000E+00
NH_3	6.077E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	7.572E+00	1.275E+01	4.018E+00	2.277E+00	1.369E+01	8.894E+00	1.272E+00	3.439E+01	8.925E-01	1.332E+00	1.384E+00	1.399E+00	4.224E-02	9.832E-01	4.233E+01
NO_2^{-}	1.001E+04	7.668E+01	2.045E+02	1.241E+02	5.126E+01	1.896E+02	2.221E+02	1.417E+01	5.073E+01	1.694E+01	2.275E+01	1.822E+01	1.680E+01	1.101E+00	2.493E+01	1.706E+00
NO_3^{-}	6.976E+04	9.324E+02	6.436E+02	6.930E+02	3.299E+02	5.948E+02	6.990E+02	6.958E+01	1.206E+03	2.822E+02	2.425E+02	1.178E+02	9.551E+01	3.903E+00	2.565E+02	2.711E-08
$OH_{(BOUND)}$	2.767E+05	2.235E+03	2.258E+03	2.991E+03	3.071E+03	2.709E+03	1.745E+03	2.938E+03	2.911E+03	2.824E+03	3.074E+03	3.036E+03	3.029E+03	3.215E+03	2.872E+03	2.583E+03
OH^{-}	9.299E+03	3.944E+02	1.340E+02	6.322E+01	5.382E+01	2.227E+02	1.473E+02	1.215E+01	1.032E+02	5.399E+00	3.676E+01	2.489E+01	2.394E+01	3.674E+00	7.028E+00	6.909E+01
Pb^{+2}	2.331E+03	9.935E+00	9.318E+00	3.493E+00	1.762E+00	8.423E+00	1.349E+01	4.874E-01	6.334E+00	3.762E-01	5.576E-01	5.656E-01	5.684E-01	2.357E-03	4.022E-01	0.000E+00
Pd^{+2}	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PO_4^{-3}	5.079E+04	1.023E+02	5.713E+01	2.387E+01	9.740E+00	1.020E+02	3.129E+02	7.527E+00	1.096E+01	3.776E+00	7.989E+00	8.497E+00	8.744E+00	8.280E-01	4.583E+00	0.000E+00
Pr^{+3}	8.227E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rh^{+3}	5.365E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.464E-03	0.000E+00	0.000E+00
Ru^{+3}	1.754E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.775E-02	0.000E+00	0.000E+00
Sb^{+5}	8.891E+01	5.296E+00	3.775E+00	1.188E+00	0.000E+00	2.572E+00	0.000E+00	0.000E+00	9.375E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.309E-03	0.000E+00	0.000E+00
Se^{+6}	1.680E+01	6.516E-01	4.585E-01	3.193E-01	0.000E+00	4.155E-01	0.000E+00	0.000E+00	2.078E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Si^{+4}	1.770E+04	4.373E+01	2.988E+01	1.186E+01	1.041E+01	3.374E+01	4.177E+01	1.010E+01	1.517E+01	6.490E+00	7.990E-01	6.570E-01	6.636E-01	1.221E+03	7.288E+00	7.812E+00
SO_4^{-2}	1.131E+04	1.882E+01	9.075E+01	6.392E+01	1.106E+01	6.562E+01	3.614E+01	1.131E+00	7.212E+00	2.139E+00	1.183E+00	8.399E-01	7.382E-01	4.182E-02	2.366E+00	1.004E+00
Sr^{+2}	1.289E+03	1.880E+01	1.570E+00	7.807E-01	2.297E+00	1.402E+00	9.573E-03	2.251E+00	1.582E+01	1.094E+00	2.129E+00	2.340E+00	2.412E+00	1.443E-01	1.334E+00	0.000E+00
Ta^{+5}	2.519E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Th^{+4}	1.943E+00	2.222E-05	3.711E-05	1.178E-05	5.061E-06	2.838E-05	3.684E-05	2.602E-08	1.297E-11	2.640E-07	1.496E-07	7.102E-08	4.811E-08	1.178E-05	2.219E-07	0.000E+00
Ti^{+4}	4.390E+01	1.295E+00	1.227E+00	3.401E-01	0.000E+00	1.442E+00	0.000E+00	0.000E+00	1.270E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.790E+00	0.000E+00	0.000E+00
Tl^{+3}	7.736E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
TOC	1.093E+04	1.045E+02	1.499E+02	3.107E+01	1.916E+01	7.311E+01	1.586E+02	2.415E+00	4.305E+00	7.011E+00	5.200E+00	3.503E+00	3.041E+00	1.676E-01	6.132E+00	3.769E+00
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	5.520E+00	3.848E+00	1.201E+00	0.000E+00	2.620E+00	0.000E+00	0.000E+00	9.876E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.359E+00	0.000E+00	0.000E+00
W^{+6}	1.459E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Y^{+3}	3.836E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	6.835E-02	0.000E+00	0.000E+00
Zn^{+2}	1.873E+02	8.491E+00	2.278E+00	8.273E-01	0.000E+00	5.005E+00	0.000E+00	0.000E+00	2.184E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.504E-01	0.000E+00	0.000E+00
Zr^{+4}	1.053E+03	3.603E+00	3.975E+00	4.640E-01	5.111E-01	2.586E+00	1.131E+00	4.252E-01	1.253E+01	1.686E-01	3.206E-01	3.661E-01	3.773E-01	9.439E-02	2.230E-01	0.000E+00

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	SY-101	SY-102	SY-103	T-101	T-102	T-103	T-104	T-105	T-106	T-107	T-108	T-109	T-110	T-111	T-112
Ag^{+}	7.691E+01	2.430E-03	2.909E-16	2.166E-04	0.000E+00	0.000E+00	0.000E+00	3.080E-02	4.057E-01	0.000E+00	8.760E-02	0.000E+00	0.000E+00	0.000E+00	3.234E+00	0.000E+00
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	1.105E+01	3.421E-01	5.894E+00	9.181E+02	1.420E+03	1.419E+03	4.567E+02	6.447E+02	1.237E+03	8.252E+02	1.255E+02	4.221E+01	6.486E+01	1.241E+01	1.414E+02
As^{+5}	1.367E+02	7.705E-03	1.080E-15	6.968E-04	0.000E+00	0.000E+00	0.000E+00	2.053E-02	0.000E+00	0.000E+00	8.562E-02	0.000E+00	0.000E+00	0.000E+00	1.177E-01	0.000E+00
B^{+3}	5.102E+02	1.822E-02	8.877E-15	1.606E-03	0.000E+00	0.000E+00	0.000E+00	4.433E-01	1.027E+00	0.000E+00	2.698E-01	0.000E+00	0.000E+00	0.000E+00	1.261E-01	0.000E+00
Ba^{+2}	2.957E+02	3.853E-03	4.465E-16	4.812E-04	0.000E+00	0.000E+00	0.000E+00	2.433E-01	1.325E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.379E+00	0.000E+00
Be^{+2}	3.181E+01	3.851E-04	5.417E-17	3.409E-05	0.000E+00	0.000E+00	0.000E+00	9.235E-03	1.071E-01	0.000E+00	6.724E-03	0.000E+00	0.000E+00	0.000E+00	3.773E-03	2.427E+00
Bi^{+3}	1.455E+04	1.077E-02	1.743E-03	6.616E-02	3.239E-01	4.852E-03	8.733E-01	5.315E+02	4.760E+02	1.294E+02	2.220E+02	1.509E+02	1.502E+01	7.886E+02	8.443E+02	8.011E+02
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2C_{l4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	9.911E-01	4.259E-02	1.025E+00	1.865E+01	1.148E+00	2.610E+00	1.805E+01	6.708E+00	6.298E+00	3.305E+01	7.439E+00	3.665E-02	1.490E+01	1.199E+02	8.672E+00
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	3.915E-02	3.920E-03	8.641E-02	1.074E+02	5.993E+00	4.466E+00	3.143E+01	2.157E+01	3.006E+01	3.359E+01	9.396E+00	2.636E+01	3.769E+01	6.253E+01	2.101E+01
Cd^{+2}	4.870E+01	1.067E-03	7.328E-16	9.441E-05	0.000E+00	0.000E+00	0.000E+00	1.542E-01	1.490E-01	0.000E+00	2.032E-01	0.000E+00	0.000E+00	0.000E+00	1.887E-01	2.321E+00
Ce^{+3}	1.816E+02	7.705E-03	1.094E-15	6.952E-04	0.000E+00	0.000E+00	0.000E+00	5.507E+00	0.000E+00	0.000E+00	3.411E+00	0.000E+00	0.000E+00	0.000E+00	1.381E+00	0.000E+00
CH_2C_{l2}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	3.715E+01	1.021E-01	6.378E-01	6.209E+00	3.480E-01	5.790E-01	2.807E+00	7.579E-01	1.261E+00	3.248E+00	2.409E+00	2.147E+00	3.233E+00	4.770E+00	7.970E-01
CN^{-}	1.564E+02	1.970E-29	9.818E-18	6.756E-18	0.000E+00	0.000E+00	0.000E+00	5.674E-02	0.000E+00	0.000E+00	1.510E+00	0.000E+00	0.000E+00	0.000E+00	1.113E-01	0.000E+00
Co^{+3}	4.627E+01	1.540E-03	5.285E-16	1.393E-04	0.000E+00	0.000E+00	0.000E+00	3.066E-01	5.728E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.379E-01	0.000E+00
CO_3^{-2}	2.793E+04	6.059E+00	1.154E+00	8.179E+00	2.008E+02	2.120E+01	1.237E+01	2.097E+00	3.790E+01	1.063E+01	1.478E+02	5.805E+02	2.213E+03	1.642E+02	1.905E+02	9.281E+01
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	9.649E-01	2.103E-02	8.546E-01	9.804E+00	9.832E-01	1.379E+00	2.207E+01	2.115E+01	5.052E+00	5.341E+00	3.579E+00	2.577E+00	4.987E+01	5.553E+01	5.161E+01
Cs^{+}	4.683E+00	8.646E-04	6.039E-05	7.241E-04	1.570E-02	1.987E-03	2.425E-04	1.620E-04	1.098E-03	2.103E-03	5.863E-03	4.248E-03	1.853E-03	2.035E-05	1.186E-04	3.227E-06
Cu^{+2}	6.217E+01	7.705E-04	2.100E-16	1.241E-04	0.000E+00	0.000E+00	0.000E+00	1.445E+00	5.506E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.844E-01	0.000E+00
F-	6.398E+03	2.596E-01	5.415E-01	2.164E-01	3.549E+00	2.015E-01	7.358E-01	2.033E+02	1.052E+00	8.307E+00	1.356E+02	1.017E+02	4.328E+02	2.028E+01	6.112E+01	2.989E+00
Fe^{+3}	3.644E+04	5.447E-02	3.526E-03	3.928E-01	1.471E+02	8.044E+01	8.305E+01	2.538E+02	6.238E+02	1.049E+02	6.495E+02	1.570E+02	5.270E+02	5.554E+02	5.677E+02	4.589E+02
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	3.482E+04	3.497E+02	3.463E+02	8.279E+03	8.598E+03	8.633E+03	8.449E+03	8.592E+03	8.592E+03	8.275E+03	8.216E+03	8.534E+03	8.379E+03	8.434E+03	8.563E+03
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	9.580E-04	1.724E-04	4.345E-04	1.605E-03	7.058E-02	2.586E-03	3.553E-03	1.593E-01	3.753E-04	2.135E-03	5.744E-02	2.316E-01	1.234E-01	4.927E-02	4.946E-02

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	SY-101	SY-102	SY-103	T-101	T-102	T-103	T-104	T-105	T-106	T-107	T-108	T-109	T-110	T-111	T-112
K^{+}	1.531E+03	1.642E-01	1.022E-01	1.894E-01	7.983E+00	1.555E-01	5.946E-01	1.624E+00	3.496E+00	1.800E+00	2.085E+00	3.259E+00	3.038E+00	1.032E+01	1.571E+01	2.734E+01
La^{+3}	5.251E+02	7.541E-04	1.742E-06	8.907E-04	7.979E-11	5.863E-01	4.894E-01	3.095E-02	4.114E-01	9.592E-02	5.069E-02	5.510E-01	2.711E+00	1.463E+01	1.332E+02	1.348E+02
Li^{+}	5.916E+01	1.826E-03	2.099E-17	1.662E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.128E+00	0.000E+00	1.621E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mg^{+2}	6.038E+02	7.705E-03	1.375E-15	8.679E-03	0.000E+00	0.000E+00	0.000E+00	3.990E+00	9.404E+00	0.000E+00	6.108E+00	0.000E+00	0.000E+00	0.000E+00	1.156E+01	0.000E+00
Mn^{+4}	4.661E+03	1.626E-02	2.291E-04	7.028E-02	3.941E+00	4.475E+00	4.010E+00	1.743E+00	7.289E+01	7.736E-01	9.960E+00	3.169E+00	7.684E+01	1.898E+01	2.712E+02	1.662E+02
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	6.681E-03	2.560E-15	5.864E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.169E+00	0.000E+00	2.593E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Na^{+}	1.044E+05	2.224E+02	3.056E+01	3.866E+01	8.744E+02	4.552E+01	1.089E+02	6.821E+02	1.810E+02	3.006E+02	8.216E+02	2.141E+03	2.061E+03	6.216E+02	2.928E+02	3.938E+02
Nd^{+3}	1.805E+02	7.705E-03	9.770E-16	6.984E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.553E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_3	6.077E+01	4.974E-21	0.000E+00	9.056E-21	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	6.014E-03	7.163E-04	1.778E-02	7.794E-01	3.693E-01	9.582E+00	3.202E-01	1.190E+00	2.759E-01	3.015E+00	4.012E-01	1.064E+00	1.790E+00	3.829E+00	2.919E+00
NO_2^{-}	1.001E+04	3.901E+01	7.411E-01	7.531E+00	1.043E+02	1.575E+01	1.899E+01	1.777E+01	6.501E+01	2.828E+01	7.034E+01	2.000E+01	5.734E+00	2.337E+02	9.889E+00	2.387E+02
NO_3^{-}	6.976E+04	3.180E+02	5.375E+01	5.480E+01	8.404E+02	6.463E+01	4.377E+01	2.433E+02	3.075E+02	1.878E+02	4.482E+02	7.632E+02	1.744E+02	8.318E+02	6.902E+02	1.276E+02
$OH_{(BOUND)}$	2.767E+05	1.359E+01	4.145E-01	9.500E+00	2.282E+03	2.871E+03	2.870E+03	1.033E+03	2.378E+03	2.682E+03	2.464E+03	1.395E+00	1.704E+01	1.186E+03	1.127E+03	1.673E+03
OH^{-}	9.299E+03	4.731E+01	1.516E+00	8.406E+00	3.629E+00	3.667E+00	1.877E+01	2.722E+01	9.251E+01	5.376E+00	3.583E+00	3.624E+00	3.582E+00	2.706E+01	3.644E+00	4.435E+01
Pb^{+2}	2.331E+03	1.857E-02	7.512E-04	7.992E-02	1.426E+02	2.660E+00	2.343E+01	1.413E+00	1.340E+01	3.498E+01	1.648E+01	8.511E+00	2.575E+01	3.534E+01	9.315E+00	1.772E+01
Pd^{+2}	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PO_4^{-3}	5.079E+04	2.666E+00	6.923E+00	2.437E+00	4.752E+01	4.537E+01	4.806E+01	1.679E+03	1.627E+01	1.574E+02	4.801E+02	1.872E+03	8.813E+02	6.730E+02	6.154E+02	2.782E+02
Pr^{+3}	8.227E+00	0.000E+00	0.000E+00	1.195E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	0.000E+00	0.000E+00	1.499E-20	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rh^{+3}	5.365E+00	0.000E+00	0.000E+00	2.403E-06	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ru^{+3}	1.754E+01	0.000E+00	0.000E+00	2.572E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Sb^{+5}	8.891E+01	4.634E-03	1.751E-15	4.086E-04	0.000E+00	0.000E+00	0.000E+00	1.089E+00	0.000E+00	0.000E+00	4.351E+00	0.000E+00	0.000E+00	0.000E+00	9.710E-01	0.000E+00
Se^{+6}	1.680E+01	7.831E-03	1.835E-14	6.859E-04	0.000E+00	0.000E+00	0.000E+00	2.010E-03	0.000E+00	0.000E+00	7.415E-01	0.000E+00	0.000E+00	0.000E+00	9.585E-03	0.000E+00
Si^{+4}	1.770E+04	4.851E-02	6.706E-02	8.801E-01	4.150E+00	1.453E+01	1.027E+01	1.807E+02	1.804E+02	4.254E+01	8.416E+01	5.970E+01	6.209E+01	2.572E+02	1.862E+02	2.260E+02
SO_4^{-2}	1.131E+04	2.799E+00	1.031E+00	2.728E+00	3.746E+01	7.300E+00	5.380E+00	1.642E+01	3.763E+01	1.170E+01	1.712E+02	7.902E+01	9.283E+00	5.256E+01	2.107E+01	6.191E+01
Sr^{+2}	1.289E+03	1.046E-04	5.359E-04	2.659E-03	8.357E-04	1.058E-01	4.235E-02	1.860E+00	3.945E+00	1.720E-01	2.153E+01	3.419E-01	2.563E-02	1.107E+00	8.230E+00	5.260E-01
Ta^{+5}	2.519E+00	0.000E+00	0.000E+00	4.056E-21	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	0.000E+00	0.000E+00	5.562E-21	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Th^{+4}	1.943E+00	7.548E-08	3.569E-09	1.028E-05	5.752E-06	0.000E+00	2.255E-02	0.000E+00	8.279E-09	2.374E-08	3.495E-03	0.000E+00	0.000E+00	3.977E-14	5.448E-12	7.549E-13
Ti^{+4}	4.390E+01	7.705E-04	1.046E-16	1.033E-03	0.000E+00	0.000E+00	0.000E+00	2.743E-01	1.225E+00	0.000E+00	7.940E-01	0.000E+00	0.000E+00	0.000E+00	5.442E-01	0.000E+00
Tl^{+3}	7.736E+01	1.540E-02	2.303E-17	1.353E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.513E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
TOC	1.093E+04	1.088E-01	5.177E-02	3.272E-01	2.299E+01	1.946E+00	2.652E+00	4.442E+00	5.579E+00	2.518E+00	1.015E+01	1.836E+00	2.162E-02	1.131E+01	1.727E+01	4.298E+00
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	3.853E-03	4.636E-16	1.070E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.325E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.392E-01	0.000E+00
W^{+6}	1.459E+01	0.000E+00	0.000E+00	9.549E-19	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Y^{+3}	3.836E+00	2.432E-42	2.315E-20	3.679E-05	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Zn^{+2}	1.873E+02	2.363E-03	4.702E-16	4.638E-04	0.000E+00	0.000E+00	0.000E+00	3.879E+00	7.307E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.367E+00	8.720E+00
Zr^{+4}	1.053E+03	3.967E-04	1.315E-04	3.733E-03	1.671E-01	2.129E-01	1.550E-01	1.842E+00	1.266E+00	9.804E-01	1.101E+00	1.178E+00	6.733E-01	2.102E-01	2.481E-02	1.122E-01

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	T-201	T-202	T-203	T-204	TX-101	TX-102	TX-103	TX-104	TX-105	TX-106	TX-107	TX-108	TX-109
Ag^{+}	7.691E+01	5.182E-03	2.993E-03	2.372E-03	3.064E-03	0.000E+00	0.000E+00	0.000E+00	6.782E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	9.351E-02	7.742E-02	6.050E-02	5.793E-02	1.820E+03	9.095E+02	9.604E+02	1.885E+03	8.853E+02	1.436E+03	7.481E+02	8.313E+02	7.993E+02
As^{+5}	1.367E+02	5.017E-02	1.093E-01	2.151E-02	2.248E-01	0.000E+00	0.000E+00	0.000E+00	3.226E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
B^{+3}	5.102E+02	1.434E-01	1.597E-01	1.001E-01	1.028E-01	0.000E+00	0.000E+00	0.000E+00	6.119E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ba^{+2}	2.957E+02	3.998E-02	1.239E+00	8.040E-02	1.529E-02	0.000E+00	0.000E+00	0.000E+00	1.613E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Be^{+2}	3.181E+01	2.509E-03	1.119E-03	1.073E-03	1.529E-03	0.000E+00	0.000E+00	0.000E+00	1.613E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Bi^{+3}	1.455E+04	1.043E+02	3.786E+01	4.112E+01	5.566E+01	4.483E+00	2.275E+00	3.063E+00	6.653E+00	2.221E+00	3.259E+00	2.424E+00	3.259E+00	1.038E+03
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2C_{l4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	1.016E+00	6.787E-01	1.250E+00	1.437E+00	5.058E+01	1.243E+02	1.314E+02	1.086E+02	1.214E+02	1.865E+02	1.737E+02	1.137E+02	5.403E+01
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	8.064E-01	2.668E-01	3.722E-01	2.226E-01	2.293E+01	1.688E+01	1.585E+01	1.687E+01	1.720E+01	2.750E+01	1.793E+01	2.172E+01	4.905E+01
Cd^{+2}	4.870E+01	2.509E-03	1.119E-03	1.073E-03	1.529E-03	0.000E+00	0.000E+00	0.000E+00	1.059E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ce^{+3}	1.816E+02	5.460E-02	5.479E-02	5.943E-02	6.804E-02	0.000E+00	0.000E+00	0.000E+00	3.226E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CH_2C_{l2}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	1.117E+00	7.291E-01	6.358E-01	7.279E-01	1.086E+01	9.119E+00	8.762E+00	1.149E+01	8.158E+00	8.445E+00	1.142E+01	8.474E+00	5.572E+00
CN^{-}	1.564E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Co^{+3}	4.627E+01	1.003E-02	4.471E-03	4.292E-03	7.047E-03	0.000E+00	0.000E+00	0.000E+00	5.769E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CO_3^{-2}	2.793E+04	6.915E+00	1.152E+01	8.497E+00	7.539E+00	8.167E+01	1.943E+02	2.796E+02	1.246E+02	2.275E+02	1.210E+02	1.178E+02	3.052E+02	3.243E+02
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	4.818E+00	3.396E+00	3.782E+00	4.853E+00	5.496E+01	4.404E+01	4.517E+01	6.473E+01	4.305E+01	6.774E+01	1.396E+02	4.034E+01	3.842E+01
Cs^{+}	4.683E+00	1.041E-06	2.932E-07	2.917E-07	2.965E-07	2.948E-02	6.853E-02	7.149E-02	4.143E-02	6.516E-02	8.648E-03	9.828E-02	6.202E-02	3.214E-03
Cu^{+2}	6.217E+01	5.017E-03	4.724E-03	2.151E-03	7.387E-03	0.000E+00	0.000E+00	0.000E+00	5.806E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
F-	6.398E+03	5.561E+00	6.362E+00	6.600E+00	6.417E+00	2.386E+00	6.250E+00	6.783E+00	5.788E+00	6.740E+00	6.101E+00	4.421E+00	6.491E+00	5.029E+01
Fe^{+3}	3.644E+04	7.989E+00	5.825E+00	4.357E+00	4.361E+00	1.261E+02	6.634E+01	7.602E+01	1.084E+02	6.593E+01	1.115E+02	7.646E+01	1.050E+02	5.523E+02
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	3.332E-03	3.468E-03	3.468E-03	3.430E-03	9.115E+03	7.955E+03	7.960E+03	8.489E+03	7.975E+03	7.995E+03	7.992E+03	7.969E+03	8.203E+03
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.102E-01	9.236E-02	6.859E-02	4.899E-01	1.007E-01	3.566E-03	1.107E-01	2.190E-01	1.413E-02

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	T-201	T-202	T-203	T-204	TX-101	TX-102	TX-103	TX-104	TX-105	TX-106	TX-107	TX-108	TX-109
K^{+}	1.531E+03	4.611E+00	7.180E+00	7.368E+00	6.615E+00	9.912E+00	6.967E+00	6.847E+00	5.825E+00	5.984E+00	3.832E+00	7.288E+00	6.109E+00	1.568E+00
La^{+3}	5.251E+02	2.072E+01	1.127E+01	1.065E+01	1.243E+01	8.701E-01	5.485E-10	7.630E-02	8.457E-01	5.339E-10	5.665E-02	7.149E-01	8.307E-02	9.278E-02
Li^{+}	5.916E+01	5.017E-03	2.233E-03	2.151E-03	3.064E-03	0.000E+00	0.000E+00	0.000E+00	3.226E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mg^{+2}	6.038E+02	2.010E-01	7.887E-02	8.497E-02	3.740E-02	0.000E+00	0.000E+00	0.000E+00	8.170E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mn^{+4}	4.661E+03	2.500E+01	1.188E+01	1.136E+01	1.519E+01	4.735E+01	2.804E+01	3.059E+01	2.581E+01	2.742E+01	4.367E+01	3.262E+01	2.588E+01	5.072E+00
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	2.509E-02	1.119E-02	1.073E-02	1.529E-02	0.000E+00	0.000E+00	0.000E+00	1.758E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Na^{+}	1.044E+05	3.163E+01	3.641E+01	3.682E+01	3.437E+01	1.174E+03	1.311E+03	1.374E+03	8.016E+02	1.294E+03	5.094E+02	1.672E+03	1.253E+03	5.488E+02
Nd^{+3}	1.805E+02	5.017E-02	2.233E-02	2.151E-02	3.064E-02	0.000E+00	0.000E+00	0.000E+00	3.226E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_3	6.077E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	3.954E-01	1.229E-01	1.587E-01	2.610E-01	5.586E+00	2.590E+00	2.759E+00	5.696E-01	2.532E+00	5.017E+00	3.291E+00	2.499E+00	1.142E+00
NO_2^{-}	1.001E+04	4.595E-01	6.745E-01	3.564E-01	3.065E-01	1.407E+02	9.197E+01	8.712E+01	1.120E+02	7.663E+01	7.828E+01	9.391E+01	8.168E+01	4.788E+01
NO_3^{-}	6.976E+04	5.004E+01	6.501E+01	6.254E+01	5.961E+01	6.350E+02	9.106E+02	9.281E+02	1.038E+03	9.495E+02	8.297E+02	9.404E+02	9.290E+02	6.213E+02
$OH_{(BOUND)}$	2.767E+05	7.899E+01	3.646E+01	3.676E+01	4.671E+01	3.523E+03	2.381E+03	2.357E+03	3.427E+03	2.327E+03	2.824E+03	2.316E+03	2.219E+03	2.171E+03
OH^{-}	9.299E+03	2.135E-05	7.946E-06	1.482E-05	3.059E-06	9.623E+02	3.595E+00	3.595E+00	4.828E+02	3.593E+00	2.329E+01	6.628E+01	3.594E+00	3.582E+00
Pb^{+2}	2.331E+03	2.651E-01	1.003E-01	2.232E-02	3.351E-01	1.919E+00	6.102E+00	7.159E+00	4.211E+00	5.956E+00	9.301E+00	6.870E+00	6.631E+00	1.071E+01
Pd^{+2}	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PO_4^{-3}	5.079E+04	9.426E+00	6.993E+00	7.862E+00	8.761E+00	6.911E+01	1.926E+02	2.284E+02	1.536E+02	1.937E+02	1.236E+02	1.866E+02	2.180E+02	4.147E+02
Pr^{+3}	8.227E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rh^{+3}	5.365E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ru^{+3}	1.754E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Sb^{+5}	8.891E+01	3.008E-02	1.341E-02	1.291E-02	3.637E-02	0.000E+00	0.000E+00	0.000E+00	1.747E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Se^{+6}	1.680E+01	5.017E-02	2.097E-02	2.103E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.400E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Si^{+4}	1.770E+04	2.015E+00	1.715E+00	1.190E+00	1.616E+00	3.536E+01	2.864E+01	3.207E+01	1.392E+01	2.800E+01	9.793E-01	3.456E+01	2.719E+01	3.032E+01
SO_4^{-2}	1.131E+04	6.255E-01	1.501E+00	4.828E-01	3.921E-01	3.503E+01	1.336E+02	1.364E+02	9.365E+00	1.371E+02	5.650E+01	1.221E+02	1.330E+02	6.607E+01
Sr^{+2}	1.289E+03	1.012E+00	4.775E-01	5.362E-01	5.388E-01	7.681E+00	6.310E-03	2.266E-03	1.282E-01	1.507E-02	4.355E-01	4.719E-02	9.499E-01	6.822E+00
Ta^{+5}	2.519E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Th^{+4}	1.943E+00	4.114E-13	6.162E-13	6.132E-13	6.361E-13	2.290E-06	3.747E-05	3.965E-05	7.920E-06	3.656E-05	6.010E-05	4.055E-05	3.404E-05	0.000E+00
Ti^{+4}	4.390E+01	7.155E-03	1.513E-02	3.517E-03	3.745E-03	0.000E+00	0.000E+00	0.000E+00	1.254E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tl^{+3}	7.736E+01	1.003E-01	1.329E-01	4.292E-02	3.232E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
TOC	1.093E+04	1.229E-01	1.987E-01	1.112E-01	2.278E-05	1.574E+01	1.526E+02	1.613E+02	1.825E+01	1.490E+02	2.261E+02	1.759E+02	1.396E+02	1.330E+01
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	2.509E-02	1.119E-02	1.073E-02	1.529E-02	0.000E+00	0.000E+00	0.000E+00	1.613E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
W^{+6}	1.459E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Y^{+3}	3.836E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Zn^{+2}	1.873E+02	8.468E-02	1.933E-02	2.216E-02	6.777E-02	0.000E+00	0.000E+00	0.000E+00	2.998E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Zr^{+4}	1.053E+03	5.219E-03	2.233E-03	2.151E-03	2.855E-03	1.502E+00	1.011E+00	1.087E+00	7.742E-01	9.893E-01	1.047E+00	9.940E-01	9.372E-01	5.252E+00

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	TX-110	TX-111	TX-112	TX-113	TX-114	TX-115	TX-116	TX-117	TX-118	TY-101	TY-102	TY-103	TY-104	TY-105	TY-106
Ag^{+}	7.691E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.289E-02	0.000E+00	0.000E+00	2.267E-01	4.507E-02	1.459E-02
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	9.218E+02	8.965E+02	9.572E+02	2.180E+02	9.626E+02	9.695E+02	6.019E+02	4.666E+02	3.286E+02	1.874E+02	2.421E+01	5.709E+01	1.524E+02	5.075E+01	1.743E+01
As^{+5}	1.367E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.459E-01
B^{+3}	5.102E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.660E-01
Ba^{+2}	2.957E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.640E+01	0.000E+00	0.000E+00	8.083E+00	0.000E+00	2.721E-01
Be^{+2}	3.181E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.296E-03
Bi^{+3}	1.455E+04	1.105E+02	1.565E+02	3.564E+00	2.268E+02	1.083E+01	3.021E+00	1.260E+01	1.072E+01	1.305E+01	2.325E+02	2.706E+00	5.851E+02	3.460E+02	1.067E+01	2.253E+00
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2C_{l4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	1.184E+02	1.115E+02	1.311E+02	1.010E+02	8.066E+01	1.331E+02	3.561E+01	6.069E+01	8.222E+02	1.037E+00	1.569E+01	9.705E+00	4.225E+00	1.335E+01	2.256E+00
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	1.783E+01	1.865E+01	1.611E+01	1.965E+01	1.084E+01	1.818E+01	1.793E+01	1.729E+01	1.572E+01	1.499E+02	1.571E+01	1.824E+02	3.145E+02	6.363E+01	2.449E+01
Cd^{+2}	4.870E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.463E-02	0.000E+00	0.000E+00	2.296E-01	7.753E-02	7.570E-03
Ce^{+3}	1.816E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.459E-01
CH_2C_{l2}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	7.955E+00	7.822E+00	7.864E+00	1.515E+00	7.231E+00	8.207E+00	4.716E+00	4.807E+00	5.410E+00	3.245E-01	6.084E+00	1.784E+00	5.982E-01	2.454E+00	5.597E-01
CN^{-}	1.564E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.468E-01
Co^{+3}	4.627E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	3.349E-02
CO_3^{-2}	2.793E+04	3.634E+02	4.301E+02	1.831E+02	2.552E+03	1.634E+03	1.580E+02	1.201E+02	9.286E+02	2.559E+01	1.095E+01	3.787E+03	7.843E+00	1.661E+02	4.906E+01	5.504E+00
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	4.358E+01	4.243E+01	4.508E+01	9.798E+00	2.923E+01	4.569E+01	1.273E+01	2.233E+01	1.082E+02	2.266E+01	2.732E+00	1.305E+01	7.975E+00	3.126E+00	3.857E-01
Cs^{+}	4.683E+00	6.250E-02	5.851E-02	6.975E-02	7.428E-03	4.389E-02	7.102E-02	6.496E-02	3.309E-02	2.987E-02	5.566E-05	4.766E-03	1.172E-02	1.634E-02	2.583E-03	1.498E-02
Cu^{+2}	6.217E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.020E-01
F-	6.398E+03	8.566E+00	9.494E+00	7.489E+00	1.179E+01	8.938E+00	6.760E+00	7.436E+00	1.413E+01	4.139E+01	1.756E+00	1.366E+01	1.899E+00	4.020E+00	9.341E+00	2.206E-01
Fe^{+3}	3.644E+04	1.106E+02	1.286E+02	8.319E+01	1.301E+02	7.356E+01	8.870E+01	2.257E+02	1.799E+02	1.065E+02	3.426E+02	7.166E+01	5.185E+02	5.307E+02	5.924E+02	2.549E+02
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	7.982E+03	7.987E+03	7.984E+03	7.974E+03	7.962E+03	7.980E+03	7.947E+03	8.038E+03	8.356E+03	8.635E+03	7.870E+03	8.503E+03	8.592E+03	8.448E+03	8.599E+03
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	5.581E-02	5.246E-02	7.355E-02	7.598E-02	5.861E-02	1.198E-01	1.353E-01	1.239E-01	4.629E-02	3.837E-02	1.317E-01	1.196E+00	1.446E+00	1.673E+00	1.649E-03

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	TX-110	TX-111	TX-112	TX-113	TX-114	TX-115	TX-116	TX-117	TX-118	TY-101	TY-102	TY-103	TY-104	TY-105	TY-106
K^{+}	1.531E+03	5.684E+00	5.401E+00	6.063E+00	2.232E+00	4.572E+00	6.259E+00	3.764E+00	3.380E+00	3.955E+00	7.250E-02	4.866E+00	1.994E+00	8.296E-01	1.689E+00	3.576E-01
La^{+3}	5.251E+02	9.698E-03	1.383E-02	1.349E-01	2.003E-02	2.399E-01	4.147E-02	1.372E+00	1.111E+00	2.580E+00	1.092E-01	1.657E+00	3.170E-01	1.836E-01	1.222E+00	7.529E-02
Li^{+}	5.916E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.518E-02
Mg^{+2}	6.038E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.346E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.303E+01
Mn^{+4}	4.661E+03	2.645E+01	2.474E+01	3.126E+01	1.908E+00	2.087E+01	3.024E+01	2.398E+01	2.661E+01	8.717E+01	4.639E+00	2.731E+00	3.373E+00	2.605E+01	3.928E+00	1.273E+00
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.296E-02
Na^{+}	1.044E+05	1.274E+03	1.230E+03	1.389E+03	1.594E+03	1.079E+03	1.370E+03	7.719E+02	1.171E+03	1.325E+03	4.355E+02	1.047E+03	5.412E+02	5.400E+02	8.103E+02	1.685E+02
Nd^{+3}	1.805E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.661E-01
NH_3	6.077E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	2.481E+00	2.345E+00	2.773E+00	1.347E+00	1.753E+00	2.833E+00	1.254E+00	1.623E+00	3.445E+00	4.294E+01	1.327E+00	4.982E+01	2.738E+01	2.356E+00	7.421E-01
NO_2^{-}	1.001E+04	7.343E+01	7.130E+01	7.376E+01	9.688E+00	6.379E+01	7.770E+01	2.992E+01	4.241E+01	6.233E+01	4.783E+00	5.876E+01	2.300E+01	2.094E+01	2.244E+01	4.065E+00
NO_3^{-}	6.976E+04	9.524E+02	9.481E+02	9.604E+02	1.016E+03	9.394E+02	9.608E+02	1.060E+03	8.970E+02	2.121E+02	9.905E+02	1.197E+03	3.175E+02	8.134E+01	2.549E+02	9.939E+01
$OH_{(BOUND)}$	2.767E+05	2.283E+03	2.218E+03	2.407E+03	2.360E+01	1.366E+03	2.456E+03	3.142E+03	1.772E+03	6.275E+02	1.452E+03	3.747E+02	1.007E+03	1.749E+03	0.000E+00	2.809E+03
OH^{-}	9.299E+03	3.592E+00	3.592E+00	3.592E+00	3.597E+00	3.600E+00	3.592E+00	3.594E+00	3.593E+00	4.476E+01	1.463E+01	3.595E+00	1.200E+01	3.662E+00	3.654E+00	3.670E+00
Pb^{+2}	2.331E+03	6.731E+00	6.778E+00	7.685E+00	8.362E+00	6.189E+00	7.072E+00	1.452E+01	1.317E+01	9.760E+00	1.862E+00	4.695E+00	1.116E+01	1.053E+01	1.061E+01	2.001E+00
Pd^{+2}	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PO_4^{-3}	5.079E+04	2.404E+02	2.588E+02	2.567E+02	4.717E+02	2.527E+02	2.138E+02	2.638E+01	6.362E+02	2.334E+03	5.253E+02	2.551E+02	1.244E+03	4.225E+02	3.083E+03	2.594E+02
Pr^{+3}	8.227E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rh^{+3}	5.365E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ru^{+3}	1.754E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Sb^{+5}	8.891E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.741E-02
Se^{+6}	1.680E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.482E-02
Si^{+4}	1.770E+04	5.764E+01	6.895E+01	3.338E+01	1.245E+02	2.606E+01	3.124E+01	6.653E+02	4.127E+02	1.161E+02	3.278E+02	1.419E+01	1.227E+02	1.538E+02	8.579E+00	1.061E+03
SO_4^{-2}	1.131E+04	1.334E+02	1.300E+02	1.398E+02	3.153E+02	1.084E+02	1.414E+02	9.874E+01	9.309E+01	3.401E+01	1.502E+00	9.716E+01	2.104E+01	1.349E+01	7.680E+01	9.467E+00
Sr^{+2}	1.289E+03	2.897E-02	4.323E-02	2.976E-03	4.249E-02	7.746E-03	2.117E-01	2.155E-02	1.620E-02	2.014E-01	1.263E-02	3.520E-01	4.582E+00	2.673E+00	1.810E+01	2.409E+00
Ta^{+5}	2.519E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Th^{+4}	1.943E+00	3.454E-05	3.196E-05	3.956E-05	4.645E-05	2.406E-05	4.006E-05	1.235E-05	1.821E-05	2.959E-05	4.343E-11	2.160E-05	2.149E-06	9.099E-11	1.309E-11	9.192E-13
Ti^{+4}	4.390E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.332E+00
Tl^{+3}	7.736E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.918E-01
TOC	1.093E+04	1.417E+02	1.317E+02	1.609E+02	1.804E+00	9.874E+01	1.634E+02	5.158E+01	7.446E+01	5.236E+01	3.469E-01	1.326E+01	6.806E+00	1.605E+00	1.858E+01	7.386E+00
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.079E-01
W^{+6}	1.459E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Y^{+3}	3.836E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.978E-02
Zn^{+2}	1.873E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.675E-01
Zr^{+4}	1.053E+03	1.590E+00	1.799E+00	1.100E+00	1.764E+00	7.494E-01	1.092E+00	5.761E-01	7.350E-01	1.527E+00	3.161E+00	2.670E-01	4.962E+00	3.092E+00	2.064E-01	5.298E-02

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	U-101	U-102	U-103	U-104	U-105	U-106	U-107	U-108	U-109
Ag^{+}	7.691E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.295E+00	3.324E+00	1.397E+00	5.105E-01	1.472E+00
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	1.910E+03	1.106E+03	6.618E+02	6.115E+02	1.019E+03	5.018E+02	7.602E+02	1.929E+02	1.330E+03
As^{+5}	1.367E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.035E+00	5.462E+00	4.312E+00	3.654E+00	5.214E+00
B^{+3}	5.102E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.728E+01	9.003E+00	1.061E+01	3.614E+00	1.326E+01
Ba^{+2}	2.957E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.095E+00	2.771E+00	2.155E+00	1.827E+00	2.605E+00
Be^{+2}	3.181E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.992E-01	2.731E-01	2.155E-01	1.827E-01	2.605E-01
Bi^{+3}	1.455E+04	5.899E+00	3.885E+00	2.841E+00	1.677E+00	1.583E+00	1.230E+00	4.484E+00	8.586E-01	2.386E+00
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2C_{l4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	5.581E+01	2.353E+02	5.093E+02	1.581E+01	3.710E+02	7.140E+02	1.706E+02	1.260E+02	3.197E+02
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	1.876E+01	2.195E+01	2.956E+01	1.836E+01	1.918E+01	1.016E+01	3.874E+01	1.708E+01	1.769E+01
Cd^{+2}	4.870E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.023E+00	5.613E-01	1.495E-01	8.657E-02	1.630E-01
Ce^{+3}	1.816E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.562E+00	9.164E+00	4.312E+00	3.654E+00	5.210E+00
CH_2C_{l2}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	4.647E+00	1.241E+01	1.007E+01	2.856E+00	1.124E+01	7.890E+00	8.714E+00	9.171E+00	7.883E+00
CN^{-}	1.564E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.394E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Co^{+3}	4.627E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	7.245E-01	8.422E-01	7.672E-01	7.257E-01	9.262E-01
CO_3^{-2}	2.793E+04	3.942E+01	1.351E+02	8.875E+01	5.246E+00	1.153E+02	1.433E+02	2.762E+01	1.129E+02	1.135E+02
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	6.688E+01	1.167E+02	4.104E+02	5.012E+01	1.338E+02	3.085E+02	2.452E+02	1.722E+02	2.894E+02
Cs^{+}	4.683E+00	5.378E-03	1.333E-01	1.188E-02	2.788E-03	4.723E-02	1.659E-02	7.208E-02	7.397E-02	1.277E-01
Cu^{+2}	6.217E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	8.942E-01	2.219E+00	5.629E-01	3.655E-01	5.967E-01
F-	6.398E+03	4.190E-01	8.580E-01	2.322E+01	1.066E-01	4.699E+00	1.483E+00	1.275E+00	2.274E+00	5.083E+00
Fe^{+3}	3.644E+04	1.322E+02	6.827E+01	2.161E+02	6.623E+01	1.812E+02	3.839E+02	2.038E+02	6.725E+01	2.335E+01
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	9.030E+03	8.131E+03	8.178E+03	8.708E+03	7.995E+03	8.057E+03	8.048E+03	8.111E+03	8.103E+03
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	6.158E-01	2.687E-01	1.560E-01	1.388E-02	1.152E-02	1.992E-03	2.258E-02	2.169E-02	4.734E-02

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	U-101	U-102	U-103	U-104	U-105	U-106	U-107	U-108	U-109
K^{+}	1.531E+03	1.276E+00	7.928E+00	1.996E+01	1.089E+01	6.374E+00	8.566E+00	6.090E+00	4.868E+00	3.095E+00
La^{+3}	5.251E+02	1.182E+00	4.168E-01	1.356E-01	3.360E-01	1.118E-01	4.853E+00	9.634E-02	2.800E-05	7.839E-02
Li^{+}	5.916E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.855E-01	5.462E-01	6.633E-01	3.654E-01	2.141E+00
Mg^{+2}	6.038E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	5.365E+00	5.525E+00	6.297E+00	3.654E+00	5.325E+00
Mn^{+4}	4.661E+03	6.220E+01	3.004E+01	5.629E+01	1.784E+01	6.209E+01	1.289E+02	8.103E+01	2.864E+00	6.702E+00
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.415E+00	4.184E+00	3.406E+00	2.489E+00	4.120E+00
Na^{+}	1.044E+05	2.363E+02	1.216E+03	6.508E+02	4.553E+02	6.689E+02	8.534E+02	1.400E+03	2.760E+03	4.856E+02
Nd^{+3}	1.805E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.855E+00	1.380E+01	4.311E+00	3.654E+00	5.210E+00
NH_3	6.077E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	1.418E-01	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	5.711E+00	6.246E+00	1.181E+01	2.620E+00	7.427E+00	2.595E+01	2.845E+00	2.444E+00	3.177E+00
NO_2^{-}	1.001E+04	6.555E+01	1.526E+02	1.362E+02	3.416E+01	1.303E+02	1.466E+02	1.078E+02	1.424E+02	1.337E+02
NO_3^{-}	6.976E+04	2.323E+02	8.001E+02	5.929E+02	1.282E+02	8.016E+02	5.669E+02	9.465E+02	7.393E+02	7.273E+02
$OH_{(BOUND)}$	2.767E+05	3.385E+03	2.505E+03	1.590E+03	3.137E+03	2.125E+03	9.550E+02	2.577E+03	2.115E+03	2.368E+03
OH^{-}	9.299E+03	6.129E+02	1.507E+02	1.521E+02	1.989E+02	4.105E+01	6.120E+01	9.015E+01	1.230E+02	7.533E+01
Pb^{+2}	2.331E+03	2.294E+00	6.263E+00	1.431E+01	6.106E-01	1.025E+01	2.070E+01	1.007E+01	7.300E+01	5.578E+00
Pd^{+2}	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PO_4^{-3}	5.079E+04	5.872E+01	1.249E+02	4.096E+02	2.351E+01	1.008E+02	1.417E+02	2.176E+02	6.578E+01	6.101E+02
Pr^{+3}	8.227E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rh^{+3}	5.365E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ru^{+3}	1.754E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Sb^{+5}	8.891E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.039E+00	2.686E+00	2.891E+00	1.976E+00	0.000E+00
Se^{+6}	1.680E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.107E-01	3.018E-01	1.547E-01	1.947E-01	2.784E-01
Si^{+4}	1.770E+04	3.215E+00	2.683E+01	1.622E+02	7.169E+02	2.542E+01	2.222E+00	4.256E+01	2.988E-01	2.565E+01
SO_4^{-2}	1.131E+04	2.489E+00	9.669E+01	2.575E+02	1.547E+00	8.886E+01	5.646E+01	5.295E+00	3.723E+01	8.269E+01
Sr^{+2}	1.289E+03	1.041E+01	3.635E+00	1.174E+00	2.928E+00	4.521E-02	2.186E-02	1.962E-02	1.333E-02	3.364E-02
Ta^{+5}	2.519E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Th^{+4}	1.943E+00	1.240E-11	2.564E-05	3.159E-05	1.695E-12	1.750E-05	5.225E-05	2.365E-05	1.561E-05	3.429E-05
Ti^{+4}	4.390E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	4.642E-01	6.025E-01	4.877E-01	3.654E-01	5.210E-01
Tl^{+3}	7.736E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
TOC	1.093E+04	8.318E+00	2.808E+02	6.744E+02	2.356E+00	5.825E+02	1.485E+03	3.379E+01	1.128E+02	1.539E+02
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	2.023E+00	2.731E+00	2.155E+00	1.827E+00	2.794E+00
W^{+6}	1.459E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Y^{+3}	3.836E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Zn^{+2}	1.873E+02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	9.990E-01	6.176E+00	4.769E+00	2.049E+00	1.624E+00
Zr^{+4}	1.053E+03	1.620E+00	8.492E-01	1.607E+00	3.783E-01	1.534E+00	1.377E+01	0.000E+00	3.426E-02	0.000E+00

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	U-110	U-111	U-112	U-201	U-202	U-203	U-204
Ag^{+}	7.691E+01	9.792E-01	0.000E+00	0.000E+00	1.312E-02	1.161E-02	1.782E-02	9.929E-03
$Al(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Al^{+3}	9.476E+04	1.062E+03	5.496E+02	1.546E+03	2.722E+02	2.578E+02	1.289E+02	2.760E+02
As^{+5}	1.367E+02	5.673E-01	0.000E+00	0.000E+00	2.398E-02	2.100E-02	9.370E-02	2.091E-02
B^{+3}	5.102E+02	9.524E-01	0.000E+00	0.000E+00	3.000E-01	3.438E-01	4.221E-01	7.718E-02
Ba^{+2}	2.957E+02	6.788E-01	0.000E+00	0.000E+00	1.199E-02	1.050E-02	4.685E-02	1.090E-02
Be^{+2}	3.181E+01	2.563E-02	0.000E+00	0.000E+00	1.199E-03	1.050E-03	4.685E-03	1.046E-03
Bi^{+3}	1.455E+04	1.488E+02	1.128E+02	8.798E+01	1.141E+00	8.917E-01	6.237E-01	1.225E+00
$C_{10}H_{12}N_2O_8^{-4}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{10}H_{15}N_2O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{12}H_{27}O_4P$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_{13}H_{28}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2C_{l4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_2^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2H_3O_3^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_2HC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_2O_4^{-2}$	2.782E+04	2.056E+01	3.133E+02	5.728E+00	1.666E-01	1.236E-01	1.033E-01	2.373E-01
C_3H_6O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_4H_{10}O$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_4H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_5H_5N	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_5NO2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_6H_5O_7^{-3}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_6H_6	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$C_7H_6N_2O_4$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
C_7H_8O	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ca^{+2}	6.465E+03	5.976E+00	2.523E+01	9.382E+00	6.541E-02	4.274E-02	2.047E-01	1.329E+00
Cd^{+2}	4.870E+01	1.916E-01	0.000E+00	0.000E+00	3.671E-03	3.129E-03	4.685E-03	2.962E-03
Ce^{+3}	1.816E+02	7.868E+00	0.000E+00	0.000E+00	2.398E-02	2.100E-02	9.370E-02	2.091E-02
CH_2C_{l2}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHC_{l3}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
CHO_2^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Cl^{-}	7.146E+02	7.391E-01	1.121E+01	3.943E-01	7.742E-01	5.237E-01	4.691E-01	3.026E-01
CN^{-}	1.564E+02	0.000E+00	0.000E+00	0.000E+00	8.100E-04	4.431E-04	1.093E-03	7.377E-04
Co^{+3}	4.627E+01	1.060E+00	0.000E+00	0.000E+00	4.796E-03	4.199E-03	1.874E-02	4.780E-03
CO_3^{-2}	2.793E+04	3.967E+00	1.057E+02	4.141E+00	5.116E+00	8.643E+00	1.946E+00	7.870E+00
$Cr(OH)_4^{-}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
$Cr_{(TOTAL)}$	1.452E+04	1.791E+00	4.036E+02	6.430E+00	3.548E-01	2.901E-01	3.150E-01	1.750E-01
Cs^{+}	4.683E+00	7.821E-03	1.399E-01	7.657E-04	2.687E-04	2.177E-04	2.162E-04	2.555E-04
Cu^{+2}	6.217E+01	2.530E+00	0.000E+00	0.000E+00	2.300E-02	3.167E-02	1.248E-02	1.655E-02
F-	6.398E+03	3.059E+00	3.274E+00	5.014E+00	8.771E+00	9.594E+00	1.821E+01	6.379E-02
Fe^{+3}	3.644E+04	1.330E+02	1.480E+02	8.433E+01	3.520E+00	2.153E+00	3.042E+00	2.265E+00
H^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
H_2O	1.145E+06	8.619E+03	8.139E+03	8.689E+03	3.720E-03	3.732E-03	3.751E-03	1.438E-02
H_2O_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Hg^{+2}	3.542E+01	2.680E-04	1.697E-01	6.486E-03	5.586E-05	4.347E-05	4.278E-05	2.181E-04

Table D-2. Projected Residual Chemical Inventory. (28 Sheets)

TANK	Total for All Tanks	U-110	U-111	U-112	U-201	U-202	U-203	U-204
K^{+}	1.531E+03	6.148E-01	6.922E+00	4.405E+00	1.244E-01	1.177E-01	3.618E-01	1.293E-01
La^{+3}	5.251E+02	7.556E-01	2.499E-01	3.979E-01	1.199E-02	1.050E-02	1.969E-02	1.046E-02
Li^{+}	5.916E+01	6.140E-01	0.000E+00	0.000E+00	2.762E-03	4.824E-03	9.370E-03	2.091E-03
Mg^{+2}	6.038E+02	1.602E+01	0.000E+00	0.000E+00	2.899E-02	3.023E-02	9.370E-02	5.219E-01
Mn^{+4}	4.661E+03	4.583E+01	3.734E+01	2.203E+00	2.813E-02	3.085E-02	2.570E-02	1.026E-01
MnO_2	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
MnO_4^{-}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Mo^{+6}	1.242E+02	6.692E-01	0.000E+00	0.000E+00	1.199E-02	1.050E-02	4.685E-02	1.046E-02
Na^{+}	1.044E+05	2.738E+02	1.450E+03	5.321E+01	8.829E+01	7.964E+01	1.584E+02	1.626E+01
Nd^{+3}	1.805E+02	1.171E+01	0.000E+00	0.000E+00	2.398E-02	2.100E-02	9.370E-02	2.091E-02
NH_3	6.077E+01	4.924E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
NH_4^{+}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ni^{+2}	2.702E+03	1.541E+00	6.753E+00	1.461E+00	7.647E-03	5.872E-03	1.583E-02	5.421E-03
NO_2^{-}	1.001E+04	6.829E+00	1.465E+02	2.052E+00	3.582E+00	3.308E+00	3.295E+00	2.340E+00
NO_3^{-}	6.976E+04	2.367E+01	7.175E+02	3.917E+01	2.377E+01	2.008E+01	2.188E+01	1.623E+01
$OH_{(BOUND)}$	2.767E+05	2.583E+03	2.164E+03	2.978E+03	5.297E+02	4.982E+02	2.605E+02	5.350E+02
OH^{-}	9.299E+03	3.670E+00	1.515E+02	7.089E+01	2.511E-05	2.118E-05	8.358E-06	5.165E-05
Pb^{+2}	2.331E+03	8.708E+00	1.028E+01	5.165E+00	1.689E-01	2.270E-01	1.405E-01	7.189E+00
Pd^{+2}	1.275E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
PO_4^{-3}	5.079E+04	6.175E+01	2.389E+02	7.831E+01	7.220E+01	6.248E+01	1.640E+02	2.270E+00
Pr^{+3}	8.227E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Pu^{+4}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rb^{+}	2.588E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Rh^{+3}	5.365E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Ru^{+3}	1.754E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Sb^{+5}	8.891E+01	0.000E+00	0.000E+00	0.000E+00	1.439E-02	1.260E-02	5.622E-02	1.255E-02
Se^{+6}	1.680E+01	7.571E-02	0.000E+00	0.000E+00	2.401E-02	0.000E+00	9.426E-02	2.091E-02
Si^{+4}	1.770E+04	5.066E+01	6.885E+01	2.945E+00	1.537E+00	1.410E+00	3.779E+00	2.985E+00
SO_4^{-2}	1.131E+04	1.100E+00	6.656E+01	2.328E+00	4.452E-01	3.829E-01	3.822E-01	2.821E-01
Sr^{+2}	1.289E+03	5.147E+00	2.865E+00	7.404E-01	3.440E-06	7.626E-03	2.922E-06	2.910E-02
Ta^{+5}	2.519E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Tc^{+7}	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Te^{+6}	5.882E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Th^{+4}	1.943E+00	0.000E+00	2.774E-05	3.588E-08	4.272E-08	8.078E-08	3.779E-08	1.828E-08
Ti^{+4}	4.390E+01	5.878E-01	0.000E+00	0.000E+00	5.905E-03	2.156E-03	9.370E-03	8.999E-03
Tl^{+3}	7.736E+01	3.454E+01	0.000E+00	0.000E+00	4.796E-02	4.199E-02	0.000E+00	4.183E-02
TOC	1.093E+04	3.908E+00	1.719E+02	7.817E+00	1.288E-01	9.558E-02	7.986E-02	6.662E-01
$U_{(TOTAL)}$	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
V^{+5}	8.730E+01	7.858E-01	0.000E+00	0.000E+00	1.331E-02	1.599E-02	4.685E-02	1.046E-02
W^{+6}	1.459E+01	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Y^{+3}	3.836E+00	0.000E+00	0.000E+00	0.000E+00	2.398E-03	2.100E-03	9.370E-03	2.091E-03
Zn^{+2}	1.873E+02	3.346E+00	0.000E+00	0.000E+00	3.395E-01	3.707E-01	1.990E-01	7.681E-01
Zr^{+4}	1.053E+03	1.427E+00	1.794E+00	1.073E+00	8.967E-03	3.731E-03	9.362E-03	3.748E-03

Table D-3. Projected Radionuclide Concentration in Retrieved Single-Shell Tank Waste Liquids. (11 Sheets)

Liquid(Ci/L)	A-101	A-102	A-103	A-104	A-105	A-106	AX-101	AX-102	AX-103	AX-104	B-104	B-105	B-106	B-107	B-108	B-109
^{106}Ru	2.48E-13	1.22E-12	5.85E-13	1.71E-17	0.00E+00	1.04E-13	2.94E-13	2.31E-15	4.50E-13	1.63E-17	2.24E-18	2.26E-18	3.90E-19	2.11E-17	6.56E-17	6.33E-17
^{113m}Cd	4.53E-06	6.81E-06	1.63E-05	1.42E-07	4.03E-06	2.49E-06	5.15E-06	4.88E-06	2.52E-06	3.83E-07	1.71E-08	1.34E-08	6.53E-09	9.68E-08	3.41E-08	3.19E-08
^{125}Sb	4.27E-07	6.27E-07	4.31E-07	4.34E-05	3.85E-06	4.63E-06	1.92E-07	2.50E-04	1.08E-06	1.49E-05	1.15E-10	1.18E-10	1.64E-11	1.01E-09	1.17E-10	1.04E-10
^{126}Sn	3.22E-07	1.57E-06	1.08E-06	1.24E-08	6.95E-09	1.30E-08	3.76E-07	1.69E-08	5.75E-07	8.44E-11	1.01E-09	1.02E-09	1.64E-10	6.21E-09	9.52E-10	8.49E-10
^{129}I	6.94E-08	8.81E-08	1.60E-08	3.58E-09	2.13E-09	4.54E-08	7.84E-08	8.71E-08	7.71E-08	1.03E-09	3.70E-10	5.54E-10	4.38E-10	2.02E-08	1.38E-08	1.33E-08
^{134}Cs	5.22E-08	7.35E-08	4.79E-08	2.04E-07	3.52E-07	5.99E-08	5.54E-08	6.59E-08	8.63E-08	1.71E-07	7.12E-13	7.26E-13	1.46E-12	3.66E-11	1.34E-11	1.28E-11
^{137}Cs	9.00E-02	1.38E-01	8.90E-02	6.81E-02	1.35E-01	3.73E-02	1.08E-01	1.27E-01	1.32E-01	1.41E-01	2.16E-04	2.23E-04	4.23E-03	9.56E-03	1.32E-03	2.64E-04
^{137m}Ba	8.52E-02	1.31E-01	8.42E-02	6.45E-02	1.28E-01	3.53E-02	1.02E-01	1.20E-01	1.24E-01	1.33E-01	2.04E-04	2.10E-04	4.00E-03	9.04E-03	1.25E-03	2.50E-04
^{14}C	1.96E-06	1.02E-06	1.23E-06	1.23E-09	1.69E-07	3.73E-07	2.19E-06	3.44E-07	1.97E-06	2.41E-09	9.08E-08	3.88E-08	5.92E-08	3.72E-07	9.88E-08	9.24E-08
^{151}Sm	1.94E-04	9.52E-04	4.07E-04	6.78E-07	4.70E-14	4.37E-11	2.30E-04	1.04E-10	3.52E-04	2.60E-06	1.19E-05	1.18E-05	1.64E-06	7.15E-05	1.13E-05	1.01E-05
^{152}Eu	1.85E-08	9.07E-08	3.88E-08	6.46E-08	4.11E-17	9.20E-15	2.19E-08	5.73E-14	3.35E-08	8.77E-07	3.72E-10	3.67E-10	6.54E-11	2.13E-09	3.44E-10	3.07E-10
^{154}Eu	1.59E-06	7.81E-06	3.34E-06	1.63E-05	9.47E-16	6.46E-13	1.89E-06	2.11E-12	2.89E-06	2.84E-05	2.60E-08	2.57E-08	4.55E-09	1.49E-07	2.41E-08	2.15E-08
^{155}Eu	4.82E-07	2.37E-06	1.01E-06	2.03E-06	1.59E-16	2.62E-13	5.73E-07	9.19E-13	8.76E-07	1.44E-05	1.25E-08	1.24E-08	2.17E-09	7.17E-08	1.16E-08	1.03E-08
^{226}Ra	3.96E-12	1.23E-11	6.15E-12	3.58E-13	1.40E-12	9.05E-14	2.96E-12	1.63E-13	4.23E-12	8.29E-13	1.29E-12	6.49E-12	2.36E-13	7.89E-12	1.70E-12	1.44E-12
^{227}Ac	3.32E-10	1.63E-09	6.97E-10	9.20E-16	6.35E-24	1.10E-19	3.94E-10	1.65E-18	6.03E-10	1.54E-15	6.89E-12	6.85E-12	9.54E-13	4.24E-11	6.89E-12	6.18E-12
^{228}Ra	1.30E-09	4.06E-09	2.02E-09	1.37E-11	1.16E-17	2.19E-11	9.76E-10	6.60E-11	1.40E-09	6.87E-18	6.76E-18	3.51E-17	1.27E-18	3.57E-10	4.96E-09	4.79E-09
^{229}Th	1.28E-12	6.31E-12	2.74E-12	5.72E-20	6.00E-22	2.89E-14	1.52E-12	7.89E-16	2.33E-12	2.01E-23	1.16E-15	1.05E-15	1.61E-16	5.66E-10	9.29E-11	8.98E-11
^{231}Pa	2.46E-08	1.76E-08	8.51E-09	5.19E-15	2.81E-12	9.34E-11	5.05E-09	1.98E-08	7.15E-09	6.74E-15	2.00E-11	2.42E-11	1.45E-11	1.16E-10	2.99E-11	2.71E-11
^{232}Th	4.65E-12	2.29E-11	9.93E-12	1.45E-19	8.43E-25	9.88E-14	5.52E-12	4.17E-13	8.45E-12	2.81E-26	9.73E-18	8.82E-18	1.36E-18	2.58E-09	4.24E-10	4.10E-10
^{232}U	4.34E-12	1.12E-09	1.62E-10	2.74E-16	1.65E-21	5.44E-11	1.42E-12	6.04E-12	6.47E-12	1.64E-20	6.74E-14	3.17E-15	7.69E-14	9.41E-11	8.14E-11	1.35E-09
^{233}U	2.69E-10	6.92E-08	1.00E-08	1.73E-14	3.08E-21	3.37E-09	8.83E-11	3.74E-10	4.01E-10	3.06E-20	5.68E-15	2.62E-16	6.44E-15	5.81E-09	5.05E-09	8.38E-08
^{234}U	4.72E-11	1.21E-08	1.79E-09	4.59E-14	2.18E-17	1.45E-09	1.54E-11	7.09E-11	6.99E-11	2.17E-16	5.70E-09	2.43E-10	6.33E-09	3.97E-08	3.19E-09	1.33E-08
^{235}U	1.91E-12	4.90E-10	7.27E-11	1.93E-15	9.11E-19	6.03E-11	6.22E-13	2.89E-12	2.83E-12	9.07E-18	2.55E-10	1.09E-11	2.83E-10	1.77E-09	1.39E-10	5.29E-10
^{236}U	1.24E-12	3.17E-10	4.69E-11	1.10E-15	5.61E-19	3.73E-11	4.04E-13	1.99E-12	1.84E-12	5.58E-18	6.25E-11	2.86E-12	7.23E-11	4.67E-10	4.64E-11	3.05E-10
^{237}Np	2.35E-09	1.22E-08	7.09E-09	4.60E-15	1.89E-15	1.80E-09	2.77E-09	9.48E-11	4.24E-09	6.30E-17	6.93E-10	6.73E-10	1.02E-10	4.61E-09	6.63E-10	5.89E-10
^{238}Pu	1.13E-08	1.18E-06	8.88E-07	2.38E-11	1.13E-08	7.21E-07	7.26E-10	1.44E-08	1.18E-09	4.72E-09	1.73E-09	1.39E-09	4.57E-10	2.39E-08	6.51E-10	9.80E-10
^{238}U	4.25E-11	1.09E-08	1.61E-09	4.57E-14	2.13E-17	1.38E-09	1.38E-11	6.29E-11	6.29E-11	2.12E-16	5.81E-09	2.48E-10	6.45E-09	4.04E-08	3.17E-09	1.22E-08
^{239}Pu	2.56E-07	2.86E-05	2.24E-05	7.19E-10	2.40E-07	1.85E-05	1.76E-08	1.55E-07	2.66E-08	1.00E-07	2.42E-07	1.87E-07	6.43E-08	2.78E-06	8.59E-08	1.25E-07
^{240}Pu	6.11E-08	6.64E-06	5.14E-06	1.57E-10	5.89E-08	4.22E-06	4.09E-09	4.97E-08	6.50E-09	2.47E-08	2.67E-08	2.12E-08	7.03E-09	3.37E-07	9.82E-09	1.45E-08
^{241}Am	6.75E-07	1.95E-07	1.70E-05	7.15E-11	1.40E-10	1.78E-06	1.87E-08	7.51E-07	2.41E-07	3.65E-12	5.82E-08	3.72E-08	2.39E-08	2.16E-07	2.50E-08	3.34E-08
^{241}Pu	4.73E-07	5.17E-05	3.80E-05	8.77E-10	4.54E-07	2.97E-05	3.10E-08	7.35E-07	4.93E-08	1.90E-07	4.55E-08	3.68E-08	1.20E-08	8.37E-07	1.80E-08	2.90E-08
^{242}Cm	9.34E-08	4.41E-07	4.70E-08	2.59E-08	5.54E-07	1.36E-07	1.56E-08	3.16E-06	8.76E-08	3.06E-08	3.00E-11	2.57E-11	7.55E-11	2.83E-10	5.61E-12	7.75E-12
^{242}Pu	4.49E-12	4.96E-10	3.62E-10	7.85E-15	4.27E-12	2.80E-10	2.96E-13	7.59E-12	4.67E-13	1.79E-12	3.75E-13	3.06E-13	9.86E-14	6.88E-12	1.50E-13	2.40E-13
^{243}Am	4.19E-10	9.61E-11	9.77E-09	3.61E-14	7.46E-14	9.41E-10	1.15E-11	6.87E-10	1.49E-10	1.94E-15	7.03E-12	4.90E-12	3.13E-12	2.06E-11	3.26E-12	4.25E-12
^{243}Cm	4.72E-09	1.66E-08	1.79E-09	1.23E-09	3.13E-08	7.18E-09	9.80E-10	3.06E-07	4.89E-09	1.73E-09	3.34E-13	2.87E-13	8.45E-13	3.40E-12	6.44E-14	9.79E-14
^{244}Cm	1.07E-07	3.90E-07	4.21E-08	2.79E-08	7.03E-07	1.67E-07	2.29E-08	7.16E-06	1.10E-07	3.88E-08	7.52E-12	6.44E-12	1.90E-11	7.86E-11	1.47E-12	2.31E-12
^{3}H	5.86E-06	8.81E-06	4.84E-06	8.56E-07	2.08E-06	3.48E-06	6.55E-06	9.58E-06	5.90E-06	1.01E-06	3.04E-07	4.97E-07	4.40E-07	1.82E-06	5.71E-07	5.07E-07
^{59}Ni	1.69E-07	4.50E-07	1.44E-06	9.54E-10	1.70E-08	1.60E-07	8.52E-08	7.50E-09	1.09E-07	9.05E-10	2.00E-09	2.35E-09	2.01E-10	2.59E-08	9.93E-10	7.60E-09
^{60}Co	5.86E-07	1.22E-06	1.34E-06	2.82E-08	4.02E-07	2.01E-07	3.35E-07	4.43E-07	4.82E-07	3.16E-08	6.38E-09	5.57E-09	9.33E-10	1.87E-07	5.06E-09	1.15E-08
^{63}Ni	1.58E-05	4.20E-05	1.35E-04	8.87E-08	1.60E-06	1.48E-05	7.94E-06	7.04E-07	1.02E-05	8.52E-08	2.07E-07	2.37E-07	2.04E-08	2.51E-06	1.00E-07	7.24E-07
^{79}Se	2.24E-07	5.18E-07	2.34E-07	2.30E-08	1.14E-07	9.21E-08	2.30E-07	1.65E-07	2.76E-07	1.39E-07	9.19E-10	1.27E-09	8.62E-10	3.76E-09	6.27E-10	5.07E-10
^{90}Sr	7.70E-04	3.70E-03	9.74E-04	5.63E-04	5.63E-04	7.66E-04	7.59E-04	1.21E-02	7.25E-04	5.61E-04	5.63E-04	3.32E-04	5.63E-04	1.09E-03	4.67E-04	1.25E-04
^{90}Y	7.70E-04	3.70E-03	9.74E-04	5.63E-04	5.63E-04	7.66E-04	7.59E-04	1.21E-02	7.25E-04	5.61E-04	5.63E-04	3.32E-04	5.63E-04	1.09E-03	4.67E-04	1.25E-04
^{93}Zr	1.21E-05	8.55E-06	4.14E-06	7.06E-08	1.12E-06	8.83E-08	2.46E-06	1.02E-05	3.50E-06	1.69E-07	3.05E-08	3.91E-08	5.20E-08	1.77E-07	2.72E-08	2.36E-08
^{93m}Nb	3.78E-06	7.18E-06	4.92E-06	1.14E-06	5.79E-07	9.61E-07	2.03E-06	1.75E-06	2.85E-06	2.68E-06	2.21E-08	2.30E-08	3.34E-09	3.59E-07	2.12E-08	1.89E-08
^{99}Tc	6.83E-05	7.83E-05	6.96E-05	7.18E-06	3.54E-05	5.19E-05	7.69E-05	4.59E-06	8.00E-05	2.65E-04	8.31E-06	9.06E-07	4.69E-06	1.97E-05	2.02E-07	1.58E-07

Table D-3. Projected Radionuclide Concentration in Retrieved Single-Shell Tank Waste Liquids. (11 Sheets)

Liquid(Ci/L)	B-110	B-111	B-112	B-201	B-202	B-203	B-204	BX-101	BX-102	BX-103	BX-104	BX-105	BX-106	BX-107	BX-108
^{106}Ru	2.65E-12	1.57E-11	1.09E-15	2.18E-23	7.08E-21	6.71E-20	1.86E-21	2.06E-16	1.06E-16	2.42E-15	7.29E-19	7.46E-18	8.82E-19	1.45E-19	4.85E-21
^{113m}Cd	1.58E-07	1.37E-07	2.38E-06	1.78E-12	1.95E-11	2.20E-11	1.77E-11	3.84E-09	1.93E-09	5.07E-08	1.18E-08	2.68E-08	3.22E-09	3.18E-09	4.89E-09
^{125}Sb	3.91E-08	2.28E-07	9.26E-08	1.28E-16	2.30E-15	5.05E-13	2.64E-14	0.00E+00	0.00E+00	2.60E-10	3.30E-11	3.18E-11	0.00E+00	2.21E-12	5.73E-11
^{126}Sn	1.07E-08	1.06E-08	1.39E-07	1.16E-13	7.03E-13	9.31E-13	1.43E-12	2.28E-12	2.92E-13	5.58E-11	1.91E-11	1.61E-10	3.98E-12	1.36E-10	8.85E-11
^{129}I	1.26E-09	6.57E-10	9.25E-08	5.65E-15	0.00E+00	0.00E+00	1.63E-16	8.01E-09	4.10E-09	1.39E-08	5.07E-09	3.75E-09	1.81E-09	1.41E-10	3.86E-10
^{134}Cs	1.24E-07	1.20E-09	5.14E-09	5.10E-09	1.23E-16	1.32E-16	8.92E-17	7.35E-12	3.74E-12	4.97E-11	4.26E-12	5.57E-12	6.76E-13	2.77E-14	1.48E-12
^{137}Cs	1.12E-02	1.05E-01	1.23E-02	1.74E-05	5.21E-05	4.65E-06	1.37E-05	1.06E-04	4.43E-06	7.40E-04	4.41E-03	5.58E-03	1.40E-03	5.84E-04	2.88E-03
^{137m}Ba	1.06E-02	9.98E-02	1.16E-02	1.65E-05	4.93E-05	4.40E-06	1.30E-05	1.01E-04	4.19E-06	7.00E-04	4.18E-03	5.27E-03	1.32E-03	5.52E-04	2.73E-03
^{14}C	2.17E-06	2.59E-06	8.17E-07	1.28E-10	1.67E-10	1.68E-10	1.55E-10	6.93E-08	3.45E-08	1.10E-07	2.56E-08	1.96E-07	8.19E-08	6.88E-08	4.40E-08
^{151}Sm	3.40E-05	3.27E-05	3.76E-05	9.23E-09	1.87E-08	1.81E-07	1.43E-07	1.47E-10	1.90E-11	5.09E-07	9.75E-08	3.99E-07	2.56E-10	1.69E-09	2.35E-09
^{152}Eu	7.68E-09	5.35E-09	6.47E-09	1.00E-13	7.82E-13	7.45E-12	2.03E-12	2.20E-12	7.97E-13	1.18E-10	1.36E-11	4.79E-11	2.18E-12	3.40E-14	4.72E-14
^{154}Eu	3.70E-07	3.63E-07	4.48E-07	3.00E-09	5.25E-11	5.01E-10	1.65E-10	1.54E-10	5.61E-11	8.32E-09	8.73E-10	3.18E-09	1.49E-10	2.29E-12	3.25E-12
^{155}Eu	1.41E-07	1.38E-07	1.76E-07	1.78E-09	2.37E-11	2.26E-10	1.01E-10	7.13E-11	2.55E-11	3.78E-09	3.43E-10	1.14E-09	6.41E-11	9.89E-13	1.51E-12
^{226}Ra	1.56E-13	1.33E-13	3.31E-12	2.68E-16	7.83E-16	1.70E-15	2.32E-15	5.13E-15	6.13E-16	6.78E-14	9.13E-14	9.45E-14	8.12E-15	8.83E-13	5.47E-14
^{227}Ac	8.26E-13	8.12E-13	1.15E-09	1.19E-14	1.30E-14	1.26E-13	1.74E-13	2.90E-13	1.49E-13	1.32E-11	2.18E-14	7.29E-14	5.81E-16	3.37E-15	4.95E-15
^{228}Ra	3.93E-12	3.89E-12	2.79E-09	2.32E-20	1.22E-19	2.64E-19	2.69E-19	1.35E-10	6.96E-11	4.75E-10	2.47E-11	3.78E-19	3.38E-20	9.91E-18	2.86E-19
^{229}Th	3.10E-14	3.80E-14	3.55E-12	3.09E-16	0.00E+00	9.08E-17	5.51E-17	8.47E-10	4.35E-10	1.07E-09	2.87E-13	2.16E-17	2.11E-17	8.87E-16	9.78E-17
^{231}Pa	1.92E-12	1.90E-12	1.26E-08	8.59E-13	4.26E-12	8.51E-13	8.46E-12	0.00E+00	0.00E+00	4.74E-11	1.25E-13	1.55E-13	0.00E+00	1.98E-12	6.86E-13
^{232}Th	8.65E-14	8.57E-14	1.36E-11	2.59E-18	0.00E+00	7.73E-19	4.62E-19	3.86E-09	1.99E-09	4.86E-09	1.31E-12	1.71E-19	1.75E-19	7.46E-18	8.24E-19
^{232}U	1.44E-12	6.14E-12	4.10E-10	9.04E-14	0.00E+00	9.92E-15	7.72E-19	6.36E-10	3.27E-10	1.53E-09	5.16E-12	1.57E-14	2.66E-13	3.49E-13	5.47E-13
^{233}U	9.22E-11	9.28E-11	2.56E-08	8.21E-15	0.00E+00	8.05E-16	6.86E-20	3.95E-08	2.03E-08	9.51E-08	3.20E-10	1.19E-15	1.49E-14	2.91E-14	4.58E-14
^{234}U	6.30E-11	9.50E-08	2.40E-09	1.08E-08	0.00E+00	6.73E-10	8.22E-14	1.09E-08	2.80E-09	3.11E-08	2.95E-10	1.30E-09	9.23E-09	2.80E-08	4.50E-08
^{235}U	2.64E-12	4.23E-09	9.48E-11	4.76E-10	0.00E+00	2.98E-11	3.70E-15	4.54E-10	1.09E-10	1.31E-09	1.27E-11	5.84E-11	4.03E-10	1.25E-09	2.01E-09
^{236}U	1.71E-12	1.53E-09	5.02E-11	1.11E-10	0.00E+00	9.14E-12	7.61E-16	1.96E-10	6.90E-11	5.28E-10	4.80E-12	1.30E-11	1.58E-10	3.13E-10	5.14E-10
^{237}Np	2.69E-09	1.04E-07	2.91E-08	3.07E-11	0.00E+00	2.31E-11	5.67E-12	1.25E-11	1.50E-12	7.96E-11	6.93E-12	2.89E-11	2.22E-11	9.75E-11	2.37E-10
^{238}Pu	7.45E-08	2.27E-07	1.06E-08	4.42E-08	1.29E-08	1.28E-08	1.05E-08	1.81E-08	5.83E-10	1.16E-07	1.64E-09	1.41E-08	9.24E-09	4.31E-09	3.46E-09
^{238}U	5.90E-11	9.32E-08	2.11E-09	1.08E-08	0.00E+00	6.87E-10	8.37E-14	1.04E-08	2.52E-09	3.01E-08	2.89E-10	1.32E-09	9.43E-09	2.86E-08	4.59E-08
^{239}Pu	2.40E-06	6.60E-06	3.00E-07	5.28E-06	8.12E-07	1.48E-06	1.22E-06	9.10E-07	2.47E-08	6.14E-06	1.48E-07	9.57E-07	7.18E-07	6.13E-07	4.95E-07
^{240}Pu	2.59E-07	8.40E-07	6.78E-08	3.04E-07	1.37E-07	1.87E-07	1.54E-07	1.89E-07	5.84E-09	1.23E-06	2.08E-08	1.75E-07	1.19E-07	6.67E-08	5.33E-08
^{241}Am	4.58E-06	1.21E-04	3.62E-07	0.00E+00	0.00E+00	7.25E-07	2.29E-07	7.00E-07	1.05E-08	7.82E-06	3.53E-07	2.10E-07	6.26E-07	5.30E-07	1.31E-07
^{241}Pu	5.79E-07	4.55E-06	5.33E-07	6.52E-08	5.06E-07	3.56E-07	2.93E-07	1.08E-06	3.65E-08	6.83E-06	6.94E-08	6.06E-07	3.78E-07	1.12E-07	9.01E-08
^{242}Cm	1.43E-10	1.41E-10	1.16E-09	4.06E-11	4.43E-10	6.25E-10	1.15E-09	4.69E-11	1.77E-13	1.69E-10	6.48E-11	3.65E-11	6.28E-11	5.53E-12	2.46E-10
^{242}Pu	5.03E-12	4.49E-11	4.98E-12	1.82E-11	2.69E-11	2.99E-12	2.46E-12	8.77E-12	2.96E-13	5.55E-11	5.99E-13	5.03E-12	3.13E-12	9.28E-13	7.37E-13
^{243}Am	6.60E-10	2.67E-08	1.44E-10	0.00E+00	0.00E+00	1.12E-10	3.53E-11	6.42E-11	2.63E-13	7.79E-10	9.59E-12	7.53E-12	8.50E-11	5.42E-11	1.76E-11
^{243}Cm	4.10E-12	4.06E-12	3.84E-11	2.26E-13	5.05E-12	7.12E-12	1.31E-11	7.19E-13	8.74E-15	2.62E-12	7.95E-13	4.31E-13	7.05E-13	6.17E-14	2.76E-12
^{244}Cm	9.80E-11	9.70E-11	9.16E-10	5.09E-12	1.13E-10	1.60E-10	2.94E-10	1.80E-11	2.59E-13	6.56E-11	2.04E-11	9.86E-12	1.59E-11	1.39E-12	6.21E-11
^{3}H	1.91E-06	2.56E-06	5.91E-06	2.17E-05	5.24E-12	5.23E-12	4.76E-12	3.28E-07	1.44E-07	4.12E-06	3.32E-06	1.79E-05	7.15E-06	7.83E-08	3.97E-07
^{59}Ni	4.02E-09	3.98E-09	2.69E-07	2.10E-13	5.55E-13	1.39E-12	1.07E-12	2.09E-08	1.07E-08	2.06E-07	2.14E-08	2.25E-07	1.30E-08	4.21E-10	1.15E-10
^{60}Co	9.26E-08	9.17E-08	2.02E-06	2.94E-09	1.31E-12	3.29E-12	1.31E-12	2.27E-10	1.16E-10	3.65E-07	1.22E-07	1.13E-06	1.88E-10	2.68E-09	3.07E-09
^{63}Ni	3.74E-07	3.70E-07	2.53E-05	1.76E-11	4.80E-11	1.20E-10	8.92E-11	1.97E-06	1.01E-06	1.94E-05	2.03E-06	2.06E-05	1.19E-06	5.83E-08	1.15E-08
^{79}Se	3.99E-09	1.23E-07	5.63E-08	8.41E-12	1.06E-11	1.16E-11	1.07E-11	1.24E-10	1.49E-11	2.03E-10	1.42E-10	3.68E-10	2.19E-10	3.28E-10	8.82E-10
^{90}Sr	1.06E-03	9.71E-04	7.17E-04	2.25E-03	1.31E-03	8.74E-05	3.28E-06	5.63E-04	1.64E-05	6.09E-04	5.66E-04	5.65E-04	5.65E-04	5.63E-04	5.64E-04
^{90}Y	1.06E-03	9.71E-04	7.17E-04	2.25E-03	1.31E-03	8.74E-05	3.28E-06	5.63E-04	1.64E-05	6.09E-04	5.66E-04	5.65E-04	5.65E-04	5.63E-04	5.64E-04
^{93}Zr	1.53E-07	1.52E-07	1.97E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.30E-10	1.47E-10	6.54E-10	0.00E+00	8.01E-09	4.09E-09
^{93m}Nb	1.28E-07	1.28E-07	1.80E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.92E-10	1.33E-10	4.94E-10	0.00E+00	4.21E-09	3.11E-08
^{99}Tc	2.86E-05	1.73E-04	1.73E-05	1.32E-11	5.03E-06	1.75E-11	1.62E-11	3.57E-08	4.88E-09	5.92E-08	2.80E-06	3.55E-06	4.04E-06	8.70E-06	3.04E-06

Table D-3. Projected Radionuclide Concentration in Retrieved Single-Shell Tank Waste Liquids. (11 Sheets)

Liquid(Ci/L)	BX-109	BX-110	BX-111	BX-112	BY-101	BY-102	BY-103	BY-104	BY-105	BY-106	BY-107
^{106}Ru	8.01E-21	2.15E-16	4.62E-16	6.33E-19	4.54E-16	8.03E-16	5.06E-16	1.66E-16	5.48E-16	2.23E-12	3.70E-13
^{113m}Cd	2.56E-08	4.23E-06	1.11E-06	3.04E-09	6.84E-07	2.17E-06	1.21E-06	1.50E-06	1.00E-06	4.54E-06	4.62E-06
^{125}Sb	0.00E+00	6.51E-09	2.00E-07	8.13E-12	2.21E-07	4.00E-07	2.20E-07	5.02E-09	2.57E-07	3.02E-07	2.13E-07
^{126}Sn	9.18E-11	1.30E-07	7.53E-08	3.76E-11	4.82E-08	1.22E-07	8.23E-08	1.04E-07	6.95E-08	1.73E-08	1.11E-07
^{129}I	7.35E-10	2.09E-07	2.25E-07	1.25E-10	2.47E-07	2.08E-07	2.48E-07	2.31E-07	2.87E-07	3.74E-07	2.68E-07
^{134}Cs	0.00E+00	5.00E-09	7.02E-09	2.16E-14	6.89E-09	9.18E-09	7.69E-09	7.87E-09	8.33E-09	1.22E-08	9.03E-09
^{137}Cs	0.00E+00	1.28E-02	1.93E-02	1.24E-03	3.37E-02	2.42E-02	2.11E-02	2.76E-02	1.65E-02	5.94E-02	4.59E-02
^{137m}Ba	0.00E+00	1.21E-02	1.83E-02	1.17E-03	3.19E-02	2.29E-02	2.00E-02	2.61E-02	1.56E-02	5.62E-02	4.34E-02
^{14}C	3.47E-08	1.31E-06	1.07E-06	5.24E-08	1.06E-06	1.56E-06	1.16E-06	1.17E-06	1.26E-06	1.61E-06	1.45E-06
^{151}Sm	1.57E-17	3.49E-05	1.92E-05	7.51E-07	1.16E-05	2.79E-05	2.10E-05	2.70E-05	1.72E-05	2.87E-06	2.93E-05
^{152}Eu	5.02E-22	6.01E-09	1.33E-08	3.60E-11	1.32E-08	1.39E-08	1.46E-08	1.48E-08	1.59E-08	4.95E-10	5.04E-09
^{154}Eu	3.49E-20	4.16E-07	9.25E-07	2.31E-09	9.14E-07	9.63E-07	1.01E-06	1.03E-06	1.10E-06	3.42E-08	3.49E-07
^{155}Eu	1.68E-20	1.64E-07	3.64E-07	8.62E-10	3.60E-07	3.79E-07	3.99E-07	4.04E-07	4.33E-07	1.35E-08	1.38E-07
^{226}Ra	1.73E-13	6.78E-12	2.95E-12	5.07E-14	2.60E-12	3.28E-12	3.18E-12	2.34E-12	3.13E-12	7.29E-12	6.92E-12
^{227}Ac	9.08E-24	1.07E-09	5.86E-10	2.81E-13	3.51E-10	8.52E-10	6.41E-10	8.26E-10	5.22E-10	8.81E-11	8.98E-10
^{228}Ra	6.64E-19	5.31E-09	2.46E-09	7.22E-19	2.01E-09	2.77E-09	2.88E-09	1.98E-09	2.60E-09	6.03E-09	5.76E-09
^{229}Th	5.30E-17	7.19E-12	4.67E-12	1.44E-16	4.40E-12	3.08E-12	7.52E-11	2.21E-12	5.40E-12	5.92E-12	6.31E-12
^{231}Pa	0.00E+00	1.34E-08	6.95E-09	2.10E-12	4.48E-09	9.22E-09	7.60E-09	8.92E-09	6.43E-09	9.53E-10	1.20E-08
^{232}Th	4.49E-19	2.74E-11	1.78E-11	1.22E-18	1.68E-11	1.18E-11	3.39E-10	8.43E-12	8.26E-12	2.25E-11	2.41E-11
^{232}U	1.04E-12	1.71E-09	1.40E-10	5.99E-15	1.19E-10	5.75E-10	1.47E-09	1.17E-10	1.08E-09	2.00E-10	7.39E-10
^{233}U	8.73E-14	1.07E-07	8.74E-09	4.68E-16	7.41E-09	3.59E-08	9.16E-08	7.30E-09	6.71E-08	1.25E-08	4.61E-08
^{234}U	8.60E-08	2.06E-08	3.48E-09	3.47E-10	1.38E-08	2.34E-09	6.47E-09	4.76E-10	2.97E-08	9.40E-09	1.03E-08
^{235}U	3.84E-09	8.68E-10	1.51E-10	1.53E-11	6.13E-10	8.71E-11	2.42E-10	1.77E-11	1.29E-09	4.13E-10	4.39E-10
^{236}U	9.83E-10	3.29E-10	4.70E-11	5.05E-12	1.62E-10	5.95E-11	1.63E-10	1.21E-11	4.02E-10	1.19E-10	1.60E-10
^{237}Np	1.38E-10	3.42E-08	2.06E-08	1.70E-11	1.66E-08	2.80E-08	2.26E-08	1.77E-08	5.30E-09	3.76E-08	4.39E-08
^{238}Pu	1.36E-09	1.23E-08	1.63E-09	1.38E-08	3.12E-09	8.32E-09	1.47E-10	7.35E-09	2.04E-10	2.46E-09	8.71E-09
^{238}U	8.75E-08	1.96E-08	3.43E-09	3.54E-10	1.40E-08	1.92E-09	5.37E-09	3.89E-10	2.94E-08	9.41E-09	9.92E-09
^{239}Pu	1.95E-07	5.63E-07	4.23E-08	1.96E-06	8.09E-08	2.16E-07	3.80E-09	1.91E-07	5.30E-09	1.65E-07	2.96E-07
^{240}Pu	2.09E-08	9.58E-08	1.01E-08	2.14E-07	1.94E-08	5.16E-08	9.13E-10	4.57E-08	1.27E-09	2.33E-08	5.97E-08
^{241}Am	9.47E-08	6.05E-07	1.44E-07	2.27E-09	1.40E-06	8.75E-07	3.38E-07	2.55E-07	1.34E-06	9.06E-08	2.72E-07
^{241}Pu	3.54E-08	5.70E-07	8.28E-08	3.59E-07	1.58E-07	4.22E-07	7.45E-09	3.73E-07	1.04E-08	1.04E-07	4.27E-07
^{242}Cm	1.09E-10	1.24E-09	1.84E-10	3.29E-11	3.64E-10	9.88E-10	1.06E-10	8.50E-09	9.38E-10	2.20E-09	2.33E-09
^{242}Pu	2.87E-13	5.27E-12	7.74E-13	2.97E-12	1.48E-12	3.95E-12	6.97E-14	3.49E-12	9.70E-14	9.44E-13	3.98E-12
^{243}Am	1.34E-11	1.95E-10	3.92E-11	2.33E-13	2.23E-10	3.49E-10	1.34E-10	1.02E-10	4.49E-10	2.12E-11	1.02E-10
^{243}Cm	1.22E-12	3.95E-11	6.05E-12	3.67E-13	1.17E-11	3.26E-11	3.50E-12	2.60E-10	3.09E-11	4.50E-11	6.67E-11
^{244}Cm	2.76E-11	9.39E-10	1.44E-10	8.26E-12	2.79E-10	7.77E-10	8.35E-11	6.18E-09	7.35E-10	1.05E-09	1.58E-09
^{3}H	7.98E-07	9.50E-06	1.15E-05	1.06E-07	1.23E-05	1.13E-05	1.26E-05	1.23E-05	1.41E-05	1.22E-05	1.09E-05
^{59}Ni	8.41E-11	1.73E-06	3.82E-07	9.62E-11	3.86E-07	9.04E-07	4.20E-07	1.50E-07	4.51E-07	7.60E-06	1.63E-07
^{60}Co	1.68E-10	2.80E-06	4.53E-07	7.75E-10	2.81E-07	2.06E-06	4.95E-07	6.12E-07	5.63E-08	1.90E-06	6.65E-07
^{63}Ni	7.18E-09	1.62E-04	3.59E-05	1.30E-08	3.62E-05	8.51E-05	3.95E-05	1.41E-05	4.24E-05	7.15E-04	1.53E-05
^{79}Se	1.53E-09	8.27E-08	7.81E-08	9.62E-12	1.04E-07	1.05E-07	1.10E-07	1.13E-07	1.27E-07	1.14E-07	9.78E-08
^{90}Sr	5.65E-04	6.61E-04	5.68E-04	5.63E-04	6.15E-04	6.64E-04	1.19E-03	7.65E-04	6.04E-04	6.24E-04	6.28E-04
^{90}Y	5.65E-04	6.61E-04	5.68E-04	5.63E-04	6.15E-04	6.64E-04	1.19E-03	7.65E-04	6.04E-04	6.24E-04	6.28E-04
^{93}Zr	0.00E+00	2.44E-06	1.06E-06	4.45E-09	6.73E-07	1.69E-06	1.16E-06	1.39E-06	9.74E-07	1.49E-07	2.28E-06
^{93m}Nb	0.00E+00	1.49E-06	1.21E-06	4.45E-09	9.14E-07	1.71E-06	1.31E-06	1.15E-06	1.22E-06	7.05E-07	1.65E-06
^{99}Tc	2.05E-07	1.82E-05	1.01E-05	5.19E-06	8.14E-06	2.73E-05	1.07E-05	1.20E-05	3.26E-06	1.36E-05	1.69E-05

Table D-3. Projected Radionuclide Concentration in Retrieved Single-Shell Tank Waste Liquids. (11 Sheets)

Liquid(Ci/L)	BY-108	BY-109	BY-110	BY-111	BY-112	C-101	C-102	C-103	C-104	C-105
^{106}Ru	2.85E-16	5.34E-16	3.39E-13	4.09E-13	6.40E-16	8.25E-20	4.28E-17	1.81E-14	3.69E-14	2.71E-19
^{113m}Cd	6.07E-06	1.93E-06	2.08E-06	4.69E-06	1.29E-06	1.99E-08	3.30E-08	6.56E-08	9.30E-08	7.16E-07
^{125}Sb	2.51E-07	1.92E-07	3.64E-07	2.34E-07	3.51E-07	2.24E-12	3.88E-11	1.08E-08	0.00E+00	2.84E-10
^{126}Sn	1.73E-07	1.28E-07	1.42E-07	9.54E-08	6.65E-08	4.39E-10	5.28E-10	3.09E-09	1.34E-08	9.93E-10
^{129}I	3.18E-07	2.26E-07	2.23E-07	2.94E-07	1.79E-07	7.00E-08	7.01E-08	1.07E-07	2.83E-07	1.39E-07
^{134}Cs	4.79E-09	8.18E-09	1.20E-08	9.24E-09	7.01E-09	1.93E-11	3.68E-09	5.16E-09	2.71E-08	4.15E-12
^{137}Cs	1.05E-02	2.10E-02	4.91E-02	2.45E-02	1.89E-02	2.69E-02	1.39E-02	1.57E-02	4.43E-02	9.32E-03
^{137m}Ba	9.92E-03	1.99E-02	4.65E-02	2.32E-02	1.79E-02	2.54E-02	1.31E-02	1.48E-02	4.19E-02	8.82E-03
^{14}C	1.86E-06	1.23E-06	1.07E-06	1.51E-06	1.23E-06	7.59E-07	9.89E-07	8.78E-07	1.59E-06	7.34E-07
^{151}Sm	4.62E-05	3.39E-05	2.06E-05	2.48E-05	1.33E-05	8.71E-14	6.50E-14	1.10E-05	8.08E-11	0.00E+00
^{152}Eu	7.97E-09	1.53E-08	1.35E-08	4.28E-09	1.03E-08	2.37E-18	8.72E-18	2.38E-09	1.12E-14	0.00E+00
^{154}Eu	5.51E-07	1.06E-06	4.49E-07	2.96E-07	7.15E-07	1.61E-16	1.51E-14	6.22E-09	6.23E-13	0.00E+00
^{155}Eu	2.17E-07	4.19E-07	3.68E-07	1.17E-07	2.81E-07	6.70E-17	8.23E-15	1.16E-08	3.75E-13	0.00E+00
^{226}Ra	4.02E-12	4.13E-12	4.54E-12	6.87E-12	1.93E-12	7.56E-14	1.40E-13	4.40E-14	0.00E+00	2.31E-14
^{227}Ac	1.42E-09	1.04E-09	6.26E-10	7.62E-10	4.04E-10	6.52E-20	2.46E-15	9.54E-14	4.41E-15	0.00E+00
^{228}Ra	3.40E-09	4.76E-09	3.69E-09	5.82E-09	1.61E-09	3.30E-19	3.55E-09	9.39E-13	0.00E+00	1.55E-19
^{229}Th	3.79E-12	4.77E-10	7.36E-12	6.37E-12	1.79E-12	5.18E-18	1.07E-09	3.62E-13	5.98E-10	1.04E-16
^{231}Pa	1.81E-08	1.18E-08	6.77E-09	1.08E-08	4.37E-09	8.78E-16	1.49E-11	2.47E-13	2.36E-11	1.57E-13
^{232}Th	1.45E-11	2.17E-09	2.81E-11	2.43E-11	6.82E-12	4.28E-20	2.30E-09	9.21E-13	6.00E-09	8.34E-19
^{232}U	2.01E-10	1.34E-09	4.31E-09	5.60E-10	4.59E-10	1.53E-12	1.30E-08	8.96E-10	2.07E-09	1.09E-11
^{233}U	1.25E-08	8.39E-08	2.69E-07	3.49E-08	2.86E-08	8.16E-14	8.53E-07	5.45E-08	4.44E-07	5.42E-13
^{234}U	8.19E-10	5.69E-09	8.37E-08	2.28E-09	7.76E-09	4.56E-08	4.46E-08	8.32E-07	2.23E-08	2.58E-07
^{235}U	3.05E-11	2.12E-10	3.61E-09	8.47E-11	3.30E-10	1.98E-09	1.68E-09	3.54E-08	6.48E-10	1.10E-08
^{236}U	2.09E-11	1.44E-10	1.21E-09	5.79E-11	1.27E-10	8.52E-10	5.63E-10	1.91E-08	7.35E-10	5.58E-09
^{237}Np	3.05E-08	2.99E-08	2.82E-08	4.35E-08	1.73E-08	1.11E-10	5.31E-11	2.83E-08	4.72E-09	1.62E-10
^{238}Pu	1.04E-08	9.23E-09	5.16E-10	2.21E-08	7.86E-09	4.43E-09	3.55E-08	3.22E-08	8.41E-08	4.46E-08
^{238}U	6.69E-10	4.69E-09	8.18E-08	1.87E-09	7.55E-09	4.66E-08	3.84E-08	8.49E-07	1.26E-08	2.64E-07
^{239}Pu	5.41E-07	2.39E-07	1.34E-08	5.74E-07	2.04E-07	3.14E-07	1.37E-06	1.55E-06	1.90E-06	2.77E-06
^{240}Pu	8.61E-08	5.75E-08	3.21E-09	1.37E-07	4.89E-08	5.57E-08	3.29E-07	3.27E-07	4.89E-07	5.45E-07
^{241}Am	6.81E-08	1.57E-06	1.45E-06	5.09E-07	6.83E-07	3.81E-06	2.74E-05	1.22E-05	1.09E-05	1.33E-03
^{241}Pu	4.72E-07	4.69E-07	2.62E-08	1.12E-06	3.99E-07	1.87E-07	2.22E-06	1.38E-06	4.61E-06	1.98E-06
^{242}Cm	3.73E-09	1.05E-09	4.01E-09	3.43E-09	9.20E-10	4.13E-10	8.65E-10	7.10E-10	3.08E-08	1.09E-10
^{242}Pu	4.34E-12	4.38E-12	2.45E-13	1.05E-11	3.73E-12	1.56E-12	1.90E-11	1.18E-11	4.55E-11	1.64E-11
^{243}Am	2.72E-11	6.23E-10	4.63E-10	2.03E-10	2.72E-10	5.03E-10	1.16E-09	5.88E-09	2.36E-09	3.12E-08
^{243}Cm	9.60E-11	3.48E-11	1.11E-10	1.13E-10	3.04E-11	4.64E-12	6.31E-11	3.11E-11	2.74E-09	1.16E-12
^{244}Cm	2.27E-09	8.29E-10	2.63E-09	2.70E-09	7.23E-10	1.05E-10	1.64E-09	7.10E-10	6.12E-08	2.35E-11
^{3}H	1.39E-05	1.25E-05	1.15E-05	1.13E-05	8.95E-06	6.88E-05	2.58E-05	4.29E-05	4.21E-05	1.56E-04
^{59}Ni	2.36E-06	4.59E-07	1.04E-06	2.36E-06	7.36E-07	4.86E-08	9.95E-08	2.27E-07	2.06E-07	1.92E-08
^{60}Co	5.91E-06	7.87E-07	7.26E-07	3.48E-06	1.56E-06	8.60E-08	1.43E-06	7.32E-06	6.60E-06	3.09E-06
^{63}Ni	2.22E-04	4.31E-05	9.75E-05	2.22E-04	6.92E-05	4.45E-06	9.35E-06	2.10E-05	1.91E-05	1.76E-06
^{79}Se	1.31E-07	1.12E-07	1.06E-07	1.02E-07	7.30E-08	1.46E-09	1.87E-09	5.33E-08	5.69E-06	1.05E-09
^{90}Sr	6.81E-04	7.61E-04	8.27E-04	6.76E-04	6.97E-04	1.66E-03	1.79E-03	2.88E-03	3.50E-03	4.82E-03
^{90}Y	6.81E-04	7.61E-04	8.27E-04	6.76E-04	6.97E-04	1.66E-03	1.79E-03	2.88E-03	3.50E-03	4.82E-03
^{93}Zr	3.28E-06	1.82E-06	1.06E-06	2.13E-06	9.06E-07	7.77E-10	6.69E-09	3.03E-08	2.49E-10	6.60E-10
^{93m}Nb	2.45E-06	1.81E-06	1.57E-06	1.51E-06	1.03E-06	2.38E-11	1.92E-10	1.65E-08	0.00E+00	4.18E-09
^{99}Tc	2.31E-05	1.36E-05	1.01E-05	1.66E-05	2.10E-05	4.95E-07	5.78E-07	1.66E-05	4.71E-05	7.90E-05

Table D-3. Projected Radionuclide Concentration in Retrieved Single-Shell Tank Waste Liquids. (11 Sheets)

Liquid(Ci/L)	C-106	C-107	C-108	C-109	C-110	C-111	C-112	C-201	C-202	C-203	C-204	S-101	S-102	S-103	S-104
^{106}Ru	0.00E+00	0.00E+00	1.99E-18	6.39E-12	1.39E-18	3.69E-21	4.09E-18	7.51E-14	1.85E-21	1.24E-22	2.70E-21	3.76E-14	4.87E-13	2.41E-13	4.08E-14
^{113m}Cd	0.00E+00	0.00E+00	2.30E-11	0.00E+00	5.03E-09	3.82E-08	2.52E-08	7.74E-09	5.84E-09	9.18E-09	1.23E-08	2.18E-07	4.59E-06	1.24E-06	1.25E-07
^{125}Sb	1.63E-06	0.00E+00	1.14E-12	0.00E+00	4.34E-12	3.84E-10	0.00E+00	2.93E-08	2.21E-08	3.47E-08	4.64E-08	1.10E-08	2.03E-07	2.02E-07	1.45E-08
^{126}Sn	0.00E+00	1.97E-06	3.67E-10	1.40E-10	1.96E-10	6.78E-13	5.47E-11	0.00E+00	2.86E-18	1.34E-13	1.56E-17	5.25E-08	4.62E-07	2.91E-07	1.07E-08
^{129}I	3.77E-10	6.36E-07	1.64E-09	3.59E-08	2.75E-10	4.67E-08	2.74E-08	2.40E-11	1.81E-11	2.84E-11	3.80E-11	1.69E-09	4.31E-08	3.32E-08	3.76E-09
^{134}Cs	2.82E-06	5.33E-08	5.79E-12	9.45E-12	1.83E-13	5.91E-10	2.38E-08	2.65E-10	3.51E-10	5.52E-10	7.38E-10	5.17E-09	1.68E-08	1.60E-08	2.82E-09
^{137}Cs	2.28E-04	1.94E-02	5.24E-03	2.92E-03	5.33E-03	2.85E-02	6.54E-02	2.50E-04	2.94E-04	8.69E-05	4.73E-04	2.13E-02	4.14E-02	3.98E-02	5.65E-03
^{137m}Ba	2.16E-04	1.83E-02	4.95E-03	2.76E-03	5.04E-03	2.69E-02	6.19E-02	2.36E-04	2.78E-04	8.22E-05	4.48E-04	2.02E-02	3.92E-02	3.76E-02	5.34E-03
^{14}C	6.77E-09	2.39E-07	1.38E-07	2.83E-08	2.24E-07	3.05E-07	4.97E-06	3.51E-08	7.85E-09	1.23E-08	1.65E-08	2.63E-07	9.10E-07	7.75E-07	1.47E-07
^{151}Sm	0.00E+00	1.67E-05	3.74E-09	5.70E-08	1.40E-05	0.00E+00	7.42E-09	4.21E-08	3.17E-08	4.99E-08	6.67E-08	2.29E-05	2.48E-04	1.50E-04	4.00E-05
^{152}Eu	6.06E-07	1.40E-06	4.56E-11	0.00E+00	4.38E-10	0.00E+00	6.46E-11	2.87E-09	2.16E-09	3.40E-09	4.55E-09	2.84E-09	2.86E-08	1.82E-08	5.95E-09
^{154}Eu	7.87E-07	1.28E-05	3.15E-09	0.00E+00	2.97E-08	0.00E+00	1.96E-06	1.98E-08	4.16E-08	2.40E-08	4.15E-08	2.28E-07	1.87E-06	1.46E-06	4.35E-08
^{155}Eu	7.60E-07	6.63E-06	1.47E-09	0.00E+00	1.29E-08	0.00E+00	1.06E-06	4.01E-08	1.78E-08	9.96E-09	2.11E-08	7.16E-08	7.20E-07	4.59E-07	1.07E-07
^{226}Ra	1.33E-06	0.00E+00	2.88E-14	1.22E-13	9.31E-13	1.25E-14	5.28E-13	3.68E-16	2.69E-16	5.97E-16	5.71E-16	4.18E-13	5.46E-12	2.37E-12	1.58E-13
^{227}Ac	0.00E+00	3.33E-13	9.32E-15	1.35E-14	7.56E-12	0.00E+00	1.87E-14	3.30E-17	2.49E-17	3.91E-17	5.23E-17	1.03E-11	1.08E-10	6.68E-11	1.76E-12
^{228}Ra	0.00E+00	0.00E+00	1.55E-19	5.64E-19	1.03E-17	5.91E-20	1.03E-10	2.66E-21	1.94E-21	4.30E-21	2.12E-13	3.48E-11	4.85E-10	2.12E-10	4.38E-12
^{229}Th	0.00E+00	3.07E-09	1.13E-15	8.82E-17	4.13E-16	0.00E+00	6.23E-16	5.95E-17	1.49E-19	1.78E-19	4.27E-19	9.16E-14	1.11E-12	5.93E-13	1.77E-14
^{231}Pa	0.00E+00	0.00E+00	2.21E-15	0.00E+00	1.83E-11	6.37E-12	0.00E+00	1.39E-16	1.05E-16	1.65E-16	2.21E-16	9.50E-11	1.18E-09	1.60E-09	1.18E-11
^{232}Th	1.04E-11	1.54E-08	9.49E-18	7.01E-19	3.47E-18	0.00E+00	8.36E-10	3.78E-20	9.49E-23	1.13E-22	2.83E-14	1.50E-13	6.99E-13	2.05E-12	6.32E-14
^{232}U	2.59E-13	1.62E-08	1.05E-13	8.80E-13	2.39E-13	0.00E+00	7.84E-12	1.34E-11	3.03E-14	5.43E-14	6.55E-14	1.03E-13	4.53E-11	9.32E-13	8.97E-13
^{233}U	3.42E-11	1.00E-06	8.80E-15	1.86E-12	1.99E-14	0.00E+00	5.38E-13	5.84E-11	1.32E-13	2.36E-13	2.85E-13	6.41E-12	2.79E-09	5.77E-11	5.46E-11
^{234}U	1.76E-11	6.62E-07	8.60E-09	2.00E-08	1.93E-08	0.00E+00	4.45E-07	1.84E-07	4.50E-10	7.38E-10	4.70E-10	3.68E-12	6.05E-09	3.28E-11	1.18E-10
^{235}U	7.24E-13	2.85E-08	3.84E-10	8.03E-10	8.61E-10	0.00E+00	1.97E-08	7.86E-09	1.90E-11	3.15E-11	2.16E-11	1.54E-13	2.59E-10	1.37E-12	4.77E-12
^{236}U	3.24E-13	1.08E-08	9.69E-11	2.93E-10	2.15E-10	0.00E+00	5.82E-09	2.80E-09	4.78E-12	8.04E-12	4.90E-12	9.05E-14	1.31E-10	8.04E-13	2.95E-12
^{237}Np	1.01E-09	1.12E-08	7.12E-10	1.37E-09	1.33E-10	0.00E+00	4.24E-08	4.70E-09	1.02E-11	4.89E-13	1.18E-12	3.34E-10	2.66E-08	2.14E-09	3.87E-09
^{238}Pu	1.08E-07	3.33E-07	9.24E-10	4.38E-08	1.46E-08	5.71E-10	1.67E-07	3.86E-08	9.06E-10	5.52E-10	1.53E-10	5.61E-12	1.56E-08	3.68E-09	4.92E-10
^{238}U	1.69E-11	6.54E-07	8.76E-09	1.89E-08	1.97E-08	0.00E+00	4.54E-07	1.89E-07	4.27E-10	7.64E-10	9.22E-10	3.45E-12	6.07E-09	3.07E-11	1.01E-10
^{239}Pu	6.68E-07	1.64E-05	1.31E-07	1.74E-06	2.08E-06	3.10E-08	1.79E-06	1.21E-06	2.85E-08	1.73E-08	4.82E-09	1.60E-10	4.66E-07	1.23E-07	1.68E-08
^{240}Pu	1.43E-07	2.67E-06	1.42E-08	2.98E-07	2.26E-07	6.03E-09	2.25E-07	2.62E-07	6.15E-09	3.75E-09	1.04E-09	3.46E-11	9.95E-08	2.57E-08	3.44E-09
^{241}Am	7.75E-07	0.00E+00	1.81E-06	6.48E-07	8.34E-07	0.00E+00	6.51E-06	3.75E-08	5.80E-09	8.23E-10	6.10E-11	5.71E-10	2.96E-07	5.16E-08	1.03E-09
^{241}Pu	1.59E-06	1.34E-05	2.42E-08	1.51E-06	3.80E-07	2.35E-08	5.08E-07	1.39E-06	3.26E-08	1.98E-08	5.51E-09	2.24E-10	6.21E-07	1.42E-07	1.42E-08
^{242}Cm	6.92E-11	2.33E-08	1.02E-10	2.97E-09	3.84E-10	7.55E-10	6.46E-09	7.23E-07	7.09E-07	1.33E-07	5.53E-09	9.81E-10	3.45E-08	5.84E-09	2.36E-10
^{242}Pu	1.66E-11	1.22E-10	1.99E-13	2.69E-11	3.14E-12	1.99E-13	4.20E-12	1.23E-11	2.89E-13	1.76E-13	4.89E-14	2.14E-15	5.92E-12	1.36E-12	1.35E-13
^{243}Am	3.63E-11	3.99E-07	2.24E-10	9.39E-11	8.61E-11	0.00E+00	7.09E-10	1.60E-11	2.48E-12	3.53E-13	2.63E-14	3.40E-13	1.73E-10	3.07E-11	5.38E-13
^{243}Cm	1.33E-10	1.38E-09	1.15E-12	1.47E-10	4.28E-12	2.44E-11	1.87E-09	3.65E-08	3.59E-08	2.32E-08	2.19E-09	3.33E-11	1.17E-09	1.97E-10	9.14E-12
^{244}Cm	3.19E-09	3.21E-08	2.58E-11	3.33E-09	9.64E-11	5.50E-10	3.80E-08	8.25E-07	8.10E-07	5.55E-07	5.24E-08	7.68E-10	2.72E-08	4.61E-09	1.99E-10
^{3}H	8.58E-09	2.79E-06	1.91E-06	2.16E-06	3.92E-07	2.10E-05	8.52E-06	2.02E-08	1.53E-08	2.40E-08	2.99E-08	3.90E-06	3.43E-06	2.83E-06	8.58E-07
^{59}Ni	0.00E+00	0.00E+00	8.95E-09	3.76E-08	5.65E-11	1.22E-12	6.97E-07	2.90E-11	1.40E-11	2.49E-11	2.68E-11	9.01E-09	1.60E-07	3.00E-08	5.71E-09
^{60}Co	4.81E-07	0.00E+00	3.46E-10	5.65E-08	2.32E-10	5.15E-13	8.41E-07	6.46E-11	6.71E-11	6.14E-11	8.80E-11	3.55E-08	1.64E-07	2.39E-07	7.02E-09
^{63}Ni	2.02E-06	0.00E+00	7.99E-07	3.36E-06	8.07E-09	1.09E-10	6.22E-05	7.84E-10	9.17E-11	1.88E-11	7.09E-10	8.31E-07	1.48E-05	2.80E-06	5.30E-07
^{79}Se	6.75E-09	4.56E-08	2.78E-09	5.66E-09	8.56E-10	3.87E-09	7.32E-07	1.28E-09	9.68E-10	1.52E-09	2.04E-09	2.77E-08	1.99E-07	1.19E-07	1.18E-08
^{90}Sr	1.82E-05	2.53E-03	8.41E-04	1.24E-03	4.71E-04	1.09E-03	1.21E-03	2.61E-04	2.05E-04	1.79E-04	1.09E-03	5.66E-04	3.84E-04	3.33E-04	5.63E-04
^{90}Y	1.82E-05	2.53E-03	8.41E-04	1.24E-03	4.71E-04	1.09E-03	1.21E-03	2.61E-04	2.05E-04	1.79E-04	1.09E-03	5.66E-04	3.84E-04	3.33E-04	5.63E-04
^{93}Zr	0.00E+00	0.00E+00	4.22E-10	0.00E+00	6.63E-08	1.81E-08	0.00E+00	3.95E-09	2.97E-09	4.68E-09	6.26E-09	2.70E-07	2.99E-06	3.57E-06	1.58E-07
^{93m}Nb	0.00E+00	0.00E+00	5.16E-10	0.00E+00	7.35E-09	9.71E-10	0.00E+00	8.15E-09	6.15E-09	9.67E-09	1.29E-08	1.80E-07	2.24E-06	1.64E-06	1.32E-07
^{99}Tc	2.22E-08	2.03E-05	9.46E-06	4.53E-05	2.02E-05	3.69E-06	6.34E-05	4.23E-07	3.06E-07	8.10E-08	4.30E-07	9.85E-06	3.37E-05	3.37E-05	4.16E-06

Table D-3. Projected Radionuclide Concentration in Retrieved Single-Shell Tank Waste Liquids. (11 Sheets)

Liquid(Ci/L)	S-105	S-106	S-107	S-108	S-109	S-110	S-111	S-112	SX-101	SX-102	SX-103
^{106}Ru	1.06E-13	9.74E-14	3.27E-16	2.96E-14	4.50E-13	1.05E-13	5.24E-13	4.40E-15	9.25E-14	2.50E-13	1.08E-13
^{113m}Cd	5.37E-07	4.81E-07	0.00E+00	1.37E-07	4.84E-06	5.26E-07	5.40E-06	0.00E+00	3.85E-07	1.26E-06	5.05E-07
^{125}Sb	1.42E-06	6.79E-07	0.00E+00	6.78E-07	3.58E-07	4.51E-07	3.60E-07	2.78E-06	2.32E-07	5.55E-07	5.28E-07
^{126}Sn	1.28E-07	1.16E-07	1.18E-09	3.54E-08	6.93E-08	1.26E-07	3.43E-07	1.14E-08	7.34E-08	3.00E-07	1.14E-07
^{129}I	4.01E-08	5.21E-08	7.30E-10	5.03E-08	4.72E-08	3.73E-08	5.27E-08	2.49E-07	4.45E-08	5.26E-08	4.44E-08
^{134}Cs	1.60E-08	2.53E-08	1.76E-09	2.48E-08	2.39E-08	1.77E-08	1.38E-08	1.80E-11	2.00E-08	2.49E-08	2.14E-08
^{137}Cs	9.65E-03	5.03E-02	6.05E-03	5.00E-02	6.59E-03	2.91E-02	3.86E-02	1.50E-03	5.74E-02	8.99E-02	6.58E-02
^{137m}Ba	9.13E-03	4.76E-02	5.72E-03	4.73E-02	6.23E-03	2.75E-02	3.65E-02	1.42E-03	5.43E-02	8.50E-02	6.22E-02
^{14}C	1.21E-06	1.63E-06	1.17E-07	1.66E-06	1.45E-06	1.13E-06	1.33E-06	1.67E-05	1.16E-06	1.43E-06	1.35E-06
^{151}Sm	5.61E-05	5.02E-05	2.19E-13	1.43E-05	2.68E-05	5.49E-05	1.48E-04	7.85E-08	7.07E-05	1.36E-04	6.34E-05
^{152}Eu	8.03E-09	7.19E-09	1.47E-17	2.05E-09	3.84E-09	7.86E-09	2.13E-08	1.56E-11	9.83E-09	1.88E-08	9.16E-09
^{154}Eu	6.39E-07	5.72E-07	1.80E-15	1.63E-07	3.05E-07	6.25E-07	1.69E-06	2.33E-11	6.76E-07	1.50E-06	6.87E-07
^{155}Eu	2.02E-07	1.81E-07	3.29E-16	5.16E-08	9.66E-08	1.98E-07	5.36E-07	4.01E-11	2.24E-07	4.73E-07	2.21E-07
^{226}Ra	1.75E-12	1.28E-12	2.85E-14	7.95E-13	4.57E-12	1.15E-12	5.72E-12	8.67E-12	9.10E-13	2.37E-12	1.18E-12
^{227}Ac	2.69E-11	2.41E-11	2.11E-20	6.85E-12	1.28E-11	2.63E-11	7.12E-11	1.12E-14	1.55E-11	6.41E-11	2.35E-11
^{228}Ra	1.59E-10	1.17E-10	1.63E-12	7.24E-11	4.16E-10	1.05E-10	5.14E-10	9.19E-10	6.49E-11	2.15E-10	1.03E-10
^{229}Th	2.43E-13	9.70E-13	0.00E+00	8.32E-13	3.72E-13	7.27E-13	1.44E-12	2.85E-10	2.22E-13	1.21E-12	7.87E-13
^{231}Pa	1.26E-09	1.10E-09	2.30E-12	9.60E-10	3.97E-10	8.12E-10	8.92E-10	1.17E-09	5.45E-10	1.34E-09	8.81E-10
^{232}Th	8.34E-13	3.32E-12	0.00E+00	2.85E-12	1.27E-12	2.50E-12	4.95E-12	1.55E-10	7.66E-13	4.17E-12	2.69E-12
^{232}U	3.77E-13	7.35E-11	0.00E+00	1.60E-10	5.54E-12	6.53E-11	2.58E-10	5.20E-09	1.74E-10	1.66E-10	1.01E-10
^{233}U	2.34E-11	4.56E-09	0.00E+00	9.95E-09	3.43E-10	4.01E-09	1.60E-08	2.19E-08	1.07E-08	1.03E-08	6.26E-09
^{234}U	1.48E-11	2.89E-09	0.00E+00	6.83E-09	6.54E-10	2.25E-08	1.21E-08	1.89E-08	1.54E-08	7.42E-09	6.36E-09
^{235}U	6.19E-13	1.21E-10	0.00E+00	2.86E-10	2.79E-11	9.65E-10	5.06E-10	8.01E-10	6.41E-10	3.11E-10	2.67E-10
^{236}U	3.68E-13	7.15E-11	0.00E+00	1.67E-10	1.44E-11	4.76E-10	2.91E-10	5.17E-10	3.61E-10	1.79E-10	1.50E-10
^{237}Np	9.36E-10	7.36E-08	0.00E+00	7.47E-08	6.98E-08	4.95E-08	9.37E-08	1.52E-07	1.32E-08	6.02E-08	5.97E-08
^{238}Pu	1.56E-09	2.01E-09	8.00E-10	7.51E-09	5.06E-09	1.63E-08	6.37E-09	1.02E-08	1.88E-09	9.40E-09	1.67E-08
^{238}U	1.39E-11	2.71E-09	0.00E+00	6.47E-09	6.53E-10	2.27E-08	1.15E-08	1.80E-08	1.44E-08	7.06E-09	6.09E-09
^{239}Pu	1.53E-08	5.71E-08	3.31E-08	2.32E-07	2.49E-07	7.81E-07	2.25E-07	4.52E-07	6.76E-08	3.10E-07	6.22E-07
^{240}Pu	3.09E-09	1.25E-08	6.92E-09	4.97E-08	4.89E-08	1.54E-07	4.68E-08	8.02E-08	1.38E-08	6.54E-08	1.27E-07
^{241}Am	5.32E-08	2.39E-07	0.00E+00	5.23E-07	6.73E-08	7.37E-07	1.10E-07	5.93E-07	5.32E-06	3.68E-07	6.57E-08
^{241}Pu	1.33E-08	7.97E-08	3.64E-08	2.92E-07	1.67E-07	5.66E-07	2.41E-07	4.15E-07	6.05E-08	3.60E-07	5.71E-07
^{242}Cm	5.53E-10	4.98E-09	1.08E-09	1.70E-08	1.72E-09	1.19E-08	1.66E-09	3.33E-10	7.23E-08	6.08E-08	8.36E-08
^{242}Pu	1.30E-13	7.64E-13	3.49E-13	2.81E-12	1.67E-12	5.56E-12	2.33E-12	3.80E-12	5.83E-13	3.47E-12	5.54E-12
^{243}Am	3.23E-11	1.45E-10	0.00E+00	3.12E-10	3.19E-11	3.57E-10	6.32E-11	4.36E-11	2.82E-09	2.22E-10	3.82E-11
^{243}Cm	1.82E-11	1.66E-10	4.56E-11	5.67E-10	5.62E-11	3.93E-10	5.52E-11	5.62E-12	2.53E-09	2.03E-09	2.81E-09
^{244}Cm	4.25E-10	3.87E-09	1.03E-09	1.32E-08	1.31E-09	9.16E-09	1.29E-09	1.39E-10	5.80E-08	4.74E-08	6.53E-08
^{3}H	4.34E-06	5.84E-06	7.13E-06	6.02E-06	5.60E-06	5.93E-06	7.03E-06	3.01E-07	1.22E-05	5.73E-06	6.38E-06
^{59}Ni	1.62E-08	2.86E-08	5.21E-09	2.23E-08	3.96E-07	2.57E-08	2.86E-08	5.40E-08	3.23E-08	4.26E-08	2.97E-08
^{60}Co	1.07E-07	3.63E-08	6.13E-08	3.06E-08	4.25E-08	1.00E-07	8.04E-08	1.61E-09	9.26E-08	1.41E-07	1.13E-07
^{63}Ni	1.51E-06	2.67E-06	4.80E-07	2.08E-06	3.68E-05	2.38E-06	2.67E-06	4.93E-06	2.97E-06	3.96E-06	2.75E-06
^{79}Se	1.35E-07	1.62E-07	3.68E-09	1.56E-07	1.53E-07	1.19E-07	1.76E-07	8.65E-10	1.07E-07	1.75E-07	1.33E-07
^{90}Sr	3.74E-04	5.84E-04	5.63E-04	6.12E-04	5.65E-04	5.75E-04	5.81E-04	6.14E-04	6.02E-04	6.42E-04	6.22E-04
^{90}Y	3.74E-04	5.84E-04	5.63E-04	6.12E-04	5.65E-04	5.75E-04	5.81E-04	6.14E-04	6.02E-04	6.42E-04	6.22E-04
^{93}Zr	3.05E-06	2.07E-06	8.23E-09	1.72E-06	1.70E-06	1.61E-06	2.83E-06	3.31E-06	1.43E-06	2.71E-06	1.79E-06
^{93m}Nb	3.51E-06	1.74E-06	0.00E+00	1.45E-06	9.88E-07	1.35E-06	1.98E-06	2.80E-06	1.21E-06	2.27E-06	1.51E-06
^{99}Tc	4.10E-05	5.32E-05	1.43E-06	5.13E-05	4.82E-05	3.81E-05	5.33E-05	3.31E-07	3.70E-05	5.15E-05	4.48E-05

Table D-3. Projected Radionuclide Concentration in Retrieved Single-Shell Tank Waste Liquids. (11 Sheets)

Liquid(Ci/L)	SX-104	SX-105	SX-106	SX-107	SX-108	SX-109	SX-110	SX-111	SX-112	SX-113	SX-114	SX-115
^{106}Ru	6.60E-14	2.15E-13	2.28E-13	9.93E-15	0.00E+00	1.15E-16	1.55E-18	2.68E-14	1.82E-14	3.00E-19	8.62E-14	1.01E-17
^{113m}Cd	2.23E-07	1.08E-06	6.97E-06	3.53E-08	2.79E-08	2.44E-08	2.00E-08	9.13E-08	6.30E-08	1.22E-09	2.86E-07	1.92E-08
^{125}Sb	2.28E-07	5.90E-07	1.95E-07	3.57E-09	6.26E-11	1.82E-10	1.37E-10	9.65E-09	6.56E-09	5.88E-12	3.10E-08	6.98E-06
^{126}Sn	2.83E-08	2.57E-07	2.52E-07	4.25E-09	1.11E-08	7.35E-09	8.15E-10	7.41E-09	5.10E-09	1.19E-09	2.87E-08	8.08E-10
^{129}I	2.16E-08	5.12E-08	6.86E-08	1.69E-09	9.12E-09	5.72E-09	1.16E-08	6.26E-09	4.96E-09	1.78E-10	7.98E-09	9.79E-09
^{134}Cs	9.80E-09	2.29E-08	3.36E-08	7.12E-10	4.65E-10	5.04E-09	4.96E-09	2.31E-09	1.59E-09	1.84E-13	5.78E-09	2.83E-07
^{137}Cs	2.52E-02	5.64E-02	7.74E-02	5.63E-03	8.00E-02	1.02E-02	1.47E-02	1.04E-02	9.12E-03	5.03E-05	1.48E-02	3.92E-03
^{137m}Ba	2.38E-02	5.34E-02	7.32E-02	5.32E-03	7.57E-02	9.62E-03	1.39E-02	9.86E-03	8.63E-03	4.76E-05	1.40E-02	3.71E-03
^{14}C	6.53E-07	1.44E-06	1.90E-06	9.54E-08	7.40E-07	2.59E-07	2.49E-07	1.43E-07	1.21E-07	4.02E-09	2.83E-07	7.31E-08
^{151}Sm	5.94E-05	1.13E-04	1.38E-04	9.78E-06	2.31E-12	3.04E-12	2.39E-12	2.64E-05	1.80E-05	3.59E-10	8.48E-05	1.36E-09
^{152}Eu	8.80E-09	1.61E-08	1.50E-08	1.45E-09	1.06E-16	2.30E-16	1.76E-16	3.93E-09	2.67E-09	1.23E-11	1.26E-08	3.23E-13
^{154}Eu	5.57E-07	1.28E-06	1.21E-06	8.97E-08	6.56E-15	1.42E-14	1.09E-14	2.42E-07	1.65E-07	7.65E-10	7.78E-07	1.97E-11
^{155}Eu	1.90E-07	4.06E-07	3.78E-07	3.08E-08	2.22E-15	4.89E-15	3.74E-15	8.33E-08	5.67E-08	2.58E-10	2.68E-07	6.77E-12
^{226}Ra	4.88E-13	2.07E-12	7.88E-12	4.19E-14	3.52E-13	1.77E-14	2.19E-14	1.12E-13	7.72E-14	6.62E-16	3.45E-13	1.75E-14
^{227}Ac	5.11E-12	5.40E-11	5.89E-11	4.30E-13	2.24E-20	3.70E-20	2.87E-20	1.16E-12	7.89E-13	9.91E-18	3.73E-12	2.47E-19
^{228}Ra	2.97E-11	1.88E-10	6.99E-10	1.10E-12	2.03E-18	4.58E-13	4.90E-13	3.01E-12	2.05E-12	1.19E-13	9.53E-12	1.52E-19
^{229}Th	2.86E-13	1.11E-12	8.82E-13	4.38E-15	0.00E+00	4.03E-16	2.44E-22	1.17E-14	7.96E-15	1.12E-17	3.79E-14	1.53E-26
^{231}Pa	3.14E-10	1.22E-09	9.58E-10	2.86E-12	0.00E+00	1.85E-14	1.39E-11	1.30E-11	9.02E-12	1.19E-15	2.49E-11	1.42E-12
^{232}Th	9.79E-13	3.79E-12	3.06E-12	1.56E-14	0.00E+00	1.42E-15	8.32E-22	4.17E-14	2.84E-14	1.53E-13	1.35E-13	2.51E-29
^{232}U	5.10E-11	9.87E-11	5.32E-11	3.83E-13	0.00E+00	1.17E-12	1.88E-19	5.92E-13	4.03E-13	4.60E-15	2.86E-12	1.12E-22
^{233}U	3.14E-09	6.11E-09	3.29E-09	2.01E-11	0.00E+00	6.99E-11	1.06E-17	3.61E-11	2.45E-11	2.34E-14	1.72E-10	3.28E-22
^{234}U	1.19E-08	8.91E-09	1.74E-09	1.49E-09	0.00E+00	8.73E-10	3.91E-16	7.67E-11	5.22E-11	1.16E-10	1.25E-09	1.51E-18
^{235}U	5.08E-10	3.79E-10	7.26E-11	6.40E-11	0.00E+00	3.72E-11	1.68E-17	3.11E-12	2.11E-12	5.01E-12	5.29E-11	5.73E-20
^{236}U	2.55E-10	2.00E-10	4.23E-11	3.10E-11	0.00E+00	1.87E-11	8.19E-18	1.92E-12	1.31E-12	2.41E-12	2.75E-11	4.38E-20
^{237}Np	3.03E-08	6.35E-08	5.06E-08	1.27E-09	0.00E+00	9.87E-10	7.47E-17	2.56E-09	1.74E-09	2.57E-11	9.06E-09	4.25E-20
^{238}Pu	1.62E-08	6.17E-08	1.06E-07	9.33E-10	1.55E-08	3.69E-10	4.48E-10	1.59E-09	1.21E-09	5.44E-10	4.36E-09	5.00E-06
^{238}U	1.20E-08	8.81E-09	1.63E-09	1.52E-09	0.00E+00	8.71E-10	3.97E-16	6.58E-11	4.48E-11	1.19E-10	1.22E-09	1.05E-18
^{239}Pu	7.99E-07	3.20E-06	3.02E-06	3.73E-08	8.33E-07	1.61E-08	2.23E-08	5.09E-08	4.17E-08	2.93E-08	1.22E-07	7.48E-05
^{240}Pu	1.57E-07	6.25E-07	6.50E-07	7.46E-09	1.62E-07	3.19E-09	4.36E-09	1.05E-08	8.51E-09	5.69E-09	2.57E-08	1.75E-05
^{241}Am	4.63E-07	1.75E-06	1.08E-06	8.86E-07	0.00E+00	7.58E-07	7.32E-14	4.30E-08	2.92E-08	8.37E-08	9.24E-07	7.47E-15
^{241}Pu	5.23E-07	1.98E-06	4.26E-06	2.75E-08	4.87E-07	1.11E-08	1.39E-08	4.51E-08	3.48E-08	1.71E-08	1.21E-07	1.15E-04
^{242}Cm	5.87E-09	1.41E-08	8.32E-08	6.63E-11	2.81E-09	8.81E-11	6.64E-11	1.57E-10	1.12E-10	7.89E-13	4.78E-10	7.94E-08
^{242}Pu	5.22E-12	1.99E-11	4.05E-11	2.68E-13	4.92E-12	1.09E-13	1.38E-13	4.28E-13	3.33E-13	1.73E-13	1.14E-12	1.01E-09
^{243}Am	2.09E-10	7.64E-10	6.31E-10	3.32E-10	0.00E+00	3.39E-10	2.93E-17	2.36E-11	1.61E-11	3.07E-11	4.13E-10	6.39E-18
^{243}Cm	1.93E-10	4.46E-10	2.82E-09	2.36E-12	4.76E-11	3.39E-12	2.36E-12	5.98E-12	4.16E-12	1.34E-14	1.89E-11	5.82E-09
^{244}Cm	4.47E-09	1.04E-08	6.59E-08	5.19E-11	1.12E-09	7.38E-11	5.16E-11	1.31E-10	9.12E-11	3.16E-13	4.12E-10	1.22E-07
^{3}H	4.70E-06	6.13E-06	7.05E-06	1.70E-06	1.19E-05	5.61E-06	5.02E-06	2.83E-06	2.31E-06	9.81E-08	6.05E-06	1.06E-05
^{59}Ni	1.89E-08	4.11E-08	1.82E-07	7.79E-09	1.79E-08	1.41E-08	3.14E-09	5.55E-09	4.26E-09	0.00E+00	2.43E-08	8.87E-09
^{60}Co	1.52E-07	1.55E-07	8.62E-07	2.86E-08	3.44E-09	1.94E-08	2.44E-09	7.00E-08	4.77E-08	0.00E+00	2.37E-07	3.16E-07
^{63}Ni	1.75E-06	3.81E-06	1.70E-05	7.00E-07	1.58E-06	1.30E-06	2.86E-07	5.10E-07	3.90E-07	0.00E+00	2.25E-06	8.22E-07
^{79}Se	6.02E-08	1.68E-07	2.21E-07	5.84E-09	3.49E-08	2.32E-08	1.99E-08	1.07E-08	8.45E-09	2.94E-10	2.50E-08	1.69E-08
^{90}Sr	5.71E-04	6.15E-04	6.38E-04	5.63E-04	6.54E-04	5.64E-04	3.25E-04	5.63E-04	5.63E-04	5.63E-04	5.64E-04	2.74E-04
^{90}Y	5.71E-04	6.15E-04	6.38E-04	5.63E-04	6.54E-04	5.64E-04	3.25E-04	5.63E-04	5.63E-04	5.63E-04	5.64E-04	2.74E-04
^{93}Zr	8.16E-07	2.50E-06	2.97E-06	5.12E-08	0.00E+00	5.72E-08	2.28E-07	2.11E-07	1.61E-07	1.95E-10	3.80E-07	2.29E-07
^{93m}Nb	6.90E-07	2.10E-06	1.92E-06	3.27E-08	2.70E-09	1.72E-09	1.47E-09	8.79E-08	5.99E-08	2.57E-10	2.82E-07	1.78E-07
^{99}Tc	1.94E-05	5.17E-05	6.85E-05	2.15E-06	1.30E-05	8.45E-06	7.18E-06	3.90E-06	3.07E-06	1.08E-07	9.15E-06	6.12E-06

Table D-3. Projected Radionuclide Concentration in Retrieved Single-Shell Tank Waste Liquids. (11 Sheets)

Liquid(Ci/L)	T-101	T-102	T-103	T-104	T-105	T-106	T-107	T-108	T-109	T-110	T-111	T-112
^{106}Ru	3.72E-13	2.97E-13	1.14E-13	2.78E-19	2.64E-21	1.12E-19	4.88E-17	6.59E-18	1.02E-17	2.70E-20	2.48E-20	1.54E-18
^{113m}Cd	1.71E-06	1.36E-06	5.47E-07	0.00E+00	6.36E-09	1.72E-08	3.28E-08	2.94E-08	3.87E-08	9.81E-11	5.07E-11	4.58E-10
^{125}Sb	1.86E-07	1.75E-07	6.77E-08	4.31E-12	1.60E-08	7.00E-12	3.48E-11	3.27E-10	6.12E-10	3.19E-13	1.30E-13	8.45E-12
^{126}Sn	3.84E-07	1.05E-07	4.06E-08	0.00E+00	2.19E-11	2.11E-11	6.46E-10	2.86E-09	4.78E-09	7.40E-12	3.13E-12	6.06E-11
^{129}I	3.52E-08	2.79E-08	1.97E-08	3.23E-10	1.51E-11	1.22E-10	8.77E-09	8.36E-10	8.20E-10	1.38E-13	6.57E-14	2.65E-14
^{134}Cs	1.32E-08	3.05E-10	1.31E-10	4.58E-14	5.19E-13	7.19E-12	1.95E-11	2.94E-12	5.25E-12	1.61E-15	6.57E-16	2.16E-15
^{137}Cs	3.25E-02	6.07E-03	4.86E-04	1.87E-05	4.08E-03	2.06E-03	1.77E-02	1.82E-03	1.59E-03	6.02E-06	3.34E-05	8.61E-07
^{137m}Ba	3.07E-02	5.75E-03	4.60E-04	1.77E-05	3.86E-03	1.94E-03	1.67E-02	1.72E-03	1.51E-03	5.70E-06	3.16E-05	8.14E-07
^{14}C	8.79E-07	5.78E-06	2.08E-07	4.37E-08	7.19E-08	1.08E-07	2.70E-07	9.10E-08	5.85E-08	1.11E-09	6.19E-10	5.75E-10
^{151}Sm	3.25E-04	3.25E-04	1.25E-04	1.90E-09	2.88E-10	0.00E+00	5.13E-09	3.38E-05	5.43E-05	1.56E-07	3.04E-08	3.09E-06
^{152}Eu	3.61E-08	5.31E-08	2.05E-08	2.36E-11	3.63E-12	2.20E-11	6.54E-11	1.03E-09	1.63E-09	1.07E-12	9.88E-13	1.29E-10
^{154}Eu	2.44E-06	4.37E-06	1.39E-06	1.54E-08	2.74E-07	1.43E-09	4.43E-09	7.19E-08	1.14E-07	6.85E-11	6.85E-11	8.71E-09
^{155}Eu	9.11E-07	1.80E-06	5.28E-07	7.96E-09	1.44E-07	5.88E-10	1.94E-09	3.46E-08	5.50E-08	1.09E-10	3.29E-11	3.92E-09
^{226}Ra	3.40E-12	1.23E-12	4.72E-13	1.10E-12	3.36E-14	1.43E-14	4.14E-12	3.66E-12	6.24E-12	1.47E-14	5.75E-15	5.77E-14
^{227}Ac	1.18E-10	8.06E-12	3.11E-12	4.48E-15	7.77E-16	0.00E+00	2.15E-13	1.96E-11	3.15E-11	1.26E-13	2.04E-14	1.44E-12
^{228}Ra	2.83E-10	4.54E-10	3.48E-10	1.24E-17	6.84E-15	1.69E-15	4.01E-09	1.92E-17	3.28E-17	3.42E-19	2.21E-19	1.98E-18
^{229}Th	9.47E-13	3.05E-13	1.61E-12	1.02E-16	4.85E-16	2.82E-19	3.03E-10	7.47E-15	4.88E-15	3.59E-17	0.00E+00	6.56E-16
^{231}Pa	1.10E-09	1.89E-11	7.37E-12	9.42E-12	0.00E+00	3.05E-14	4.13E-11	5.10E-11	8.20E-11	1.56E-11	1.18E-11	1.48E-11
^{232}Th	3.42E-12	8.49E-13	7.14E-12	8.59E-19	4.82E-14	3.63E-17	1.38E-09	6.29E-17	4.11E-17	3.00E-19	0.00E+00	5.56E-18
^{232}U	2.88E-12	1.42E-11	9.11E-12	2.89E-14	3.21E-13	3.32E-15	9.42E-10	1.81E-12	4.34E-14	1.18E-16	0.00E+00	1.60E-13
^{233}U	1.76E-10	9.05E-10	5.75E-10	2.41E-15	2.06E-14	1.31E-16	5.84E-08	1.50E-13	3.58E-15	1.03E-17	0.00E+00	1.29E-14
^{234}U	3.30E-10	6.18E-10	3.99E-10	3.21E-09	2.64E-08	8.02E-11	1.46E-07	1.42E-07	3.32E-09	1.20E-11	0.00E+00	1.08E-08
^{235}U	1.27E-11	2.59E-11	1.69E-11	1.04E-10	1.10E-09	3.18E-12	6.49E-09	6.34E-09	1.49E-10	5.38E-13	0.00E+00	4.78E-10
^{236}U	8.99E-12	1.68E-11	9.04E-12	3.10E-11	2.76E-10	1.95E-12	1.75E-09	1.63E-09	3.91E-11	1.15E-13	0.00E+00	1.47E-10
^{237}Np	2.81E-09	2.64E-08	1.02E-08	1.12E-11	4.41E-11	7.60E-14	1.78E-10	3.62E-09	3.28E-09	1.06E-10	0.00E+00	7.65E-11
^{238}Pu	1.74E-08	1.52E-08	7.30E-09	4.34E-11	6.48E-08	1.27E-09	1.08E-08	3.51E-09	4.96E-09	2.39E-09	3.97E-09	8.99E-09
^{238}U	2.42E-10	5.79E-10	3.84E-10	2.37E-09	2.48E-08	6.30E-11	1.48E-07	1.45E-07	3.39E-09	1.22E-11	0.00E+00	1.10E-08
^{239}Pu	6.62E-07	3.71E-07	1.82E-07	3.34E-09	1.09E-06	1.06E-07	1.39E-06	4.75E-07	6.68E-07	3.57E-07	7.95E-07	1.10E-06
^{240}Pu	1.44E-07	8.59E-08	4.22E-08	4.03E-10	1.16E-07	1.58E-08	1.59E-07	5.36E-08	7.57E-08	3.74E-08	9.20E-08	1.33E-07
^{241}Am	6.36E-07	1.57E-06	2.26E-07	1.43E-07	6.50E-06	7.68E-08	3.36E-06	1.71E-06	1.73E-07	2.45E-08	0.00E+00	3.51E-08
^{241}Pu	8.33E-07	6.15E-07	3.01E-07	1.35E-09	3.28E-07	4.76E-08	3.36E-07	9.31E-08	1.32E-07	6.14E-08	1.65E-07	2.47E-07
^{242}Cm	1.09E-09	1.08E-09	8.17E-10	2.91E-11	6.10E-12	1.36E-11	9.51E-10	1.34E-10	3.91E-11	1.64E-11	1.11E-10	2.96E-11
^{242}Pu	6.55E-12	5.81E-12	2.82E-12	1.99E-14	5.77E-12	4.06E-13	2.76E-12	7.74E-13	1.10E-12	4.93E-13	1.36E-12	2.05E-12
^{243}Am	2.84E-10	2.07E-10	1.24E-10	1.41E-11	2.39E-10	2.81E-12	3.64E-10	1.78E-10	2.27E-11	2.13E-12	0.00E+00	5.26E-12
^{243}Cm	3.93E-11	3.09E-11	2.35E-11	3.25E-13	9.56E-14	1.70E-13	1.08E-11	1.50E-12	4.35E-13	1.81E-13	1.29E-12	3.38E-13
^{244}Cm	9.10E-10	7.39E-10	5.61E-10	7.30E-12	2.22E-12	3.86E-12	2.46E-10	3.37E-11	9.78E-12	4.06E-12	2.90E-11	7.59E-12
^{3}H	2.88E-05	1.45E-06	3.88E-06	2.37E-07	7.67E-07	1.22E-05	8.29E-07	7.36E-07	8.52E-07	2.44E-10	1.21E-10	1.39E-10
^{59}Ni	2.60E-07	3.95E-08	5.51E-08	0.00E+00	1.48E-10	1.94E-08	3.89E-10	4.28E-09	1.34E-08	8.35E-12	8.80E-10	9.00E-11
^{60}Co	2.92E-06	9.33E-07	4.54E-07	0.00E+00	1.55E-07	4.45E-07	5.00E-10	1.56E-08	2.56E-08	1.43E-11	6.10E-12	2.13E-10
^{63}Ni	2.44E-05	3.67E-06	5.18E-06	0.00E+00	1.42E-08	1.84E-06	3.75E-08	4.32E-07	1.35E-06	7.05E-10	9.23E-08	7.80E-09
^{79}Se	1.21E-07	2.54E-08	9.84E-09	8.02E-10	5.90E-11	2.68E-10	1.21E-09	1.24E-09	2.20E-09	7.28E-11	4.18E-11	2.86E-11
^{90}Sr	3.81E-04	5.63E-04	5.65E-04	7.89E-04	6.58E-04	5.63E-04	1.60E-03	5.63E-04	2.72E-04	3.56E-05	1.44E-03	1.12E-06
^{90}Y	3.81E-04	5.63E-04	5.65E-04	7.89E-04	6.58E-04	5.63E-04	1.60E-03	5.63E-04	2.72E-04	3.56E-05	1.44E-03	1.12E-06
^{93}Zr	1.49E-06	1.51E-06	5.81E-07	3.81E-08	0.00E+00	1.80E-09	1.48E-07	6.95E-08	1.17E-07	5.77E-09	4.42E-09	1.03E-08
^{93m}Nb	1.25E-06	1.25E-06	4.84E-07	8.23E-09	1.08E-10	1.97E-09	4.34E-08	6.29E-08	1.12E-07	6.59E-10	1.58E-10	8.32E-09
^{99}Tc	2.83E-05	9.61E-06	3.25E-06	6.16E-07	1.83E-05	3.05E-06	7.13E-05	5.31E-06	5.99E-07	6.76E-10	7.71E-06	3.18E-10

Table D-3. Projected Radionuclide Concentration in Retrieved Single-Shell Tank Waste Liquids. (11 Sheets)

Liquid(Ci/L)	T-201	T-202	T-203	T-204	TX-101	TX-102	TX-103	TX-104	TX-105	TX-106	TX-107	TX-108	TX-109	TX-110
^{106}Ru	6.18E-21	1.74E-20	1.75E-20	1.58E-21	1.86E-13	5.49E-13	4.76E-13	6.37E-13	3.05E-13	2.83E-13	6.01E-13	3.91E-13	5.85E-24	2.52E-13
^{113m}Cd	2.63E-11	1.49E-11	1.49E-11	1.57E-11	7.34E-07	4.94E-06	4.70E-06	4.07E-06	4.32E-06	4.51E-06	4.65E-06	4.48E-06	1.25E-08	4.08E-06
^{125}Sb	1.47E-13	5.38E-14	5.39E-14	5.65E-14	9.13E-08	2.71E-07	2.36E-07	3.15E-07	1.52E-07	2.30E-07	2.81E-07	1.94E-07	1.13E-12	1.26E-07
^{126}Sn	3.94E-12	8.23E-13	8.24E-13	8.64E-13	2.09E-07	3.95E-07	3.21E-07	5.70E-07	1.33E-07	2.91E-07	4.02E-07	2.29E-07	5.99E-12	8.10E-08
^{129}I	5.63E-15	0.00E+00	0.00E+00	0.00E+00	1.99E-08	5.36E-08	5.11E-08	4.92E-08	4.73E-08	4.92E-08	5.57E-08	4.88E-08	6.00E-10	4.47E-08
^{134}Cs	6.60E-18	7.04E-17	7.05E-17	1.02E-16	7.67E-09	2.00E-08	1.88E-08	1.65E-08	1.66E-08	2.32E-08	2.17E-08	1.76E-08	6.93E-13	1.55E-08
^{137}Cs	9.24E-06	2.63E-06	2.64E-06	3.74E-06	5.89E-02	4.54E-02	4.16E-02	6.03E-02	3.37E-02	4.98E-02	4.97E-02	3.76E-02	1.86E-02	3.11E-02
^{137m}Ba	8.74E-06	2.49E-06	2.49E-06	3.54E-06	5.58E-02	4.29E-02	3.94E-02	5.70E-02	3.19E-02	4.71E-02	4.70E-02	3.56E-02	1.76E-02	2.94E-02
^{14}C	1.30E-10	1.61E-10	1.61E-10	1.69E-10	1.02E-06	1.19E-06	1.19E-06	9.15E-07	1.27E-06	1.22E-06	1.10E-06	1.22E-06	2.69E-07	1.25E-06
^{151}Sm	6.63E-07	1.95E-08	1.95E-08	2.04E-08	1.62E-04	3.33E-04	2.70E-04	4.85E-04	1.08E-04	2.47E-04	4.05E-04	1.90E-04	3.54E-09	6.34E-05
^{152}Eu	7.19E-12	7.16E-13	7.16E-13	7.51E-13	1.40E-08	2.89E-08	2.34E-08	4.20E-08	9.32E-09	2.14E-08	4.04E-08	1.65E-08	4.39E-11	5.49E-09
^{154}Eu	6.36E-10	4.80E-11	4.80E-11	5.04E-11	9.52E-07	1.96E-06	1.58E-06	2.85E-06	6.32E-07	1.45E-06	2.66E-06	1.12E-06	2.96E-09	3.72E-07
^{155}Eu	4.26E-10	2.17E-11	2.17E-11	2.28E-11	3.54E-07	7.28E-07	5.89E-07	1.06E-06	2.35E-07	5.40E-07	9.67E-07	4.15E-07	1.28E-09	1.38E-07
^{226}Ra	8.38E-15	1.05E-15	1.05E-15	1.10E-15	1.77E-12	9.12E-12	8.40E-12	7.92E-12	7.43E-12	3.35E-12	7.87E-12	8.15E-12	2.57E-13	6.61E-12
^{227}Ac	8.57E-13	1.36E-14	1.36E-14	1.42E-14	5.88E-11	1.21E-10	9.83E-11	1.76E-10	3.91E-11	8.97E-11	1.20E-10	6.90E-11	8.33E-15	2.30E-11
^{228}Ra	7.26E-19	1.63E-19	1.63E-19	1.71E-19	1.41E-10	7.37E-10	6.86E-10	6.33E-10	5.87E-10	2.78E-10	6.13E-10	6.32E-10	2.88E-18	5.42E-10
^{229}Th	2.36E-16	5.75E-18	5.76E-18	2.23E-16	4.76E-13	1.28E-12	1.10E-12	1.57E-12	6.50E-13	7.20E-13	1.20E-12	8.74E-13	0.00E+00	5.16E-13
^{231}Pa	1.58E-11	7.73E-12	7.74E-12	8.11E-12	5.46E-10	1.50E-09	1.29E-09	1.82E-09	7.79E-10	2.98E-09	1.38E-09	1.04E-09	1.54E-10	6.25E-10
^{232}Th	1.98E-18	4.89E-20	4.90E-20	1.90E-18	1.72E-12	4.62E-12	3.95E-12	5.65E-12	2.34E-12	2.60E-12	4.32E-12	3.15E-12	0.00E+00	1.86E-12
^{232}U	3.12E-18	4.35E-16	1.34E-17	6.21E-16	2.55E-11	1.75E-10	1.75E-10	2.62E-10	1.89E-10	2.17E-12	1.28E-10	1.80E-10	0.00E+00	1.85E-10
^{233}U	2.85E-19	3.51E-17	1.08E-18	5.01E-17	1.50E-09	1.07E-08	1.08E-08	1.61E-08	1.16E-08	1.34E-10	7.84E-09	1.10E-08	0.00E+00	1.14E-08
^{234}U	3.69E-13	2.93E-11	9.01E-13	4.18E-11	4.78E-08	1.61E-08	3.64E-09	6.39E-09	2.18E-08	5.49E-11	3.02E-09	2.69E-08	0.00E+00	4.34E-09
^{235}U	1.66E-14	1.30E-12	3.99E-14	1.85E-12	2.10E-09	7.04E-10	1.51E-10	2.67E-10	9.54E-10	2.30E-12	1.25E-10	1.18E-09	0.00E+00	1.82E-10
^{236}U	3.15E-15	3.98E-13	1.23E-14	5.69E-13	7.56E-10	2.53E-10	8.37E-11	1.46E-10	3.33E-10	1.18E-12	7.13E-11	3.97E-10	0.00E+00	9.40E-11
^{237}Np	2.35E-11	7.07E-13	2.24E-12	6.88E-11	5.14E-09	3.56E-08	3.53E-08	2.75E-08	3.66E-08	2.14E-09	3.91E-08	3.55E-08	0.00E+00	3.57E-08
^{238}Pu	1.49E-08	8.85E-09	1.20E-08	1.02E-08	1.25E-08	5.53E-08	5.58E-08	1.10E-07	6.01E-08	3.26E-08	5.98E-07	5.72E-08	1.79E-09	6.00E-08
^{238}U	3.75E-13	3.00E-11	9.22E-13	4.28E-11	4.88E-08	1.61E-08	3.31E-09	5.92E-09	2.18E-08	5.11E-11	2.72E-09	2.70E-08	0.00E+00	4.01E-09
^{239}Pu	4.40E-06	1.02E-06	1.39E-06	1.18E-06	3.78E-07	1.57E-06	1.60E-06	3.72E-06	1.71E-06	9.60E-07	1.69E-05	1.63E-06	2.54E-07	1.81E-06
^{240}Pu	2.97E-07	1.29E-07	1.75E-07	1.49E-07	8.03E-08	3.30E-07	3.34E-07	7.62E-07	3.58E-07	2.00E-07	3.56E-06	3.42E-07	2.77E-08	3.66E-07
^{241}Am	2.02E-07	1.53E-07	1.81E-07	2.58E-06	1.78E-05	1.19E-06	1.17E-06	2.94E-06	1.18E-06	1.26E-07	1.14E-05	1.16E-06	0.00E+00	1.14E-06
^{241}Pu	2.48E-07	2.46E-07	3.34E-07	2.83E-07	5.82E-07	2.34E-06	2.36E-06	4.40E-06	2.54E-06	1.36E-06	2.51E-05	2.42E-06	4.65E-08	2.52E-06
^{242}Cm	6.85E-11	1.83E-10	2.16E-10	1.30E-10	6.35E-10	1.59E-08	1.59E-08	2.74E-08	1.69E-08	7.93E-09	1.66E-07	1.62E-08	5.64E-10	1.66E-08
^{242}Pu	1.34E-12	2.07E-12	2.81E-12	2.38E-12	4.61E-12	2.18E-11	2.20E-11	4.16E-11	2.37E-11	1.27E-11	2.34E-10	2.25E-11	3.85E-13	2.35E-11
^{243}Am	8.73E-12	2.37E-11	2.80E-11	3.98E-10	3.59E-09	6.50E-10	6.37E-10	1.57E-09	6.40E-10	6.89E-11	6.18E-09	6.32E-10	0.00E+00	6.20E-10
^{243}Cm	3.82E-13	2.08E-12	2.46E-12	1.49E-12	2.05E-11	5.69E-10	5.69E-10	9.79E-10	6.06E-10	2.84E-10	5.95E-09	5.81E-10	6.30E-12	5.95E-10
^{244}Cm	8.60E-12	4.68E-11	5.53E-11	3.34E-11	4.77E-10	1.32E-08	1.32E-08	2.27E-08	1.40E-08	6.58E-09	1.38E-07	1.35E-08	1.42E-10	1.38E-08
^{3}H	7.12E-14	5.07E-12	5.07E-12	5.32E-12	1.30E-05	7.86E-06	7.91E-06	8.82E-06	8.52E-06	7.76E-06	1.13E-05	8.14E-06	4.41E-07	8.38E-06
^{59}Ni	6.05E-12	7.45E-13	7.46E-13	7.82E-13	1.10E-07	1.06E-06	1.06E-06	8.94E-07	1.10E-06	1.05E-07	9.04E-07	1.07E-06	8.62E-11	1.08E-06
^{60}Co	7.50E-12	1.98E-12	1.98E-12	2.08E-12	2.32E-07	1.65E-06	1.60E-06	1.13E-06	1.56E-06	3.51E-07	1.55E-06	1.56E-06	5.48E-10	1.50E-06
^{63}Ni	5.07E-10	6.44E-11	6.45E-11	6.76E-11	1.00E-05	9.96E-05	9.90E-05	8.22E-05	1.03E-04	9.82E-06	8.47E-05	1.00E-04	1.20E-08	1.01E-04
^{79}Se	8.40E-12	1.13E-11	1.13E-11	1.13E-11	9.34E-08	1.72E-07	1.60E-07	1.62E-07	1.37E-07	1.55E-07	1.62E-07	1.47E-07	1.50E-09	1.26E-07
^{90}Sr	9.06E-05	2.81E-06	2.83E-06	5.14E-06	6.03E-04	6.49E-04	4.58E-04	5.91E-04	6.34E-04	6.36E-04	6.26E-04	6.37E-04	5.63E-04	6.29E-04
^{90}Y	9.06E-05	2.81E-06	2.83E-06	5.14E-06	6.03E-04	6.49E-04	4.58E-04	5.91E-04	6.34E-04	6.36E-04	6.26E-04	6.37E-04	5.63E-04	6.29E-04
^{93}Zr	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.82E-07	2.57E-06	2.30E-06	2.86E-06	1.65E-06	4.00E-06	2.72E-06	1.97E-06	6.24E-07	1.45E-06
^{93m}Nb	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E-07	1.82E-06	1.59E-06	2.18E-06	1.02E-06	1.54E-06	1.99E-06	1.30E-06	2.15E-09	8.52E-07
^{99}Tc	1.31E-11	1.69E-11	1.69E-11	1.77E-11	2.76E-05	2.80E-05	2.52E-05	3.04E-05	1.88E-05	4.63E-05	2.83E-05	2.19E-05	2.84E-05	1.70E-05

Table D-3. Projected Radionuclide Concentration in Retrieved Single-Shell Tank Waste Liquids. (11 Sheets)

Liquid(Ci/L)	TX-111	TX-112	TX-113	TX-114	TX-115	TX-116	TX-117	TX-118	TY-101	TY-102	TY-103	TY-104	TY-105	TY-106
^{106}Ru	2.23E-13	2.74E-13	1.92E-13	2.02E-13	3.06E-13	2.56E-18	1.10E-13	4.89E-13	9.18E-20	3.01E-13	8.29E-14	5.67E-19	1.27E-24	1.50E-25
^{113m}Cd	3.95E-06	4.13E-06	3.79E-06	3.69E-06	4.33E-06	2.01E-06	2.36E-06	4.07E-06	1.28E-09	2.52E-06	4.14E-07	3.35E-09	9.00E-09	1.63E-10
^{125}Sb	1.12E-07	1.37E-07	9.68E-08	1.01E-07	1.53E-07	4.72E-08	5.58E-08	2.42E-07	1.33E-12	2.21E-07	4.01E-08	2.01E-13	8.95E-12	5.69E-14
^{126}Sn	5.43E-08	1.06E-07	2.49E-08	4.24E-08	1.34E-07	7.12E-09	4.79E-09	3.71E-07	3.38E-11	3.32E-07	8.38E-08	3.08E-11	3.25E-11	1.82E-11
^{129}I	4.33E-08	4.52E-08	4.16E-08	4.05E-08	4.73E-08	2.52E-08	2.61E-08	4.41E-08	1.33E-10	1.71E-08	6.94E-09	2.85E-10	1.15E-08	2.50E-11
^{134}Cs	1.49E-08	1.58E-08	1.42E-08	1.39E-08	1.67E-08	2.34E-09	8.77E-09	1.67E-08	1.50E-12	1.25E-08	1.45E-09	3.79E-12	2.72E-12	5.67E-14
^{137}Cs	2.96E-02	3.16E-02	3.31E-03	2.69E-02	3.38E-02	4.35E-03	1.68E-02	2.94E-02	9.41E-06	1.74E-02	4.41E-03	2.84E-03	1.41E-03	1.08E-03
^{137m}Ba	2.80E-02	2.99E-02	3.13E-03	2.54E-02	3.20E-02	4.12E-03	1.59E-02	2.78E-02	8.90E-06	1.64E-02	4.17E-03	2.68E-03	1.34E-03	1.02E-03
^{14}C	1.24E-06	1.23E-06	1.22E-06	1.16E-06	1.26E-06	5.41E-07	7.77E-07	9.28E-07	2.33E-08	2.79E-07	1.24E-07	3.88E-07	2.56E-08	1.71E-09
^{151}Sm	4.06E-05	8.61E-05	1.54E-05	3.47E-05	1.09E-04	1.36E-05	4.98E-06	3.14E-04	1.32E-07	2.82E-04	7.15E-05	8.52E-18	1.25E-09	8.49E-11
^{152}Eu	3.52E-09	7.39E-09	1.34E-09	2.77E-09	9.44E-09	4.03E-10	1.48E-10	2.72E-08	7.17E-12	2.33E-08	6.19E-09	1.53E-22	1.54E-11	1.05E-12
^{154}Eu	2.38E-07	5.01E-07	9.05E-08	1.88E-07	6.40E-07	2.97E-08	1.04E-08	1.84E-06	5.98E-10	1.58E-06	4.20E-07	1.52E-20	1.07E-09	7.29E-11
^{155}Eu	8.87E-08	1.87E-07	3.37E-08	7.08E-08	2.38E-07	1.36E-08	4.99E-09	6.86E-07	4.38E-10	5.92E-07	1.56E-07	1.43E-20	5.15E-10	3.50E-11
^{226}Ra	6.37E-12	6.89E-12	6.03E-12	6.50E-12	7.09E-12	5.98E-12	5.21E-12	7.45E-12	1.86E-14	8.56E-12	7.74E-13	2.24E-14	1.35E-12	2.66E-14
^{227}Ac	1.47E-11	3.15E-11	5.60E-12	1.35E-11	3.95E-11	7.87E-12	2.89E-12	1.14E-10	7.76E-14	1.06E-10	2.60E-11	4.79E-24	3.17E-15	2.16E-16
^{228}Ra	5.17E-10	5.55E-10	4.89E-10	4.81E-10	5.88E-10	2.54E-10	3.01E-10	6.20E-10	1.12E-19	4.52E-10	6.19E-11	1.77E-19	5.19E-18	1.02E-19
^{229}Th	4.46E-13	5.75E-13	3.67E-13	3.97E-13	6.53E-13	1.73E-13	2.04E-13	1.15E-12	2.27E-17	8.63E-13	2.09E-13	8.42E-18	3.20E-18	1.42E-19
^{231}Pa	5.44E-10	6.94E-10	4.54E-10	4.92E-10	7.83E-10	2.38E-10	2.63E-10	1.35E-09	7.60E-13	1.98E-09	2.70E-10	2.93E-12	9.77E-16	1.09E-16
^{232}Th	1.61E-12	2.07E-12	1.32E-12	1.43E-12	2.36E-12	6.20E-13	7.35E-13	4.17E-12	1.96E-19	3.11E-12	7.55E-13	7.51E-20	2.72E-20	1.20E-21
^{232}U	1.83E-10	1.84E-10	3.52E-11	1.72E-10	1.88E-10	7.42E-11	1.14E-10	1.98E-10	3.96E-15	4.19E-11	6.10E-11	9.72E-13	1.86E-14	3.68E-15
^{233}U	1.12E-08	1.13E-08	2.16E-09	1.06E-08	1.16E-08	4.56E-09	6.99E-09	1.21E-08	3.14E-16	2.57E-09	3.75E-09	6.32E-11	1.56E-15	3.08E-16
^{234}U	4.60E-09	3.86E-09	1.59E-09	3.96E-09	4.48E-09	3.31E-09	3.71E-09	4.01E-09	3.60E-10	1.84E-09	4.08E-09	2.74E-09	1.54E-09	3.03E-10
^{235}U	1.94E-10	1.61E-10	6.87E-11	1.66E-10	1.88E-10	1.43E-10	1.59E-10	1.66E-10	1.62E-11	7.95E-11	1.79E-10	1.23E-10	6.87E-11	1.35E-11
^{236}U	9.64E-11	8.83E-11	2.64E-11	8.68E-11	9.65E-11	5.63E-11	7.03E-11	9.34E-11	3.63E-12	3.14E-11	5.83E-11	2.72E-11	1.76E-11	3.47E-12
^{237}Np	3.51E-08	3.55E-08	3.43E-08	3.33E-08	3.65E-08	1.55E-08	2.22E-08	2.82E-08	9.59E-12	7.65E-09	6.61E-10	1.92E-12	8.33E-12	4.25E-11
^{238}Pu	5.98E-08	5.88E-08	2.89E-09	5.60E-08	6.00E-08	2.65E-08	3.88E-08	1.75E-06	7.22E-10	3.07E-09	2.83E-07	1.04E-09	8.17E-10	2.51E-10
^{238}U	4.27E-09	3.52E-09	1.54E-09	3.64E-09	4.14E-09	3.21E-09	3.53E-09	3.64E-09	3.68E-10	1.78E-09	4.02E-09	2.78E-09	1.57E-09	3.09E-10
^{239}Pu	1.85E-06	1.70E-06	2.35E-07	1.69E-06	1.71E-06	1.06E-06	1.36E-06	4.98E-05	1.43E-07	2.70E-07	2.16E-05	1.72E-07	1.17E-07	3.61E-08
^{240}Pu	3.69E-07	3.53E-07	3.00E-08	3.42E-07	3.58E-07	1.85E-07	2.54E-07	1.04E-05	1.22E-08	3.43E-08	2.61E-06	1.45E-08	1.26E-08	3.87E-09
^{241}Am	1.12E-06	1.14E-06	4.66E-08	1.06E-06	1.18E-06	4.54E-07	6.98E-07	2.52E-05	6.48E-09	7.29E-07	2.77E-07	9.85E-07	6.57E-09	2.59E-09
^{241}Pu	2.51E-06	2.48E-06	1.00E-07	2.35E-06	2.54E-06	1.08E-06	1.60E-06	7.41E-05	1.76E-08	1.03E-07	1.04E-05	2.98E-08	2.13E-08	6.55E-09
^{242}Cm	1.64E-08	1.65E-08	4.96E-10	1.54E-08	1.69E-08	1.21E-09	1.02E-08	3.73E-07	4.40E-13	4.10E-10	1.08E-10	1.29E-10	7.06E-13	1.82E-13
^{242}Pu	2.33E-11	2.31E-11	8.97E-13	2.19E-11	2.36E-11	9.97E-12	1.49E-11	6.91E-10	1.12E-13	9.09E-13	9.21E-11	2.21E-13	1.73E-13	5.32E-14
^{243}Am	6.07E-10	6.19E-10	2.08E-11	5.71E-10	6.40E-10	2.43E-10	3.73E-10	1.37E-08	7.80E-13	3.69E-10	7.45E-11	5.93E-11	9.29E-13	3.68E-13
^{243}Cm	5.87E-10	5.90E-10	1.67E-11	5.52E-10	6.06E-10	4.31E-11	3.64E-10	1.34E-08	4.60E-15	1.44E-11	3.89E-12	1.25E-12	7.91E-15	2.04E-15
^{244}Cm	1.36E-08	1.36E-08	3.85E-10	1.28E-08	1.40E-08	9.99E-10	8.43E-09	3.10E-07	1.04E-13	3.34E-10	9.00E-11	2.89E-11	1.78E-13	4.60E-14
^{3}H	8.29E-06	8.31E-06	8.17E-06	7.88E-06	8.51E-06	3.80E-06	5.40E-06	6.12E-06	4.18E-08	4.37E-06	8.85E-07	1.11E-07	5.58E-07	3.80E-08
^{59}Ni	1.06E-06	1.07E-06	1.04E-06	1.00E-06	1.10E-06	4.54E-07	6.68E-07	8.38E-07	6.01E-10	2.35E-07	2.74E-08	6.85E-10	8.30E-11	7.83E-12
^{60}Co	1.46E-06	1.50E-06	2.97E-07	1.37E-06	1.56E-06	6.02E-07	8.90E-07	1.15E-06	1.24E-10	2.83E-07	7.27E-08	2.28E-09	1.66E-10	1.57E-11
^{63}Ni	9.94E-05	1.00E-04	9.75E-05	9.38E-05	1.03E-04	4.27E-05	6.28E-05	7.86E-05	5.46E-08	2.21E-05	2.57E-06	6.03E-08	7.09E-09	6.69E-10
^{79}Se	1.20E-07	1.29E-07	1.14E-07	1.12E-07	1.37E-07	8.18E-08	7.07E-08	1.45E-07	2.22E-10	1.07E-07	2.40E-08	3.67E-10	1.09E-09	7.39E-11
^{90}Sr	6.26E-04	4.50E-04	5.64E-04	4.51E-04	6.34E-04	1.98E-04	3.09E-04	7.18E-04	5.63E-04	5.68E-04	5.68E-04	5.65E-04	5.63E-04	5.66E-04
^{90}Y	6.26E-04	4.50E-04	5.64E-04	4.51E-04	6.34E-04	1.98E-04	3.09E-04	7.18E-04	5.63E-04	5.68E-04	5.68E-04	5.65E-04	5.63E-04	5.66E-04
^{93}Zr	1.34E-06	1.52E-06	1.21E-06	1.22E-06	1.66E-06	6.37E-07	7.27E-07	2.25E-06	2.78E-08	2.65E-06	5.55E-07	1.56E-07	1.32E-12	1.48E-13
^{93m}Nb	7.63E-07	9.23E-07	6.59E-07	6.90E-07	1.03E-06	3.47E-07	3.88E-07	1.62E-06	1.06E-09	1.52E-06	2.70E-07	2.98E-09	5.15E-12	3.28E-14
^{99}Tc	1.60E-05	1.74E-05	1.46E-05	1.42E-05	1.89E-05	8.63E-06	8.51E-06	2.43E-05	4.12E-07	1.23E-05	6.15E-06	5.04E-06	1.10E-05	9.98E-07

Table D-3. Projected Radionuclide Concentration in Retrieved Single-Shell Tank Waste Liquids. (11 Sheets)

Liquid(Ci/L)	U-101	U-102	U-103	U-104	U-105	U-106	U-107	U-108	U-109	U-110	U-111	U-112	U-201	U-202	U-203	U-204
^{106}Ru	2.02E-20	4.98E-13	1.75E-13	3.84E-22	2.77E-13	7.20E-13	5.42E-13	5.40E-13	5.89E-13	9.05E-19	6.13E-13	5.52E-23	5.93E-18	6.05E-18	6.11E-18	2.94E-18
^{113m}Cd	1.43E-08	5.29E-06	8.24E-07	9.88E-09	2.61E-06	9.34E-06	7.34E-06	6.31E-06	6.53E-06	0.00E+00	6.64E-06	2.59E-09	7.00E-08	6.96E-08	6.82E-08	3.68E-08
^{125}Sb	3.20E-11	2.17E-07	4.92E-07	2.22E-11	2.33E-07	6.90E-07	1.50E-07	2.84E-07	2.82E-07	4.47E-13	2.58E-07	2.28E-12	3.32E-10	3.38E-10	3.39E-10	1.63E-10
^{126}Sn	8.07E-10	3.00E-07	1.97E-07	3.93E-09	3.79E-07	9.33E-07	2.50E-07	1.89E-07	2.51E-07	1.29E-09	3.37E-07	1.32E-11	1.04E-10	1.06E-10	1.06E-10	5.14E-11
^{129}I	1.10E-08	5.72E-08	5.41E-08	7.64E-09	5.02E-08	6.57E-08	7.44E-08	6.13E-08	6.35E-08	1.67E-09	6.51E-08	1.30E-09	3.81E-11	3.45E-11	2.19E-10	2.43E-11
^{134}Cs	3.77E-10	2.14E-08	2.74E-08	2.61E-10	3.26E-08	2.97E-08	2.94E-08	2.37E-08	2.43E-08	1.28E-11	2.51E-08	4.40E-11	1.93E-12	1.75E-12	1.51E-12	1.20E-12
^{137}Cs	3.15E-02	7.61E-02	6.47E-02	1.59E-02	7.83E-02	9.53E-02	3.79E-02	5.73E-02	5.14E-02	6.22E-04	6.38E-02	4.34E-03	1.26E-03	9.09E-04	8.11E-04	6.33E-04
^{137m}Ba	2.98E-02	7.19E-02	6.12E-02	1.50E-02	7.41E-02	9.02E-02	3.58E-02	5.42E-02	4.86E-02	5.88E-04	6.04E-02	4.10E-03	1.19E-03	8.60E-04	7.68E-04	5.99E-04
^{14}C	3.65E-07	1.44E-06	1.59E-06	2.71E-07	1.90E-06	1.45E-06	2.04E-06	1.79E-06	1.76E-06	4.58E-08	1.71E-06	6.54E-08	5.26E-08	3.27E-08	3.11E-08	2.87E-08
^{151}Sm	1.18E-12	2.50E-04	8.60E-05	8.16E-13	1.97E-04	2.92E-04	1.46E-04	9.16E-05	1.07E-04	0.00E+00	1.78E-04	1.42E-13	1.05E-06	1.07E-06	1.08E-06	5.21E-07
^{152}Eu	5.41E-17	2.17E-08	1.23E-08	3.75E-17	1.94E-08	4.17E-08	1.49E-08	1.12E-08	1.53E-08	2.49E-10	2.04E-08	6.38E-18	1.07E-10	1.08E-10	1.08E-10	5.39E-11
^{154}Eu	3.36E-15	1.47E-06	9.80E-07	2.32E-15	1.51E-06	3.25E-05	1.20E-06	9.01E-07	1.21E-06	1.54E-08	1.65E-06	3.96E-16	6.53E-09	6.62E-09	6.60E-09	3.29E-09
^{155}Eu	1.13E-15	5.47E-07	3.10E-07	7.84E-16	4.90E-07	1.63E-05	3.76E-07	2.83E-07	3.84E-07	5.23E-09	5.15E-07	1.34E-16	2.23E-09	2.26E-09	2.25E-09	1.12E-09
^{226}Ra	1.35E-14	8.10E-12	1.80E-12	5.18E-15	5.03E-12	1.19E-11	8.52E-12	1.20E-11	6.94E-12	1.43E-14	7.63E-12	5.80E-15	4.52E-14	4.60E-14	4.62E-14	2.23E-14
^{227}Ac	1.15E-20	9.08E-11	4.13E-11	7.93E-21	7.94E-11	1.40E-10	6.05E-11	4.10E-11	5.11E-11	0.00E+00	7.75E-11	6.02E-21	2.35E-13	2.39E-13	2.40E-13	1.16E-13
^{228}Ra	7.81E-20	6.79E-10	1.63E-10	2.98E-20	4.38E-10	1.09E-09	7.50E-10	1.08E-09	6.23E-10	7.21E-11	6.71E-10	9.89E-16	7.21E-15	2.44E-15	1.22E-14	8.42E-17
^{229}Th	2.93E-27	1.04E-12	2.15E-12	2.45E-19	7.50E-13	1.27E-12	9.24E-13	6.91E-13	7.89E-13	2.77E-20	9.99E-13	5.16E-24	6.17E-17	6.29E-17	6.32E-17	4.83E-17
^{231}Pa	1.41E-12	1.22E-09	1.27E-09	1.58E-12	2.20E-09	1.47E-09	1.01E-09	7.42E-10	8.34E-10	9.24E-14	1.07E-09	1.08E-12	5.57E-13	5.49E-13	5.66E-13	3.57E-13
^{232}Th	8.36E-31	3.75E-12	7.39E-12	7.02E-23	2.63E-12	4.34E-12	3.23E-12	2.39E-12	2.73E-12	5.44E-14	3.46E-12	3.20E-22	1.64E-14	5.61E-15	2.92E-14	6.16E-14
^{232}U	4.09E-24	6.55E-11	1.04E-09	1.24E-16	1.05E-10	2.70E-12	3.90E-11	2.34E-11	1.60E-11	1.83E-16	4.90E-11	7.75E-21	1.20E-15	6.14E-16	7.52E-16	2.92E-13
^{233}U	2.08E-23	4.02E-09	6.42E-08	6.27E-16	6.43E-09	1.67E-10	2.41E-09	1.42E-09	9.90E-10	7.55E-16	3.03E-09	2.89E-20	6.32E-17	3.23E-17	3.96E-17	1.55E-14
^{234}U	1.04E-19	4.77E-09	4.82E-08	3.13E-12	1.72E-08	1.06E-10	1.60E-09	1.02E-08	7.28E-10	4.98E-12	3.50E-09	2.21E-16	3.27E-11	1.67E-11	2.05E-11	7.97E-09
^{235}U	4.46E-21	2.03E-10	2.02E-09	1.35E-13	7.30E-10	4.43E-12	6.70E-11	3.89E-10	3.05E-11	2.15E-13	1.49E-10	9.55E-18	1.39E-12	7.11E-13	8.71E-13	3.39E-10
^{236}U	2.14E-21	1.03E-10	1.15E-09	6.47E-14	3.63E-10	2.63E-12	3.71E-11	2.83E-10	1.72E-11	9.89E-14	7.46E-11	4.27E-18	6.69E-13	3.42E-13	4.19E-13	1.63E-10
^{237}Np	6.70E-21	3.80E-08	1.58E-07	5.61E-13	5.53E-09	4.91E-09	4.63E-08	6.21E-08	6.16E-08	5.38E-14	5.37E-08	9.48E-18	1.90E-11	1.89E-11	1.88E-11	5.20E-10
^{238}Pu	3.31E-08	6.97E-08	4.47E-08	2.20E-08	2.06E-07	2.05E-07	1.08E-07	4.53E-08	8.18E-09	1.97E-09	5.78E-08	1.74E-11	9.62E-11	2.90E-12	1.06E-11	2.72E-08
^{238}U	1.06E-19	4.73E-09	4.61E-08	3.21E-12	1.67E-08	9.95E-11	1.51E-09	7.28E-09	6.89E-10	5.06E-12	3.44E-09	2.24E-16	3.17E-11	1.62E-11	1.99E-11	7.79E-09
^{239}Pu	1.78E-06	2.77E-06	1.47E-06	1.19E-06	6.71E-06	5.83E-06	3.10E-06	1.70E-06	2.47E-07	1.28E-07	2.06E-06	2.42E-09	6.19E-09	1.87E-10	6.82E-10	1.75E-06
^{240}Pu	3.46E-07	5.57E-07	3.09E-07	2.30E-07	1.40E-06	1.27E-06	6.63E-07	3.72E-07	5.27E-08	2.19E-08	4.18E-07	2.67E-10	1.18E-09	3.55E-11	1.30E-10	3.32E-07
^{241}Am	1.50E-18	1.41E-06	5.31E-06	5.11E-10	6.06E-06	3.05E-05	1.63E-06	3.21E-07	6.30E-07	7.93E-11	1.04E-06	7.77E-16	1.47E-08	2.48E-10	2.36E-10	4.64E-07
^{241}Pu	1.04E-06	2.59E-06	1.72E-06	6.93E-07	8.37E-06	8.14E-06	4.38E-06	2.14E-06	3.27E-07	6.12E-08	2.21E-06	4.64E-10	3.74E-09	1.13E-10	4.13E-10	1.06E-06
^{242}Cm	5.95E-12	2.11E-08	4.58E-08	6.18E-11	1.88E-07	3.27E-07	9.71E-08	2.56E-08	1.41E-08	7.92E-12	3.96E-08	2.41E-12	3.03E-13	3.72E-14	4.40E-14	8.93E-14
^{242}Pu	1.05E-11	2.50E-11	1.66E-11	7.00E-12	7.90E-11	7.80E-11	4.15E-11	1.70E-11	3.12E-12	6.05E-13	2.12E-11	3.87E-15	3.49E-14	1.05E-15	3.85E-15	9.87E-12
^{243}Am	5.48E-22	7.24E-10	3.10E-09	1.87E-13	3.29E-09	1.85E-08	9.45E-10	1.67E-10	3.78E-10	2.48E-14	5.83E-10	7.32E-20	1.60E-13	2.71E-15	2.57E-15	5.04E-12
^{243}Cm	1.01E-13	7.30E-10	1.54E-09	1.05E-12	6.40E-09	1.09E-08	3.30E-09	8.63E-10	4.76E-10	1.15E-13	1.34E-09	2.70E-14	5.24E-15	6.46E-16	7.63E-16	1.55E-15
^{244}Cm	2.38E-12	1.70E-08	3.59E-08	2.47E-11	1.49E-07	2.54E-07	7.70E-08	2.02E-08	1.11E-08	2.67E-12	3.13E-08	6.08E-13	1.23E-13	1.51E-14	1.78E-14	3.63E-14
^{3}H	6.07E-06	8.40E-06	5.77E-06	4.20E-06	1.10E-05	5.10E-06	9.73E-06	1.21E-05	9.50E-06	1.24E-07	6.73E-06	3.86E-06	1.13E-05	1.02E-05	9.00E-06	7.20E-06
^{59}Ni	6.91E-09	7.77E-07	3.04E-08	2.14E-09	2.33E-07	4.62E-07	1.80E-07	2.95E-08	2.98E-07	2.07E-10	2.66E-07	1.60E-09	7.32E-08	7.46E-08	7.50E-08	3.63E-08
^{60}Co	1.33E-09	1.53E-06	4.01E-07	1.10E-09	2.33E-06	1.62E-05	4.58E-07	2.16E-07	5.84E-07	1.25E-10	9.04E-07	1.19E-09	2.27E-07	6.10E-09	6.64E-09	1.92E-08
^{63}Ni	6.11E-07	7.25E-05	2.83E-06	1.90E-07	2.18E-05	4.30E-05	1.68E-05	2.75E-06	2.78E-05	1.86E-08	2.46E-05	1.44E-07	7.00E-06	7.13E-06	7.16E-06	3.47E-06
^{79}Se	1.82E-08	1.72E-07	1.65E-07	1.26E-08	2.16E-07	2.40E-07	2.50E-07	2.02E-07	2.08E-07	2.67E-09	2.15E-07	2.15E-09	1.62E-09	1.57E-09	1.54E-09	7.00E-10
^{90}Sr	5.66E-04	9.46E-04	9.16E-04	5.63E-04	2.59E-03	5.71E-03	5.88E-04	7.04E-04	6.57E-04	5.63E-04	6.87E-04	1.35E-04	1.64E-05	5.74E-06	1.09E-05	2.76E-04
^{90}Y	5.66E-04	9.46E-04	9.16E-04	5.63E-04	2.59E-03	5.71E-03	5.88E-04	7.04E-04	6.57E-04	5.63E-04	6.87E-04	1.35E-04	1.64E-05	5.74E-06	1.09E-05	2.76E-04
^{93}Zr	2.31E-07	2.43E-06	2.40E-06	2.59E-07	2.35E-06	3.56E-06	3.06E-06	2.55E-06	2.83E-06	1.45E-09	3.18E-06	1.37E-08	1.89E-09	1.86E-09	1.92E-09	1.21E-09
^{93m}Nb	1.38E-09	1.63E-06	2.01E-06	9.57E-10	2.56E-06	3.68E-06	1.96E-06	1.60E-06	1.84E-06	2.41E-11	2.15E-06	1.31E-10	1.36E-09	1.38E-09	1.39E-09	6.68E-10
^{99}Tc	6.89E-06	2.71E-05	5.27E-05	4.78E-06	6.19E-05	6.92E-05	3.58E-05	2.72E-05	2.96E-05	1.00E-06	3.24E-05	1.73E-06	7.95E-07	7.13E-07	6.40E-07	3.01E-07

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	A-101	A-102	A-103	A-104	A-105	A-106	AX-101	AX-102	AX-103	AX-104
Ag^{+}	8.50E-07	0.00E+00	2.06E-06	0.00E+00	0.00E+00	0.00E+00	9.55E-07	0.00E+00	0.00E+00	0.00E+00
$Al(OH)_4^{-}$	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
Al^{+3}	1.21E-02	2.90E-02	1.31E-02	0.00E+00	2.39E-04	3.63E-03	1.30E-02	7.03E-03	1.46E-02	1.73E-04
As^{+5}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-06	0.00E+00	0.00E+00	0.00E+00
B^{+3}	3.80E-06	5.68E-06	3.09E-06	0.00E+00	0.00E+00	0.00E+00	4.47E-06	0.00E+00	0.00E+00	0.00E+00
Ba^{+2}	1.84E-06	0.00E+00	1.03E-06	0.00E+00	0.00E+00	0.00E+00	1.42E-06	0.00E+00	0.00E+00	0.00E+00
Be^{+2}	1.83E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-07	0.00E+00	0.00E+00	0.00E+00
Bi^{+3}	4.02E-06	1.18E-05	1.43E-05	3.94E-08	0.00E+00	1.81E-05	2.19E-06	1.77E-06	3.06E-06	0.00E+00
$C_{10}H_{12}N_2O_8^{-4}$	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
$C_{10}H_{15}N_2O_7^{-3}$	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
$C_{12}H_{27}O_4P$	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
$C_{13}H_{28}$	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
C_2Cl4	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
$C_2H_3O_2^{-}$	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
$C_2H_3O_3^{-}$	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
C_2HCl_3	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
$C_2O_4^{-2}$	2.70E-03	3.62E-03	2.92E-03	0.00E+00	0.00E+00	2.09E-03	2.71E-03	6.09E-03	1.61E-03	0.00E+00
C_3H_6O	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
$C_4H_{10}O$	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
C_4H_8O	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
C_5H_5N	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
$C_6H_5NO_2$	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
$C_6H_5O_7^{-3}$	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
C_6H_6	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
$C_7H_6N_2O_4$	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
C_7H_8O	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
Ca^{+2}	2.16E-05	2.24E-05	7.74E-05	6.92E-04	8.17E-04	2.98E-05	5.50E-06	6.81E-06	6.15E-06	5.88E-04
Cd^{+2}	1.33E-06	0.00E+00	9.97E-06	0.00E+00	0.00E+00	5.23E-06	1.09E-06	0.00E+00	0.00E+00	1.56E-05
Ce^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-06	0.00E+00	0.00E+00	0.00E+00
CH_2Cl_2	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
$CHCl_3$	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
CHO_2^{-}	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
Cl^{-}	2.14E-03	5.83E-03	2.83E-03	6.41E-05	1.17E-04	3.15E-03	2.29E-03	5.64E-04	3.66E-03	4.46E-05
CN^{-}	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
Co^{+3}	1.33E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.56E-08	5.90E-07	0.00E+00	0.00E+00	0.00E+00
CO_3^{-2}	5.19E-02	1.97E-02	3.55E-02	1.11E-05	7.15E-03	8.57E-03	6.04E-02	6.43E-02	3.74E-02	1.02E-04
$Cr(OH)_4^{-}$	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
$Cr_{(TOTAL)}$	2.38E-04	1.36E-04	5.06E-05	8.45E-06	3.52E-04	1.88E-04	7.32E-05	2.12E-05	3.52E-04	3.62E-05
Cs^{+}	3.70E-06	5.68E-06	3.66E-06	2.80E-06	5.54E-06	1.53E-06	4.44E-06	5.21E-06	5.41E-06	5.78E-06
Cu^{+2}	3.76E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-07	0.00E+00	0.00E+00	0.00E+00
F^{-}	2.94E-04	2.80E-04	3.40E-04	1.33E-06	3.78E-05	4.13E-05	4.31E-04	3.06E-04	6.14E-04	1.44E-05
Fe^{+3}	1.23E-06	3.11E-06	7.83E-06	7.54E-08	0.00E+00	1.89E-06	1.44E-06	1.49E-08	2.21E-06	5.21E-09
H^{+}	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
H_2O	9.52E-01	9.32E-01	9.32E-01	9.99E-01	9.94E-01	9.71E-01	9.43E-01	9.17E-01	9.37E-01	9.97E-01
H_2O_2	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
Hg^{+2}	1.04E-06	7.62E-07	6.17E-07	5.32E-06	1.40E-05	1.86E-04	3.60E-06	3.93E-05	5.97E-06	6.80E-06

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	A-101	A-102	A-103	A-104	A-105	A-106	AX-101	AX-102	AX-103	AX-104
K^{+}	1.65E-03	2.97E-03	1.60E-03	2.83E-05	4.69E-05	7.88E-04	6.66E-04	3.18E-04	8.46E-04	6.32E-06
La^{+3}	4.86E-11	2.17E-10	9.30E-11	1.85E-08	1.26E-06	7.74E-15	5.26E-11	1.87E-14	8.06E-11	4.79E-07
Li^{+}	1.02E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-06	0.00E+00	0.00E+00	0.00E+00
Mg^{+2}	0.00E+00	0.00E+00	2.58E-07	0.00E+00	0.00E+00	0.00E+00	2.84E-06	0.00E+00	0.00E+00	0.00E+00
Mn^{+4}	1.01E-05	5.99E-05	1.03E-05	8.23E-08	2.16E-07	4.16E-05	3.75E-07	2.17E-05	2.31E-06	1.88E-07
MnO_2	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
MnO_4^{-}	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
Mo^{+6}	6.01E-06	1.74E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.15E-06	0.00E+00	0.00E+00	0.00E+00
Na^{+}	1.15E-01	1.25E-01	1.15E-01	1.42E-02	6.36E-02	4.87E-02	1.30E-01	1.25E-01	1.18E-01	6.14E-03
Nd^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-06	0.00E+00	0.00E+00	0.00E+00
NH_3	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
NH_4^{+}	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
Ni^{+2}	3.44E-06	1.40E-05	3.39E-05	1.87E-07	3.66E-06	5.70E-06	7.46E-07	6.52E-07	2.60E-06	2.39E-07
NO_2^{-}	3.95E-02	6.09E-02	4.71E-02	3.30E-03	8.38E-04	3.29E-02	4.39E-02	2.62E-02	6.14E-02	3.19E-04
NO_3^{-}	7.29E-02	8.91E-02	7.08E-02	3.15E-04	2.14E-02	3.62E-02	8.91E-02	1.33E-01	7.78E-02	6.51E-03
$OH_{(BOUND)}$	5.32E-03	2.17E-02	1.34E-02	0.00E+00	0.00E+00	0.00E+00	5.35E-03	0.00E+00	9.77E-03	0.00E+00
OH^{-}	3.21E-02	5.25E-02	3.30E-02	1.13E-02	3.37E-02	1.43E-03	3.31E-02	2.61E-02	3.53E-02	3.21E-03
Pb^{+2}	3.91E-06	2.93E-05	3.92E-05	7.19E-06	5.93E-05	1.64E-05	6.05E-06	7.56E-06	5.89E-06	4.84E-07
Pd^{+2}	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
PO_4^{-3}	2.70E-03	3.77E-03	3.25E-03	1.83E-09	1.03E-02	2.27E-02	1.62E-03	1.96E-03	1.34E-03	7.27E-09
Pr^{+3}	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
Pu^{+4}	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
Rb^{+}	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
Rh^{+3}	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
Ru^{+3}	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
Sb^{+5}	1.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E-06	0.00E+00	0.00E+00	0.00E+00
Se^{+6}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E-05	0.00E+00	0.00E+00	0.00E+00
Si^{+4}	4.71E-04	5.60E-05	2.10E-04	7.56E-04	1.96E-03	3.53E-05	3.03E-04	5.24E-03	7.31E-04	1.66E-06
SO_4^{-2}	1.36E-02	2.09E-02	8.56E-03	8.21E-04	1.11E-02	1.77E-03	1.52E-02	2.39E-03	9.39E-03	6.75E-04
Sr^{+2}	1.14E-07	2.41E-07	1.36E-07	1.06E-08	9.67E-09	4.69E-08	1.17E-08	5.98E-06	6.77E-08	9.05E-09
Ta^{+5}	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
Tc^{+7}	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
Te^{+6}	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
Th^{+4}	3.84E-11	1.89E-10	8.07E-11	1.85E-18	0.00E+00	0.00E+00	4.56E-11	0.00E+00	6.98E-11	0.00E+00
Ti^{+4}	3.66E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.84E-07	0.00E+00	0.00E+00	0.00E+00
Tl^{+3}	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
TOC	8.15E-04	5.26E-03	1.39E-03	0.00E+00	0.00E+00	8.07E-04	5.29E-04	1.04E-02	8.83E-04	0.00E+00
$U_{(TOTAL)}$	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
V^{+5}	1.84E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E-06	0.00E+00	0.00E+00	0.00E+00
W^{+6}	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
Y^{+3}	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
Zn^{+2}	4.60E-07	0.00E+00	4.87E-06	0.00E+00	0.00E+00	0.00E+00	3.79E-07	0.00E+00	0.00E+00	0.00E+00
Zr^{+4}	3.64E-05	3.91E-06	5.45E-06	1.10E-06	2.45E-04	8.95E-06	4.32E-07	5.68E-05	6.44E-06	2.90E-05

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	B-101	B-102	B-103	B-104	B-105	B-106	B-107	B-108	B-109	B-110	B-111	B-112	B-201	B-202	B-203	B-204
Ag^{+}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.07E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-08	2.82E-08
$Al(OH)_4^{-}$	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
Al^{+3}	2.87E-03	3.71E-05	2.30E-05	3.33E-05	8.68E-06	2.00E-04	4.19E-04	2.12E-04	8.33E-04	1.00E-04	7.07E-05	4.42E-03	2.67E-05	4.01E-05	1.18E-06	1.32E-06
As^{+5}	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	2.22E-07	2.82E-07
B^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-07	1.40E-07
Ba^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-07	1.40E-07
Be^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E-07	6.01E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-08	1.40E-08
Bi^{+3}	1.70E-04	1.90E-05	1.49E-05	2.32E-06	2.11E-05	4.60E-06	6.87E-05	4.14E-06	5.98E-06	7.06E-05	8.80E-05	3.38E-05	1.34E-05	1.62E-05	3.17E-03	2.82E-07
$C_{10}H_{12}N_2O_8^{-4}$	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
$C_{10}H_{15}N_2O_7^{-3}$	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
$C_{12}H_{27}O_4P$	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
$C_{13}H_{28}$	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
C_2Cl4	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
$C_2H_3O_2^{-}$	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
$C_2H_3O_3^{-}$	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
C_2HCl_3	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
$C_2O_4^{-2}$	2.39E-04	6.93E-05	7.80E-06	3.49E-05	1.89E-05	5.16E-06	7.12E-04	7.42E-06	2.55E-05	3.50E-04	8.86E-04	1.23E-03	6.15E-03	9.99E-03	1.78E-03	1.50E-03
C_3H_6O	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
$C_4H_{10}O$	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
C_4H_8O	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
C_5H_5N	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
$C_6H_5NO_2$	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
$C_6H_5O_7^{-3}$	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
C_6H_6	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
$C_7H_6N_2O_4$	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
C_7H_8O	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
Ca^{+2}	7.91E-05	9.90E-05	9.80E-05	3.63E-06	4.38E-04	1.19E-05	6.33E-05	6.18E-05	4.96E-05	5.10E-05	1.37E-05	4.37E-05	3.64E-05	1.55E-04	5.91E-06	7.29E-06
Cd^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.55E-07	1.89E-06	4.54E-06	0.00E+00	1.92E-06	0.00E+00	0.00E+00	9.21E-07	2.80E-07	1.03E-07	1.47E-07
Ce^{+3}	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	2.22E-07	2.82E-07
CH_2Cl_2	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
$CHCl_3$	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
CHO_2^{-}	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
Cl^{-}	1.98E-04	7.45E-04	5.71E-04	1.86E-03	6.04E-04	7.89E-04	1.49E-03	3.03E-04	2.51E-04	2.23E-03	1.69E-03	8.31E-04	2.42E-03	1.13E-03	1.07E-03	8.18E-04
CN^{-}	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
Co^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-08	6.81E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.72E-07	4.40E-08	4.44E-08	5.64E-08
CO_3^{-2}	1.07E-02	3.58E-03	3.93E-03	0.00E+00	5.64E-03	0.00E+00	0.00E+00	2.82E-03	1.75E-03	2.14E-03	2.47E-02	1.29E-02	7.86E-03	8.32E-03	0.00E+00	3.97E-03
$Cr(OH)_4^{-}$	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
$Cr_{(TOTAL)}$	1.07E-04	1.77E-04	1.54E-04	2.42E-05	2.03E-04	3.81E-05	8.14E-05	4.66E-05	2.45E-04	1.12E-04	4.45E-04	3.66E-04	1.31E-03	1.02E-03	1.10E-03	1.16E-03
Cs^{+}	5.92E-08	4.54E-08	3.11E-08	8.87E-09	9.14E-09	1.74E-07	3.93E-07	5.41E-08	1.09E-08	4.61E-07	4.34E-06	5.05E-07	7.15E-10	2.14E-09	1.91E-10	5.63E-10
Cu^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.92E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-08	2.82E-08
F^{-}	7.19E-05	6.87E-03	6.48E-03	1.86E-03	9.69E-03	1.49E-03	1.18E-02	5.34E-03	3.73E-03	1.33E-03	9.96E-04	7.73E-04	6.40E-03	6.00E-03	7.14E-03	6.09E-03
Fe^{+3}	1.23E-05	1.83E-05	1.41E-05	2.54E-06	1.36E-05	6.75E-05	1.87E-04	1.64E-06	6.98E-06	2.01E-04	1.32E-04	5.33E-05	6.59E-06	3.80E-05	1.05E-05	1.43E-06
H^{+}	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
H_2O	9.63E-01	9.66E-01	9.72E-01	8.86E-01	9.65E-01	9.53E-01	8.92E-01	9.88E-01	9.90E-01	8.36E-01	8.99E-01	9.53E-01	9.62E-01	9.48E-01	9.84E-01	9.73E-01
H_2O_2	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
Hg^{+2}	5.35E-06	5.51E-07	5.19E-07	1.14E-06	7.99E-07	6.17E-06	1.13E-07	2.74E-07	1.90E-07	3.98E-07	1.84E-09	4.58E-08	8.65E-09	2.41E-08	0.00E+00	0.00E+00

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	B-101	B-102	B-103	B-104	B-105	B-106	B-107	B-108	B-109	B-110	B-111	B-112	B-201	B-202	B-203	B-204
K^{+}	1.46E-04	1.36E-04	1.01E-04	5.34E-04	1.23E-04	9.63E-05	2.95E-04	1.31E-04	4.08E-05	3.77E-04	9.94E-04	4.80E-04	3.46E-03	9.73E-03	4.43E-03	5.36E-03
La^{+3}	0.00E+00	0.00E+00	0.00E+00	3.13E-08	1.22E-09	2.19E-08	1.06E-15	1.91E-08	1.85E-08	9.39E-15	0.00E+00	1.30E-11	2.94E-05	3.74E-05	3.15E-05	3.15E-05
Li^{+}	6.92E-06	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	1.76E-07	7.35E-07
Mg^{+2}	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	2.22E-07	2.82E-07
Mn^{+4}	2.06E-07	2.27E-06	2.19E-06	0.00E+00	3.43E-06	2.44E-06	5.33E-06	1.37E-06	3.36E-06	1.02E-07	1.01E-07	2.95E-06	5.28E-06	3.72E-06	9.80E-04	2.05E-04
MnO_2	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
MnO_4^{-}	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
Mo^{+6}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-07	1.40E-07
Na^{+}	8.81E-02	7.51E-02	6.89E-02	9.45E-02	1.11E-01	5.37E-02	1.78E-01	5.37E-02	4.21E-02	1.63E-01	1.32E-01	5.27E-02	3.67E-02	5.03E-02	1.37E-02	2.96E-02
Nd^{+3}	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	2.22E-07	2.82E-07
NH_3	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
NH_4^{+}	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
Ni^{+2}	1.11E-05	1.12E-05	6.98E-06	4.07E-06	2.83E-06	5.73E-07	1.77E-06	2.41E-07	4.19E-06	6.13E-07	6.07E-07	6.56E-06	2.64E-06	2.23E-06	4.44E-08	5.64E-08
NO_2^{-}	2.20E-02	3.46E-03	3.04E-03	2.27E-03	4.72E-03	3.87E-03	4.64E-03	4.06E-03	1.50E-03	1.73E-02	6.83E-02	1.47E-02	9.55E-04	1.31E-03	5.77E-04	5.65E-04
NO_3^{-}	7.82E-02	5.71E-02	4.73E-02	2.46E-01	6.06E-02	9.60E-02	2.06E-01	2.34E-02	2.75E-02	3.05E-01	1.22E-01	6.01E-02	5.79E-02	7.36E-02	4.99E-02	4.97E-02
$OH_{(BOUND)}$	1.68E-04	4.86E-04	3.02E-04	9.15E-05	1.13E-04	1.43E-05	0.00E+00	0.00E+00	9.58E-05	2.45E-04	2.43E-04	7.28E-03	0.00E+00	0.00E+00	0.00E+00	1.27E-04
OH^{-}	4.00E-02	1.26E-02	1.18E-02	8.50E-04	1.79E-02	8.50E-04	8.50E-04	5.35E-03	5.24E-03	8.50E-04	8.50E-04	4.95E-03	8.50E-04	7.20E-03	8.50E-04	8.50E-04
Pb^{+2}	1.30E-06	2.61E-06	2.51E-06	1.98E-05	4.55E-06	4.09E-06	1.16E-05	1.14E-05	6.13E-06	5.84E-07	5.78E-07	1.39E-05	1.55E-06	1.35E-05	0.00E+00	5.89E-06
Pd^{+2}	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
PO_4^{-3}	2.22E-03	1.39E-02	1.34E-02	8.94E-03	3.52E-02	1.79E-02	5.62E-02	2.46E-02	2.07E-02	4.00E-02	3.65E-02	5.00E-03	1.54E-03	4.06E-03	4.08E-03	4.36E-03
Pr^{+3}	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
Pu^{+4}	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
Rb^{+}	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
Rh^{+3}	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
Ru^{+3}	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	1.23E-06	7.69E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Sb^{+5}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E-08	0.00E+00	0.00E+00	0.00E+00	1.42E-07	4.91E-08	0.00E+00	5.60E-11	5.64E-08	1.57E-06	1.70E-07
Se^{+6}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.28E-05	0.00E+00	0.00E+00	0.00E+00	3.59E-05	3.62E-05	0.00E+00	2.10E-06	2.98E-07	4.01E-05	5.70E-05
Si^{+4}	5.89E-03	3.22E-04	3.00E-04	5.46E-05	4.50E-05	2.86E-04	2.22E-04	3.03E-04	4.82E-04	6.46E-04	1.12E-03	9.65E-05	3.79E-04	1.43E-04	1.92E-04	1.86E-05
SO_4^{-2}	2.28E-02	3.03E-02	2.92E-02	1.67E-02	4.31E-02	7.48E-03	1.05E-01	2.29E-02	1.47E-02	1.89E-02	1.73E-02	6.02E-03	4.68E-04	1.90E-03	3.40E-04	3.59E-04
Sr^{+2}	6.76E-08	2.44E-05	2.18E-05	7.64E-05	4.53E-05	4.04E-06	3.67E-05	1.77E-05	1.36E-05	2.86E-06	1.09E-06	4.13E-05	1.19E-03	2.16E-04	6.25E-04	4.84E-04
Ta^{+5}	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
Tc^{+7}	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
Te^{+6}	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
Th^{+4}	3.21E-17	1.46E-18	1.36E-18	0.00E+00	0.00E+00	0.00E+00	1.70E-08	2.78E-09	2.69E-09	0.00E+00	0.00E+00	2.46E-10	8.24E-17	0.00E+00	1.72E-17	7.09E-18
Ti^{+4}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.92E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-08	2.82E-08
Tl^{+3}	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	4.44E-07	5.64E-07
TOC	1.78E-04	3.90E-05	4.52E-06	2.16E-05	1.06E-05	4.74E-06	3.02E-04	5.36E-06	2.03E-06	2.41E-04	5.71E-04	1.00E-03	7.44E-04	8.35E-07	6.58E-07	1.91E-07
$U_{(TOTAL)}$	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
V^{+5}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.96E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-07	1.40E-07
W^{+6}	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
Y^{+3}	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
Zn^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.92E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E-08	5.02E-08
Zr^{+4}	4.80E-06	4.75E-06	3.68E-06	1.18E-06	4.07E-06	6.22E-06	3.70E-06	3.18E-06	1.53E-06	0.00E+00	0.00E+00	7.42E-08	3.96E-07	1.23E-07	0.00E+00	3.67E-07

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	BX-101	BX-102	BX-103	BX-104	BX-105	BX-106	BX-107	BX-108	BX-109	BX-110	BX-111	BX-112
Ag^{+}	0.00E+00	0.00E+00	0.00E+00	2.03E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.86E-10
$Al(OH)_4^{-}$	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
Al^{+3}	1.23E-03	6.21E-04	5.54E-03	1.48E-03	9.04E-05	3.91E-04	3.29E-05	7.00E-05	1.11E-04	6.78E-04	4.98E-03	6.48E-05
As^{+5}	0.00E+00	0.00E+00	0.00E+00	1.59E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.38E-09
B^{+3}	0.00E+00	0.00E+00	0.00E+00	5.23E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.34E-08
Ba^{+2}	0.00E+00	0.00E+00	0.00E+00	1.15E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.17E-10
Be^{+2}	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	2.69E-10
Bi^{+3}	0.00E+00	0.00E+00	0.00E+00	4.90E-07	0.00E+00	0.00E+00	6.36E-05	1.21E-05	0.00E+00	1.66E-06	1.64E-04	6.82E-06
$C_{10}H_{12}N_2O_8^{-4}$	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
$C_{10}H_{15}N_2O_7^{-3}$	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
$C_{12}H_{27}O_4P$	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
$C_{13}H_{28}$	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
C_2Cl4	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
$C_2H_3O_2^{-}$	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
$C_2H_3O_3^{-}$	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
C_2HCl_3	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
$C_2O_4^{-2}$	1.32E-05	3.89E-06	4.78E-04	1.59E-04	1.60E-04	7.94E-05	1.31E-04	1.03E-04	9.49E-05	4.99E-04	4.84E-04	3.90E-05
C_3H_6O	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
$C_4H_{10}O$	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
C_4H_8O	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
C_5H_5N	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
$C_6H_5NO_2$	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
$C_6H_5O_7^{-3}$	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
C_6H_6	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
$C_7H_6N_2O_4$	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
C_7H_8O	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
Ca^{+2}	1.98E-06	2.04E-06	5.52E-06	1.53E-06	1.31E-05	1.43E-05	1.34E-04	6.67E-05	3.49E-05	8.35E-05	1.71E-05	1.82E-05
Cd^{+2}	0.00E+00	0.00E+00	0.00E+00	1.95E-06	0.00E+00	2.34E-07	1.15E-07	0.00E+00	1.73E-05	0.00E+00	0.00E+00	1.79E-06
Ce^{+3}	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
CH_2Cl_2	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
$CHCl_3$	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
CHO_2^{-}	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
Cl^{-}	7.48E-05	1.27E-05	1.22E-04	1.08E-04	1.52E-04	9.52E-05	2.91E-04	5.00E-04	7.76E-04	9.93E-04	5.92E-04	3.21E-04
CN^{-}	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
Co^{+3}	0.00E+00	0.00E+00	0.00E+00	1.44E-07	0.00E+00	8.37E-11	5.50E-08	0.00E+00	5.09E-07	0.00E+00	0.00E+00	0.00E+00
CO_3^{-2}	1.27E-03	6.24E-04	7.05E-03	2.37E-03	2.12E-03	2.10E-03	0.00E+00	0.00E+00	0.00E+00	4.02E-03	4.62E-03	3.15E-03
$Cr(OH)_4^{-}$	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
$Cr_{(TOTAL)}$	2.74E-05	1.24E-05	3.58E-05	1.76E-04	1.29E-03	7.85E-04	3.92E-05	2.49E-05	2.00E-05	7.65E-04	4.76E-04	7.86E-05
Cs^{+}	4.37E-09	1.82E-10	3.04E-08	1.81E-07	2.29E-07	5.75E-08	2.40E-08	1.18E-07	0.00E+00	5.27E-07	7.94E-07	5.08E-08
Cu^{+2}	0.00E+00	0.00E+00	0.00E+00	3.78E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F^{-}	6.31E-05	2.18E-05	8.33E-05	8.43E-05	7.01E-05	5.73E-05	1.09E-03	5.77E-04	1.56E-04	3.70E-03	1.86E-03	5.03E-04
Fe^{+3}	9.72E-05	4.47E-05	2.75E-06	8.97E-08	4.67E-07	4.93E-05	2.98E-05	5.98E-05	1.57E-03	2.18E-06	1.35E-05	2.42E-06
H^{+}	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
H_2O	9.99E-01	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	9.83E-01	9.72E-01	9.41E-01	8.97E-01	8.96E-01	9.91E-01
H_2O_2	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
Hg^{+2}	1.31E-07	0.00E+00	1.49E-07	3.69E-10	0.00E+00	2.59E-07	2.86E-08	4.11E-07	1.15E-05	8.07E-08	5.00E-08	3.26E-09

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	BX-101	BX-102	BX-103	BX-104	BX-105	BX-106	BX-107	BX-108	BX-109	BX-110	BX-111	BX-112
K^{+}	1.08E-05	2.61E-06	1.70E-05	5.99E-05	1.26E-04	1.94E-04	3.81E-05	6.69E-05	6.37E-05	9.37E-04	7.36E-04	1.07E-04
La^{+3}	1.86E-08	8.09E-09	2.31E-08	0.00E+00	4.88E-16	2.93E-08	6.32E-17	1.51E-15	4.72E-08	8.28E-10	3.52E-10	6.46E-17
Li^{+}	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	3.68E-07
Mg^{+2}	0.00E+00	0.00E+00	0.00E+00	6.02E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.64E-09
Mn^{+4}	1.02E-07	4.76E-08	0.00E+00	2.58E-06	0.00E+00	3.68E-07	2.43E-07	2.23E-06	0.00E+00	6.94E-07	2.26E-07	3.78E-06
MnO_2	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
MnO_4^{-}	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
Mo^{+6}	0.00E+00	0.00E+00	0.00E+00	6.06E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.84E-08
Na^{+}	5.29E-03	1.12E-03	8.33E-03	5.21E-03	1.48E-02	1.43E-02	1.86E-02	3.37E-02	5.80E-02	1.15E-01	1.15E-01	1.97E-02
Nd^{+3}	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
NH_3	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
NH_4^{+}	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
Ni^{+2}	6.44E-06	3.25E-06	2.35E-06	1.89E-06	5.87E-06	1.00E-06	3.81E-07	4.31E-07	3.80E-07	1.83E-05	5.46E-07	3.23E-09
NO_2^{-}	1.15E-03	3.60E-04	1.90E-03	1.88E-03	2.34E-03	2.15E-03	1.90E-03	4.14E-03	1.05E-02	8.34E-03	9.17E-03	5.19E-03
NO_3^{-}	8.65E-03	1.12E-03	1.43E-02	3.81E-03	5.10E-03	5.26E-03	3.20E-02	5.73E-02	1.14E-01	1.97E-01	2.01E-01	1.43E-02
$OH_{(BOUND)}$	0.00E+00	0.00E+00	7.03E-04	3.52E-05	2.31E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.43E-04	5.01E-03	9.43E-06
OH^{-}	1.42E-03	1.60E-03	4.54E-03	3.14E-03	5.10E-03	6.85E-03	8.50E-04	8.50E-04	8.50E-04	7.82E-03	1.99E-02	4.57E-03
Pb^{+2}	1.42E-06	6.95E-07	5.58E-06	1.56E-06	9.22E-06	3.52E-07	1.64E-06	2.63E-06	6.67E-06	7.81E-06	1.11E-05	8.61E-09
Pd^{+2}	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
PO_4^{-3}	1.95E-03	3.56E-04	3.45E-03	5.60E-04	5.06E-03	4.05E-03	3.45E-03	1.21E-02	1.41E-02	2.55E-02	1.33E-02	4.68E-03
Pr^{+3}	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
Pu^{+4}	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
Rb^{+}	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
Rh^{+3}	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
Ru^{+3}	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
Sb^{+5}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.08E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Se^{+6}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.74E-05	3.62E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Si^{+4}	4.65E-06	2.46E-04	5.56E-06	1.07E-06	9.13E-05	2.03E-04	7.66E-05	2.75E-05	2.39E-05	1.58E-04	2.97E-04	2.24E-04
SO_4^{-2}	8.20E-04	1.17E-04	1.25E-03	1.76E-04	2.51E-03	1.51E-04	3.26E-03	5.61E-03	1.02E-02	5.16E-03	1.71E-03	1.29E-05
Sr^{+2}	3.28E-06	2.14E-06	3.33E-06	2.04E-07	2.56E-07	3.38E-07	1.25E-05	3.02E-06	3.13E-06	9.51E-06	1.44E-06	1.18E-05
Ta^{+5}	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
Tc^{+7}	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
Te^{+6}	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
Th^{+4}	2.54E-08	1.30E-08	3.20E-08	8.60E-12	6.71E-18	3.15E-18	0.00E+00	0.00E+00	6.66E-18	2.73E-10	1.57E-10	0.00E+00
Ti^{+4}	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	1.70E-09
Tl^{+3}	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
TOC	2.36E-05	8.10E-06	6.03E-04	1.36E-04	1.22E-04	1.52E-04	3.23E-05	7.84E-05	1.32E-04	9.36E-04	1.24E-04	9.60E-06
$U_{(TOTAL)}$	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
V^{+5}	0.00E+00	0.00E+00	0.00E+00	3.87E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.86E-10
W^{+6}	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
Y^{+3}	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	7.17E-10
Zn^{+2}	0.00E+00	0.00E+00	0.00E+00	2.49E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-09
Zr^{+4}	0.00E+00	0.00E+00	0.00E+00	3.39E-07	1.04E-06	0.00E+00	6.11E-07	3.83E-07	0.00E+00	5.44E-06	1.71E-07	6.20E-09

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	BY-101	BY-102	BY-103	BY-104	BY-105	BY-106	BY-107	BY-108	BY-109	BY-110	BY-111	BY-112
Ag^{+}	0.00E+00	0.00E+00	0.00E+00	4.77E-07	4.04E-07	0.00E+00	0.00E+00	0.00E+00	8.17E-07	2.83E-07	0.00E+00	0.00E+00
$Al(OH)_4^{-}$	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
Al^{+3}	6.73E-03	1.12E-02	1.02E-02	1.49E-02	8.81E-03	1.14E-02	1.77E-02	2.85E-02	1.06E-02	1.12E-02	8.40E-03	5.70E-03
As^{+5}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.61E-06	0.00E+00	0.00E+00
B^{+3}	0.00E+00	0.00E+00	0.00E+00	2.39E-06	8.73E-07	0.00E+00	0.00E+00	2.58E-06	0.00E+00	1.41E-06	0.00E+00	0.00E+00
Ba^{+2}	0.00E+00	0.00E+00	0.00E+00	2.39E-06	8.31E-07	0.00E+00	0.00E+00	0.00E+00	1.10E-06	1.41E-06	0.00E+00	0.00E+00
Be^{+2}	0.00E+00	0.00E+00	0.00E+00	2.39E-07	8.31E-08	0.00E+00	8.89E-08	0.00E+00	1.09E-07	1.41E-07	7.00E-08	0.00E+00
Bi^{+3}	1.38E-06	1.35E-06	1.53E-06	1.28E-06	1.32E-05	2.69E-07	1.50E-06	2.45E-06	2.07E-06	2.08E-05	1.19E-06	6.51E-07
$C_{10}H_{12}N_2O_8^{-4}$	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
$C_{10}H_{15}N_2O_7^{-3}$	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
$C_{12}H_{27}O_4P$	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
$C_{13}H_{28}$	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
C_2Cl4	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
$C_2H_3O_2^{-}$	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
$C_2H_3O_3^{-}$	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
C_2HCl_3	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
$C_2O_4^{-2}$	1.44E-03	3.75E-03	9.45E-03	3.07E-03	1.21E-03	2.03E-03	2.57E-03	1.87E-03	4.12E-03	3.21E-03	3.50E-03	4.41E-03
C_3H_6O	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
$C_4H_{10}O$	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
C_4H_8O	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
C_5H_5N	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
$C_6H_5NO_2$	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
$C_6H_5O_7^{-3}$	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
C_6H_6	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
$C_7H_6N_2O_4$	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
C_7H_8O	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
Ca^{+2}	2.12E-04	2.97E-05	5.51E-05	4.77E-06	9.80E-04	2.08E-04	9.64E-05	9.75E-06	2.59E-05	3.49E-04	6.17E-05	2.59E-05
Cd^{+2}	0.00E+00	0.00E+00	0.00E+00	2.39E-07	1.01E-07	0.00E+00	2.70E-06	0.00E+00	2.04E-07	1.67E-06	2.72E-05	0.00E+00
Ce^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CH_2Cl_2	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
$CHCl_3$	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
CHO_2^{-}	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
Cl^{-}	2.43E-04	1.11E-03	5.11E-04	1.50E-03	5.61E-04	1.05E-03	1.44E-03	1.14E-03	1.06E-03	1.49E-03	6.99E-04	6.67E-04
CN^{-}	0.00E+00	0.00E+00	0.00E+00	3.13E-07	0.00E+00	2.67E-07	0.00E+00	3.65E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co^{+3}	0.00E+00	0.00E+00	0.00E+00	9.54E-07	3.38E-07	0.00E+00	0.00E+00	3.30E-06	4.59E-07	1.32E-06	0.00E+00	0.00E+00
CO_3^{-2}	8.32E-03	5.82E-02	3.72E-02	4.41E-02	2.83E-02	2.12E-02	2.09E-02	1.64E-02	9.23E-03	7.19E-02	4.75E-02	6.71E-02
$Cr(OH)_4^{-}$	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
$Cr_{(TOTAL)}$	4.20E-04	5.15E-04	5.86E-04	8.67E-04	1.70E-04	2.12E-04	4.61E-05	7.53E-05	4.21E-04	1.52E-03	5.69E-04	3.18E-03
Cs^{+}	1.38E-06	9.93E-07	8.67E-07	1.13E-06	6.80E-07	2.44E-06	1.88E-06	4.31E-07	8.64E-07	2.02E-06	1.01E-06	7.78E-07
Cu^{+2}	0.00E+00	0.00E+00	0.00E+00	4.77E-07	1.66E-07	0.00E+00	0.00E+00	4.12E-07	2.19E-07	2.83E-07	0.00E+00	0.00E+00
F^{-}	2.42E-03	6.67E-03	5.06E-03	2.14E-03	1.02E-03	3.52E-03	2.07E-03	5.21E-03	1.67E-02	2.41E-03	4.63E-03	2.62E-03
Fe^{+3}	1.50E-05	8.90E-06	7.53E-06	2.39E-06	1.95E-05	6.04E-04	1.43E-04	6.42E-06	6.39E-06	2.37E-04	2.28E-04	1.93E-05
H^{+}	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
H_2O	9.26E-01	9.71E-01	9.43E-01	9.42E-01	8.88E-01	9.23E-01	9.65E-01	9.90E-01	9.75E-01	9.69E-01	9.68E-01	9.86E-01
H_2O_2	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
Hg^{+2}	9.01E-08	7.15E-08	4.90E-08	1.22E-08	6.33E-07	1.75E-06	6.74E-07	2.56E-06	4.94E-08	9.73E-07	7.20E-08	9.98E-08

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	BY-101	BY-102	BY-103	BY-104	BY-105	BY-106	BY-107	BY-108	BY-109	BY-110	BY-111	BY-112
K^{+}	1.21E-03	1.13E-03	1.20E-03	1.92E-03	5.20E-04	1.30E-03	2.06E-03	8.70E-04	1.42E-03	1.60E-03	1.14E-03	9.17E-04
La^{+3}	4.72E-09	9.68E-12	1.95E-09	4.11E-08	2.09E-09	4.61E-09	3.69E-09	1.50E-08	4.56E-09	5.92E-09	8.67E-12	4.62E-12
Li^{+}	0.00E+00	0.00E+00	0.00E+00	4.77E-07	1.66E-07	5.85E-08	0.00E+00	2.36E-07	2.19E-07	3.04E-07	0.00E+00	0.00E+00
Mg^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.83E-06	0.00E+00	0.00E+00
Mn^{+4}	6.13E-07	4.51E-07	1.01E-06	4.77E-07	2.69E-07	3.54E-07	4.62E-07	4.19E-06	6.12E-07	9.18E-06	3.93E-07	2.84E-07
MnO_2	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
MnO_4^{-}	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
Mo^{+6}	0.00E+00	0.00E+00	0.00E+00	3.67E-06	9.32E-07	0.00E+00	0.00E+00	8.54E-07	3.06E-06	2.51E-06	0.00E+00	0.00E+00
Na^{+}	1.15E-01	1.15E-01	1.15E-01	1.15E-01	1.15E-01	1.15E-01	1.15E-01	1.15E-01	1.15E-01	1.15E-01	1.15E-01	1.15E-01
Nd^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NH_3	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
NH_4^{+}	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
Ni^{+2}	2.20E-05	8.49E-06	6.79E-06	9.52E-07	1.22E-05	6.35E-04	3.54E-07	2.52E-04	2.54E-06	8.49E-05	2.39E-05	7.28E-06
NO_2^{-}	4.57E-03	1.04E-02	5.79E-03	2.31E-02	7.47E-03	1.61E-02	2.34E-02	1.97E-02	1.93E-02	2.16E-02	8.75E-03	1.14E-02
NO_3^{-}	1.78E-01	5.20E-02	1.16E-01	1.21E-01	2.50E-01	1.84E-01	1.00E-01	1.17E-01	4.88E-02	6.18E-02	7.31E-02	3.04E-02
$OH_{(BOUND)}$	2.21E-03	8.61E-03	5.44E-03	8.03E-03	2.61E-03	5.96E-04	6.63E-03	7.14E-03	6.51E-03	5.55E-03	3.71E-03	2.88E-03
OH^{-}	2.06E-02	2.87E-02	2.78E-02	2.93E-02	1.00E-02	3.10E-02	5.76E-02	6.73E-02	3.12E-02	2.72E-02	3.73E-02	3.78E-02
Pb^{+2}	2.03E-05	7.00E-06	1.83E-05	2.01E-05	1.27E-05	2.05E-06	6.55E-06	9.56E-06	1.12E-05	5.38E-05	3.52E-06	2.99E-06
Pd^{+2}	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
PO_4^{-3}	3.68E-02	9.52E-03	1.54E-02	6.63E-03	6.92E-03	4.25E-03	4.12E-03	1.11E-02	2.84E-02	6.51E-03	7.05E-03	3.07E-03
Pr^{+3}	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
Pu^{+4}	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
Rb^{+}	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
Rh^{+3}	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
Ru^{+3}	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
Sb^{+5}	0.00E+00	0.00E+00	0.00E+00	2.87E-06	3.38E-06	0.00E+00	0.00E+00	0.00E+00	5.28E-06	0.00E+00	0.00E+00	0.00E+00
Se^{+6}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.62E-05	0.00E+00	0.00E+00	0.00E+00	4.67E-05	0.00E+00	0.00E+00	0.00E+00
Si^{+4}	8.66E-04	2.07E-04	3.00E-04	6.40E-05	1.54E-03	8.88E-05	1.87E-04	4.13E-05	1.05E-03	3.03E-04	1.49E-03	1.32E-04
SO_4^{-2}	1.28E-03	2.01E-02	8.45E-03	1.03E-02	3.85E-03	5.94E-03	7.54E-03	1.31E-02	3.82E-02	1.10E-02	1.62E-02	9.33E-03
Sr^{+2}	1.25E-06	7.13E-06	1.32E-05	1.27E-05	2.04E-05	1.24E-05	8.89E-06	2.31E-05	7.34E-06	1.63E-05	7.29E-06	7.24E-06
Ta^{+5}	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
Tc^{+7}	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
Te^{+6}	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
Th^{+4}	1.12E-10	1.87E-10	2.27E-09	1.73E-10	0.00E+00	8.23E-11	2.32E-10	2.97E-10	1.44E-08	1.95E-10	2.08E-10	9.24E-11
Ti^{+4}	0.00E+00	0.00E+00	0.00E+00	4.77E-07	1.66E-07	0.00E+00	0.00E+00	0.00E+00	2.19E-07	2.83E-07	0.00E+00	0.00E+00
Tl^{+3}	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
TOC	3.84E-04	6.17E-05	1.17E-04	6.94E-04	3.63E-04	2.90E-04	1.67E-04	6.64E-04	3.95E-04	8.79E-04	1.92E-04	4.71E-05
$U_{(TOTAL)}$	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
V^{+5}	0.00E+00	0.00E+00	0.00E+00	2.39E-06	8.31E-07	0.00E+00	0.00E+00	0.00E+00	1.10E-06	1.41E-06	0.00E+00	0.00E+00
W^{+6}	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
Y^{+3}	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
Zn^{+2}	0.00E+00	0.00E+00	0.00E+00	4.77E-07	1.66E-07	8.62E-08	9.56E-07	5.59E-07	2.19E-07	6.19E-07	0.00E+00	0.00E+00
Zr^{+4}	1.06E-07	3.08E-07	1.01E-07	0.00E+00	3.04E-08	0.00E+00	2.25E-07	1.11E-06	3.74E-07	0.00E+00	1.02E-06	2.72E-07

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110	C-111	C-112	C-201	C-202	C-203	C-204
Ag^{+}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.59E-11	0.00E+00	0.00E+00	0.00E+00	2.00E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
$Al(OH)_4^{-}$	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
Al^{+3}	7.10E-03	2.68E-04	4.36E-03	9.61E-04	0.00E+00	2.53E-08	0.00E+00	9.74E-04	8.82E-05	7.57E-04	1.67E-03	5.36E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
As^{+5}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.45E-10	0.00E+00	0.00E+00	0.00E+00	2.02E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
B^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E-10	0.00E+00	0.00E+00	0.00E+00	2.99E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Ba^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.70E-12	0.00E+00	0.00E+00	0.00E+00	4.19E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Be^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.54E-12	0.00E+00	0.00E+00	0.00E+00	4.19E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Bi^{+3}	4.21E-06	3.51E-05	0.00E+00	0.00E+00	6.30E-05	7.42E-08	0.00E+00	6.24E-06	0.00E+00	6.47E-05	8.82E-06	0.00E+00	4.90E-08	3.88E-08	3.86E-08	3.03E-08
$C_{10}H_{12}N_2O_8^{-4}$	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
$C_{10}H_{15}N_2O_7^{-3}$	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
$C_{12}H_{27}O_4P$	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
$C_{13}H_{28}$	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
C_2Cl4	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
$C_2H_3O_2^{-}$	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
$C_2H_3O_3^{-}$	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
C_2HCl_3	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
$C_2O_4^{-2}$	2.69E-04	2.01E-04	8.24E-04	1.92E-03	7.83E-04	1.07E-04	3.03E-04	6.53E-04	3.77E-04	2.44E-04	1.12E-04	9.71E-04	6.03E-04	3.38E-04	4.81E-04	2.16E-05
C_3H_6O	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
$C_4H_{10}O$	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
C_4H_8O	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
C_5H_5N	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
$C_6H_5NO_2$	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
$C_6H_5O_7^{-3}$	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
C_6H_6	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
$C_7H_6N_2O_4$	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
C_7H_8O	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
Ca^{+2}	8.09E-05	1.56E-04	4.15E-05	0.00E+00	2.72E-05	3.76E-07	0.00E+00	1.70E-05	6.21E-05	1.89E-04	5.62E-06	2.96E-04	1.30E-06	1.01E-06	2.61E-06	7.03E-07
Cd^{+2}	0.00E+00	0.00E+00	0.00E+00	3.06E-05	0.00E+00	3.91E-08	0.00E+00	0.00E+00	0.00E+00	4.99E-07	0.00E+00	1.03E-06	2.86E-08	4.17E-08	1.48E-08	9.75E-09
Ce^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.37E-10	0.00E+00	0.00E+00	0.00E+00	2.73E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CH_2Cl_2	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
$CHCl_3$	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
CHO_2^{-}	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
Cl^{-}	7.07E-04	1.28E-03	4.93E-04	7.11E-04	4.65E-04	5.14E-06	7.68E-04	4.55E-04	5.26E-04	6.82E-04	4.68E-04	7.44E-04	5.54E-05	4.12E-05	5.07E-05	4.89E-05
CN^{-}	0.00E+00	0.00E+00	8.08E-08	0.00E+00	0.00E+00	2.56E-11	0.00E+00	0.00E+00	0.00E+00	7.23E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co^{+3}	0.00E+00	0.00E+00	0.00E+00	3.52E-07	4.24E-07	9.95E-09	0.00E+00	0.00E+00	0.00E+00	2.62E-09	0.00E+00	6.74E-06	2.30E-10	1.02E-10	8.36E-11	3.62E-10
CO_3^{-2}	8.89E-03	5.00E-02	4.02E-03	4.21E-02	1.45E-02	0.00E+00	0.00E+00	0.00E+00	1.74E-02	1.99E-03	0.00E+00	2.82E-03	5.54E-03	3.75E-03	5.44E-03	0.00E+00
$Cr(OH)_4^{-}$	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
$Cr_{(TOTAL)}$	1.19E-05	3.67E-05	1.95E-05	1.17E-04	4.67E-04	6.33E-08	3.04E-04	1.98E-04	1.68E-04	1.33E-04	3.20E-05	1.32E-04	9.64E-05	5.48E-05	2.33E-04	2.26E-04
Cs^{+}	1.10E-06	5.70E-07	6.44E-07	1.82E-06	3.83E-07	9.36E-09	7.96E-07	2.15E-07	1.20E-07	2.19E-07	1.17E-06	2.69E-06	1.03E-08	1.21E-08	3.57E-09	1.94E-08
Cu^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E-11	0.00E+00	0.00E+00	0.00E+00	3.03E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
F^{-}	8.21E-04	2.96E-03	8.38E-04	3.07E-02	1.23E-03	3.92E-07	5.59E-03	2.65E-03	9.04E-04	1.81E-03	1.34E-03	4.40E-04	5.81E-05	6.20E-05	2.92E-04	9.76E-06
Fe^{+3}	4.16E-06	4.43E-06	2.72E-06	5.61E-06	2.97E-06	3.71E-09	0.00E+00	3.87E-04	8.21E-04	3.51E-04	1.43E-12	1.02E-03	5.56E-06	1.09E-13	3.41E-15	2.68E-13
H^{+}	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
H_2O	9.79E-01	9.75E-01	9.97E-01	9.63E-01	9.84E-01	1.00E+00	1.01E+00	1.00E+00	9.70E-01	9.70E-01	9.90E-01	9.53E-01	9.97E-01	9.98E-01	9.96E-01	9.96E-01
H_2O_2	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
Hg^{+2}	9.62E-06	1.50E-06	4.35E-05	2.01E-06	7.83E-06	5.23E-08	0.00E+00	2.45E-07	0.00E+00	4.27E-08	6.84E-05	2.74E-07	1.02E-06	2.09E-06	1.79E-07	7.51E-08

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	C-101	C-102	C-103	C-104	C-105	C-106	C-107	C-108	C-109	C-110	C-111	C-112	C-201	C-202	C-203	C-204
K^{+}	7.18E-05	5.60E-04	5.46E-05	3.05E-04	4.48E-04	1.57E-06	8.72E-05	2.43E-04	3.05E-04	2.52E-04	2.73E-04	3.53E-04	3.57E-05	1.85E-05	2.24E-05	1.91E-05
La^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.71E-09	5.48E-07	3.92E-08	1.04E-08	2.31E-07	0.00E+00	1.44E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Li^{+}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-11	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
Mg^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-10	0.00E+00	0.00E+00	0.00E+00	8.32E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mn^{+4}	2.89E-07	1.40E-06	3.96E-06	0.00E+00	2.68E-05	1.23E-06	0.00E+00	1.13E-06	4.10E-08	1.29E-06	6.50E-07	1.13E-06	6.07E-06	4.11E-06	6.87E-07	6.75E-07
MnO_2	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
MnO_4^{-}	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
Mo^{+6}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.77E-11	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
Na^{+}	5.17E-02	6.10E-02	5.35E-03	9.63E-02	2.89E-02	1.18E-03	2.05E-02	3.76E-02	5.18E-02	4.21E-02	1.89E-02	5.86E-02	6.82E-03	5.49E-03	7.75E-03	6.15E-03
Nd^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.08E-10	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
NH_3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E-09	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
NH_4^{+}	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
Ni^{+2}	1.20E-06	7.41E-05	1.41E-05	9.49E-05	6.96E-06	8.36E-07	0.00E+00	2.49E-05	5.06E-05	1.37E-08	2.13E-09	6.49E-04	1.30E-08	7.52E-09	3.24E-09	2.28E-08
NO_2^{-}	9.01E-03	1.36E-02	1.38E-02	3.24E-02	1.01E-02	3.42E-05	3.12E-02	1.50E-02	2.28E-02	4.15E-03	1.53E-02	3.84E-02	1.06E-03	6.89E-04	3.42E-04	1.55E-03
NO_3^{-}	7.91E-02	4.65E-02	1.35E-03	1.74E-02	1.22E-02	3.75E-05	1.32E-02	2.71E-02	3.34E-02	6.10E-02	2.96E-02	5.06E-02	2.99E-03	2.11E-03	6.89E-03	2.23E-03
$OH_{(BOUND)}$	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.39E-08	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
OH^{-}	3.63E-03	8.50E-04	8.50E-04	8.50E-04	8.50E-04	8.50E-04	8.50E-04	8.50E-04	9.75E-04	8.50E-04	8.50E-04	8.50E-04	8.50E-04	8.50E-04	8.50E-04	8.50E-04
Pb^{+2}	1.65E-04	8.95E-05	1.62E-05	1.35E-04	1.27E-04	4.01E-07	5.47E-04	2.56E-05	9.39E-06	1.04E-05	1.00E-07	4.89E-06	0.00E+00	9.69E-14	6.02E-09	2.39E-13
Pd^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.30E-10	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
PO_4^{-3}	2.95E-02	9.40E-03	6.96E-04	1.45E-03	4.69E-03	1.25E-05	2.70E-02	4.27E-02	1.56E-02	1.62E-02	1.38E-02	2.15E-02	1.01E-05	3.34E-04	5.65E-04	5.91E-03
Pr^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.51E-10	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
Pu^{+4}	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
Rb^{+}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.04E-09	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
Rh^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.23E-10	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
Ru^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.35E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.26E-07	5.62E-09	0.00E+00	2.81E-17	2.53E-15
Sb^{+5}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E-08	0.00E+00	0.00E+00	0.00E+00	1.51E-07	0.00E+00	0.00E+00	4.56E-07	2.24E-07	4.51E-07	2.08E-07
Se^{+6}	0.00E+00	0.00E+00	0.00E+00	4.24E-05	0.00E+00	2.07E-06	4.38E-06	0.00E+00	0.00E+00	5.96E-07	0.00E+00	1.15E-04	0.00E+00	2.01E-06	3.24E-06	2.04E-06
Si^{+4}	8.13E-04	4.57E-03	3.09E-05	3.44E-04	2.59E-04	8.72E-09	6.60E-05	6.97E-05	1.68E-04	1.48E-04	1.53E-03	4.87E-05	6.17E-05	5.77E-05	3.47E-04	0.00E+00
SO_4^{-2}	7.78E-03	4.87E-03	2.19E-03	3.04E-03	4.38E-03	2.75E-06	7.01E-03	4.17E-03	5.23E-03	7.65E-03	2.27E-03	9.27E-03	1.68E-04	1.07E-04	1.75E-04	2.75E-04
Sr^{+2}	1.18E-05	9.87E-06	8.55E-08	6.56E-07	1.52E-06	3.72E-10	2.93E-07	1.55E-05	6.45E-07	1.52E-05	6.70E-08	3.80E-07	1.24E-06	6.70E-07	8.92E-07	2.93E-05
Ta^{+5}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E-10	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
Tc^{+7}	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
Te^{+6}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.63E-10	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
Th^{+4}	8.26E-19	1.87E-08	1.17E-11	2.52E-07	2.12E-17	8.76E-11	6.91E-08	0.00E+00	0.00E+00	1.09E-17	0.00E+00	0.00E+00	3.00E-19	7.54E-22	8.97E-22	7.41E-14
Ti^{+4}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.47E-12	0.00E+00	0.00E+00	0.00E+00	5.58E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Tl^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-10	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
TOC	6.89E-04	4.55E-04	4.12E-03	4.32E-03	2.27E-03	2.37E-08	5.26E-04	3.73E-04	4.46E-04	6.02E-05	1.13E-04	1.04E-03	1.67E-04	1.75E-04	2.09E-04	4.00E-03
$U_{(TOTAL)}$	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
V^{+5}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.80E-11	0.00E+00	0.00E+00	0.00E+00	3.28E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
W^{+6}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.40E-08	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
Y^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.39E-12	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
Zn^{+2}	0.00E+00	0.00E+00	3.03E-09	0.00E+00	0.00E+00	3.63E-11	0.00E+00	0.00E+00	0.00E+00	3.50E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Zr^{+4}	1.00E-05	1.50E-04	2.89E-05	8.99E-06	3.72E-06	1.22E-07	0.00E+00	3.50E-08	0.00E+00	7.46E-06	4.72E-06	0.00E+00	1.50E-08	1.15E-07	2.92E-08	0.00E+00

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	S-101	S-102	S-103	S-104	S-105	S-106	S-107	S-108	S-109	S-110	S-111	S-112
Ag^{+}	1.75E-09	2.67E-07	0.00E+00	1.53E-09	0.00E+00	3.45E-07	0.00E+00	0.00E+00	1.62E-07	2.94E-07	7.65E-07	0.00E+00
$Al(OH)_4^{-}$	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
Al^{+3}	2.37E-03	7.19E-03	6.45E-03	7.77E-04	1.72E-03	7.62E-03	1.13E-03	7.20E-03	3.47E-03	1.97E-03	1.79E-02	3.48E-03
As^{+5}	9.02E-10	2.67E-06	0.00E+00	6.62E-09	0.00E+00	1.14E-06	0.00E+00	0.00E+00	3.82E-07	1.13E-06	2.08E-06	0.00E+00
B^{+3}	4.95E-07	5.93E-06	0.00E+00	7.40E-08	0.00E+00	2.06E-06	0.00E+00	0.00E+00	6.79E-07	2.05E-06	4.44E-06	0.00E+00
Ba^{+2}	6.58E-10	1.34E-06	0.00E+00	5.30E-10	0.00E+00	5.73E-07	0.00E+00	0.00E+00	1.91E-07	5.66E-07	1.04E-06	0.00E+00
Be^{+2}	1.63E-09	1.34E-07	0.00E+00	2.12E-09	0.00E+00	5.71E-08	0.00E+00	0.00E+00	1.90E-08	5.64E-08	1.04E-07	0.00E+00
Bi^{+3}	3.98E-07	2.22E-06	2.29E-06	1.56E-08	3.85E-06	8.67E-06	0.00E+00	1.36E-06	3.07E-07	7.09E-06	1.63E-06	1.37E-05
$C_{10}H_{12}N_2O_8^{-4}$	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
$C_{10}H_{15}N_2O_7^{-3}$	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
$C_{12}H_{27}O_4P$	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
$C_{13}H_{28}$	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
C_2Cl4	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
$C_2H_3O_2^{-}$	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
$C_2H_3O_3^{-}$	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
C_2HCl_3	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
$C_2O_4^{-2}$	4.05E-04	9.37E-04	5.12E-04	1.53E-04	1.19E-04	1.01E-03	1.73E-04	1.24E-03	4.71E-04	1.05E-03	1.14E-03	1.31E-03
C_3H_6O	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
$C_4H_{10}O$	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
C_4H_8O	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
C_5H_5N	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
$C_6H_5NO_2$	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
$C_6H_5O_7^{-3}$	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
C_6H_6	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
$C_7H_6N_2O_4$	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
C_7H_8O	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
Ca^{+2}	4.49E-06	5.88E-05	6.87E-06	1.87E-07	3.61E-06	5.15E-06	4.89E-06	6.61E-06	1.14E-05	4.91E-06	2.02E-05	9.18E-06
Cd^{+2}	3.24E-08	1.04E-06	0.00E+00	1.28E-09	0.00E+00	5.71E-08	0.00E+00	0.00E+00	8.82E-07	5.64E-08	2.08E-06	0.00E+00
Ce^{+3}	6.58E-10	2.67E-06	0.00E+00	2.17E-08	0.00E+00	1.14E-06	0.00E+00	0.00E+00	3.82E-07	1.13E-06	2.08E-06	0.00E+00
CH_2Cl_2	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
$CHCl_3$	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
CHO_2^{-}	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
Cl^{-}	6.82E-04	1.64E-03	1.47E-03	4.57E-04	4.47E-04	1.62E-03	2.46E-04	1.94E-03	2.96E-04	7.53E-04	1.73E-03	5.55E-05
CN^{-}	0.00E+00	0.00E+00	0.00E+00	3.04E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Co^{+3}	1.13E-09	9.08E-07	0.00E+00	3.62E-09	0.00E+00	2.35E-07	9.54E-09	0.00E+00	1.04E-07	2.29E-07	4.16E-07	0.00E+00
CO_3^{-2}	3.53E-03	7.54E-03	9.76E-03	6.18E-04	2.62E-03	1.82E-02	1.10E-03	2.41E-02	1.08E-02	1.25E-02	1.73E-02	1.10E-01
$Cr(OH)_4^{-}$	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
$Cr_{(TOTAL)}$	4.41E-04	6.46E-05	1.71E-04	2.60E-04	8.15E-05	7.07E-04	1.82E-04	5.24E-04	2.30E-04	9.53E-04	8.60E-04	1.39E-05
Cs^{+}	8.76E-07	1.70E-06	1.64E-06	2.32E-07	3.97E-07	2.07E-06	2.49E-07	2.06E-06	2.71E-07	1.20E-06	1.59E-06	6.18E-08
Cu^{+2}	2.75E-08	2.67E-07	0.00E+00	2.45E-09	0.00E+00	1.14E-06	0.00E+00	0.00E+00	3.82E-08	1.13E-07	2.08E-07	0.00E+00
F^{-}	4.54E-05	2.21E-04	1.56E-04	3.54E-05	1.32E-04	1.13E-03	2.07E-03	3.80E-04	1.10E-04	2.37E-04	7.64E-04	8.86E-05
Fe^{+3}	1.38E-07	1.56E-05	1.12E-06	3.50E-07	5.02E-07	1.07E-06	1.16E-06	5.84E-07	3.04E-05	1.33E-06	5.95E-06	6.09E-07
H^{+}	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
H_2O	9.86E-01	9.42E-01	9.63E-01	9.82E-01	9.12E-01	9.12E-01	9.99E-01	9.19E-01	8.57E-01	9.20E-01	9.62E-01	9.93E-01
H_2O_2	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
Hg^{+2}	5.01E-07	2.13E-07	4.80E-07	3.14E-09	4.31E-07	1.55E-07	0.00E+00	1.94E-07	2.42E-07	6.62E-07	8.82E-07	4.85E-07

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	S-101	S-102	S-103	S-104	S-105	S-106	S-107	S-108	S-109	S-110	S-111	S-112
K^{+}	1.84E-04	4.77E-04	4.34E-04	4.03E-05	2.38E-04	3.58E-04	5.97E-05	5.05E-04	1.77E-04	2.41E-04	4.78E-04	1.36E-05
La^{+3}	8.69E-12	9.34E-10	6.93E-11	3.83E-09	2.53E-11	2.26E-11	0.00E+00	6.59E-12	1.02E-09	3.04E-11	5.11E-09	6.09E-11
Li^{+}	4.38E-09	2.67E-07	0.00E+00	0.00E+00	0.00E+00	1.76E-07	0.00E+00	0.00E+00	0.00E+00	1.13E-07	2.20E-07	0.00E+00
Mg^{+2}	2.75E-07	2.67E-06	0.00E+00	5.78E-09	0.00E+00	1.14E-06	0.00E+00	0.00E+00	3.82E-07	1.13E-06	2.08E-06	0.00E+00
Mn^{+4}	2.75E-08	1.37E-06	2.22E-06	4.16E-08	1.17E-07	2.17E-07	2.57E-07	6.77E-07	5.72E-08	1.12E-06	6.11E-07	5.19E-07
MnO_2	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
MnO_4^{-}	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
Mo^{+6}	1.00E-06	9.20E-06	0.00E+00	0.00E+00	0.00E+00	1.37E-06	0.00E+00	0.00E+00	7.86E-07	1.30E-06	3.94E-06	0.00E+00
Na^{+}	2.31E-02	6.54E-02	5.60E-02	1.42E-02	7.58E-02	1.15E-01	1.01E-02	1.15E-01	1.16E-01	7.89E-02	9.53E-02	1.15E-01
Nd^{+3}	6.58E-10	2.67E-06	0.00E+00	0.00E+00	0.00E+00	1.14E-06	0.00E+00	0.00E+00	3.82E-07	1.13E-06	2.08E-06	0.00E+00
NH_3	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
NH_4^{+}	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
Ni^{+2}	2.18E-07	2.06E-06	6.20E-07	5.05E-09	5.74E-07	3.75E-07	1.82E-06	5.17E-07	1.76E-06	5.01E-07	4.16E-07	3.79E-07
NO_2^{-}	9.62E-03	1.71E-02	1.69E-02	3.44E-03	3.51E-03	1.49E-02	3.57E-03	2.32E-02	3.42E-03	8.84E-03	1.88E-02	7.82E-04
NO_3^{-}	2.78E-02	8.23E-02	7.41E-02	3.21E-02	1.66E-01	1.89E-01	6.78E-03	1.64E-01	2.89E-01	1.48E-01	1.33E-01	2.77E-03
$OH_{(BOUND)}$	3.75E-04	1.11E-02	2.45E-03	7.95E-04	2.11E-03	1.64E-03	0.00E+00	4.12E-04	9.31E-04	1.98E-03	4.38E-03	0.00E+00
OH^{-}	7.25E-03	1.07E-02	1.61E-02	8.50E-04	7.83E-03	2.23E-02	3.61E-03	2.49E-02	8.50E-04	7.84E-03	3.99E-02	3.93E-03
Pb^{+2}	1.03E-06	3.05E-06	2.71E-06	1.49E-07	1.27E-06	1.24E-06	1.17E-06	5.28E-07	8.82E-07	1.20E-06	2.47E-06	2.50E-07
Pd^{+2}	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
PO_4^{-3}	7.31E-04	1.07E-02	2.58E-03	1.04E-06	1.04E-03	1.04E-02	1.49E-03	5.03E-03	4.98E-03	1.53E-03	6.43E-03	5.82E-03
Pr^{+3}	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
Pu^{+4}	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
Rb^{+}	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
Rh^{+3}	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
Ru^{+3}	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
Sb^{+5}	6.98E-09	2.64E-06	0.00E+00	9.64E-08	0.00E+00	4.11E-06	0.00E+00	0.00E+00	2.25E-06	2.38E-06	2.68E-06	0.00E+00
Se^{+6}	6.31E-06	2.37E-05	0.00E+00	2.30E-06	0.00E+00	2.96E-05	3.49E-06	0.00E+00	2.84E-05	1.81E-05	2.36E-05	0.00E+00
Si^{+4}	3.37E-05	1.73E-04	1.08E-04	7.03E-05	1.88E-04	1.20E-04	1.76E-04	1.23E-04	1.14E-04	1.91E-04	4.50E-05	1.33E-03
SO_4^{-2}	1.33E-03	1.50E-03	2.94E-03	1.66E-04	1.99E-03	3.73E-03	1.48E-04	7.68E-03	3.74E-03	3.64E-03	7.83E-03	6.79E-02
Sr^{+2}	7.00E-07	7.72E-09	2.47E-07	6.89E-07	2.42E-07	2.88E-08	1.03E-06	1.01E-07	3.20E-07	1.12E-06	5.81E-10	2.48E-07
Ta^{+5}	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
Tc^{+7}	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
Te^{+6}	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
Th^{+4}	6.16E-13	7.57E-12	3.02E-11	8.74E-13	1.03E-11	5.92E-11	0.00E+00	5.37E-11	2.19E-11	4.25E-11	8.01E-11	3.93E-09
Ti^{+4}	2.75E-08	2.67E-07	0.00E+00	1.21E-09	0.00E+00	1.14E-07	0.00E+00	0.00E+00	3.82E-08	1.13E-07	2.08E-07	0.00E+00
Tl^{+3}	6.58E-10	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E-06	0.00E+00	0.00E+00	0.00E+00	2.26E-06	4.16E-06	0.00E+00
TOC	7.82E-05	3.94E-04	4.37E-04	4.30E-05	1.10E-04	2.16E-04	3.49E-05	4.15E-04	1.21E-05	8.69E-05	1.52E-04	4.16E-04
$U_{(TOTAL)}$	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
V^{+5}	5.29E-08	1.34E-06	0.00E+00	0.00E+00	0.00E+00	5.73E-07	0.00E+00	0.00E+00	1.91E-07	5.66E-07	1.04E-06	0.00E+00
W^{+6}	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
Y^{+3}	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
Zn^{+2}	4.38E-09	2.67E-07	0.00E+00	8.36E-08	0.00E+00	1.61E-07	0.00E+00	0.00E+00	5.72E-08	6.25E-06	2.08E-07	0.00E+00
Zr^{+4}	1.48E-07	5.90E-07	1.68E-06	6.77E-09	0.00E+00	1.06E-08	4.79E-05	1.17E-06	1.19E-07	6.93E-07	9.69E-08	0.00E+00

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	SX-101	SX-102	SX-103	SX-104	SX-105	SX-106	SX-107	SX-108	SX-109	SX-110	SX-111	SX-112	SX-113	SX-114	SX-115
Ag^{+}	3.23E-07	7.50E-07	2.75E-07	0.00E+00	5.45E-07	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
$Al(OH)_4^{-}$	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
Al^{+3}	3.58E-02	1.31E-02	5.71E-03	3.33E-03	2.09E-02	1.29E-02	1.04E-03	4.78E-03	3.06E-04	9.48E-04	1.22E-03	1.18E-03	0.00E+00	1.38E-03	5.32E-04
As^{+5}	1.09E-06	2.59E-06	1.11E-06	0.00E+00	2.00E-06	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
B^{+3}	6.45E-07	3.74E-06	1.79E-06	0.00E+00	2.87E-06	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
Ba^{+2}	5.47E-07	1.30E-06	5.58E-07	0.00E+00	1.00E-06	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
Be^{+2}	5.45E-08	1.29E-07	5.56E-08	0.00E+00	1.00E-07	1.22E-07	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
Bi^{+3}	2.67E-06	3.03E-06	2.09E-06	2.61E-06	5.19E-06	1.19E-06	3.10E-07	1.04E-06	1.55E-07	3.79E-07	3.25E-07	3.33E-07	6.13E-09	1.90E-07	0.00E+00
$C_{10}H_{12}N_2O_8^{-4}$	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
$C_{10}H_{15}N_2O_7^{-3}$	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
$C_{12}H_{27}O_4P$	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
$C_{13}H_{28}$	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
C_2Cl4	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
$C_2H_3O_2^{-}$	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
$C_2H_3O_3^{-}$	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
C_2HCl_3	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
$C_2O_4^{-2}$	8.03E-04	1.86E-03	1.94E-03	4.91E-04	1.45E-03	1.47E-03	9.81E-05	4.48E-04	1.74E-04	2.00E-04	1.25E-04	1.16E-04	7.73E-06	1.63E-04	1.97E-04
C_3H_6O	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
$C_4H_{10}O$	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
C_4H_8O	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
C_5H_5N	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
$C_6H_5NO_2$	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
$C_6H_5O_7^{-3}$	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
C_6H_6	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
$C_7H_6N_2O_4$	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
C_7H_8O	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
Ca^{+2}	6.41E-06	1.08E-05	8.94E-06	6.10E-06	1.57E-05	3.25E-05	1.99E-06	2.33E-04	1.28E-06	1.29E-06	1.89E-06	1.59E-06	6.61E-06	4.44E-06	2.48E-05
Cd^{+2}	5.46E-08	1.29E-07	5.56E-08	0.00E+00	1.00E-07	3.53E-05	0.00E+00	2.94E-07	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E-09	0.00E+00	0.00E+00
Ce^{+3}	1.09E-06	2.59E-06	1.11E-06	0.00E+00	2.00E-06	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
CH_2Cl_2	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
$CHCl_3$	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
CHO_2^{-}	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
Cl^{-}	4.23E-03	3.08E-03	1.90E-03	1.08E-03	2.63E-03	4.20E-03	3.12E-04	1.67E-03	1.13E-03	9.98E-04	5.16E-04	4.23E-04	1.81E-05	1.10E-03	2.65E-04
CN^{-}	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
Co^{+3}	2.26E-07	5.23E-07	2.29E-07	0.00E+00	4.07E-07	0.00E+00	0.00E+00	7.11E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
CO_3^{-2}	4.05E-03	2.55E-02	2.06E-02	8.48E-03	1.89E-02	1.44E-02	8.33E-04	8.50E-03	9.63E-04	1.36E-03	9.26E-04	8.98E-04	4.55E-05	9.69E-04	3.48E-03
$Cr(OH)_4^{-}$	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
$Cr_{(TOTAL)}$	1.95E-03	7.78E-04	2.57E-04	4.75E-04	4.54E-04	2.40E-04	2.68E-04	5.23E-03	8.21E-04	7.58E-04	4.05E-04	3.45E-04	1.01E-07	7.60E-04	9.68E-03
Cs^{+}	2.36E-06	3.69E-06	2.70E-06	1.03E-06	2.32E-06	3.18E-06	2.31E-07	3.29E-06	4.18E-07	6.05E-07	4.28E-07	3.75E-07	2.07E-09	6.09E-07	1.61E-07
Cu^{+2}	1.09E-07	2.59E-07	1.67E-07	0.00E+00	4.66E-07	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
F^{-}	9.74E-05	1.75E-04	1.46E-04	1.31E-04	1.87E-04	3.41E-04	1.80E-05	3.33E-04	9.30E-06	2.23E-05	1.90E-05	1.95E-05	1.63E-06	1.13E-05	0.00E+00
Fe^{+3}	1.39E-06	1.61E-06	1.13E-06	8.91E-07	1.89E-06	4.95E-06	3.68E-07	0.00E+00	7.75E-08	2.81E-09	6.77E-07	4.57E-07	1.07E-05	2.24E-06	2.54E-07
H^{+}	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
H_2O	9.99E-01	9.26E-01	9.09E-01	9.62E-01	9.57E-01	9.26E-01	9.93E-01	8.74E-01	9.66E-01	9.72E-01	9.85E-01	9.89E-01	1.00E+00	9.63E-01	1.03E+00
H_2O_2	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
Hg^{+2}	1.71E-06	6.47E-07	8.07E-07	7.91E-07	9.50E-07	7.87E-08	8.16E-07	8.80E-06	5.22E-07	1.07E-06	8.75E-07	8.88E-07	6.10E-08	5.95E-07	4.20E-06

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	SX-101	SX-102	SX-103	SX-104	SX-105	SX-106	SX-107	SX-108	SX-109	SX-110	SX-111	SX-112	SX-113	SX-114	SX-115
K^{+}	4.32E-04	1.08E-03	7.60E-04	2.45E-04	8.81E-04	8.44E-04	4.55E-05	4.60E-04	7.25E-05	1.28E-04	9.08E-05	8.16E-05	2.78E-05	1.05E-04	6.35E-05
La^{+3}	2.16E-11	6.07E-11	2.40E-11	5.88E-12	5.35E-11	4.53E-11	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.95E-10	0.00E+00	0.00E+00
Li^{+}	1.21E-07	2.59E-07	1.11E-07	0.00E+00	2.00E-07	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
Mg^{+2}	1.09E-06	2.59E-06	1.11E-06	0.00E+00	2.00E-06	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
Mn^{+4}	2.07E-06	2.59E-07	1.11E-07	8.71E-07	1.86E-06	2.63E-06	2.81E-07	0.00E+00	1.22E-07	2.56E-07	3.64E-07	3.05E-07	5.95E-07	7.67E-07	1.07E-06
MnO_2	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
MnO_4^{-}	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
Mo^{+6}	1.21E-06	5.18E-06	2.55E-06	0.00E+00	3.94E-06	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
Na^{+}	1.19E-01	1.15E-01	1.02E-01	5.26E-02	1.16E-01	1.15E-01	9.94E-03	1.33E-01	2.78E-02	3.32E-02	1.88E-02	1.60E-02	7.07E-04	2.91E-02	4.72E-03
Nd^{+3}	1.09E-06	2.59E-06	1.11E-06	0.00E+00	2.00E-06	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
NH_3	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
NH_4^{+}	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
Ni^{+2}	4.71E-07	1.02E-06	7.13E-07	4.36E-07	1.15E-06	1.01E-05	4.93E-07	4.52E-06	1.73E-07	6.91E-08	7.41E-07	5.25E-07	0.00E+00	2.38E-06	2.21E-06
NO_2^{-}	1.47E-02	4.62E-02	2.88E-02	1.18E-02	4.35E-02	4.60E-02	3.29E-03	1.21E-02	3.94E-03	5.30E-03	4.23E-03	3.90E-03	2.55E-04	5.80E-03	3.97E-04
NO_3^{-}	1.76E-01	1.38E-01	1.58E-01	7.44E-02	1.31E-01	1.50E-01	1.61E-02	2.87E-01	6.56E-02	5.65E-02	2.74E-02	2.22E-02	9.03E-04	5.97E-02	6.31E-12
$OH_{(BOUND)}$	4.04E-03	4.40E-03	1.89E-03	1.01E-03	3.45E-03	1.14E-03	3.51E-04	0.00E+00	0.00E+00	0.00E+00	1.09E-03	7.28E-04	0.00E+00	3.52E-03	0.00E+00
OH^{-}	9.45E-02	3.18E-02	1.49E-02	1.26E-02	5.30E-02	3.49E-02	2.82E-03	2.45E-02	1.26E-03	8.56E-03	5.78E-03	5.56E-03	8.50E-04	1.63E-03	1.61E-02
Pb^{+2}	9.57E-07	2.76E-06	1.19E-06	5.04E-07	2.29E-06	3.30E-06	5.23E-07	1.40E-05	3.71E-07	8.62E-08	2.15E-07	1.70E-07	5.45E-07	8.60E-07	0.00E+00
Pd^{+2}	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
PO_4^{-3}	2.02E-03	2.76E-03	2.07E-03	2.12E-03	6.17E-03	6.91E-03	2.95E-04	2.76E-05	1.51E-04	3.54E-04	3.02E-04	3.10E-04	1.85E-09	1.84E-04	0.00E+00
Pr^{+3}	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
Pu^{+4}	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
Rb^{+}	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
Rh^{+3}	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
Ru^{+3}	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	5.37E-09	0.00E+00	0.00E+00
Sb^{+5}	4.95E-06	5.13E-06	4.10E-06	0.00E+00	4.54E-06	0.00E+00	0.00E+00	3.66E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.44E-10	0.00E+00	0.00E+00
Se^{+6}	4.08E-05	3.36E-05	3.34E-05	0.00E+00	3.69E-05	0.00E+00	0.00E+00	4.28E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Si^{+4}	3.03E-05	1.18E-04	1.31E-04	1.08E-04	1.72E-04	2.54E-06	2.62E-05	4.94E-04	1.68E-05	1.86E-04	1.53E-04	1.54E-04	2.82E-04	2.48E-05	1.82E-03
SO_4^{-2}	1.13E-03	6.15E-03	6.60E-03	2.58E-03	5.54E-03	2.85E-03	1.31E-04	1.48E-03	2.39E-04	2.75E-04	1.95E-04	1.71E-04	9.68E-06	3.18E-04	2.33E-04
Sr^{+2}	5.85E-07	8.58E-08	7.67E-08	3.83E-07	9.78E-08	4.10E-09	4.05E-07	1.38E-07	3.49E-07	2.25E-07	3.99E-07	4.02E-07	6.40E-07	3.64E-07	0.00E+00
Ta^{+5}	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
Tc^{+7}	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
Te^{+6}	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
Th^{+4}	1.07E-11	6.47E-11	4.69E-11	1.76E-11	6.18E-11	4.17E-11	2.14E-13	0.00E+00	8.33E-15	4.90E-21	5.77E-13	3.93E-13	4.34E-12	1.86E-12	0.00E+00
Ti^{+4}	1.09E-07	2.59E-07	1.11E-07	0.00E+00	2.00E-07	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
Tl^{+3}	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
TOC	2.33E-04	4.50E-04	3.00E-04	1.67E-04	3.63E-04	5.37E-04	1.90E-05	6.68E-05	5.00E-05	4.74E-05	3.06E-05	2.54E-05	1.15E-06	6.26E-05	2.94E-05
$U_{(TOTAL)}$	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
V^{+5}	5.47E-07	1.30E-06	5.58E-07	0.00E+00	1.00E-06	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
W^{+6}	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
Y^{+3}	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
Zn^{+2}	1.38E-07	2.59E-07	1.69E-07	0.00E+00	6.36E-07	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
Zr^{+4}	2.55E-06	3.33E-06	1.19E-06	1.24E-06	2.98E-06	9.55E-07	2.07E-07	0.00E+00	8.38E-08	1.13E-06	1.05E-06	1.13E-06	1.20E-08	1.11E-07	0.00E+00

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	T-101	T-102	T-103	T-104	T-105	T-106	T-107	T-108	T-109	T-110	T-111	T-112	T-201	T-202	T-203	T-204
Ag^{+}	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	1.55E-07	0.00E+00	0.00E+00	0.00E+00
$Al(OH)_4^{-}$	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
Al^{+3}	6.29E-03	6.88E-04	3.24E-03	1.59E-04	5.34E-03	3.02E-03	2.26E-03	5.42E-04	4.94E-04	0.00E+00	8.75E-06	3.59E-05	1.98E-06	1.66E-06	1.30E-06	1.26E-06
As^{+5}	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	6.86E-07	0.00E+00	0.00E+00	0.00E+00
B^{+3}	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	3.87E-07	0.00E+00	0.00E+00	0.00E+00
Ba^{+2}	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	3.44E-07	0.00E+00	0.00E+00	0.00E+00
Be^{+2}	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	3.54E-08	3.44E-08	0.00E+00	0.00E+00	0.00E+00
Bi^{+3}	1.84E-06	5.96E-08	3.03E-08	1.63E-04	3.68E-05	1.11E-06	2.88E-04	6.61E-06	1.12E-05	2.48E-04	2.46E-04	1.24E-04	1.34E-03	4.91E-04	5.37E-04	7.34E-04
$C_{10}H_{12}N_2O_8^{-4}$	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
$C_{10}H_{15}N_2O_7^{-3}$	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
$C_{12}H_{27}O_4P$	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
$C_{13}H_{28}$	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
C_2Cl4	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
$C_2H_3O_2^{-}$	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
$C_2H_3O_3^{-}$	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
C_2HCl_3	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
$C_2O_4^{-2}$	4.11E-04	6.97E-05	2.44E-04	1.76E-05	9.52E-04	9.13E-05	6.19E-05	5.60E-06	2.81E-07	7.99E-04	7.72E-03	3.05E-04	8.63E-04	5.73E-04	1.06E-03	1.23E-03
C_3H_6O	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
$C_4H_{10}O$	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
C_4H_8O	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
C_5H_5N	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
$C_6H_5NO_2$	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
$C_6H_5O_7^{-3}$	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
C_6H_6	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
$C_7H_6N_2O_4$	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
C_7H_8O	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
Ca^{+2}	5.40E-05	1.13E-05	5.21E-06	3.91E-04	6.76E-05	1.34E-05	1.03E-03	1.03E-05	3.46E-05	2.28E-05	6.12E-05	6.89E-06	2.04E-05	6.60E-06	9.27E-06	5.60E-06
Cd^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.45E-07	0.00E+00	2.87E-06	0.00E+00	0.00E+00	0.00E+00	3.37E-07	1.67E-06	1.72E-07	6.21E-08	5.99E-08	8.62E-08
Ce^{+3}	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	6.86E-07	0.00E+00	0.00E+00	0.00E+00
CH_2Cl_2	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
$CHCl_3$	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
CHO_2^{-}	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
Cl^{-}	1.46E-03	8.07E-05	1.34E-04	6.55E-04	1.77E-04	2.93E-04	7.71E-04	5.65E-04	5.10E-04	7.56E-04	1.11E-03	1.85E-04	1.39E-03	8.68E-04	7.61E-04	8.80E-04
CN^{-}	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
Co^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.57E-08	0.00E+00	3.42E-07	6.86E-08	6.63E-08	1.10E-07
CO_3^{-2}	1.70E-02	4.86E-03	2.82E-03	4.89E-04	8.84E-03	2.43E-03	1.24E-02	0.00E+00	0.00E+00	7.12E-03	0.00E+00	2.17E-03	5.31E-03	8.93E-03	6.62E-03	5.94E-03
$Cr(OH)_4^{-}$	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
$Cr_{(TOTAL)}$	3.51E-04	2.11E-04	7.18E-05	1.41E-04	2.49E-04	7.18E-05	3.75E-04	1.23E-04	6.03E-05	4.39E-05	1.98E-04	1.40E-04	1.59E-03	1.13E-03	1.27E-03	1.64E-03
Cs^{+}	1.34E-06	2.50E-07	2.00E-08	7.68E-10	1.68E-07	8.45E-08	7.27E-07	7.46E-08	6.55E-08	2.48E-10	1.37E-09	3.54E-11	3.80E-10	1.08E-10	1.08E-10	1.54E-10
Cu^{+2}	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	6.86E-08	0.00E+00	0.00E+00	0.00E+00
F^{-}	7.97E-04	4.55E-05	1.63E-04	1.61E-03	2.28E-04	1.84E-03	9.95E-03	3.83E-03	8.09E-03	1.22E-03	4.36E-03	1.13E-04	5.19E-03	5.59E-03	5.83E-03	5.73E-03
Fe^{+3}	7.43E-06	1.65E-05	5.44E-06	7.87E-05	6.29E-06	4.05E-06	5.10E-04	5.59E-05	7.32E-05	1.01E-04	1.46E-04	4.09E-05	5.98E-05	4.39E-05	3.30E-05	2.85E-06
H^{+}	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
H_2O	9.40E-01	9.94E-01	1.00E+00	9.71E-01	1.00E+00	9.97E-01	9.64E-01	9.28E-01	1.03E+00	9.59E-01	9.68E-01	9.89E-01	9.73E-01	9.67E-01	9.66E-01	9.65E-01
H_2O_2	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
Hg^{+2}	3.07E-07	1.82E-08	4.80E-07	0.00E+00	6.90E-07	6.97E-08	6.59E-08	7.80E-07	6.78E-07	1.69E-07	8.79E-08	3.31E-08	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	T-101	T-102	T-103	T-104	T-105	T-106	T-107	T-108	T-109	T-110	T-111	T-112	T-201	T-202	T-203	T-204
K^{+}	5.95E-04	3.48E-05	3.35E-05	3.65E-05	2.95E-04	5.55E-05	3.57E-04	1.29E-04	1.61E-04	5.86E-04	7.82E-04	8.79E-04	4.27E-03	6.19E-03	6.39E-03	5.79E-03
La^{+3}	8.46E-16	0.00E+00	0.00E+00	2.45E-09	2.38E-08	0.00E+00	7.74E-09	3.32E-08	4.26E-08	1.01E-06	1.27E-05	4.52E-06	5.88E-05	3.23E-05	3.07E-05	3.62E-05
Li^{+}	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	6.86E-08	0.00E+00	0.00E+00	0.00E+00
Mg^{+2}	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	6.86E-07	0.00E+00	0.00E+00	0.00E+00
Mn^{+4}	7.72E-07	1.93E-06	7.89E-07	3.86E-07	4.26E-08	7.88E-08	7.69E-06	0.00E+00	4.43E-06	5.96E-06	3.90E-05	2.54E-05	3.21E-04	1.54E-04	1.48E-04	2.00E-04
MnO_2	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
MnO_4^{-}	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
Mo^{+6}	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	3.44E-07	0.00E+00	0.00E+00	0.00E+00
Na^{+}	5.96E-02	1.00E-02	7.34E-03	4.64E-02	3.31E-02	1.60E-02	1.19E-01	5.82E-02	1.16E-01	5.86E-02	3.89E-02	2.43E-02	3.37E-02	3.67E-02	3.73E-02	3.52E-02
Nd^{+3}	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	6.86E-07	0.00E+00	0.00E+00	0.00E+00
NH_3	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
NH_4^{+}	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
Ni^{+2}	2.62E-06	6.02E-06	1.38E-05	0.00E+00	8.93E-08	3.34E-07	2.11E-07	7.47E-06	1.24E-05	5.98E-07	1.82E-06	1.31E-06	5.49E-06	1.68E-06	2.18E-06	3.63E-06
NO_2^{-}	1.43E-02	2.43E-03	2.31E-03	4.15E-03	1.52E-02	2.70E-03	1.67E-02	4.69E-03	1.24E-03	1.46E-02	7.37E-04	9.59E-03	4.34E-04	6.02E-04	3.20E-04	3.50E-04
NO_3^{-}	1.09E-01	1.14E-02	6.05E-03	5.68E-02	3.36E-03	2.26E-02	1.06E-01	1.79E-01	3.29E-02	6.20E-02	6.04E-02	6.19E-03	5.06E-02	6.14E-02	5.94E-02	6.80E-02
$OH_{(BOUND)}$	4.83E-03	4.40E-04	9.25E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.26E-04	4.20E-04	1.66E-05	0.00E+00	6.15E-04	2.38E-04	0.00E+00	0.00E+00	0.00E+00
OH^{-}	8.50E-04	8.50E-04	4.36E-03	6.35E-03	2.16E-02	1.25E-03	8.50E-04	8.50E-04	8.50E-04	6.33E-03	8.50E-04	1.03E-02	6.23E-03	2.22E-03	4.13E-03	8.61E-04
Pb^{+2}	1.57E-04	8.37E-06	2.57E-05	0.00E+00	3.06E-05	3.56E-05	8.13E-05	5.38E-06	8.02E-06	1.68E-05	6.71E-06	5.70E-06	5.12E-06	1.96E-06	4.38E-07	6.65E-06
Pd^{+2}	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
PO_4^{-3}	3.35E-03	6.46E-04	3.11E-03	1.65E-02	2.05E-03	1.03E-02	8.72E-02	6.50E-03	1.51E-01	1.52E-02	2.03E-02	1.10E-03	6.77E-04	2.24E-03	3.75E-03	3.21E-03
Pr^{+3}	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
Pu^{+4}	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
Rb^{+}	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
Rh^{+3}	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
Ru^{+3}	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
Sb^{+5}	0.00E+00	0.00E+00	0.00E+00	3.34E-07	0.00E+00	0.00E+00	5.64E-06	0.00E+00	0.00E+00	0.00E+00	2.82E-07	0.00E+00	8.23E-07	1.41E-07	1.36E-07	3.88E-07
Se^{+6}	0.00E+00	0.00E+00	0.00E+00	4.57E-07	0.00E+00	0.00E+00	3.85E-05	0.00E+00	0.00E+00	0.00E+00	1.90E-06	0.00E+00	5.95E-05	2.50E-05	2.52E-03	0.00E+00
Si^{+4}	1.95E-05	2.17E-05	3.28E-05	1.67E-04	5.71E-04	1.11E-04	3.22E-03	2.26E-04	9.97E-05	7.45E-04	7.51E-04	3.21E-04	2.25E-04	1.90E-04	1.33E-04	5.77E-06
SO_4^{-2}	7.28E-03	1.44E-03	1.06E-03	3.73E-03	3.55E-03	2.23E-03	8.90E-03	2.01E-03	1.61E-03	7.74E-03	4.18E-03	3.17E-03	7.46E-04	1.79E-03	5.78E-04	4.42E-04
Sr^{+2}	1.96E-07	5.95E-08	3.90E-06	3.85E-05	2.76E-06	1.35E-05	1.52E-05	1.79E-05	6.09E-06	2.59E-04	1.04E-04	1.22E-04	1.19E-03	5.68E-04	6.42E-04	6.52E-04
Ta^{+5}	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
Tc^{+7}	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
Te^{+6}	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
Th^{+4}	3.33E-11	0.00E+00	4.47E-11	0.00E+00	6.34E-14	4.77E-17	9.06E-09	0.00E+00	0.00E+00	9.30E-18	0.00E+00	2.54E-20	2.11E-17	1.77E-18	1.78E-18	6.88E-17
Ti^{+4}	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	6.86E-08	0.00E+00	0.00E+00	0.00E+00
Tl^{+3}	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	1.37E-06	0.00E+00	0.00E+00	0.00E+00
TOC	5.28E-04	4.23E-05	9.44E-05	4.33E-06	7.92E-04	3.65E-05	1.90E-05	1.57E-06	4.24E-07	6.06E-04	1.11E-03	1.27E-04	1.05E-04	1.68E-04	9.44E-05	1.95E-08
$U_{(TOTAL)}$	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
V^{+5}	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	3.44E-07	0.00E+00	0.00E+00	0.00E+00
W^{+6}	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
Y^{+3}	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
Zn^{+2}	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	1.51E-07	6.88E-08	0.00E+00	0.00E+00	0.00E+00
Zr^{+4}	2.86E-08	0.00E+00	2.49E-08	2.42E-06	0.00E+00	1.59E-07	4.52E-06	1.75E-06	3.06E-06	7.97E-07	2.18E-07	4.71E-07	7.31E-07	3.16E-07	3.07E-07	4.11E-07

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	TX-101	TX-102	TX-103	TX-104	TX-105	TX-106	TX-107	TX-108	TX-109	TX-110	TX-111	TX-112	TX-113
Ag^{+}	0.00E+00	0.00E+00	0.00E+00	1.33E-06	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
$Al(OH)_4^{-}$	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
Al^{+3}	1.26E-01	6.46E-03	6.09E-03	6.97E-02	5.36E-03	6.80E-03	1.26E-02	5.67E-03	3.66E-04	5.00E-03	4.80E-03	5.12E-03	1.01E-03
As^{+5}	0.00E+00	0.00E+00	0.00E+00	5.39E-06	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
B^{+3}	0.00E+00	0.00E+00	0.00E+00	4.44E-06	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
Ba^{+2}	0.00E+00	0.00E+00	0.00E+00	2.70E-06	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
Be^{+2}	0.00E+00	0.00E+00	0.00E+00	2.69E-07	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
Bi^{+3}	4.06E-06	1.91E-06	1.76E-06	2.93E-06	6.38E-07	3.29E-06	1.83E-06	1.12E-06	2.76E-05	1.88E-06	2.53E-06	7.51E-07	2.35E-06
$C_{10}H_{12}N_2O_8^{-4}$	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
$C_{10}H_{15}N_2O_7^{-3}$	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
$C_{12}H_{27}O_4P$	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
$C_{13}H_{28}$	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
C_2Cl4	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
$C_2H_3O_2^{-}$	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
$C_2H_3O_3^{-}$	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
C_2HCl_3	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
$C_2O_4^{-2}$	1.05E-03	6.50E-04	6.27E-04	1.15E-03	6.01E-04	6.10E-04	6.13E-04	6.11E-04	3.27E-05	5.92E-04	5.85E-04	5.78E-04	3.58E-04
C_3H_6O	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
$C_4H_{10}O$	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
C_4H_8O	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
C_5H_5N	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
$C_6H_5NO_2$	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
$C_6H_5O_7^{-3}$	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
C_6H_6	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
$C_7H_6N_2O_4$	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
C_7H_8O	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
Ca^{+2}	2.82E-05	3.15E-05	2.81E-05	7.08E-05	3.28E-05	1.02E-05	2.61E-05	4.28E-05	3.74E-05	3.48E-05	3.85E-05	2.79E-05	2.74E-05
Cd^{+2}	0.00E+00	0.00E+00	0.00E+00	2.56E-06	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
Ce^{+3}	0.00E+00	0.00E+00	0.00E+00	5.39E-06	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
CH_2Cl_2	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
$CHCl_3$	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
CHO_2^{-}	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
Cl^{-}	2.70E-03	2.16E-03	2.07E-03	2.80E-03	1.93E-03	2.00E-03	2.71E-03	2.01E-03	1.32E-03	1.88E-03	1.85E-03	1.86E-03	3.58E-04
CN^{-}	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
Co^{+3}	0.00E+00	0.00E+00	0.00E+00	2.25E-06	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
CO_3^{-2}	1.75E-02	2.91E-02	2.87E-02	2.83E-02	3.08E-02	2.86E-02	2.14E-02	2.90E-02	0.00E+00	2.90E-02	2.80E-02	3.07E-02	9.34E-03
$Cr(OH)_4^{-}$	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
$Cr_{(TOTAL)}$	1.18E-03	6.66E-04	6.61E-04	1.52E-03	6.50E-04	6.35E-04	8.97E-04	6.46E-04	1.65E-04	6.43E-04	6.32E-04	6.38E-04	1.60E-04
Cs^{+}	2.42E-06	1.87E-06	1.71E-06	2.48E-06	1.38E-06	2.05E-06	2.04E-06	1.55E-06	7.63E-07	1.28E-06	1.22E-06	1.30E-06	1.36E-07
Cu^{+2}	0.00E+00	0.00E+00	0.00E+00	5.39E-07	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
F^{-}	5.93E-04	1.48E-03	1.60E-03	1.41E-03	1.60E-03	1.44E-03	1.05E-03	1.54E-03	1.19E-02	2.03E-03	2.25E-03	1.77E-03	2.79E-03
Fe^{+3}	2.23E-06	4.87E-05	5.28E-05	1.84E-04	5.27E-05	1.16E-06	3.95E-05	8.59E-05	1.19E-09	9.16E-05	1.14E-04	6.00E-05	7.78E-05
H^{+}	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
H_2O	1.26E+00	8.82E-01	8.83E-01	1.07E+00	8.88E-01	8.92E-01	8.94E-01	8.86E-01	9.47E-01	8.90E-01	8.91E-01	8.90E-01	8.85E-01
H_2O_2	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
Hg^{+2}	8.59E-06	2.72E-07	1.95E-07	3.17E-06	3.14E-07	8.44E-07	2.26E-07	6.95E-07	1.54E-07	1.81E-07	1.80E-07	2.08E-07	1.76E-07

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	TX-101	TX-102	TX-103	TX-104	TX-105	TX-106	TX-107	TX-108	TX-109	TX-110	TX-111	TX-112	TX-113
K^{+}	6.64E-04	1.00E-03	9.31E-04	1.05E-03	7.83E-04	9.07E-04	9.18E-04	8.53E-04	3.72E-04	7.34E-04	7.06E-04	7.45E-04	2.41E-04
La^{+3}	4.22E-16	8.76E-16	1.13E-09	3.12E-08	2.89E-16	6.43E-16	7.33E-09	1.47E-09	4.56E-09	1.75E-10	2.66E-10	2.10E-09	2.61E-10
Li^{+}	0.00E+00	0.00E+00	0.00E+00	5.39E-07	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
Mg^{+2}	0.00E+00	0.00E+00	0.00E+00	5.39E-06	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
Mn^{+4}	2.28E-06	2.47E-06	2.48E-06	5.13E-06	2.42E-06	7.51E-06	2.59E-06	2.42E-06	1.35E-06	2.38E-06	2.35E-06	2.45E-06	1.37E-07
MnO_2	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
MnO_4^{-}	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
Mo^{+6}	0.00E+00	0.00E+00	0.00E+00	5.73E-06	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
Na^{+}	1.03E-01	1.16E-01	1.16E-01	1.15E-01	1.16E-01	1.15E-01	1.15E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.16E-01
Nd^{+3}	0.00E+00	0.00E+00	0.00E+00	5.39E-06	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
NH_3	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
NH_4^{+}	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
Ni^{+2}	3.93E-06	6.10E-06	6.07E-06	3.35E-06	5.37E-06	1.49E-06	7.52E-06	5.82E-06	1.45E-07	5.25E-06	5.17E-06	5.44E-06	2.02E-06
NO_2^{-}	3.50E-02	2.04E-02	1.91E-02	2.65E-02	1.68E-02	1.85E-02	2.04E-02	1.80E-02	1.14E-02	1.60E-02	1.56E-02	1.60E-02	2.07E-03
NO_3^{-}	1.58E-01	2.02E-01	2.05E-01	2.46E-01	2.12E-01	1.96E-01	2.03E-01	2.07E-01	1.47E-01	2.13E-01	2.13E-01	2.13E-01	2.22E-01
$OH_{(BOUND)}$	3.54E-03	7.59E-03	6.17E-03	0.00E+00	2.46E-03	5.60E-03	1.07E-02	4.33E-03	0.00E+00	1.41E-03	9.37E-04	1.27E-03	2.29E-04
OH^{-}	2.39E-01	8.50E-04	8.50E-04	1.18E-01	8.50E-04	5.51E-03	1.57E-02	8.50E-04	8.50E-04	8.50E-04	8.50E-04	8.50E-04	8.50E-04
Pb^{+2}	7.22E-06	4.43E-06	3.80E-06	6.56E-06	1.98E-06	3.01E-06	4.57E-06	3.01E-06	2.43E-07	1.63E-06	1.44E-06	1.85E-06	9.99E-07
Pd^{+2}	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
PO_4^{-3}	6.23E-03	6.97E-03	7.87E-03	1.10E-02	7.56E-03	7.23E-03	4.75E-03	8.69E-03	7.95E-02	9.67E-03	1.10E-02	9.16E-03	1.44E-02
Pr^{+3}	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
Pu^{+4}	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
Rb^{+}	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
Rh^{+3}	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
Ru^{+3}	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
Sb^{+5}	0.00E+00	0.00E+00	0.00E+00	6.48E-06	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
Se^{+6}	0.00E+00	0.00E+00	0.00E+00	8.04E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Si^{+4}	2.63E-04	3.40E-05	3.46E-05	3.58E-05	3.06E-05	2.32E-04	3.45E-05	3.24E-05	7.20E-03	6.14E-05	7.74E-05	3.28E-05	9.39E-05
SO_4^{-2}	6.24E-03	1.34E-02	1.33E-02	1.57E-03	1.45E-02	1.34E-02	9.56E-03	1.43E-02	1.57E-02	1.44E-02	1.46E-02	1.40E-02	2.82E-02
Sr^{+2}	4.31E-07	2.40E-07	5.36E-07	7.67E-09	2.09E-07	4.45E-07	5.66E-08	1.88E-06	1.68E-05	6.53E-06	8.37E-06	7.04E-07	7.81E-06
Ta^{+5}	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
Tc^{+7}	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
Te^{+6}	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
Th^{+4}	1.68E-11	5.43E-11	4.79E-11	5.96E-11	3.29E-11	2.54E-11	4.91E-11	4.03E-11	0.00E+00	2.81E-11	2.55E-11	3.00E-11	2.26E-11
Ti^{+4}	0.00E+00	0.00E+00	0.00E+00	5.39E-07	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
Tl^{+3}	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
TOC	3.96E-04	8.22E-04	7.89E-04	2.63E-04	7.46E-04	7.59E-04	6.87E-04	7.64E-04	8.06E-06	7.14E-04	6.95E-04	7.15E-04	1.52E-05
$U_{(TOTAL)}$	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
V^{+5}	0.00E+00	0.00E+00	0.00E+00	2.70E-06	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
W^{+6}	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
Y^{+3}	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
Zn^{+2}	0.00E+00	0.00E+00	0.00E+00	5.39E-07	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
Zr^{+4}	2.15E-06	1.36E-06	1.39E-06	2.44E-06	1.48E-06	3.84E-06	8.81E-07	1.43E-06	5.19E-05	2.47E-06	2.99E-06	1.48E-06	1.99E-06

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	TX-114	TX-115	TX-116	TX-117	TX-118	TY-101	TY-102	TY-103	TY-104	TY-105	TY-106
Ag^{+}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.01E-08	0.00E+00	0.00E+00
$Al(OH)_4^{-}$	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
Al^{+3}	5.05E-04	5.37E-03	3.64E-03	3.08E-03	2.90E-03	7.38E-04	1.84E-03	5.87E-04	7.55E-05	4.20E-05	3.23E-06
As^{+5}	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
B^{+3}	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
Ba^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.99E-10	0.00E+00	0.00E+00
Be^{+2}	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
Bi^{+3}	1.21E-06	6.53E-07	3.13E-07	1.15E-06	1.93E-06	8.70E-07	8.80E-06	2.17E-06	2.28E-06	2.36E-06	4.45E-08
$C_{10}H_{12}N_2O_8^{-4}$	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
$C_{10}H_{15}N_2O_7^{-3}$	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
$C_{12}H_{27}O_4P$	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
$C_{13}H_{28}$	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
C_2Cl4	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
$C_2H_3O_2^{-}$	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
$C_2H_3O_3^{-}$	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
C_2HCl_3	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
$C_2O_4^{-2}$	5.25E-04	6.03E-04	2.22E-04	3.38E-04	3.48E-03	9.99E-05	1.67E-04	2.31E-04	2.52E-04	4.45E-06	5.05E-05
C_3H_6O	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
$C_4H_{10}O$	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
C_4H_8O	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
C_5H_5N	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
$C_6H_5NO_2$	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
$C_6H_5O_7^{-3}$	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
C_6H_6	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
$C_7H_6N_2O_4$	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
C_7H_8O	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
Ca^{+2}	2.93E-05	3.16E-05	4.46E-05	4.01E-05	2.90E-05	6.81E-06	3.21E-05	1.98E-04	5.61E-05	3.38E-04	2.79E-05
Cd^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E-07	0.00E+00	0.00E+00	8.78E-07	3.84E-07	7.48E-09
Ce^{+3}	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
CH_2Cl_2	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
$CHCl_3$	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
CHO_2^{-}	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
Cl^{-}	1.71E-03	1.94E-03	1.12E-03	1.14E-03	1.28E-03	7.52E-05	1.44E-03	4.15E-04	1.39E-04	5.71E-04	1.30E-04
CN^{-}	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
Co^{+3}	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	6.68E-09
CO_3^{-2}	1.39E-02	3.10E-02	2.50E-02	1.88E-02	5.15E-03	2.54E-03	0.00E+00	1.82E-03	4.68E-03	3.26E-05	0.00E+00
$Cr(OH)_4^{-}$	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
$Cr_{(TOTAL)}$	5.84E-04	6.59E-04	6.84E-05	3.90E-04	5.28E-04	5.92E-04	1.12E-04	1.23E-04	2.16E-04	7.98E-06	4.44E-08
Cs^{+}	1.11E-06	1.39E-06	1.79E-07	6.91E-07	1.21E-06	3.87E-10	7.14E-07	1.81E-07	1.17E-07	5.80E-08	4.43E-08
Cu^{+2}	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
F^{-}	2.11E-03	1.60E-03	1.76E-03	3.35E-03	9.78E-03	3.27E-04	3.23E-03	3.69E-04	9.33E-04	2.22E-04	6.22E-06
Fe^{+3}	8.22E-05	6.45E-05	2.91E-07	1.74E-04	7.61E-05	5.22E-06	5.68E-06	4.04E-05	3.50E-05	1.99E-07	1.44E-07
H^{+}	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
H_2O	8.80E-01	8.89E-01	8.80E-01	9.03E-01	9.74E-01	1.00E+00	8.62E-01	9.77E-01	9.95E-01	9.66E-01	9.93E-01
H_2O_2	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
Hg^{+2}	2.53E-07	3.40E-07	5.62E-07	4.63E-07	1.43E-07	8.89E-06	7.26E-07	3.70E-06	5.52E-06	8.29E-06	1.63E-09

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	TX-114	TX-115	TX-116	TX-117	TX-118	TY-101	TY-102	TY-103	TY-104	TY-105	TY-106
K^{+}	6.55E-04	7.85E-04	5.65E-04	4.49E-04	6.43E-04	1.68E-05	6.95E-04	1.61E-04	2.78E-05	6.37E-05	1.25E-05
La^{+3}	5.79E-09	6.54E-10	3.22E-08	2.34E-08	3.96E-08	2.87E-09	2.33E-08	7.95E-16	4.88E-09	3.30E-08	1.97E-09
Li^{+}	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
Mg^{+2}	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
Mn^{+4}	2.47E-06	2.43E-06	2.72E-06	2.71E-06	6.81E-06	1.53E-06	1.31E-06	3.53E-06	2.20E-06	4.01E-06	4.91E-07
MnO_2	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
MnO_4^{-}	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
Mo^{+6}	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
Na^{+}	1.16E-01	1.16E-01	1.16E-01	1.16E-01	1.15E-01	7.27E-03	1.16E-01	2.73E-02	1.84E-02	3.15E-02	6.86E-03
Nd^{+3}	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
NH_3	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
NH_4^{+}	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
Ni^{+2}	5.71E-06	5.47E-06	3.25E-06	4.83E-06	7.39E-06	7.57E-06	6.08E-06	1.54E-05	3.50E-06	3.48E-07	1.48E-07
NO_2^{-}	1.42E-02	1.69E-02	6.63E-03	9.32E-03	1.39E-02	1.11E-03	1.31E-02	3.49E-03	2.64E-03	5.22E-03	7.56E-04
NO_3^{-}	2.12E-01	2.13E-01	2.40E-01	2.02E-01	4.75E-02	3.05E-03	2.64E-01	3.93E-02	1.03E-02	5.93E-02	1.47E-02
$OH_{(BOUND)}$	7.31E-04	1.62E-03	0.00E+00	4.73E-05	4.67E-03	1.25E-06	4.08E-03	1.06E-03	2.01E-05	0.00E+00	0.00E+00
OH^{-}	8.50E-04	8.50E-04	8.50E-04	8.50E-04	1.06E-02	3.39E-03	8.50E-04	2.79E-03	8.50E-04	8.50E-04	8.50E-04
Pb^{+2}	1.47E-06	2.06E-06	2.58E-06	2.10E-06	4.63E-06	6.23E-07	6.28E-06	2.26E-06	2.21E-06	3.01E-06	1.04E-06
Pd^{+2}	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
PO_4^{-3}	1.29E-02	7.71E-03	6.24E-03	2.90E-02	8.17E-02	1.66E-03	1.39E-02	6.18E-03	1.06E-02	3.59E-03	8.71E-04
Pr^{+3}	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
Pu^{+4}	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
Rb^{+}	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
Rh^{+3}	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
Ru^{+3}	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
Sb^{+5}	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	1.73E-09
Se^{+6}	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	1.51E-06
Si^{+4}	3.94E-05	3.11E-05	3.01E-05	5.02E-04	1.10E-04	3.16E-05	4.09E-05	1.30E-05	3.66E-05	2.29E-05	3.75E-04
SO_4^{-2}	1.36E-02	1.42E-02	1.24E-02	1.10E-02	3.47E-03	3.48E-04	9.48E-03	2.32E-03	4.77E-04	6.57E-03	1.02E-03
Sr^{+2}	1.83E-06	2.20E-06	5.10E-06	3.83E-06	1.36E-08	2.67E-07	1.32E-06	1.65E-06	1.01E-06	2.47E-06	1.49E-06
Ta^{+5}	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
Tc^{+7}	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
Te^{+6}	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
Th^{+4}	2.32E-11	3.31E-11	1.00E-11	1.33E-11	4.78E-11	2.39E-18	3.32E-11	7.40E-12	2.06E-18	4.03E-19	1.79E-20
Ti^{+4}	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
Tl^{+3}	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
TOC	6.45E-04	7.48E-04	3.24E-04	4.14E-04	3.94E-04	3.34E-05	2.01E-04	1.81E-04	9.44E-05	6.19E-06	1.65E-04
$U_{(TOTAL)}$	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
V^{+5}	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
W^{+6}	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
Y^{+3}	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
Zn^{+2}	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
Zr^{+4}	1.75E-06	1.49E-06	1.16E-06	1.59E-06	2.02E-06	3.49E-07	2.02E-06	3.52E-06	9.57E-07	1.04E-08	4.26E-09

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	U-101	U-102	U-103	U-104	U-105	U-106	U-107	U-108	U-109	U-110	U-111	U-112	U-201	U-202	U-203	U-204
Ag^{+}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.62E-07	1.05E-06	9.70E-08	4.57E-07	6.17E-07	0.00E+00	0.00E+00	0.00E+00	5.39E-08	5.37E-08	5.32E-08	3.61E-08
$Al(OH)_4^{-}$	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
Al^{+3}	7.04E-02	2.00E-02	9.86E-03	1.92E-02	7.98E-03	5.38E-03	1.23E-02	1.30E-02	8.27E-03	2.47E-04	1.63E-02	8.74E-03	2.26E-03	1.93E-03	8.52E-04	1.84E-03
As^{+5}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-06	1.05E-05	4.44E-07	1.12E-06	2.20E-06	0.00E+00	0.00E+00	0.00E+00	5.39E-07	5.37E-07	5.32E-07	3.61E-07
B^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.92E-06	5.37E-06	3.18E-06	2.56E-06	3.05E-06	0.00E+00	0.00E+00	0.00E+00	3.51E-05	2.67E-05	7.34E-05	1.16E-05
Ba^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-06	5.27E-06	1.75E-08	5.63E-07	1.10E-06	0.00E+00	0.00E+00	0.00E+00	2.69E-07	2.69E-07	2.66E-07	1.81E-07
Be^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-07	5.26E-07	1.47E-08	5.60E-08	1.10E-07	0.00E+00	0.00E+00	0.00E+00	2.69E-08	2.69E-08	2.66E-08	1.81E-08
Bi^{+3}	1.73E-06	1.47E-06	2.40E-06	4.30E-07	7.09E-06	4.97E-06	9.00E-07	8.80E-07	1.18E-06	2.19E-07	2.72E-06	5.35E-07	9.82E-07	7.29E-07	5.62E-07	2.19E-07
$C_{10}H_{12}N_2O_8^{-4}$	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
$C_{10}H_{15}N_2O_7^{-3}$	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
$C_{12}H_{27}O_4P$	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
$C_{13}H_{28}$	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
C_2Cl4	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
$C_2H_3O_2^{-}$	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
$C_2H_3O_3^{-}$	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
C_2HCl_3	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
$C_2O_4^{-2}$	4.78E-04	1.15E-03	1.06E-03	1.19E-04	2.26E-03	1.89E-03	6.98E-04	9.44E-04	1.12E-03	1.43E-04	1.14E-03	2.58E-05	5.16E-06	1.04E-05	2.54E-06	1.12E-05
C_3H_6O	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
$C_4H_{10}O$	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
C_4H_8O	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
C_5H_5N	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
$C_6H_5NO_2$	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
$C_6H_5O_7^{-3}$	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
C_6H_6	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
$C_7H_6N_2O_4$	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
C_7H_8O	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
Ca^{+2}	3.50E-06	4.85E-05	1.12E-05	1.64E-06	3.86E-05	1.66E-04	6.31E-05	5.34E-04	2.59E-05	2.71E-06	3.90E-05	1.14E-06	5.72E-07	5.58E-07	6.27E-07	4.54E-07
Cd^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E-06	3.29E-05	1.43E-06	1.53E-06	1.40E-06	0.00E+00	0.00E+00	0.00E+00	5.77E-08	5.04E-08	5.77E-08	3.80E-08
Ce^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-06	1.05E-05	4.28E-07	1.12E-06	2.20E-06	0.00E+00	0.00E+00	0.00E+00	5.39E-07	5.37E-07	5.32E-07	3.61E-07
CH_2Cl_2	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
$CHCl_3$	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
CHO_2^{-}	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
Cl^{-}	1.12E-03	2.95E-03	2.38E-03	6.70E-04	2.66E-03	1.86E-03	2.07E-03	2.19E-03	1.87E-03	1.71E-04	2.66E-03	9.18E-05	1.26E-04	1.19E-04	9.65E-05	5.31E-05
CN^{-}	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	2.96E-09	1.48E-08	5.86E-09	1.97E-08
Co^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-06	3.14E-06	7.31E-07	2.93E-07	1.09E-06	7.82E-09	0.00E+00	0.00E+00	1.08E-07	1.07E-07	1.07E-07	7.23E-08
CO_3^{-2}	4.13E-03	2.73E-02	1.96E-02	1.12E-03	2.73E-02	3.38E-02	5.47E-03	2.40E-02	2.15E-02	9.19E-04	2.03E-02	9.64E-04	7.52E-04	1.21E-03	3.94E-04	9.61E-04
$Cr(OH)_4^{-}$	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
$Cr_{(TOTAL)}$	5.61E-04	7.68E-04	2.60E-04	8.40E-05	1.88E-04	1.76E-04	2.58E-04	2.44E-04	3.97E-04	5.60E-05	3.24E-04	1.48E-05	4.93E-05	4.31E-05	4.56E-05	1.81E-05
Cs^{+}	1.29E-06	3.13E-06	2.66E-06	6.54E-07	3.22E-06	3.92E-06	1.56E-06	2.35E-06	2.11E-06	2.56E-08	2.62E-06	1.78E-07	5.17E-08	3.74E-08	3.33E-08	2.60E-08
Cu^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.30E-07	3.27E-06	2.04E-07	1.12E-07	2.20E-07	0.00E+00	0.00E+00	0.00E+00	5.39E-08	5.37E-08	5.32E-08	3.61E-08
F^{-}	1.01E-04	2.04E-04	3.20E-04	2.50E-05	7.66E-04	3.50E-04	3.03E-04	5.36E-04	1.20E-03	7.09E-04	7.77E-04	1.17E-03	7.14E-04	7.03E-04	1.17E-03	8.55E-06
Fe^{+3}	2.01E-08	5.75E-05	3.12E-06	2.41E-10	1.33E-05	7.78E-05	1.38E-04	8.75E-05	1.71E-05	4.83E-06	9.14E-05	1.54E-10	2.70E-07	2.69E-07	1.71E-06	1.81E-07
H^{+}	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
H_2O	1.17E+00	9.34E-01	9.34E-01	1.04E+00	8.91E-01	9.02E-01	9.09E-01	9.23E-01	9.18E-01	9.97E-01	9.31E-01	1.02E+00	1.00E+00	1.00E+00	9.99E-01	1.00E+00
H_2O_2	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
Hg^{+2}	4.50E-06	8.74E-07	2.18E-07	3.25E-06	1.58E-07	4.70E-07	6.85E-08	1.14E-07	1.16E-07	6.21E-08	4.13E-07	1.51E-06	4.49E-09	3.14E-09	2.73E-09	1.29E-08

Table D-4. Projected Chemical Concentrations in Retrieved Single-Shell Tank Waste Liquids. (22 Sheets)

Liquid(kg/L)	U-101	U-102	U-103	U-104	U-105	U-106	U-107	U-108	U-109	U-110	U-111	U-112	U-201	U-202	U-203	U-204
K^{+}	3.07E-04	1.06E-03	6.20E-04	6.64E-05	1.12E-03	7.63E-04	7.42E-04	9.77E-04	7.33E-04	1.42E-04	8.41E-04	3.15E-05	2.50E-05	2.36E-05	3.84E-05	1.23E-05
La^{+3}	0.00E+00	7.57E-09	3.92E-11	0.00E+00	4.31E-11	1.31E-10	1.47E-09	3.50E-11	1.04E-09	0.00E+00	3.39E-09	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Li^{+}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-07	1.05E-06	2.78E-08	1.13E-07	2.20E-07	0.00E+00	0.00E+00	0.00E+00	7.61E-08	5.37E-08	5.32E-08	3.61E-08
Mg^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-06	1.05E-05	5.10E-07	1.12E-06	2.20E-06	0.00E+00	0.00E+00	0.00E+00	5.39E-07	5.37E-07	5.32E-07	3.61E-07
Mn^{+4}	7.30E-07	2.81E-06	8.29E-07	1.99E-06	2.85E-05	5.07E-05	5.97E-06	5.04E-07	1.34E-06	0.00E+00	2.71E-06	5.01E-08	4.75E-09	5.11E-09	3.22E-09	2.33E-08
MnO_2	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
MnO_4^{-}	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
Mo^{+6}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E-06	6.48E-06	4.35E-06	3.45E-06	4.31E-06	0.00E+00	0.00E+00	0.00E+00	2.69E-07	2.69E-07	2.66E-07	1.81E-07
Na^{+}	5.00E-02	1.15E-01	1.15E-01	2.29E-02	1.15E-01	1.15E-01	1.15E-01	1.15E-01	1.15E-01	7.08E-03	1.15E-01	1.10E-02	1.02E-02	8.93E-03	1.27E-02	2.44E-03
Nd^{+3}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-06	1.05E-05	1.97E-07	1.12E-06	2.20E-06	0.00E+00	0.00E+00	0.00E+00	5.39E-07	5.37E-07	5.32E-07	3.61E-07
NH_3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NH_4^{+}	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
Ni^{+2}	3.03E-07	1.73E-05	5.39E-06	1.45E-07	2.32E-05	8.68E-05	5.19E-06	1.11E-06	6.07E-06	1.14E-08	1.19E-05	6.56E-08	1.07E-07	1.06E-07	1.06E-07	7.18E-08
NO_2^{-}	1.58E-02	3.38E-02	3.03E-02	8.01E-03	2.86E-02	3.46E-02	2.35E-02	3.24E-02	2.86E-02	1.58E-03	3.17E-02	4.78E-04	8.46E-04	8.98E-04	7.25E-04	4.03E-04
NO_3^{-}	5.59E-02	1.80E-01	1.23E-01	3.01E-02	1.81E-01	1.34E-01	2.09E-01	1.68E-01	1.59E-01	5.48E-03	1.58E-01	9.12E-03	5.76E-03	5.53E-03	5.23E-03	3.03E-03
$OH_{(BOUND)}$	0.00E+00	2.64E-03	3.00E-03	0.00E+00	3.72E-03	2.50E-03	3.31E-03	1.57E-03	2.31E-03	0.00E+00	5.27E-03	0.00E+00	1.18E-03	4.78E-04	1.48E-03	4.11E-04
OH^{-}	1.47E-01	3.58E-02	3.60E-02	4.66E-02	9.71E-03	1.44E-02	2.14E-02	2.91E-02	1.78E-02	8.50E-04	3.59E-02	1.65E-02	6.76E-03	5.69E-03	2.22E-03	3.60E-03
Pb^{+2}	3.62E-07	2.51E-06	1.99E-06	6.34E-07	3.05E-05	1.04E-04	1.65E-06	1.67E-05	2.73E-06	1.30E-05	4.24E-06	5.77E-08	1.86E-06	1.80E-06	1.62E-06	1.13E-06
Pd^{+2}	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
PO_4^{-3}	1.29E-03	5.28E-03	7.80E-03	2.30E-04	6.63E-03	4.79E-03	2.47E-02	5.68E-03	1.81E-02	3.07E-03	7.55E-03	8.22E-03	3.52E-03	2.76E-03	1.01E-02	1.80E-04
Pr^{+3}	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
Pu^{+4}	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
Rb^{+}	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
Rh^{+3}	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
Ru^{+3}	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
Sb^{+5}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.19E-06	8.76E-06	2.51E-06	3.51E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.36E-07	3.33E-07	3.70E-07	2.19E-07
Se^{+6}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.65E-05	3.80E-05	3.67E-05	4.60E-05	3.38E-05	1.06E-05	0.00E+00	0.00E+00	2.47E-06	0.00E+00	6.55E-06	1.72E-06
Si^{+4}	7.74E-04	2.92E-05	1.98E-05	2.34E-03	1.67E-04	1.36E-04	3.77E-05	7.11E-05	2.41E-05	3.86E-05	5.48E-05	3.14E-04	4.25E-04	2.47E-04	4.52E-04	1.53E-04
SO_4^{-2}	5.99E-04	7.30E-03	6.57E-03	3.63E-04	9.95E-03	5.77E-03	1.26E-03	8.78E-03	7.36E-03	1.55E-04	6.25E-03	5.42E-04	8.40E-05	7.25E-05	6.95E-05	3.74E-05
Sr^{+2}	4.11E-07	4.13E-07	2.51E-07	4.06E-07	1.90E-07	6.32E-09	1.40E-07	2.91E-08	3.74E-08	1.38E-06	4.61E-07	3.09E-08	2.83E-10	5.52E-07	1.87E-10	1.69E-06
Ta^{+5}	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
Tc^{+7}	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
Te^{+6}	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
Th^{+4}	2.34E-29	4.17E-11	1.09E-10	3.38E-22	3.90E-11	5.37E-11	4.26E-11	3.36E-11	3.46E-11	0.00E+00	4.95E-11	4.22E-22	1.36E-13	4.63E-14	7.20E-13	3.26E-13
Ti^{+4}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-07	1.05E-06	1.18E-08	1.12E-07	2.20E-07	0.00E+00	0.00E+00	0.00E+00	7.97E-08	5.37E-08	1.29E-07	3.61E-08
Tl^{+3}	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	1.08E-06	1.07E-06	0.00E+00	7.23E-07
TOC	7.13E-05	1.80E-03	1.74E-03	1.77E-05	4.24E-03	7.23E-03	3.49E-04	1.02E-03	7.41E-04	2.71E-05	8.89E-04	3.52E-05	3.99E-06	4.56E-06	1.96E-06	1.81E-05
$U_{(TOTAL)}$	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
V^{+5}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.41E-06	5.27E-06	5.25E-08	5.63E-07	1.10E-06	0.00E+00	0.00E+00	0.00E+00	2.69E-07	2.69E-07	2.66E-07	1.81E-07
W^{+6}	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
Y^{+3}	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	5.39E-08	5.37E-08	5.32E-08	3.61E-08
Zn^{+2}	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.81E-07	1.98E-06	2.86E-07	1.27E-06	2.20E-07	0.00E+00	0.00E+00	0.00E+00	1.19E-06	6.19E-07	1.33E-07	3.61E-08
Zr^{+4}	6.09E-06	1.33E-06	1.07E-06	2.38E-06	1.58E-06	3.29E-06	0.00E+00	8.30E-08	0.00E+00	1.12E-07	2.06E-06	6.48E-07	1.93E-07	4.48E-08	3.70E-07	6.82E-08

Table D-5. Data Files Containing Results from the Development Run for the Refined Target Case. (4 Sheets)

Description of Data	File Name(s)	File Size, Bytes[1]	File Creation Date and Time[2]
Annual inventories of the waste contained in each of the DSTs and SSTs, and in each primary and secondary waste product stream	inv-2003.csv	1,239,148	2/22/2005 4:09 PM
	inv-2004.csv	1,270,794	2/22/2005 4:09 PM
	inv-2005.csv	1,286,359	2/22/2005 4:10 PM
	inv-2006.csv	1,298,952	2/22/2005 4:12 PM
	inv-2007.csv	1,316,812	2/22/2005 4:15 PM
	inv-2008.csv	1,328,808	2/22/2005 4:37 PM
	inv-2009.csv	1,328,897	2/22/2005 4:45 PM
	inv-2010.csv	1,328,931	2/22/2005 4:46 PM
	inv-2011.csv	1,360,953	2/22/2005 5:28 PM
	inv-2012.csv	1,366,556	2/22/2005 6:47 PM
	inv-2013.csv	1,383,242	2/22/2005 8:12 PM
	inv-2014.csv	1,385,261	2/22/2005 9:12 PM
	inv-2015.csv	1,388,754	2/22/2005 10:18 PM
	inv-2016.csv	1,392,234	2/22/2005 11:16 PM
	inv-2017.csv	1,395,576	2/23/2005 12:25 AM
	inv-2018.csv	1,406,204	2/23/2005 1:48 AM
	inv-2019.csv	1,412,767	2/23/2005 3:17 AM
	inv-2020.csv	1,419,856	2/23/2005 4:45 AM
	inv-2021.csv	1,424,150	2/23/2005 6:11 AM
	inv-2022.csv	1,428,890	2/23/2005 7:38 AM
	inv-2023.csv	1,431,575	2/23/2005 9:08 AM
	inv-2024.csv	1,435,350	2/23/2005 10:38 AM
	inv-2025.csv	1,437,081	2/23/2005 11:56 AM
	inv-2026.csv	1,439,341	2/23/2005 1:26 PM
	inv-2027.csv	1,442,572	2/23/2005 2:42 PM
	inv-2028.csv	1,443,449	2/23/2005 3:53 PM
	inv-2029.csv	1,445,829	2/23/2005 5:06 PM
	inv-2030.csv	1,446,439	2/24/2005 8:49 AM
	yearly-files-bd.zip[3]	11,552,173	2/24/2005 9:00 AM
Total liquid effluent from the 242-A Evaporator	242a-to-lerf-stream.csv	13,447	1/11/2005 9:37 AM
Feed Vector of delivered batches to the WTP with residual wash factors applied	batches-delivered-to-wtp.csv	3,142,840	1/7/2005 8:27 AM

Table D-5. Data Files Containing Results from the Development Run for the Refined Target Case. (4 Sheets)

Description of Data	File Name(s)	File Size, Bytes[1]	File Creation Date and Time[2]
Feed Vector of delivered batches to the WTP	batches-delivered-to-wtp-unwashed.csv	3,224,615	3/21/2005 1:01 PM
Bulk Vitrification Roll-off Box production as a function of time	bv-box-logger-history.his	68,908	1/5/2005 3:24 PM
Total liquid effluent from the Supplemental LAW Treatment Facility	bv-to-lerf-stream.csv	13,447	1/11/2005 9:38 AM
Molecular weight and specific activity values for the components tracked within HTWOS	components.csv	6,026	1/5/2005 3:22 PM
LAW package production as a function of time[4]	htwos-law-canister logger-history.his	667,157	1/5/2005 3:24 PM
Total liquid effluent from the LAW Melter Facility	htwos-law-caustic-scrubber-totalizer-mass-adata.his	3,670	1/5/2005 3:22 PM
HLW canister production as a function of time	htwos-wash-hlw-canisters-history.his	206,254	1/5/2005 3:24 PM
The end-of-treatment-mission total inventory, by waste stream, sent to the IDF for the following streams: • Spent resin from WTP Pretreatment • Spent LAW melters from LAW Vitrification • Two streams of used high-efficiency particulate air (HEPA) filters from LAW Vitrification • Used volatile organic compound (VOC) beds from LAW Vitrification • ILAW product from LAW Vitrification • Spent HLW melters from HLW Vitrification • Two streams of used HEPA filters from HLW Vitrification • Used VOC beds from HLW Vitrification • Spent Ag-Mordenite from HLW Vitrification • ILAW from the Demonstration Bulk Vitrification System	idf-streams.csv	40,313	1/5/2005 3:22 PM

Table D-5. Data Files Containing Results from the Development Run for the Refined Target Case. (4 Sheets)

Description of Data	File Name(s)	File Size, Bytes[1]	File Creation Date and Time[2]
• ILAW from Supplemental Treatment Production Facility • Solid waste from ETF			
Tank-by-tank residual inventory estimates	sst-dst-residual-update.csv	1,034,346	2/9/2005 10:22 AM
Tank-by-tank composition of a hypothetical retrieval leak for each SST[5]	sst-retrieval-conc.csv	406,965	1/5/2005 3:22 PM
Total liquid effluent from the TRU Packaging Facility	tru-processing-to-lerf-stream.csv	13,447	1/11/2005 9:37 AM
Total liquid effluent from the WTP Pretreatment Facility	wtp-to-lerf-stream.csv	13,447	1/11/2005 9:37 AM
Projected transfers made during the mission	wvp-taf-file	237,821	1/5/2005 3:22 PM
ILAW package production as a function of time	htwos-law-canister-logger-history.his	667,157	1/5/2005 4:24 PM
IHLW canister production as a function of time	htwos-wash-hlw-canisters-history.his	3,431	1/5/2005 4:22 PM
Bulk Vitrification Roll-off Boxes as a function of time	bv-box-logger-history.his	68,908	1/5/2005 4:24 PM
Sodium processed annually through ion exchange	htwos-cs-ix-mass-data.his	74,357	1/26/2005 11:55 AM
HLW Glass Composition Data	output-glass.csv	3,752,961	4/1/2005 10:24 AM (PDT)
Trace-back function output	tb-liquid.csv tb-solid.csv	874,581 825,653	3/29/2005 1:46 PM (PDT) 3/29/2005 1:46 PM (PDT)

Table D-5. Data Files Containing Results from the Development Run for the Refined Target Case. (4 Sheets)

Description of Data	File Name(s)	File Size, Bytes[1]	File Creation Date and Time[2]

Notes:

1. File size was obtained from a directory listing using the Microsoft DOS command DIR executed in a Command Prompt window with the directory listing ported to a text file.
2. Reported file creation times depend on the time of year the information was reported and are Pacific Standard Time unless noted otherwise. The creation time may differ by an hour if being viewed under a different time basis such as Pacific Daylight Time (PDT).
3. The 28 inventory files were saved in this file in a compressed (zipped) format to facilitate the transmission of the data.
4. The LAW package count reported in the data file is based on loading 6 metric tonnes of glass in a package rather than using the assumed value of 5.92 metric tonnes of glass in a package. Subsequent users of the data should make the appropriate correction.
5. The hypothetical retrieval leak was interpreted as the inventory or composition for a unit volume of the liquid-phase at the bulk as-retrieved composition. No waste was assumed to have leaked from the SSTs during retrieval in this run

DST = double-shell tank
ETF = Effluent Treatment Facility
HEPA = high-efficiency particulate air
HLW = high-level waste
IDF = Integrated Disposal Facility
ILAW = immobilized low-activity waste
LERF = Liquid Effluent Retention Facility
LAW = low-activity waste
PDT = Pacific Daylight Time
SST = single-shell tank
TRU = transuranic
VOC = volatile organic compound
WTP = Waste Treatment and Immobilization Plant

APPENDIX E

SUCCESS CRITERIA AND KEY ENABLING ASSUMPTIONS

APPENDIX E

SUCCESS CRITERIA AND KEY ENABLING ASSUMPTIONS

The following pages present the Success Criteria and Key Enabling Assumptions agreed to by the Office of River Protection and CH2M HILL Hanford Group, Inc., as the basis for the Refined Target Case. The Refined Target Case was intended to serve as the basis for preparing Revision 3 of the *River Protection Project System Plan* (ORP-11242), but the schedule for completing ORP-11242, Rev. 3, has been delayed. The agreed to assumptions are being documented here to(1) preserve the information until other studies are completed and work on Revision 3 of the River Protection Project System Plan resumes and (2) provide a traceable basis for many of the HTWOS modeling assumptions (Appendix A) used for the Development Run.

SUCCESS CRITERIA AND KEY ENABLING ASSUMPTIONS

The scope of this version of the System Plan is defined jointly by the annotated outline and these Success Criteria and Key Enabling Assumptions that are being prepared and approved separately from the outline. For clarity, several important limitations on the scope are listed below:

- Only one case, the "Refined Target Case", will be addressed.
- There will no analysis or discussion of cost.
- The HTWOS model is currently being updated to include the features needed to provide estimates of the major secondary waste streams being generated by the treatment of tank waste. In the event that the model is not ready to support the schedule for the system plan and M-62-08 deliverables, those secondary waste stream estimates may be omitted from the system plan and separate estimates used.
- The System Plan will align itself with the Tank Farm Contractor planning assumptions to the extent agreed to in the Key Enabling Assumptions.

ORP Concurrence _____ **Date** 9/14/04

CH2MHILL Concurrence _____ **Date** 9/14/04

E1.0 GENERAL INFORMATION

The success criteria and key enabling assumptions listed in this section document the initial input for modeling and mission planning purposes as of August 2004. These were developed after reviewing existing assumptions from the previous RPP System Plan, the WTP contract[1], the HTWOS model run[2] supporting the TFC baseline and the run[3] associated with the M-45-04-01 TPA Milestone Change Request along with assumptions provided by ORP for the Supplemental Treatment Technologies Report[4]. They represent the major planning bases needed to develop an integrated flowsheet using the existing flowsheet and dynamic models[5] for the new System Plan case. They are not intended to address design-basis decisions or detailed equipment operating plans.

The scenario was not constrained to match current contracts, regulatory permits, performance based initiatives, funding, interface control documents, or other planning guidance except as captured by the key enabling assumptions. Changes in those areas may be required to implement a scenario built upon these modeling assumptions.

The only case to be evaluated in this version of the System Plan is a refinement of the Target Case, briefly described as follows:

> "Refined Target Case" – 2 HLW and 2 LAW Melter Configuration of the WTP with enhancements, Supplemental LAW Treatment both upstream and downstream of WTP Pretreatment, and TRU Waste Treatment upstream of WTP to meet the 2028 TPA Milestone.

E2.0 SUCCESS CRITERIA

E2.1 Pretreat and vitrify no less than 10 percent of Hanford's tank waste by mass and 25 percent by activity by February 28, 2018[6]. The 10 percent by mass is further defined to mean at least 6,000 MT of sodium from LAW feed and at least 800 MT of waste oxides from HLW feed. (TPA Milestone M-62-00A [Ecology et al. 1996)

E2.2 The Waste Treatment Complex *could* treat or package all Hanford Site tank waste by the December 31, 2028 TPA Milestone if all supplemental facilities are provided and the enhanced throughput rates achieved. (TPA Milestone M-62-00).

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[1] DE-AC27-01RV14136, Through Modification Number A037, 2004, WTP Contract.

[2] HNF-SD-WM-SP-012, 2004, *Tank Farm Contractor Operation and Utilization Plan*, Rev. 5A, CH2M HILL Hanford Group, Inc., Richland, Washington..

[3] RPP-21217, Rev. 0.

[4] ORP-22339, Rev. A (50% DRAFT).

[5] Only the Hanford Tank Waste Operations Simulator (HTWOS) was used to model this case. The WTP dynamic flowsheet model was not needed to evaluate the case in this version of the Plan.

[6] A strict interpretation (only waste that is pretreated and vitrified by the WTP counts) of the M-62-00A milestone language will be used as the success criteria. We will, however, report on both the milestone as written and on modified language that includes all the waste treated for disposal and packaged in waste forms acceptable to the stakeholders.

E3.0 KEY ENABLING ASSUMPTIONS

E3.1 TANK FARMS

E3.1.1 Single-Shell Tanks

E3.1.1.1 The integrity and status of the 149 SSTs is as described in the *Waste Tank Summary Report For Month Ending June 30, 2004*.[7]

E3.1.1.2 SSTs will be interim closed in the 10-month period immediately after retrieval has been completed.

E3.1.1.3 Closure activities for each tank farm can begin after all tanks in that farm are interim closed.[8]

E3.1.2 Double-Shell Tanks

E3.1.2.1 The integrity and status of the 28 DSTs is as described in the *Waste Tank Summary Report For Month Ending June 30, 2004*.[7] Furthermore, it is assumed that the DSTs will remain operational for the duration of the waste treatment mission.

E3.1.2.2 The maximum operating levels of the eight DSTs in AP-Farm will be increased from 416 inches (1.144 Mgal) to 449 inches (1.235 Mgal) by November 1, 2004. Design evaluation, records evaluation, and ultrasonic testing are assumed to confirm that AP-Farm is appropriate for increased fill height by November 1, 2004. Initial use of the increased space will be managed through "In-Process Tests" during transfers that use the increased DST operating levels. No transfers that use the increased operating level are scheduled for calendar year 2004.

E3.1.2.3 The volume of DST space allocated for Tank Farm emergencies and emergency returns from the WTP is 1.144 Mgal, increasing to 1.235 Mgal on November 1, 2004. No space will be reserved for non-emergency returns of pretreated LAW to the DST system.

E3.1.2.4 Solids are assumed to settle to approximately 40-wt% solids in the DSTs within 30 days. Solids from C-Farm retrieval are assumed to settle within 2 days to a comparable void fraction based on the original wet sludge volume after adjustments for water washing.[9]

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[7] HNF-EP-0182, Rev. 195.

[8] This is an enabling assumption that may need to be refined as closure strategies are developed.

[9] HNF-SD-WM-SP-012, Assumption A4.2.5 as updated by RPP-21217, Rev 0.

E3.1.2.5 Assume that the solids management strategy for the DSTs will allow, on the average:

- DSTs supporting C-Farm retrieval will be operated with a minimal supernate layer so that they do not become Group A tanks even though they will be filled with significant quantities of solids.
- DSTs not supporting C-Farm retrieval are assumed to hold up to 10-wt% bulk solids based on the maximum operating level of each DST.

E3.1.2.6 The waste blending and segregation controls in the feed control list (HNF-SD-WM-OCD-015, Table A-1) will be followed, with the following exceptions:

- The supernate in AY-102 will be removed and replaced with supernate from AP-101. It is assumed that the TFC will successfully demonstrate the supernate in AP-101 should be consolidated with the solids in AY-102 using the stipulated "Special process to release controls."
- The list of tanks containing low-curie LAW waste potentially suitable for direct feed to the STP will be updated per Table 1 of letter 7F300-04-RER-001.

E3.1.3 Waste Retrieval and Transfers

E3.1.3.1 The priorities for sequencing the retrieval of SST waste, in order of decreasing priority, are to:

- Retrieve S-112 per TPA Milestone M-045-03C by March 31, 2005.[10]
- Retrieve S-102 per TPA Milestone M-045-05A by March 31, 2005.[10]
- Retrieve C-Farm (Waste Management Area – C) per TPA Milestone M-045-00B by September 30, 2006.[10]
- Retrieve the 18 "Committed Tanks"[11] from the 50-Tank SST Retrieval Pool by end of FY 2006.
- Retrieve the remaining Pool tanks, balancing logistics, tanks space and feed to the various treatment processes.
- Retrieve the remaining SSTs, risk-based, balancing logistics, tank space and feed to the various treatment processes.

E3.1.3.2 The SST Retrieval Pool Tank List is provided by Figure 2-1 of RPP-21216 and updated retrieval assumptions are provided in Table A-4 of RPP-21217.

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[10] Milestone from draft agreement change request M-45-04-01, February 4, 2004.

[11] "Committed Tanks" refers to those tanks on which the Tank Farm Contractor is currently spending funds in preparation for retrieval.

E3.1.3.3 During retrieval of sludge from SSTs to the DST system, sodium hydroxide will be added if needed to bring the free [OH^-] in the liquid phase up to 0.05 M.[12]

E3.1.3.4 Allow 210 days[13] to sample the staged feed and verify compliance with permits and the safety authorization basis before delivery to the WTP, starting from when each staging tank (DST) is first filled with feed.

E3.1.3.5 Before January 31, 2011, when retrieval system construction schedules and waste transfer logic allow, the TFC will allocate a six-month period on each side of the 210-day window described in Section E3.1.3.4 to provide assurance that the initial WTP feed will be ready on time. After that date, the retrieval systems will be ready no earlier than needed to support the sampling of feed per Section E3.1.3.4.

E3.1.3.6 The initial LAW feed sequence (envelope) for delivery to the WTP for the cases will be as follows: AY-102/AP-101[14] (A), 1-3 tanks from AP-Farm (A), AN-104 (A), AN-102 (C), AN-105 (A), AN-107 (C), SY-101 (A), AN-103 (A), and AW-101 (A).

E3.1.3.7 The feed for LAW hot commissioning will be delivered by decanting supernate from AY-102 and transferring it to the WTP; the feed for HLW hot commissioning will be delivered by remobilizing the solids in AY-102 with water and transferring them to the WTP.

E3.1.3.8 The initial HLW feed sequence (the solid portions are all considered Envelope D) for delivery to the WTP for the cases will be as follows: AY-102/AP-101[14] (includes material retrieved from C-106), AZ-101, AZ-102, C-104/AY-101.

E3.1.3.9 All HLW batches delivered to the WTP should be at least 130 Kgal total volume and contain at least 2-wt% solids[15] whenever possible.

E3.1.3.10 The low-curie fraction of SSTs retrieved for supplemental LAW treatment will be staged in a 200 East Area DST prior to delivery to the STP; the high-curie fraction will be staged for eventual delivery to the WTP.

E3.1.3.11 The residual waste remaining in the SSTs and DSTs after retrieval is complete will be estimated as follows[16]:

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[12] HNF-SD-WM-SP-012, Assumption A4.2.1 as updated by RPP-21217, Rev 0.

[13] The 210 days comprises the 180 days required by ICD-19 (24590-WTP-ICD-MG-01-019) with an additional 30 days allocated for the TFC to sample the staged waste.

[14] The identity and contents of the feed to be used for LAW and HLW hot commissioning is currently being established by the feed control list process. The WTP is expecting that the existing feed in AP-101 for LAW hot commissioning and in AY-102 for HLW hot commissioning will be delivered separately. This version of the System Plan assumes that the liquid in AY-102, after consolidation with waste from AP-101, is used for LAW hot commissioning and that the solids are used for HLW hot commissioning. It is assumed that the impacts to the WTP cost, schedule and risk are acceptable. Consolidation of most of the waste from AP-101 into AY-102 allows the TFC to better utilize DST space for accelerated SST retrievals.

[15] These are operational considerations.

- 200 Series SSTs: 30 ft^3 of "selected phase" from the Tank Closure EIS, re-estimated using the current Best Basis Inventory (BBI).
- 100 Series SSTs: 360 ft^3 of 35-wt% water-washed solids with ½ concentration of as-retrieved supernate for all tanks; except C-106 will use the BBI.
- DSTs: 100 gallons with composition of the last waste contained in the tank.

E3.1.3.12 No waste is assumed to leak from the SSTs during retrieval[17].

E3.1.3.13 Two Waste Retrieval Facilities (WRF) are assumed to support retrieval of the SSTs in the two northern quadrants (B-complex and T-complex) and will be configured per Assumption A3.4 "Waste Retrieval Facilities" in the HNF-SD-WM-SP-012, Rev. 5A. The two WRFs will be available on June 1, 2018. Retrieval of TRU sludge for supplemental sludge treatment and retrieval of other SSTs prior to June 1, 2018 are assumed to not require WRFs.

E3.1.3.14 For planning purposes, assume that the waste transfer system upgrades needed to support transfer of SST waste into the DST system will be provided by the SST Retrieval Projects.

E3.1.4 Tank Farm Waste Evaporator (242-A)

E3.1.4.1 The 242-A Evaporator is available for use through September 30, 2018.

E3.1.4.2 If there are periods greater than one year during which the 242-A Evaporator is not needed, a "cold run" of 82,000 gallons of water will be performed to maintain personnel qualifications and avoid the need for a full readiness review.

E3.1.4.3 A three-month period is allocated for the sampling and analysis of dilute feed staged in one or more DSTs, and preparation of the process control plan before that feed can be run through the evaporator.

E3.1.4.4 When processing waste, the evaporator is assumed to run at the lesser of 50 gpm boil-off or 140 gpm feed.

E3.1.4.5 It is assumed that, on the average, the evaporator can boil-off no more than 500 Kgal/month[18].

E3.1.4.6 Dilute waste will be concentrated until it reaches a bulk concentration of 1.44 g/mL[19].

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[16] These are all enabling assumptions based on the assumptions used for the Composite Analysis run (RPP-20633, Rev. 1), with the exception that the residual assumptions were extended to all 100-series SSTs, including those that previously used "selected phase" assumptions.

[17] While Performance Assessments have assumed nominal leakage during retrieval operations, the System Plan assumes no leakage occurs to ensure that maximum waste inventory is modeled through treatment.

[18] This is an operational consideration to avoid over committing evaporator campaigns.

[19] This density is expected to be the average density selected for future evaporator campaigns – it is not an inherent limitation of the evaporator. The feed for each evaporator campaign will be evaluated and a target density for

E3.1.4.7 The composition of process condensate from the 242-A Evaporator will be estimated using the formulas and partition factors given in RPP-17239. The volume of process condensate will be 1.15 times the waste volume reduction to account for the vacuum system steam jets per HNF-SD-WM-SP-012, Assumption A4.3.4.

E3.1.4.8 The releases from the vessel vent to the atmosphere will be estimated using the release factors given in Table D-6 of RPP-17239.

E3.2 WASTE TREATMENT PLANT

In Appendix A of the Supplemental Treatment Technologies Report (ORP-22339), ORP discusses the performance of the WTP from three different perspectives:

- Minimum performance consistent with the functional requirements of the BNI Contract.
- ORP's assessment of the actual expected performance without any further enhancements beyond those already assumed in the Target Case as described in Revision 2 of the RPP System Plan.
- ORP's assessments of the potential performance of the WTP after specific enhancements in design, flowsheet, or operating modes have been made (WTP Facility Commitment Case).

The assumptions for the performance of the WTP used in this System Plan are consistent with the WTP Facility Commitment Case as presented in ORP-22339 and assume that the technical issues identified in D-03-DESIGN-005 have been successfully resolved.

E3.2.1 General

E3.2.1.1 The WTP will be operable for 40 years, from the start of hot commissioning through 2049.

E3.2.1.2 The Balance of Facilities, the Laboratory, and other support facilities are assumed to be capable of supporting the WTP. WTP sampling and analysis times will support production.

E3.2.1.3 Delivery of the first batch of LAW feed will begin on December 1, 2009.

E3.2.1.4 Delivery of the first batch of HLW feed will begin on December 15, 2009.

E3.2.1.5 Hot commissioning will begin on December 1, 2009 and end on January 31, 2011.[20]

E3.2.1.6 Full WTP operations will begin on February 1, 2011 and continue until the end of the treatment mission.

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specific for that feed will be determined considering the ability of the transfer system to maintain solids in suspension and the DSTs ability to stay within buoyant displacement gas release event (BDGRE) controls. In the future, a lower value may be used for waste containing high concentrations of phosphates.

[20] The BNI Contract requires that 56 canisters of HLW glass and 188 packages of LAW glass be produced during hot commissioning. For modeling purposes, the average WTP glass production rates during hot commissioning are set so that the contract goals are just met by the end date for hot commissioning.

E3.2.1.7 The WTP is assumed to not return any waste streams or wastewater back to the tank farms.

E3.2.1.8 It is assumed that the delivered feed and internal WTP material flows and accumulations will be consistent with the WTP authorization basis.[21]

E3.2.1.9 Key features of the WTP that will be modeled for purposes of mission planning and estimation of secondary waste streams include:

- Feed Receipt Tanks (simplified – 1.5 Mgal lumped capacity).
- Front End Evaporator (simplified – no feed tanks).
- Ultrafilter System (with modified [OH^-] endpoint and oxidative leach).
- Pretreated HLW Lag Storage and Blend Tanks (simplified – 81 Kgal lumped capacity).
- Cesium Ion-Exchange (as a black-box).
- Back End Evaporator / Pretreated LAW Storage (simplified and product routing modified to interface with STP).
- HLW Melter Feed Preparation (simplified).
- HLW Melter (model total capacity, not individual melters).
- LAW Melter Feed Preparation (simplified).
- LAW Melter (model total capacity, not individual melters).
- Off-gas treatment systems (added NH_4^+ for proper stoichiometry). Recycle of HLW and LAW SBS Condensate and Caustic Scrubber internal to the WTP.

The basis for modeled chemical reactions, extents, and split factors for estimating primary and secondary waste streams will be the 24590-WTP-MDD-PR-01-002, Rev. 6, with flowsheet and operating mode modifications as needed to implement the other assumptions in this System Plan.

E3.2.1.10 One LAW Melter is assumed to fail every 2.5 years and contains 6,900 gallons of glass,[22] not to exceed nine failed LAW melters.[23]

E3.2.1.11 One HLW Melter is assumed to fail every 2.5 years and contains 1,800 gallons of glass, [24] not to exceed nine failed HLW melters.[23]

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[21] This assumption is not necessarily true for all feed to the WTP. It is assumed that the integrated management process for ICD-19 (24590-WTP-ICD-MG-01-019), as described in 24590-WTP-PL-MG-01-001 will be used to successfully address any feed not consistent with this assumption.

[22] Melter failures are already accounted for in the assumed net production capacity assumptions. Assumes two melters, each with a 5-year minimum design life per 24590-LAW-3PS-AE00-T0001. Volume of glass in the melter does not include an allowance for increased volume due corrosion of refractory and reflects the set point of 6,891 gallons per 24590-WTP-MDD-PR-01-002, Appendix D; other contributions to source term are neglected.

[23] Per 24590-WTP-ICD-MG-01-003, Section 4.2.1.2

E3.2.2 Pretreatment

E3.2.2.1 The WTP pretreatment facility is assumed[25] to be enhanced to produce up to an average of 2,950 MT of sodium per year[26] of treated LAW and sufficient pretreated HLW to produce up to 571 canisters of IHLW per year[27].

E3.2.2.2 For planning purposes, all solids delivered with the HLW feed and entrained solids delivered with the LAW feed, except for those associated with the Envelope C waste from AN-102 and AN-107, will undergo caustic and oxidative leaching with the insoluble fraction incorporated into HLW glass.

E3.2.2.3 The LAW (liquid) fraction of Envelope C waste from tanks AN-102 and AN-107 will be segregated from other waste within the PT facility until the strontium and transuranic components are removed.

E3.2.2.4 When the WTP requests delivery of HLW feed, the HLW feed receipt tanks at the WTP will have sufficient space to receive 160,000 gal (600 m^3) of HLW feed without interruption.[28]

E3.2.2.5 When the WTP requests delivery of LAW feed, the LAW feed receipt tanks at the WTP will have sufficient space to receive 1 Mgal of feed without interruption[28].

E3.2.2.6 The WTP pretreatment facility will be configured so that a portion of concentrated pretreated LAW from the Treated LAW Concentrate Tank can be transferred to the Supplemental Treatment Plant (STP) as feed. This is downstream of the point to which LAW SBS condensate is recycled, so the STP feed will include a proportional fraction of SBS condensate.

E3.2.2.7 Any "excess" pretreated LAW beyond that which the LAW Vitrification Facility can process will be routed to the STP.

E3.2.2.8 Sufficient caustic will be added to the waste during caustic leaching so that 3.0 M [OH^-] remains in solution after the leach reactions are complete.

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[24] Melter failures are already accounted for in the assumed net production capacity assumptions. Assumes two melters, each with a 5-year minimum design life per 24590-HLW-3PS-AE00-T0001. Volume of glass in the melter includes an allowance for increased volume due corrosion of refractory per 24590-HLW-M5C-HMP-00002, Table 2; other contributions to source term are neglected.

[25] This assumption requires the successful resolution of the technical issues identified in D-03-DESIGN-005.

[26] This is based on a maximum capacity of 3400 MT Na/yr and 0.86 TOE. The basis for the TOE is "Assessment of Operations Research (OR) Model Run for the Technical Integration Baseline Development Team (TIBDT)," (24590-PTF-RPT-PT-02-001, Rev. 0). The basis for the maximum capacity of 3,400 MT Na/yr is the "5-day" average Goal of 90 MTG/d stated for PT L in Table C.6-5.1 of the BNI Contract, mod A029 and an average Na_2O loading of 14 wt%.

[27] This is based on 5.0 MTG/d per ORP-22339, 365.24 d/yr and 3.2 MTG/canister (thin-walled canisters). Section C.7(b)(1)(ii) of the BNI contract requires HLW pretreatment to be sized to support 480 canisters of HLW glass per year.

[28] These are operational considerations.

E3.2.2.9 An oxidative leach process that removes Cr from the HLW sludge without impact on cycle time or other species will be implemented in the ultrafilters. Reaction stoichiometry and endpoint (5,000 µg Cr / g dried solids) are described in RPP-15552.

E3.2.2.10 The technical issues surrounding the capacity and flowsheet of the ultrafilters during caustic leaching, as identified in an ORP Design Oversight Report (D-03-DESIGN-005), are assumed to be successfully resolved. For modeling purposes, the ultrafiltration system (UF) permeate rate may be increased as needed to achieve the production rates in Section E3.2.2.1.

E3.2.2.11 There will be approximately 300 gallons (2005 lb_m air-dried) of spent cesium ion exchange resin generated for every 1,200,000 gallons of supernate treated through the cesium ion exchange system.[29]

E3.2.2.12 Spent cesium ion exchange resin will contain the following constituents after being prepared for disposal[30]:

- Cr – 670 µg/g
- K – 220 µg/g
- Na – 83,800 µg/g
- ^{99}Tc – 6.74 µg/g[31]
- ^{238}U – 14.8 µg/g[31]
- ^{60}Co – 1.31 µCi/g
- ^{137}Cs – 60 µCi/g.

E3.2.3 <u>High-Level Waste Vitrification</u>

E3.2.3.1 HLW Vitrification at the WTP will begin on May 17, 2010[32].

E3.2.3.2 During hot commissioning, the WTP will produce 56 Canisters[33] of HLW glass.

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[29] This assumes that all supernate is Envelope A and is based on operating the system as four column carousel (lead, lag, polish, regeneration), with the columns swapping function every 100 column volumes, 300 gallons per column volume, resin change-out after the 10th regeneration cycle (24590-WTP-MDD-PR-01-002, Section 4.7.4). Using the air-dried bulk density of SuperLig resin from 4716-1, *Flow Properties Test Report Sodium Form Resin Samples*, Jenike & Johanson, 2003, summary page 2, the bulk density is about 50 pounds per cubic foot of resin.

[30] These are the RCRA listed constituents detected at levels above the minimum reportable quantities during small-scale column testing per 24590-PTF-3PS-MWD0-T0003, Rev. 1, Section 3.4.7.5, page 10.

[31] The reference states µg/g, not µCi/g.

[32] Date is from the WTP SAP4 Level 3 Schedule dated March 11, 2003.

[33] This is the required production from Table C.6-5.2 of Standard 5 of the BNI Contract. The corresponding average HLW vitrification rate from May 17, 2010 through January 31, 2011 is about 0.69 MTG/d.

E3.2.3.3 During full operations, the net WTP HLW vitrification capacity will be ramped as follows:

Starting On	Rate[34] MTG/day
2/1/2011	3.0
1/1/2012	4.0
1/1/2013	5.0[35],[36]

E3.2.3.4 Density of IHLW glass will be 2.7 Kg/liter.

E3.2.3.5 Each thin-walled canister of IHLW will contain 3.2 MT of HLW glass on the average.[37]

E3.2.3.6 The composition and waste oxide loading of HLW glass will be estimated using the same mathematical model and computer code that was used for the RPP System Plan (ORP-11242, Rev. 2) and the TFCOUP (HNF-SD-WM-SP-012, Rev. 5A). The references for the various property models and constraints are taken from a variety of sources and are consolidated in RPP-18592.

The physical property constraints are summarized in Table E-1. Glass Property Constraints. The terms “default” and “relaxed,” identified in Table E-1, refer to two levels of parameters. The “relaxed” levels, discussed in Section 2.3.6.4 of the System Plan (ORP-11242, Rev. 2) incorporate potential improvements in the HLW waste oxide loading by relaxing the glass viscosity, Cr_2O_3 solubility, and the spinel liquidus temperature constraints. The Revision 3 of the System Plan will continue to use the “relaxed” limits.

The melter was assumed to operate at a nominal temperature of 1,150 °C. The “default” levels are the more conservative levels that had been previously used for HLW glass projections.

[34] The various ramp-up rates were provided by ORP-22339.

[35] This is based on a nameplate capacity of 6 MTG/d and a 0.84 TOE. The basis for the TOE is “High Level Waste Facility Operations Research Availability Assessment,” (24590-HLW-RPT-PT-02-001, Rev. 0). The basis for the nameplate is the goal stated in Table C.6-5.1 of Standard 5 of the BNI Contract.

[36] If needed to finish waste treatment by 2028, this rate can be increased not-to-exceed 5.5 MTG/d with a commensurate increase in programmatic risk.

[37] This is based on an average fill of 1.185 m^3 per canister.

Table E-1. Glass Property Constraints.

Property	Lower Limit	Upper Limit
Liquidus Temperature (Spinel)	850 °C	1,100 °C (relaxed) 1,050 °C (default)
Liquidus Temperature (Zircon)	None	1,050 °C
Melt Viscosity at 1,150 °C	4.5 Pa·s	10 Pa•s (relaxed) 5.5 Pa•s (default)
PCT (B, Li, Na)	None	2 g/m^2
Nepheline precipitation rule $\frac{[SiO_2]}{[SiO_2]+[Al_2O_3]+[Na_2O]}$	0.62	None

Additional constraints (Table E-2) were also applied to either limit the glass composition to the approximate region of validity (domain) of the various property models, or to limit the allowable concentration of components that impact the waste oxide loading in the resulting glass. The limits in Table E-2 should not be confused with those in Table TS-1.1 of the WTP contract (DE-AC27-01RV14136), which establishes minimum component limits in HLW glass for contractual purposes.

Table E-2. Glass Composition Constraints.

	Component	Minimum (wt %)	Maximum (wt %)	Allowed as glass additive?
Model Domain	SiO_2	38.0	57.0	Yes
	B_2O_3	5.0	20.0	Yes
	Na_2O	5.0	20.0	Yes
	Li_2O	1.0	4.0	Yes
	Al_2O_3	None	17.0	Yes
	Fe_2O_3	2.0	15.0	Yes
	CaO	None	10.0	No
	MgO	None	8.0	No
	ZrO_2	None	15.0	No
Solubility	Cr_2O_3	None	0.5 (default) 1.0 (relaxed)	No
	P_2O_5	None	3.0	No
	SO_3	None	0.5	No
	$Rh_2O_3 + Ru_2O_3$	None	0.25	No

E3.2.4 Low-Level Waste Vitrification

E3.2.4.1 LAW Vitrification at the WTP will begin on March 1, 2010[38].

E3.2.4.2 During hot commissioning, the WTP will produce 188 Packages[39] of LAW glass.

E3.2.4.3 During full operations, the net WTP LAW vitrification capacity will be ramped as follows:

Starting On	Rate[40] MTG/day
2/1/2011	18.0
1/1/2012	24.0
1/1/2013	28.8[41]
1/1/2015	34.0[42]

E3.2.4.4 The density of ILAW glass will be 2.6 Kg/liter.

E3.2.4.5 Each package of ILAW will contain 5.92 MT of LAW glass on the average.[43]

E3.2.4.6 During hot commissioning, the total sodium loading, sulfate volatilization and formulation of the LAW glass will be estimated using the Gimpel Model as described in 24590-WTP-MDD-PR-01-002.[44]

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[38] Date is from the WTP SAP4 Level 3 Schedule dated March 11, 2003.

[39] This is the required production from Table C.6-5.2 of Standard 5 of the BNI Contract. The corresponding average LAW vitrification rate from March 1, 2010 through January 31, 2011 is about 3.36 MTG/d.

[40] The various ramp-up rates were provided by ORP-22339.

[41] This is based on a nameplate capacity of 36 MTG/d and a 0.80 TOE. The basis for the TOE is "Low Activity Waste Facility Operations Research Availability Assessment," (24590-LAW-RPT-PO-03-001, Rev. 0) and is driven by the 16-week bubbler life. It is assumed that the TOE stated in the reference (0.774) can be increased to an average of 0.80 over the mission. The basis for the nameplate is the 5-day average goal stated in Table C.6-5.1 of Standard 5 of the BNI Contract for the LAW Facility.

[42] This assumes the installation of second-generation LAW melters.

[43] This is based on a 601 gallon (2.275 m^3) container per 24590-WTP-MDD-PR-01-002, Section 4.7.14.

[44] This is an updated reference from 24590-WTP-MCR-PT-02-002, which was used in SP2.

E3.2.4.7 During hot operations, the total sodium loading of LAW glass from pretreated feed will be determined using the DOE Model (D-03-DESIGN-004), which maximizes the sodium oxide loading in the LAW glass subject to the following constraints:

$$[Na_2O] \leq 20 wt\%$$

$$[SO_3] \leq 0.8 wt\%$$

E3.2.4.8 During hot operations, the composition of the LAW glass will be estimated using a glass recipe model similar to that described in 24590-WTP-MRQ-PO-04-0065 (DRAFT). Sulfate volatilization will be estimated using Equation 3.1-5f of 24590-WTP-RPT-PT-02-005.

E3.3 SUPPLEMENTAL TREATMENT

E3.3.1 <u>Demonstration Bulk Vitrification System (DBVS)</u>

E3.3.1.1 The DBVS will be located adjacent to S-Farm.

E3.3.1.2 The DBVS will begin operation on May 31, 2005 and treat low-curie waste containing 260 MT Na.

E3.3.1.3 The DBVS will be modeled using a simple black-box approach that implements the overall mass balances (elemental, NO_X, and activity) as shown in Section 3.2 of the process flowsheet (RPP-20528) using the process design criteria provided in 145579-A-DC-002, with the exception that the Tri-mer scrubber (provides backup off-gas treatment) is assumed to not be operated. These mass balances cover both primary and secondary waste streams from the DBVS.

E3.3.1.4 The feed for the DBVS will be supplied from S-109 using the selective dissolution assumptions provided in Tables 3 and 4 of letter 7F300-04-RER-001.[45]

E3.3.1.5 For planning purposes[46], the net treatment rate will be modeled as 3.92 MTG/day.[47]

E3.3.1.6 The density of the bulk vitrification product (glass) is 2.7 MT/m^3.[48]

E3.3.1.7 The Na_2O loading in the product will be a nominal 20-wt% based on waste sodium.[49]

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[45] When a range of values is provided for a parameter, the average will be used.

[46] The current plans are to limit the amount of waste treated for the first box so that the DBVS contains less than Hazard Class 3 quantities of radionuclides; then allow 2 months for completing the ORR. This ramp-up scenario will be neglected for modeling purposes.

[47] This is based on 43.8 MTG/box and 201 hours total cycle time per box (145579-A-DC-002) with an assumed TOE of 0.75 (ORP-22339).

[48] 145579-A-DC-002

[49] It is assumed that the target waste sodium oxide loading of 17.6-wt% in 145579-A-DC-002 is increased by flowsheet refinements such as sodium-free soil to the value of 20-wt% assumed in ORP-22339.

E3.3.1.8 The product is packaged in 35-m^3 roll-off boxes, each filled with 43.8 MT glass.[50] The external volume of the box is 1,920 ft^3 (8 ft by 10 ft by 24 ft, ~ 54.4 m^3).

E3.3.1.9 The roll-off boxes will be temporarily stored on a cooling pad located near the DBVS until the IDF is ready to accept them for disposal.

E3.3.2 Supplemental Treatment Plant (STP)

E3.3.2.1 For planning purposes, it is assumed that the STP will utilize bulk vitrification technology.

E3.3.2.2 The Supplemental Treatment Plant (STP) will be online on January 31, 2011 and operate at its net rated capacity.

E3.3.2.3 The STP will be located in 200E, slightly northeast of the WTP pretreatment facility, on the plot of land originally reserved for the second LAW Vitrification Facility.

E3.3.2.4 The STP will receive both excess pretreated LAW from the WTP backend evaporator product tank and low-curie waste[51] direct from the Tank Farms as feed. Priority will be given to the excess pretreated LAW.

E3.3.2.5 The Supplemental LAW Treatment Plant capacity will be sized to handle the designated low-curie feed plus the difference between the WTP LAW pretreatment capacity and the net WTP LAW (See Section E3.2.2.7) capacity. The Supplemental Treatment Technologies Report (ORP-22339) estimates that 8 melter lines will be required, each with a 3.92 MTG/d net capacity, for a total installed net capacity of 31.4 MTG/d.[52]

E3.3.2.6 The SSTs that are candidates[53] for providing low-curie feed and associated selective dissolution assumptions are provided in Tables 1, 3 and 4 of letter 7F300-04-RER-001.

E3.3.2.7 The process flowsheet and mass balance splits for the STP are assumed to be identical to the DBVS.

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[50] 145579-A-DC-002

[51] Waste from tanks containing low-Cs waste (less than 0.05 Ci Cs-137/liter when normalized to 7 M Na) will be routed to the STP as feed and is assumed to not require additional pretreatment beyond that provided by selective dissolution and solids separation.

[52] Pairs of additional melter lines will be added if additional capacity is needed to finish the treatment mission by 2028.

[53] The candidate low-curie feed contains approximately 7,300 MT Na. The amount of low-curie feed used will be adjusted as needed to meet the 2028 treatment end date.

E3.3.3 Supplemental TRU Sludge Treatment

E3.3.3.1 The contact-handled Supplemental TRU Treatment and Packaging process will be available on February 28, 2006 and treat a maximum of 2,880 gallons of undiluted TRU tank waste per day.[54]

E3.3.3.2 The system will first be located near B-Farm and then moved to T-Farm. There will be a 10-day outage between tanks and 60-day outage to move equipment between farms.[55]

E3.3.3.3 The SSTs assumed to provide contact-handled sludge are [B-201, B-202, B-203, B-204], [T-201, T-202, T-203, T-204], T-111, T-110, and T-104, in the stated order except that the tank order within the [brackets] can be changed.[56]

E3.3.3.4 The remote-handled Supplemental TRU Treatment and Packaging process will be available on July 1, 2012 and treat 2,880 gallons of undiluted tank waste per day[57]. It is assumed to be located near AW-Farm.[58]

E3.3.3.5 All remote handled sludge will be water-washed prior to treatment to remove soluble waste constituents. The DSTs will be water washed in their respective tanks; the SSTs will be retrieved, transferred to a 200E area DST and then water-washed. No attempt will be made to segregate the remote-handled SST TRU sludge from the remote-handled DST TRU sludge.

E3.3.3.6 The SSTs assumed to provide remote-handled sludge are T-105, T-107, T-112, B-107, B-110, and B-111; the DSTs assumed to provide remote-handled sludge are SY-102, AW-103, and AW-105.

E3.3.3.7 The overall process for both contact-handled and remote-handled TRU sludge treatment is assumed to use the "dry batch mode"[59] as described in the System Design Description (RPP-20499) and summarized as follows:

- As the CH-TRU sludge is retrieved and transferred, a total of 1 part water by volume is added per original in-tank sludge bulk volume.

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[54] The stated rate is based on planning assumptions for a single retrieval system and does not fully utilize the TRU treatment system capacity (personal correspondence with A. R. Tedeschi, September 1, 2004).

[55] This assumes 30 days to move the equipment and 30 days schedule contingency (personal correspondence with A. R. Tedeschi, September 1, 2004).

[56] These are operational considerations. Tanks and sequence per personal correspondence with A. R. Tedeschi, September 1, 2004).

[57] Personal correspondence with M. J. Jennings, September 2, 2004. This is an enabling assumptions since the RH-TRU treatment process parameters have not been established.

[58] The remote-handled Supplemental TRU Treatment and Packaging process will simply re-deploy the contact-handled system with additional shielding per personal communication with J. G. Kristofzski, September 7, 2004.

[59] "Dry batch mode" is a continuous process. Use of this mode for planning purposes is recommended per personal communication with A. R. Tedeschi, September 1, 2004.

- The slurry (either direct from the SSTs for CH-TRU or via a DST for water washed RH-TRU) will be transferred to the Feed Receipt Process System modeled as a single tank with a working volume of 28,800 gallons.[60]
- The slurry, carrier and heat are continuously added to the dryer, while dried product is withdrawn to maintain a product with 20-wt% water and 80-wt% waste loading (both relative to waste, water and carrier).
- The CH-TRU dried waste product is packaged in standard waste boxes (SWB)[61], each SWB holding approximately 2,760 lb_m waste.
- The RH-TRU dried waste product is assumed to be packaged in 55-gallon drums containing 700 lb_m product per drum, which are loaded three drums to a RH-72B canister[62,63].

E3.3.3.8 Secondary waste will be estimated using the dryer retention factors and release factors as stated in 20843.PCAL.001, Assumptions 7 and 8.

E3.3.3.9 Liquid effluent will either be transferred to the LERF via Tank Truck or recycled to the Retrieval project. For planning purposes, it will be assumed that the liquid effluent is transferred only to LERF (no recycle) and modeled as a continuous transfer.

E3.4 INTERFACING FACILITIES

E3.4.1 ETF / LERF / TEDF

E3.4.1.1 The timing, capacities, and capability of the ETF, LERF, and TEDF will be driven by the needs of the waste treatment mission and assumed to be available when needed. If the treatment mission requires that changes be made to the ETF, LERF, or TEDF, or their operating plans, the ORP is assumed to successfully drive the changes.

E3.4.1.2 The LERF consists of three basins, each with an operating volume of 7.8 Mgal (POP-60M-002), which are used to provide lag-storage of liquid effluent. For planning purposes, only two of the basins will be allocated to supporting the waste treatment mission; the third basin will be reserved for CERCLA effluents.

E3.4.1.3 The ETF will be modeled as a black-box. Overall partitioning of feed into solid waste and treated effluent will be approximated per HNF-4573, Appendix A.

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[60] This assumes that only 4 of the 5 feed tanks are used; the 5th tank is kept in reserve.

[61] The final package has not been established; 55-gallon drums may also be used.

[62] Personal communication with M. J. Jennings, September 2, 2004.

[63] The final package configuration has not been established; the dried waste may also be directly loaded into the RH-72B canister

E3.4.1.4 The TEDF will not be modeled; however, the demand on TEDF from ETF will be estimated. The demand from other non-radioactive liquid effluents will not be addressed.

E3.4.2 Central Waste Complex

E3.4.2.1 The Central Waste Complex (CWC) is assumed to support the needs of the waste treatment mission and is assumed to be available when needed; the demand on the CWC will not be modeled.

E3.4.3 Canister Storage Building

E3.4.3.1 The IHLW interim storage facility (the Canister Storage Building), being upgraded by Project W-464, will be operational on April 30, 2010.

E3.4.3.2 The need date for the Canister Storage Building will be the date on which the first radioactive HLW canister is produced (May 17, 2010).

E3.4.3.3 The demand for interim storage space will be established assuming that 22 canisters of WTP-provided IHLW is used.

E3.4.4 Integrated Disposal Facility

E3.4.4.1 The IDF will be operational on February 28, 2006.

E3.4.4.2 The IDF will receive LAW glass packages from the WTP, failed LAW melters from the WTP, and roll-off boxes containing glass from the STP.

E3.4.4.3 The IDF can contain 38,000 cubic meters of ILAW; 44,000 cubic meters of MLLW; and 81,000 cubic meters of LLW. The IDF can be expanded as needed to contain up to 900,000 cubic meters of waste. This capacity is shared by all users of the IDF – the demand from these other users will not be tracked.

E3.4.5 222-S Laboratory

E3.4.5.1 It is assumed that the laboratory services required to support waste characterization for TFC projects and operations are available and provided in a timely manner.

E3.4.6 Other Hanford Site Facilities

(No unique assumptions)

E3.4.7 Waste Encapsulation and Storage Facility

E3.4.7.1 Cesium and strontium capsules are assumed to be dispositioned outside of the WTP and Tank Farm facilities by the DOE-RL.[64]

E3.4.8 Yucca Mountain (Offsite Repository)

E3.4.8.1 The Hanford Shipping Facility for IHLW will be located in the 200 Area and will be operational on December 31, 2012. If this date is later than the date determined by the model run for Section E3.4.8.3, it will be accelerated to match that date.

E3.4.8.2 Yucca will be ready to accept IHLW from the Hanford Site on January 1, 2012.

E3.4.8.3 The shipping date of IHLW to Yucca will be the date on which the Canister Storage Building (CSB) is full (880 canisters + 22 canisters in WTP-provided lag storage), but no earlier than January 1, 2012.

E3.4.8.4 Assume that the shipping rate is 2 canisters of IHLW per day – first priority given to shipping newly created IHLW canisters – second priority is given to emptying the CSB.

E3.4.8.5 It is assumed that the WTP-prepared delisting petition for the IHLW is accepted by Ecology prior to shipping the waste to Yucca.

E3.4.9 Waste Isolation Pilot Plant (WIPP)

E3.4.9.1 It is assumed that WIPP will accept contact-handled TRU waste starting in FY 2006 and remote-handled TRU waste, staring in FY 2012.

[64] Pretreatment can connect to a potential new facility designed to receive and treat the Hanford Cs and Sr capsules prior to incorporation into the HLW feed for immobilization in the HLW Vitrification Facility (Section C.7(c)(2) of DE-AC27-01RV14136).

E3.5 CROSS-CUTTING ASSUMPTIONS

E3.5.1 Starting tank inventories represents the contents of the tanks as of April 2004. This will be referred to as the "FY 2005" inventory and is based on BBI downloaded from the Tank Waste Information Network System (TWINS) circa 8/10/2004. Adjustments will be made in HTWOS model for historical transfers as needed.

E3.5.2 Anticipated addition of new waste into the DSTs from Tank Farm activities and from other Hanford Site facilities will match those assumed in RPP-21217.

E3.5.3 The water wash factors[65] in TWINS on August 24, 2004, will be used for partitioning waste into solid and liquid phases during retrieval and staging; the partitioning of strontium will be modeled per RPP-21807. The composition of waste in the feed vector will be reported on a fully water-washed basis.

E3.5.4 The caustic leach factors in the TWINS on August 24, 2004, will be used as the basis for computing the caustic leach factors associated with each delivered batch of HLW solids.

E3.5.5 Oxalate will be partitioned the same as TOC[66].

E3.5.6 TOC will not be speciated.[67] However, for modeling purposes, all TOC will be treated as oxalate once it enters the WTP or STP to allow for reaction stoichiometry.

E3.5.7 The design, operating modes, and operating plans of all facilities or processes will drive the permits, and the permits will be modified as the design is modified.

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[65] There are uncertainties and biases in the water wash and caustic leach factors that can significantly influence the canister counts and end dates; some of these have been corrected in TWINS since the last revision of the System Plan (for example, Cr and Al wash and leach factors, S-complex ^{99}Tc wash factors, ^{90}Sr wash factors, and miscellaneous corrections).

[66] Recently, the BBI was updated to track oxalate separately from TOC. Since oxalate water wash factors or solubility models are not available, we will assume that oxalate continues to be partitioned as TOC.

[67] A global enabling assumption for speciating TOC into its constituent organic compounds is not available. Therefore, the organic content of the various secondary waste streams will not be estimated in this version of the System Plan. Once such speciation is established, the DFs in Table 2.2-3 of 24590-WTP-RPT-PT-02-005 can be used for the 242-A Evaporator and the Waste Feed Evaporation Process (FEP) and Treated LAW Evaporation Process System (TLP) evaporators in the WTP.

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