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Tank Waste Remediation System SIMAN Retrieval Model

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Abstract: An event simulation model based on the TWRS (enhanced sludge was) process flow sheet model has been developed to represent the time dependence of inter-tank waste transfer, retrieval and disposal operations. The TWRS SIMAN Retrieval Model refers to the SIMulation ANalysis language developed by Systems Modeling Corporation.

The model represents the 149 single-shell tanks and their inventories, the 28 double-shell tanks and their storage and processing functions, the single-shell tank retrieval assumptions and constraints, and the capacity and operational behavior of high level and low level waste vitrification for both Phase I and Phase II processing.

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TANK WASTE REMEDIATION SYSTEM SIMAN RETRIEVAL MODEL

September 1996

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1.0 INTRODUCTION

An event simulation model based on the Tank Waste Remediation System (TWRS) enhanced sludge wash process flow sheet model (Orme, 1995) was developed to represent the time dependence of inter-tank waste transfer, retrieval and disposal operations. The model is called *TWRS SIMAN Retrieval Model* (TSRM), where "SIMAN" refers to the SIMulation ANalysis language developed by Systems Modeling Corporation.

The model represents: the 149 single shell tanks (SST) and their inventories, the 28 double shell tanks (DST) and their storage and processing functions, the SST retrieval assumptions and constraints, and the capacity and operational behavior of high level and low level waste vitrification for both Phase I and Phase II processing.

This model is presently being used in support of TPA milestone M45-02A (*Submit Initial SST Retrieval Sequence Document for Ecology Approval*) to determine the influence of proposed SST retrieval sequences on performance measures such as schedule, retrieval costs, glass volume and risk (Penwell 1996). A SST retrieval sequence will be selected by systematically exploring a large number of possible sequences and manually comparing their relative performances.

1.1 PURPOSE AND SCOPE

The goal of simulation was to test the consequences of assumptions. For the TWRS SIMAN Retrieval Model, the specific assumptions are primarily defined with respect to waste processing and transfer timing. The model tracks 73 chemical constituents from underground waste tanks to glass; yet, the detailed chemistry and complete set of unit operations of the TWRS process flow sheet are represented *only at the level necessary* to define the waste processing and transfer logic and to estimate the feed composition for the treatment facilities. Therefore, the model should not be regarded as a substitute for the TWRS process flow sheet. Practically, the model functions as a *dynamic extension* of the flow sheet model.

The following sections present the description, assumptions, architecture, and evaluation of the TWRS SIMAN Retrieval Model. Section 2 describes the model in terms of an overview of the processes represented. Section 3 presents the assumptions for the simulation model. Specific assumptions and parameter values used in the model are provided for waste retrieval, pretreatment, low-level waste (LLW) immobilization, and high-level waste (HLW) immobilization functions. Section 4 describes the model in terms of its functional architecture to define a basis for a systematic evaluation of the model. Finally, Section 5 documents an independent test and evaluation of the model's performance (i.e., the verification and validation). Additionally, Appendix A gives a complete listing of the tank inventory used. Appendix B documents the verification and validation plan that was used for the (Section 5) evaluation work. A description and listing of all the model variables is given in Appendix C along with a complete source listing.

2.0 MODEL DESCRIPTION

The SIMAN (SIMulation ANalysis) Discrete Event Simulation language was used to develop the TWRS Retrieval Model. SIMAN provides the basic logic structure from which process and/or event oriented models can be constructed. The model is an *event driven simulation* of the retrieval and processing of the waste in the single-shell tanks (SSTs) and double-shell tanks (DSTs). This means that the operation of the model is based upon start and completion of events rather than upon a predefined schedule.

The SIMAN language is coded in two separate files: the experiment file, and the model file. The experiment file contains the variable and logic element declarations with their default (if any) values. The model file contains the logic structures directing the flow of abstract "entities" that control the occurrence of physical events (such as waste transfers) having associated time durations. The model is constructed in sets of command-lines called blocks, which can branch entities, assign values, seize resources, and delay entities based on process durations and logic. A complete source listing with variable descriptions is given in Appendix C.

2.1 WASTE RETRIEVAL (SINGLE-SHELL TANKS)

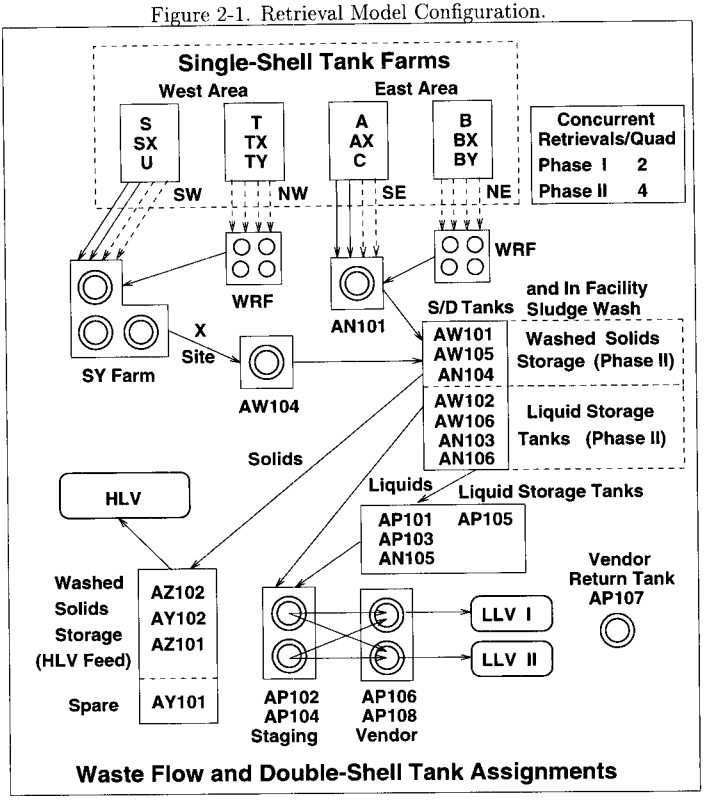
Past practice sluicing of all SSTs is assumed because it is the current baseline (Boomer et al. 1993). Although sluicing is assumed exclusively, it is unlikely that all SSTs (especially tanks designated as leakers) will be retrieved using sluicing. However, no basis currently exists for assuming an alternative retrieval technology. Additionally, many of the dynamic aspects of the results are not retrieval method dependent. The waste will be diluted to approximately the same concentration for transfer regardless of the retrieval method assumed. Therefore, the waste volumes transferred to the DSTs for sludge washing should be reasonable. And, the transfer rates should be similar for other retrieval methods.

The retrieval assumptions are given in Section 3.1 and a summary of the hydraulic retrieval process is described here. The amount of retrieval water added to each tank is the maximum required to attain $5M$ sodium or 10 wt% solids in the diluted waste. Overall, the 1.36×10^8 L of SST waste is diluted to about 5.39×10^8 L.

It is assumed that waste in the Southeast (SE) and Southwest (SW) quadrants (Figure 2-1) can be retrieved directly to DSTs, while retrieval operations in the Northeast (NE) and Northwest (NW) quadrants (Figure 2-1) are assisted by waste receiver facility (WRF) annexes (Andersen 1994). The baseline assumed that each DST or WRF used for waste retrieval from SSTs can receive waste from as many as four concurrent retrieval operations. Also, each WRF annex contains four 284 m^3 (75,000-gal) tanks to store and condition diluted waste before transfer to a DST receipt tank. Figure 2-1 shows the waste flow and the DST assignments assumed in the current model.

In the 200 West Area, waste is stored before cross-site transfer in previously retrieved DSTs in SY-Farm. When 3.785×10^6 L or more of retrieved waste is accumulated in any one tank, a cross-site transfer to 200 East Area is sought. Transfer is made at 757 L/m when the 200 East Area cross-site receiver tank becomes available. For 200 East Area, waste is transferred from the WRF directly to a dedicated waste receipt tank.

Figure 2-1. Retrieval Model Configuration.



2.2 INITIAL CONDITIONS AND DOUBLE-SHELL TANK ASSIGNMENTS

The start time of the simulation is assumed to be the beginning of calendar year (CY) 2000. Therefore, operations that involve evaporation, waste consolidation, and SST stabilization are assumed to have already occurred. For instance, tank 241-AZ-102 holds the solids from tank 241-C-106, which is to be retrieved before CY 2000 as a demonstration project. The consequences of this assumption for the simulation is that tanks 241-AZ-102 and 241-C-106 solids contribute to the same batch feeding High-Level Waste (HLW) vitrification (HLV). Appendix A describes the steps assumed to evolve the present day tank inventory to the CY-2000 start date.

During Phase I, in-tank sludge washing is always assumed. As stated in Section 3.2, seven tanks are used to perform in-tank sludge washing. For cases with out-of-tank sludge

washing, the tanks are transitioned to either washed solids storage tanks or liquid storage tanks. This occurs during the first two years of Phase II.

Currently, the method for processing complexed transuranic waste has not been determined. Therefore, other than quantities retrieved for Phase I testing, retrieval and processing of the waste contained in tanks 241-AN-102 and 241-AN-107 is delayed until CY 2019. This delay allows for the development and deployment of an appropriate method or process to precipitate the transuranics. Once emptied, tanks 241-AN-102 and 241-AN-107 are taken out of service. Tentatively, these tanks may be processed any time after the Phase I testing of that waste is completed. Also, if processed earlier, those tanks may provide space for storing and processing retrieved waste. The initial DST assignments are shown in Figure 2-1.

2.3 SIMULTANEOUS RETRIEVALS

Before incorporating Phase I & II privatization assumptions, a maximum of two simultaneous retrievals were assumed. Those retrievals went to one of the four waste receiver facilities which were assumed for each quadrant. Each waste receiver facility was assumed to contain four 284 m^3 (75,000 gal) tanks. Each tank was assumed to be able to receive waste from one SST at a time, but the SSTs were switched every 95 m^3 (25,000 gal). The waste was collected until 757 m^3 (200,000 gal) were available for transfer, then transferred to a DST. This meant that other than during the time of the transfer, the WRF should have been able to receive waste from four SSTs.

For the present model, a maximum of two simultaneous retrievals per quadrant were assumed for Phase I and a maximum of four simultaneous retrievals per quadrant (16 total) were assumed for Phase II. Consistent with the current planning basis for retrieval operations, only two waste retrieval facilities were assumed, as mentioned in Section 2.1 and 3.1. The SE and SW quadrants were assumed to be retrieved directly into DSTs.

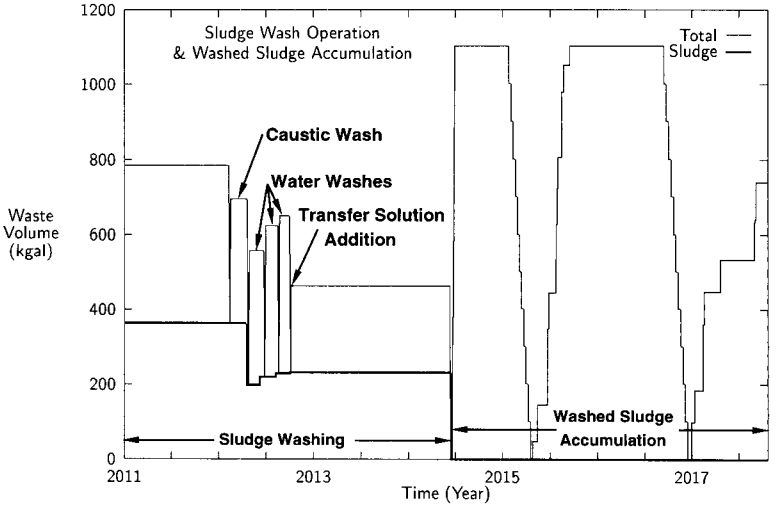
2.4 LIQUID-SOLID SEPARATION AND SLUDGE WASHING

In-tank sludge washing is the baseline assumption. It is the only type of sludge washing assumed for Phase I. Although the baseline assumption for Phase II is in-tank sludge washing, a proposed change to in-facility (out-of-tank) sludge washing has been submitted based upon Raytheon/BNFL trade studies (Raytheon/BNFL 1994), but not approved. Therefore, in-facility sludge washing for Phase II is also modeled. The assumptions for both in-tank and in-facility sludge washing are given in Section 3.2.

The actual amount of solids dissolved is based on the chemical content of the solids undergoing a caustic wash. On average, approximately 30 % of the solids are dissolved by caustic washing.

The in-tank sludge wash model uses a multi-tank settle/decant of retrieved waste slurry and sludge washing of dispersed solids to reduce the fraction of waste going to HLW vitrification. Effectively, a first wash has already occurred during retrieval as soluble solids are dissolved and insoluble solids are dispersed through the retrieved waste slurry. As stated, retrieved waste is stored in designated retrieved waste receipt tanks; these tanks supply feed to settle/decant tanks.

Figure 2-2. Typical Settle/Decant Cycle for Sludge Washing.



The details of a typical settle/decant cycle are shown in Figure 2-2 for the CASE.250 run (Penwell 1996). Before CY-2011 this tank was filled with SST waste that was retrieved in Phase I. Since the tank has already accumulated about a three meter depth of sludge settled at 20 wt%, no additional waste is added until the accumulated sludge can be washed and staged to washed sludge accumulation tanks for high level waste vitrification feed. In this case, the wash cannot occur until Phase II low level waste vitrification (LLV) is on-line after 10/2011 when tank space becomes available for receiving the decanted liquid.

The figure shows that the decant is made early in CY-2012, at which point a caustic wash and three water washes are performed. After the caustic wash, the volume of the sludge decreases based on its chemical content. During the water washes, the interstitial liquid is diluted and then decanted to remove soluble material such as sodium, but no additional solids are removed. The effect of lowering the density of the interstitial liquid due to the water washes while keeping the settling fraction fixed [See Section 3.2, Eqs. (7-10)] is a mild increase in the sludge volume as seen in Figure 2-2. After the last water wash, a transfer solution is added to reduce the solids weight fraction to 10 percent. The washed sludge awaits transfer to an available high level vitrification feed tank. For this case, the washed sludge is not transferred until the middle of 2014, since Phase II high level vitrification begins operation after 10/2013. Once the transfer is made, the tank shown is reassigned to a washed sludge accumulation tank for feeding the high level vitrification plant. This case assumes that the sludge wash operation is performed in a facility (rather than in-tank) for Phase II. The six other sludge wash tanks independently function in a manner similar to the one shown in Figure 2-2.

2.5 LOW-LEVEL WASTE PRETREATMENT AND IMMOBILIZATION

The assumptions associated with Low-Level Waste (LLW) Pretreatment and Immobilization are given in Section 3.0. The LLW pretreatment and vitrification are modeled as close-coupled facilities. Therefore, the processes are treated as a single unit within the model. The decanted liquid generated by sludge washing provides the feed into the unit. Two independent LLW processing facilities are assumed for both Phase I and Phase II.

The assumed average Phase I processing rate for each facility is 13.5 MT glass/day, which is based upon a design capacity of 18 MT glass/day operating at 75 percent efficiency. Therefore, the sodium processing rate at 20 wt% Na_2O glass loading is 2.0 MT Na/day (Certa 1996). The Phase I LLW feed staging sequence and assumptions were obtained from the Preliminary Low-Level Waste Feed Staging Plan (Certa 1996).

The baseline Phase II LLV design capacity for each of the two facilities is 130 MT glass/day (Holbrook 1995). Therefore, the average processing rate for each facility is 97.5 MT glass per day (14.5 MT Na/day, assuming 20 wt% Na_2O in glass). This gives a total net processing rate of 195 MT of glass/day (29 MT Na/day).

The facilities are assumed to operate at the average capacity whenever feed is available for the facility to process. Liquid batches of 3.785 ML are generated as they arrive from sludge washing. Approximately 215 batches are generated. The batch definitions are used to provide information to construct the feed input to the chemical process flowsheet model for computing the actual volume of LLW glass for selected sequences.

The results of varying Phase II processing rates the baseline rate is documented the in retrieval sequence studies (Penwell 1996) to determine an approximate rate needed to allow completion of the SST retrieval to meet the 2018 Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) (Ecology et al. 1994) retrieval milestone.

2.6 HIGH-LEVEL WASTE IMMOBILIZATION

The assumptions associated with High-Level waste vitrification are given in Section 3.5. HLW vitrification facilities are assumed for both Phase I and Phase II. The DST assignments associated with HLW vitrification are given in Figure 2-1.

The Phase I HLW vitrification design capacity of 1.1 MT glass/day (0.27 MT waste oxides exclusive of sodium and silicon assuming a 25 wt% loading) is based upon values given in the Privatization Request for Proposal (DOE/RL 1996). The average (net) HLW processing rate based upon a 75 percent plant operating efficiency is 0.82 MT glass/day. The Phase I HLW feed staging is based upon data developed for the Phase I High-Level Waste Pretreatment and Feed Staging Plan (Manuel 1996).

The baseline Phase II HLW facility design capacity is 12 MT glass/day (Holbrook 1995). Therefore, the average (net) baseline processing rate for each facility is 9 MT glass/day assuming a 75 percent plant operating efficiency. Assuming the same waste loading as Phase I means that an average of 2.25 MT waste oxides exclusive sodium and silicon is processed per day.

3.0 MODEL ASSUMPTIONS

The following sections describe the TWRS SIMAN retrieval model assumptions for waste retrieval, sludge washing, and Phase I/II privatization.

3.1 WASTE RETRIEVAL AND TRANSFER ASSUMPTIONS

As mentioned in Section 2.1, sluicing is assumed for all SSTs to completely specify the retrieval logic for the model, even though it is unlikely that all SSTs (especially tanks designated as leakers) will be retrieved using sluicing. Furthermore, past practice sluicing of all single-shell tanks (SSTs) is the current baseline (Boomer et al. 1993). The overall timing behavior is not expected to be strongly retrieval method dependent. The waste will need to be diluted to approximately the same concentration for transfer for alternative retrieval methods.

In the 200 West Area, retrieved waste is stored in previously retrieved DSTs in SY-Farm before cross-site transfer. When 3.785×10^6 L or more of retrieved waste is accumulated in any one tank, a cross-site transfer to 200 East Area is sought. Transfer is made at 757 L/m when the 200 East Area cross-site receiver tank becomes available. For 200 East Area, waste is transferred from the Waste Retrieval Facility (WRF) (NE quadrant) or SST (SE quadrant) directly to a dedicated waste receipt tank. Figure 2-1 shows the waste flow from the SSTs to the specific DSTs which store and process retrieved waste.

Table 3-1 lists the major baseline retrieval and transfer assumptions used for the model.

Table 3-1. Waste Retrieval and Transfer Assumptions.

Assumption	Value	Comment
Waste Transfer Rate	757 L/min diluted waste	
Average salt cake and Sludge Retrieval Rate/tank	7.2 m^3/day	The rate is estimated based upon the average historical instantaneous rate of 14.4 m^3/day in addition to sluicer availability and operating efficiency assumptions (Boomer et al. 1994) (Orme 1994).
Maximum wt% solids in Transfer Solution	10 wt% based upon the liquid density	The specific gravity of dry solids is assumed to be 3.0. During FY 1995, the liquid was transferred at approximately 14 wt% solids in solution.
Maximum sodium molarity in Supernatant during waste transfers	$5M$	
Maximum Simultaneous Retrievals per Quadrant Phase I Phase II	 2 4	Maximum number of simultaneous retrievals per DST is not separately restricted. See description in Section 1.3.

The model tracks the constituent masses of Appendix A as well as the material volume. All dry solids volumes are assumed to have a density of $\rho_s = 3.0$ kg/L (Orme 1995). The liquid volumes are calculated by assuming that the liquid density can be estimated according to

$$\frac{\rho_L}{\rho_{H_2O}} = 1 + \kappa[Na^+] \,, \tag{1}$$

where $[Na^+]$ is the concentration of sodium in the liquid and the constant $\kappa \approx 0.054$ L mol^{-1} (Orme 1995). Given the total mass M_L and sodium mass M_{Na} in the liquid, from Eq. (1) the liquid volume is solved for as

$$V_L = \frac{M_L}{\rho_{H_2O}} - \frac{\kappa M_{Na}}{w_{Na}} \,, \tag{2}$$

where w_{Na} is the molecular weight of sodium. Dilution from retrieval is calculated for each tank as the greater of the liquid masses as determined from the $5M$ sodium or 10 wt% solids requirements in Table 3-1. Using Eq. (1), the liquid mass based on the $5M$ sodium requirement is

$$M_L = \frac{\rho_{5M}\,\rho_{H_2O}}{\rho_{5M} - \rho_{H_2O}} \frac{\kappa M_{Na}}{w_{Na}} \,, \tag{3}$$

where ρ_{5M} is calculated from Eq. (1) to be 1.27 kg/L. The liquid mass based on the 10 wt% solids requirement is

$$M_L = \frac{1-f}{f} M_S \,, \tag{4}$$

where f is the fraction (0.10 for 10 wt%) of solids. The greater of the two M_L values from Eq. (3) and Eq. (4) is used to determine the total liquid mass attained by addition of retrieval water. The diluted volume is then calculated from Eq. (2).

Table 3-2 lists special retrieval assumptions which were used for development of the process model and constraints on the retrieval sequences. These restrictions greatly affect sequence generation and modeling results (timing and glass results).

Table 3-2. Special Retrieval Assumptions and Restrictions.

	Description
Phase I	Early in Phase I, retrieval can only occur from the Southeast quadrant (SE Tank Farms A, AX, and C). During the rest of Phase I, retrieval can only occur from the Southeast quadrant (A, AX, and C) and the Southwest quadrant (S, SX, and U)
Phase II	Two Waste Retrieval facilities for receiving the waste from the Northwest and Northeast quadrants. The Southeast and Southwest quadrants will be assumed to be retrieved directly.

3.1.2 RETRIEVAL PROGRAM ASSUMPTIONS

The following retrieval program assumptions were used.

Table 3-3. Program Assumptions.

Retrieval should be initiated for 35 SSTs by the 9/30/2010.
Complete closure of one tank farm by 12/31/2011.
Capital cost outlays during the early years should be reduced. Tanks from the southeast and southwest quadrants should be given preference for early retrieval due to the shorter transfer lines and the possibility of avoiding waste receiver facility costs.

3.2 SLUDGE WASH ASSUMPTIONS

During Phase I, in-tank sludge washing is always assumed. Seven tanks are used to perform in-tank sludge washing. For cases with out-of-tank sludge washing, the tanks are transitioned to either washed solids storage tanks or liquid storage tanks. This occurs during the first two years of Phase II. Table 3-4 provides the sludge wash assumptions used for the model. Additionally, Table 3-6 lists the sludge wash efficiencies used for the caustic wash. Detailed information regarding the in-tank sludge wash process cycle timing is given in Table 3-5.

Table 3-4. Sludge Wash Assumptions.

Assumption	Value†	Comment
In-Tank Sludge Washing: time for transfer in caustic wash time settling time water fill time water wash time settling time transfer out	 10 days (379 kL/day) 30 days 30 days 5–8 days (379 kL/day) 7 days 30 days 1 Mgal/10 days	Detailed cycle timing may be found in Table 3-5. In-tank sludge washing is the baseline process for both Phase I and Phase II privatization. It is used for Phase I for all cases. Washing occurs when 27.5 wt% solids has been accumulated (Slaathaug et al. 1996)
Settled Solids Weight Percent	20%	
In-Facility Sludge Washing (Phase II only) start date 10/1/2011		Modeled as transfer in and remove at the rate needed to match LLW glass plant rate. Washing occurs at 27.5 wt% solids.

†Consistent with (Orme 1995).

Table 3-5. Processing Steps and Timings for a Settle Decant Tank.

Processing steps	Timing	
Filling tank with sludge	1. Transfer waste to processing tanks	379 kL/day
	2. Settle suspended solids	30 days
	3. Decant supernatant liquid to liquid storage tanks	379 kL/day
	4. Repeat steps 1-3 to obtain required level of sludge	As needed
Leaching sludge	5. Add $5M$ caustic 1:1 to waste	379 kL/day
	6. Leach solids by mixing with mixing pumps	30 days
	7. Settle suspended solids	30 days
	8. Decant supernatant liquid to liquid storage tanks	379 kL/day
Washing sludge	9. Add wash water 2:1 to waste	379 kL/day
	10. Mix waste with mixing pumps	7 days
	11. Settle suspended solids	30 days
	12. Decant supernatant liquid to liquid storage tanks	379 kL/day
	13. Repeat steps 9-12 three times	As needed
Transferring sludge	14. Add water to waste for slurry transfer at 10 wt% solids in solution	379 kL/day
	15. Transfer waste to sludge accumulation tank	379 kL/day

The partitioning of liquids and solids for a settle/decant operation is based on the assumption that settled waste can be described in terms of two distinct regions—a settled particulate (SP) (or sludge) region and a clarified liquid (CL) region. The statement of total mass balance for total solid M_S and liquid M_L mass in these regions is

$$M_S^{CL} + M_S^{SP} = M_S \quad \text{and} \quad M_L^{CL} + M_L^{SP} = M_L \tag{5}$$

respectively. For simplicity, the two regions are each characterized with a single parameter. For the settled sludge, a solids settling fraction f_s is defined; for the clarified liquid, a solids entrainment fraction f_e is defined. These definitions are represented as

$$\frac{M_S^{SP}}{M_S^{SP} + M_L^{SP}} = f_s \quad \text{and} \quad \frac{M_S^{CL}}{M_S^{CL} + M_L^{CL}} = f_e \tag{6}$$

respectively. The solution to the four equations of Eq. (5) and Eq. (6) give the partitioning of liquids and solids in each region:

$$M_S^{SP} = \frac{M_S f_s (1 - f_e) - M_L f_e f_s}{f_s - f_e}, \tag{7}$$

$$M_L^{SP} = \frac{M_S (1 - f_s)(1 - f_e) - M_L f_e (1 - f_s)}{f_s - f_e}, \tag{8}$$

$$M_S^{CL} = \frac{-M_S f_e (1 - f_s) + M_L f_e f_s}{f_s - f_e} \quad \text{and} \tag{9}$$

$$M_L^{CL} = \frac{-M_S(1-f_s)(1-f_e) + M_L f_s(1-f_e)}{f_s - f_e} \quad (10)$$

The value used for the solids settling fraction is shown in Table 3-4 to be $f_s = 0.20$ for in-tank settling. The value presently used for the solids entrainment fraction f_e in the decanted liquid is zero.

Table 3-6. Component Sludge Wash Efficiencies.

Component	Wash efficiency[a,b]
Aluminum	68%
Chromium	64%
Sodium	25%
Phosphorus	74%

[a]The SIMAN model uses component sludge wash factors to calculate the liquid/solid partitioning of each component resulting from the caustic wash.
[b]TWRS Process Flowsheet, WHC-SD-WM-TI-613, Rev. 1, (Orme 1995)

3.3 DOUBLE-SHELL TANK MODELING ASSUMPTIONS AND INITIAL TANK ASSIGNMENTS

The initial DST assignments and assumptions are provided in Table 3-7. Figure 2-1 shows the waste flow along with tank assignments allowing easier visualization of the DST assumptions and assignments.

Table 3-7. Double-Shell Tank Assumptions.

Tank assignment	In-tank sludge washing	In-facility sludge washing (Phase II only after)
200 East Sluicing Receiver	1 (AN-101)	1 (AN-101)
Cross-Site Transfer Receiver	1 (AW-104)	1 (AW-104)
200 West Sluicing Receivers	3 (All 3 West Area DSTs)	3 (All 3 West Area DSTs)
Sludge Wash	7	
Washed Solids Storage	3	6[a]
Decanted Liquid Storage	4	
Liquid Storage		8[a]
LLW Vitrification Staging	2 (AP-102)[b] (AP-104)[b]	2 (AP-102)[b] (AP-104)[b]
LLW Vitrification Feed	2 (AP-106)[b] (AP-108)[b]	2 (AP-106)[b] (AP-108)[b]
HLW Vitrification Feed/Staging[c]	1	1
Delayed (Complexed TRU)	2	2
Spares	2	2

[a]These numbers apply only after completion of the transition of the sludge wash DSTs to liquid storage.
[b]The LLW feed staging information was obtained from the Preliminary Low-Level Feed Staging Plan (Certa 1996).
[c]The HLW feed staging information was obtained from the Phase I High-Level Waste Pretreatment and Feed Staging Plan (Manuel 1996).

3.4 GLASS PLANT EFFICIENCIES

The Privatization Request for Proposals (RFP) provides average operating capacity for both the HLW and LLW vitrification plants (DOE/RL 1996a). For performing modeling calculations, plant efficiencies must be assumed. The efficiencies were taken to match the assumptions provided in the Preliminary Low-Level Waste Feed Staging Plan (Certa 1996) and the Tank Waste Remediation Facility Configuration Study (Boomer 1994). The total operating efficiency included both the Plant Operating Efficiency and the Feed Availability Factor. However, the model determines when feed is available and models operation of the processing facilities accordingly. Therefore, the efficiencies were separated out and the plant operating efficiency is applied to the process facilities whenever they are operating.

Table 3-8. Glass Plant Efficiencies.

	Value	Comments
Total Operating Efficiency (TOE)	60%*	
Plant Operating Efficiency (POE)	75%*	When feed is available, the plant operates at (design capacity × POE)
Feed Availability Efficiency (FAE)	80%*	Used for comparison only — The feed availability in this model is determined through the modeling of waste transfers and processing

*These values match the values used in the Preliminary Low-Level Waste Feed Staging Plan (Certa 1996).

3.5 PRIVATIZATION LLW AND HLW ASSUMPTIONS

The Phase I assumptions given in Table 3-9(a,b) were developed from information given in the Privatization RFP (DOE/RL 1996a), the Preliminary Low-Level Waste Feed Staging Plan (Certa 1996), and the Phase 1 High-Level Waste Pretreatment and Feed Staging Plan (Manuel 1996).

Table 3-9a. Phase I Assumptions for LAW Glass Plant.

Assumption	Value	Comment
Start Date	6/1/2002	Privatization RFP
Design capacity (each of 2 Plants)	2.7 MT Na/day	Calculated based on Privatization RFP and (Certa 1996)
	18.0 MT glass/day	Calculated based on sodium oxide loading given in RFP
Total net operating rate	27 MT glass/day	Design capacity × POE
Shutdown	Calculated based on each plant completing processing 5100 MT Na (Total of 10,200 MT Na)	Privatization RFP maximum quantity data

LAW = Low-activity waste
RFP = Request for Proposals

Table 3-9b. Phase I Assumptions for HLW Glass Plant.

Assumption	Value	Comment
Start Date	6/1/2002	Privatization RFP
Design Capacity (waste oxide exclusive of Na and Si)	0.27 MT waste oxides/day	Calculated based on Privatization RFP and efficiencies given above
(assuming 25 wt% waste oxide exclusive of Na and Si)	1.1 MT glass/day	Calculated based on waste oxide loading given in the Privatization RFP.
Net operating capacity	0.82 MT glass/day	Design capacity × POE
Shutdown	Calculated based on completion of processing 465 MT waste oxides exclusive of Na and Si	Privatization RFP Amendment 1 maximum quantity data

HLW = High-level waste
RFP = Request for Proposals

The baseline Phase II privatization assumptions are given in Table 3-10(a,b) (Holbrook 1995).

Table 3-10a. Phase II Assumptions for LAW Glass Plant.

Assumption	Value	Comment
Start Date	10/1/2011	(Penwell 1996),(Bader 1995)
Design capacity (each of 2 Plants)	19.3 MT Na/plant/day	Calculated based on 20 wt% sodium oxide loading
	130 MT glass/plant/day	Preliminary Phase II input from (Holbrook 1995)
total net rate for combined plants	195 MT glass/day	calculated using plant efficiency and 2 plants

LAW = Low-activity waste

Table 3-10b. Phase II Assumptions for HLW Glass Plant.

Assumption	Value	Comment
Start Date	10/1/2011	(Penwell 1996),(Bader 1995)
Design Capacity (waste oxide exclusive of Na and Si)	3 MT waste oxides/day	Calculated based upon waste oxide loading
(assuming 25 wt% waste oxide exclusive of Na and Si)	12 MT glass/day	Preliminary Phase II input from (Holbrook 1995)
Net Rate	9 MT glass/day	calculated using plant efficiency

HLW = High-level waste

3.6 WASTE COMPATIBILITY

Some of the waste transfer and storage compatibility rules identified in the waste transfer procedures were incorporated into the model. Presently, the inventory *radionuclide* values for Inventory E (Agnew 1994) are not fully established on an individual tank basis. Therefore, the compatibility rules were not dynamically imposed on the model, but were built in to the initial conditions and the initial DST feed staging. Future simulation work using a more realistic radionuclide inventory will allow transfer logic to be based on storage compatibility rules.

3.7 TANK INVENTORY

Tank-by-tank inventory estimates for DSTs are derived primarily from analytical data as well as secondary information taken from process knowledge and fuel records (Agnew 1994). Sludge wash factors were obtained from the TWRS Process Flowsheet (Orme 1995).

The tank-by-tank inventory estimates for SSTs and DSTs used by the model are called Set E. However, the estimate was updated for projected transfers through 2002. In addition, the projected sludge consolidation and wash data as used by the Phase I High-Level Waste Pretreatment and Feed Staging Plan (Manuel 1996) was incorporated. A complete listing of the inventory is given in Appendix A.

4.0 MODEL ARCHITECTURE

4.1 OVERVIEW OF TWRS SIMAN RETRIEVAL MODEL

The mission of the SIMAN model is to simulate the dynamic behavior of the Tank Waste Remediation System baseline configuration over its entire life cycle. The three primary pieces of the TWRS architecture of concern to this verification and validation effort are the SST Waste Retrieval System, DST Waste System and Waste Processing (Washing) System.

The model is used to support two trade studies, Double-Shell Tank Utilization and Retrieval Schedule Selection. Model simulation results answer questions about optimal use of the double-shell tank resource and develop single-shell tank retrieval blending requirements. The model is also used to demonstrate that the TWRS baseline architecture satisfies the functional requirements. Also, simulation results are to be presented in multi-color animation to reach a diverse audience including the general public.

The model specification is provided on spread sheet "R & B ASSUMPTIONS FY-96," 96-ASSUM.XLS, printed June 28, 1996. The verification and validation (V&V) of the model shall be against this specification and follow the requirements of IEEE Std 1012-1986 (Reference 1). The V&V task shall verify that the products of each software life-cycle phase (1) comply with the requirements and products of the previous phase, (2) satisfy the standards, practices and conventions of the phase, and (3) establish the proper basis for initiating the next phase activities. Likewise, the V&V task shall validate that the completed end product complies with established software and system requirements.

4.2 RETRIEVAL MODEL MODULES

The retrieval model includes the following modules: Initialization, DST Retrieval, SST Retrieval, Settle/Decant (Sludge Wash), Cross-site Transfer, and South Quadrant SST Retrieval. Settle/Decant (S/D) is further divided into eight sub-modules. These are Retrieve Waste, Transfer First to Second Stage S/D, Transfer Second Stage S/D to Decant Storage Tanks, Transfer Wash Decant to Decant Storage Tanks, Transfer Wash Solids to Solid Storage Tanks, Transfer Stored Decant and Wash Liquids to Pretreatment, Pretreat Low Level Waste, and Feed High Level Waste Glass Plant (prepare feed batches). Each of these modules are discussed in the following sections.

INITIALIZATION

The primary purpose of the initialization module is to define the initial tank inventory for the 177 waste tanks. The radionuclide, liquid, solid, and volume inventories are loaded. The liquid and solid data are then written to inventory check files. Retrieval volumes are calculated to satisfy $5M$ sodium and 10 wt% solids constraints.

DST RETRIEVAL

At its scheduled start time, the DST retrieval module begins retrieval of a DST into a DST decant tank (staging tank for LLW vitrification feed). It then computes the transfer total volume, transfer rate, sodium molarity (add water as required for $5M$ sodium maximum in staging tanks), liquid volume, component masses and partial transfer duration (decant

tank received waste volume divided by transfer rate). When a decant tank is full, is initiates an 88 day sampling interval before releasing the tank's waste for LLW vitrification feed.

SST RETRIEVAL

For each SST at its scheduled start time, the SST retrieval module begins retrieval into a DST through a Waste Receiver Facility (WRF). It then compute the total transfer volume, transfer rate, sodium molarity (add water as required for $5M$ sodium maximum in staging tanks), liquid volume, solid volume, weight percent solids (add water as required for 10 wt% solids maximum), component masses and transfer duration (received waste volume divided by transfer rate). When a HLW vitrification feed tank is full, it initiates a to be determined (TBD) day (approximately 18 month) sampling interval before releasing the tank's waste for HLW vitrification.

SETTLE/DECANT–SOLID WASH OPERATION

This module selects a full stored retrieved waste tank and identifies an available first stage settle/decant (S/D) for waste transfer. It then estimates the volume and increase in volume of settled solid and checks solid mass and total mass against cut-off values. Retrieved waste is then transferred into first stage S/D tank. Volumes, component masses, and transfer durations are then computed. First stage S/D tanks are released when not in use for S/D function.

Solids are transferred from the first stage S/D tank to a second stage S/D tank. Transfer total volume, total volume increment, liquid volume, solid volume and transfer duration (total volume increment divided by rate increment) are then calculated. Second stage S/D tank decant is transferred to decant storage tanks.

CROSS-SITE TRANSFER

This module continuously looks for a full West Area DST. When found, it locates an available West Area SY-farm DST to continue retrieval of SST waste. It then finds an East Area DST to receive retrieved West Area SST waste. Waste transfer total volume, rate, liquid volume, solid volume and component masses are then calculated. Waste transfer is performed when East Area DST space is available. Continue transfer until entire transfer volume is received by a DST.

TRANSFERS FROM SOUTH QUADRANT SST RETRIEVAL

This module continuously looks for DST space to receive retrieved South Quadrant SST waste. It then initiates waste transfer when DST space is available. Waste transfer continues until entire transfer volume is received by a DST.

5.0 MODEL VERIFICATION AND VALIDATION

The model was verified and validated following a detailed test plan which underwent a peer review process. The plan is provided in Appendix B. The model was successfully verified and validated as shown in the results below. However, some recommendations are provided concerning certain design specifications. (see Section 5.3).

The model's six modules were verified individually and the integrated model was validated using test cases and another validated TWRS dynamic model coded in ithink©.† The modules tested were the Initialization, DST Retrieval, SST Retrieval, Settle/Decant (Sludge Wash), Cross-site Transfer, and South Quadrant SST Retrieval.

5.1 MODEL VERIFICATION

Inventory data, tank retrieval sequence information and output files for retrieval sequence Case 250 (Penwell 1996) were used for the module verification. This case represents the baseline assumptions of Section 3, with a SST retrieval sequence that satisfies the requirements referred to in the initial SST retrieval sequence work (Grenard 1996).

5.1.1 Initialization

The inventory data file was input to a spread sheet to verify that all the tanks are accounted for and that total solid and total liquid masses are correct, i.e. material balance was verified.

5.1.2 DST Retrieval

Retrieval water is added as DSTs are pumped and contents are routed to LLW glass plants. Retrieval from a DST may cause the five $5M$ sodium concentration limit to be reached. Water is added to assure the limit is not exceeded. Tank 241-AP-105 was selected because it is the only case where no additional DST wastes are blended to form the LLW feed batch. Also, the entire contents of 241-AP-105 go into this batch. Table 5-1 compares a hand calculated volume with the corresponding value calculated by the model.

Table 5-1. DST Tank 241-AP-105 Test Results.

PRODUCT OR DURATION	HAND CALCULATED	MODEL OUTPUT	RESULT
Dilute Retrieval Volume (Mgal)	1.103	1.10	pass
Duration (Days)	152 (minimum retrieval duration)	Controlled by demo glass plant rate which is much lower than retrieval rate.	Tank to LLW Contractor on day 150 for glass feed batch 1.

†ithink© is a registered trademark of High Performance Systems, Inc. of Hanover, New Hampshire.

5.1.3 SST Retrieval

At its scheduled start time, each SST's waste is retrieved into a DST through a Waste Receiver Facility (WRF) (except South Quadrant SSTs discussed in Section 5.1.6). The transfer total volume, transfer rate, sodium molarity (add water as required for $5M$ sodium maximum in staging tanks), liquid volume, solid volume, weight percent solids (add water as required for 10 wt% solids maximum), component masses and transfer duration (received waste volume divided by transfer rate) were calculated manually and compared against the model results. Tables 5-2 to 5-4 show the verification results for one high sodium limit and two high solids limit cases. SST retrieval is verified within the accuracy limits of the hand calculations (better than one half percent).

Table 5-2. SST Tank 241-BY-111 High Sodium Limit Test Results.

PRODUCT OR DURATION	HAND CALCULATED	MODEL OUTPUT	RESULT
Dilute Retrieval Volume (ML)	8.13	8.12	pass
Duration (Days)	303 (minimum)	351	Holdups caused duration to exceed calculated minimum (as expected).

Table 5-3. SST Tank 241-BX-101 High Solids Limit Test Results.

PRODUCT OR DURATION	HAND CALCULATED	MODEL OUTPUT	RESULT
Dilute Retrieval Volume (ML)	0.69	0.695	pass
Duration (Days)	25.2 (minimum)	52.4	Calculated minimum duration is based on 7.056 cubic meters/day (Boomer et al. 1993). Holdups lengthen retrieval duration (as expected).

Table 5-4. SST Tank BX-104 High Solids Limit Test Results.

PRODUCT OR DURATION	HAND CALCULATED	MODEL OUTPUT	RESULT
Dilute Retrieval Volume (ML)	0.445	0.443	pass
Duration (Days)	16.3	16.3	pass

5.1.4 Settle/Decant (Sludge Wash)

Typically the contents of several tanks are blended to form a batch of HLW glass plant feed. To verify proper separation (splits) of waste constituents by the sludge wash process, a batch was sought in which only one waste tank provided the feed. Batch 36 was found to contain only waste from Tank 241-SX-104 (file: CASE.250.hlv). Therefore, the masses of constituents in this batch were compared to the original inventories to determine the separations provided by the modeled sludge wash process. Table 5-5 provides results for the four mass constituents separated by sludge wash.

Table 5-5. Settle/Decant (Sludge Wash) Process Test Results.

PRODUCT	INVENTORY (insoluble mass kilograms)	MODEL OUTPUT (insoluble mass kilograms)	BACK CALCULATED WASH FACTOR (Note)	RESULT/ COMMENT
Mass SO_4^{-2}	157	13.2	0.0 (fraction to batch 36= 0.0841)	Used to compute fraction of SX-104 solids washed for batch 36. Model output is from file CASE.250.hlv
Mass Al^{+3}	27,400	2307	0.68	pass; Spec 0.68
Mass Cr^{+3}	1620	136	0.64	pass; Spec 0.64
Mass Na^{+}	4700	396	0.25	pass; Spec 0.25
Mass PO_4^{-3}	33.54	2.83	0.74	pass; Spec 0.74
Mass total solids	314,000	11,565	0.56	Specification is not applied to aggregate wash factor.

Note: Wash factors (F_w) are back calculated from HLW glass feed constituents using the following equation:

$$F_{w,i} = 1 - \frac{M_{B,i}}{f_B M_{I,i}}$$

where $M_{B,i}$ is mass of constituent i in glass feed batch B, $M_{I,i}$ is mass of constituent i in the tank's initial inventory, and f_B is fraction of solids entering sludge wash for this glass feed batch.

5.1.5 Cross-site Transfer

Table 5-6 presents the test results for evaluating the cross-site transfer.

Table 5-6. West Area Tank SY-102 to East Area Tank AW-104 Transfer.

TRANSFER RATE	SPECIFICATION	MODEL OUTPUT	RESULT/COMMENT
Total Transfer Volume	variable	725 Gal	Transfer was completed in 8 increments
Transfer duration	variable	2.5 days	Begin on day 2798, end on day 2801. Observable resolution of duration in data file about 0.2 day.
Rate	757 L/min = 280 kgal/day	290 kgal/day	pass (Specification from Technical Options Report)

5.1.6 South Quadrant SST Retrieval and Transfer

South Quadrant SST retrieval is similar to the SST Retrieval discussed in Section 5.1.3 except retrieved waste does not pass through a WRF. One SST from East Area and one from West Area were selected for verification since both East and West Areas have a WRF. Table 5-7 presents the results for West Area using data for Tank 241-U-106. Dilute retrieval/transfer volume was verified and transfer duration was verified to take longer than the minimum imposed by process capacities. Table 5-8 presents the results for East Area using data for Tank 241-C-102. Dilute retrieval/transfer volume was verified and transfer duration was verified to take longer than the minimum imposed by process capacities.

Table 5-7. South Quadrant West - SST Tank U-106 Transfer.

PRODUCT OR DURATION	HAND CALCULATED	MODEL OUTPUT	RESULT
Dilute Retrieval Volume (ML)	3.46	3.48	pass
Duration (Days)	126 (minimum)	511 (file: ret-info.out)	pass (Multiple delays lengthened transfer duration).

Table 5-8. South Quadrant West - SST Tank C-102 Transfer.

PRODUCT OR DURATION	HAND CALCULATED	MODEL OUTPUT	RESULT
Dilute Retrieval Volume (ML)	8.40	8.37	pass
Duration (Days)	308 (minimum)	1136 (file: ret-info.out)	pass (Multiple delays lengthened transfer duration).

5.2 INTEGRATED MODEL VALIDATION

Test cases were chosen having significantly different SST retrieval sequences. Test Case 1 was the baseline case referred to in Section 5.1. Test Case 2 was SIMAN Case 241 (Penwell 1996) for which accelerated high-level and low-level processing rates for Phase II was assumed. Details of the sequences are provided below.

5.2.1 Validation Test Case 1

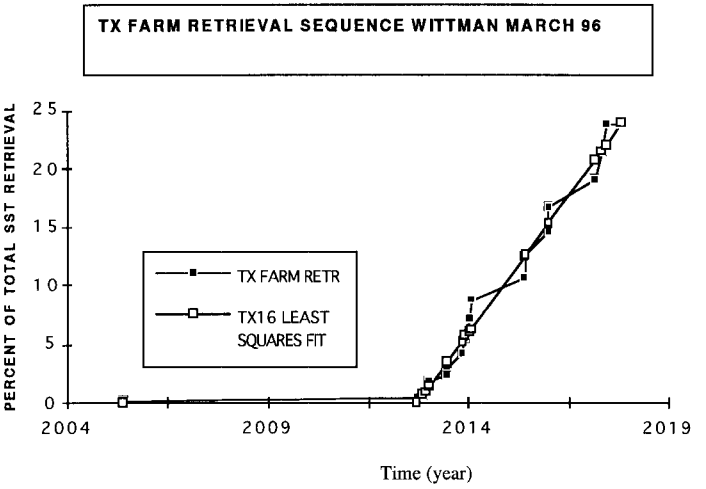
Summary

In Test Case 1, both models determined that the Tri-Party Agreement milestones could be met with in-tank sludge wash and within the capacity constraints of the existing DSTs.

Discussion

The SST retrieval sequence for Test Case 1 is characterized by a relatively low early SST retrieval rate followed by a moderate, nearly constant retrieval rate from 2011 to retrieval completion. Figure 5-1 shows the TX Farm (salt cake) retrieval sequence. Figure 5-2 shows the dilute retrieval volume versus time for all SSTs. Note that the ithink© model appears to start slower and then move ahead of the SIMAN model. Actually, the waste retrieval rate (pre-dilution) is the same but retrieval volumes differ due to differing methods of calculating water addition for retrieval. The ithink© model applies retrieval water equal to nearly five times the retrieved waste volume for the TX farm, salt cake rich tanks to achieve $4.9M$ sodium after retrieval. For the sludge, about two parts water are added for each part retrieved. The model uses a 10 wt% solids limit in calculating water addition for individual tanks.

Figure 5-1. TX Farm Retrieval (Test Case 1).



The DST utilization results are presented in Figure 5-3. The zero surplus condition occurs in 2017 just as retrieval is completing. Using water recycle, no fresh water addition is required as long as a 20 Mgal recycle water storage capacity is available (see Figure 5-4). This capacity may be shared with liquid effluent treatment facility input staging (LERF). Earlier sequences in which TX farm (salt cake) tanks were retrieved first required approximately 50 Mgal of fresh water addition.

Figure 5-2. SST Dilute Retrieval Volume Versus Time(Test Case 1).

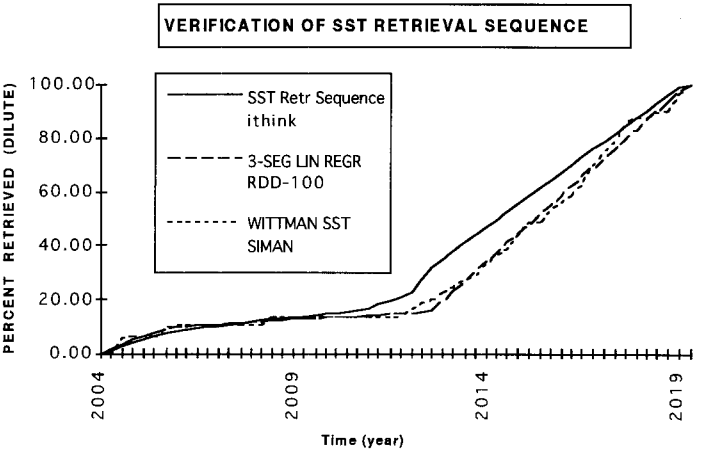


Figure 5-3. Test Case 1 Tank Space Deficit & Surplus.

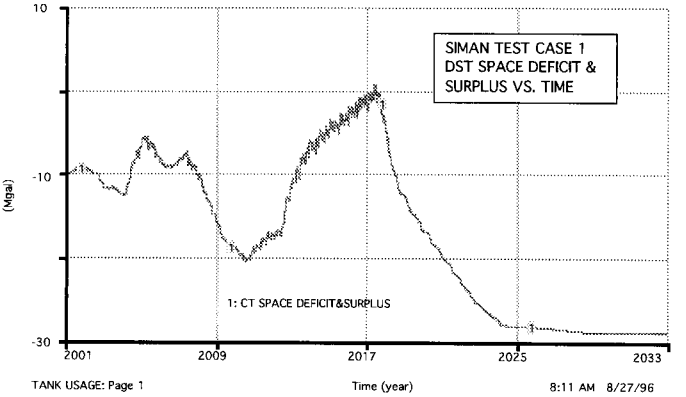
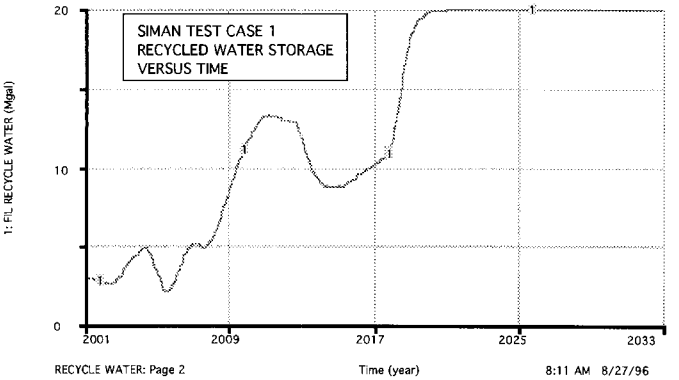


Figure 5-4 shows the status of the recycle water storage facility. With this retrieval sequence and the use of water recycle, no fresh water addition is required.

Figure 5-4 Test Case 1 Recycled Water Storage.



5.2.2 Validation Test Case 2

Summary

In Test Case 2, both models determined that the TPA milestones could not be met with in-tank sludge wash with the aggressive SST retrieval rate at the end of the sequence. The problem was solved in the model by increasing the sludge wash rate to simulate out-of-tank sludge wash. The ithink© model made a similar capacity adjustment, as discussed further below, to complete the run within the DST constraints. Although different adjustment methods were used, both models demonstrated that the TPA milestones could be met with this retrieval sequence and the existing DST capacity by appropriately increasing system throughput capacity.

Discussion

The SST retrieval sequence for Test Case 2 is characterized by an even lower early SST retrieval rate, an extremely high retrieval burst rate in 2013, and an aggressive rate over the final three and one half years of retrieval. The TX 16 (salt cake) farm retrieval is shown in Figure 5-5. The three segment, least squares linear approximation is used in the ithink© model. The remaining SSTs salt cake/sludge (SC/SL) are retrieved as shown in Figure 5-6. The five segment, least squares linear approximation is used in the ithink© model.

Figure 5-5. TX Farm Retrieval (Test Case 2).

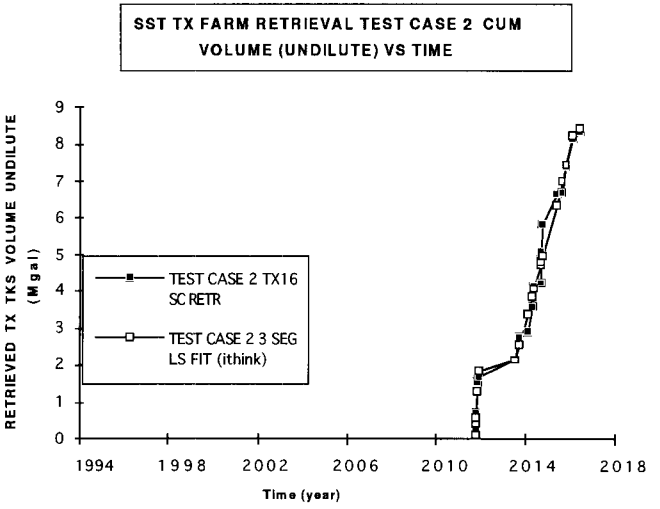
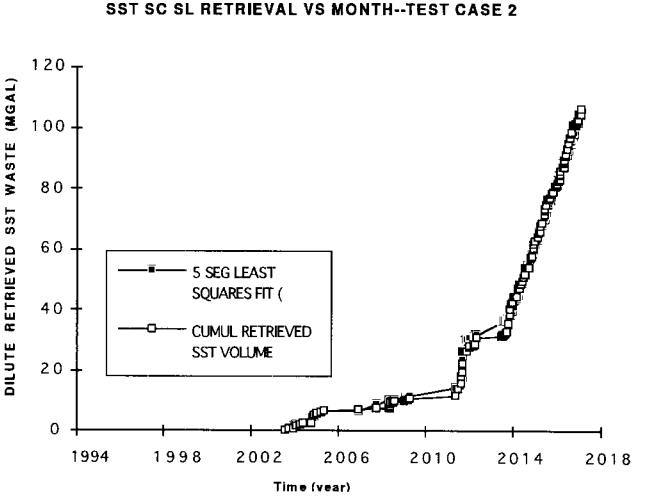
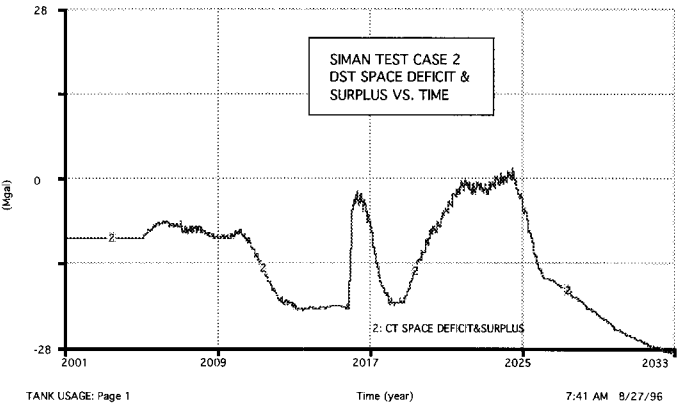


Figure 5-6. SST Salt Cake/Sludge (other SSTs) Retrieval (Test Case 2).



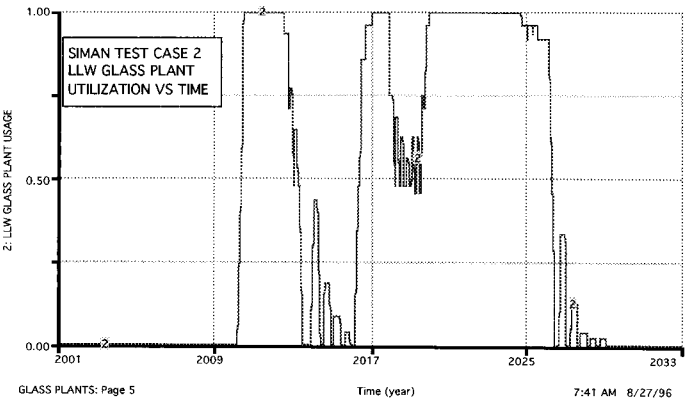
With this retrieval sequence, the ithink® model indicated that a DST deficit occurred in 2016 making the TPA milestone impossible to be met.

Figure 5-7. Test Case 2 Tank Space Deficit & Surplus (Gallons Vs. Time).



The SC SL retrieval rate for the final segment was reduced by twenty percent. The run then completed without exceeding the available DST capacity as shown in Figure 5-7.

Figure 5-8. Test Case 2 Glass Plant Usage.



Note that the DST surplus hovers between zero and one for several years beginning 2017 qualifying this as "non-robust" system operation. The overall TPA completion milestone was met although retrieval ended 14 months late. With twenty-five percent higher system throughput capacity during the final three years of SST retrieval, the retrieval milestone would be met as well. The SIMAN version of this output is presented in Table 5-9. SIMAN provides activities of individual DSTs while ithink© shows aggregate operations.

Table 5-9. SIMAN Case 2 Output.

SIMAN V - License #8900000
Systems Modeling Corporation

Summary for Replication 1 of 1

Project: Run execution date : 6/28/1996
Analyst: Model revision date: 6/28/1996

Replication ended at time : 18000.0

DISCRETE-CHANGE variableS

Identifier	Average	Variation	Minimum	Maximum	Final Value
Vol in Tank 101A	297.36	1.4602	1.098E-2	972.89	1.098E-2
Vol to Pretrt kga	1.5616E+5	.58862	.00000	2.2206E+5	2.2206E+5
mass to PT kg	7.1314E+8	.58700	.00000	1.0135E+9	1.0135E+9
Imass to PT kg	.00000	--	.00000	.00000	.00000
mass Na kg Dem	1.1263E+6	2.4954	.00000	1.0432E+7	.00000
mass Na PT kg	5.4064E+7	.58098	.00000	7.6684E+7	7.6684E+7
Mass of NonNa Si Ox	4.5528E+6	.63452	.00000	6.7072E+6	6.7072E+6
mass to HLG kg	8.8702E+7	.65678	.00000	1.3206E+8	1.3206E+8
Imass to HLG kg	9.3904E+6	.64595	.00000	1.3908E+7	1.3908E+7
mass Na HLG kg	6.1959E+5	.59598	.00000	8.9879E+5	8.9879E+5
Wash water kgal	44759.	.61673	.00000	64509.	64509.
Tot no of Washes	803.99	.65317	.00000	1184.0	1184.0
Tot Liq Retr kgal	94855.	.62820	.00000	1.3752E+5	1.3752E+5
Tot Sol Retr kgal	1021.1	.59224	.00000	1452.9	1452.9
Tot Retr kgal	95876.	.62781	.00000	1.3897E+5	1.3897E+5
Vol of 1	352.14	1.3392	.00000	1102.0	.00000
Vol of Set Sol 1	57.083	2.3083	.00000	370.35	.00000
Vol of Set Sol 2	56.590	2.0997	.00000	363.20	.00000
Vol of Set Sol 3	42.442	2.3981	.00000	368.04	.00000
Vol of Set Sol 4	37.230	2.3904	.00000	359.24	.00000
Vol of Set Sol 5	13.858	3.8780	.00000	355.11	.00000
Vol of Set Sol 6	26.693	3.0097	.00000	368.09	.00000
Vol of Set Sol 7	26.153	2.9451	.00000	41.58	.00000
Vol of Set Sol 8	3.7514	2.6459	1.690E-3	42.994	.00000
Vol of Set Sol 9	3.8509	2.6986	5.128E-4	39.721	.00000
Vol of Set Sol 10	3.4846	2.7824	3.617E-5	37.147	.00000
Vol of Set Sol 11	3.3720	2.7965	4.683E-4	38.671	.00000
Vol of Set Sol 12	3.7238	2.5765	3.273E-4	37.095	.00000
Vol of Set Sol 13	3.5381	2.7400	9.366E-5	36.920	.00000
Vol of Set Sol 14	.42852	9.0727	.00000	41.383	.00000
Vol of Set Sol 15	.16058	12.034	.00000	26.811	.00000
Vol of Set Sol 16	5.6351	10.689	.00000	674.86	.00000
Vol of Set Sol 17	.00000	--	.00000	.00000	.00000
Vol of Set Sol 18	.00000	--	.00000	.00000	.00000
DST utilization	11.020	.81773	4.0000	27.000	4.0000
LLV Plants OP	.34679	2.1807	.00000	2.0000	.00000

Execution time: 13.88 minutes.
Simulation run complete.

The SIMAN model reveals that tank space allocated to sludge storage is insufficient until Phase II HLW vitrification starts. As seen in Figure 5-8, the LLW glass plant is starved for feed during a significant portion of its operating life cycle. This inefficiency problem is not fixed by adjusting system capacities or throughputs but changing the feed source.

5.3 RECOMMENDATIONS

The following recommendations are presented for consideration to improve the model's accuracy and usefulness. The assumptions are actually part of the model's specification.

a. Determine model sensitivity to assumption that solids density is equal to 3.0 Kg/liter.
b. Determine model sensitivity to assumption that liquid volume is estimated by Eq. (2) of Section 3.1.
c. Model sensitivity to assumption that tank retrieval duration is proportional to dilute retrieval volume for all waste tank sizes and all waste types (same proportionality constant).
d. Make simple model modifications to track system recycle water and fresh water addition requirements over the operational life cycle. Since up to 500 million gallons may be recycled and storage capacity for recycle liquid is limited, this feature could significantly enhance the utility of the model.

6.0 REFERENCES

Agnew, S., 1994, *Hanford Defined Waste: Chemical and Radionuclide Compositions*, LAUR-94-2657, Rev. 0, LANL, Los Alamos, New Mexico.

Andersen, J. A., 1994, *Project W-314C Transfer System Upgrades Engineering Study*, WHC-SD-W314C-ES-001, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

Bader, C. P., 1995, *Tank Waste Remediation System (TWRS) Guidance for Update of the Multi-Year Program Plan (MYPP) - Supplemental Guidance for the Disposal Program*, 95-PRI-073, U. S. Department of Energy, Richland Operations Office, Richland, Washington.

Boomer, K. D., S. K. Baker, A. L. Boldt, J. D. Galbraith, J. S. Garfield, C. E. Golberg, B. A. Higley, L. J. Johnson, M. J. Kupfer, R. M. Marusich, R. J. Parazin, A. N. Praga, G. W. Reddick, J. A. Reddick, E. J. Slaathaug, L. M. Swanson, T. L. Waldo, and C. E. Worcester, 1993, *Tank Waste Technical Options Report*, WHC-EP-0616, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

Boomer, K. D., J. M. Colby, T. W. Crawford, J. S. Garfield, J. D. Galbraith, C. E. Golberg, C. E. Leach, D. E. Mitchell, F. D. Nankani, E. J. Slaathaug, L. M. Swanson, T. L. Waldo, and C. M. Winkler, 1994, *Tank Waste Remediation System Facility Configuration Study*, WHC-ED-WM-ES-295, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

Certa, P. J., *Preliminary Low-Level Waste Feed Staging Plan*, WHC-SD-WM-210, Rev. 0, February 1996, Westinghouse Hanford Company, Richland, Washington.

DOE/RL, 1996a, *TWRS Privatization Request for Proposals*, Solicitation Number DE-RP06-96RL13308, February 1996, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL, 1996b, *Amendment of Solicitation/Modification of Contract*, Tanks Waste Remediation System (TWRS) Privatization Amendment 001 to Solicitation Number DE-RP06-96RL13308, March 1996, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

DOE/RL, 1996c, *Amendment of Solicitation/Modification of Contract*, Tanks Waste Remediation System (TWRS) Privatization Amendment 002 to Solicitation Number DE-RP06-96RL13308, April 1996, U.S. Department of Energy, Richland Operations Office, Richland, Washington.

Ecology, EPA, and DOE, 1994, *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.

Grenard, C. E., 1996, *Initial Single-Shell Tank Retrieval System – Tank Selection*, WHC-SD-WM-ES-367, Rev. 0, draft, March 1996, Westinghouse Hanford Company, Richland, Washington.

Hanlon, B. M., 1996, *Waste Tank Summary Report for Month Ending May 31, 1996*, WHC-EP-0182-98, Westinghouse Hanford Company, Richland, Washington.

Holbrook, J.H., 1995, Preliminary Phase II assumptions as provided by the Contract Support Team in November 1995.

Hrma, P. R., G. F. Piepel, M. J. Schweiger, et al., 1994, *Property/Composition Relationships for Hanford High-Level Waste Glasses Melting at 1150C*, PNL-10359, Volume 2, December 1994, Pacific Northwest Laboratory, Richland, Washington.

Manuel, A. F., *Phase I High-Level Waste Pretreatment and Feed Staging Plan*, WHC-SD-WM-ES-370, Rev. 0, February 1996, Westinghouse Hanford Company, Richland, Washington.

Orme, R. M., 1994, *TWRS Process Flowsheet*, WHC-SD-WM-TI-613, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

Orme, R. M., 1995, *TWRS Process Flowsheet*, WHC-SD-WM-TI-613, Rev. 1, Westinghouse Hanford Company, Richland, Washington.

Penwell, D. L., C. E. Grenard, and R. S. Wittman, *Initial Retrieval Sequence and Blending Strategy*, WHC-SD-WM-RPT-229, Rev. 0, August 1996, Westinghouse Hanford Company, Richland, Washington.

Raytheon/BNFL, 1994, *Initial Pretreatment Module Trade Studies: In-Tank Radionuclide Separation*, E/B-SD-W236B-RPT-018, Rev. 0, Raytheon/BNFL.

Raytheon/BNFL, 1994, *Initial Pretreatment Module Trade Studies: Sludge Washing*, E/B-SD-W236B-RPT-021, Rev. 0, Raytheon/BNFL.

Shade, J. W., J. M. Conner, D. W. Hendrickson, W. J. Powell, and R. A. Watrous, 1995, *Preliminary Low-Level Waste Feed Definition Guidance, Low-Level Waste Pretreatment Interface*, WHC-SD-WM-RD-052, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

Slaathaug, E. J., A. L. Boldt, K. D. Boomer, J. D. Galbraith, C. E. Leach, and T. L. Waldo, 1996, *Tank Waste Remediation System Optimized Processing Strategy*, WHC-SD-WM-TI-694, Rev. 0 Westinghouse Hanford Company, Richland, Washington.

Strode, J. N., 1995, *Operational Waste Volume Projection*, WHC-SD-WM-ER-029, Rev. 21, Westinghouse Hanford Company, Richland, Washington.

APPENDIX A
TANK INVENTORY INITIAL CONDITIONS

This section summarizes the steps taken to update Tank Waste Inventory E to the simulation start date of 1-1-2000. The major activities that define those steps are (Strode, 1995):

- Single-Shell Tank Stabilization (Salt-well Pumping),
- Waste Consolidation and
- C-106 Sludge Wash Demonstration.

A major addition to the DSTs is the ≈22,000 kL of supernatant from the SSTs to complete SST stabilization (Hanlon, 1996). Segregation of complexed from non-complexed waste is built into the initial conditions by transferring 12,600 kL of non-complexed SST liquid to AP-101, AP-106, AW-104 and AN-101 as Double-Shell Slurry Feed (DSSF), while 9400 kL of SST liquid with complexant is transferred to AN-106, AP-105 and AP-107 as Complexed Concentrate (CC). A summary of the transfer steps applied to evolve the inventory is given in Table A-0.

Table A-0. Summary of Tank Inventory Update Steps.

Waste Type	Source	Destination	Comments
Transuranic	SY-102	AW-103	Make SY-102 available for cross site transfers
DSSF	SST SWL	AN-101	Top-Off with SST DSSF Salt-well liquid
CC	AY-101	AN-106	Top-Off with AY-101 liquid & SST CC Salt-well liquid
DSSF	AP-105	AP-101	From AP-105 & Top-Off with DSSF Salt-well liquid
DSSF	AP-104		Conc. to $5M$ Na & Transfer to any of DSSF Receiver Tanks
CC	SST SWL	AP-105	to $5M$ Na & Top-Off with SST CC Salt-well liquid
DSSF	SST SWL	AP-106	Top-Off with SST CC Salt-well liquid adjusted to $5M$ Na
DSSF	AP-107		Conc. to $5M$ Na & Transfer to any of DSSF Receiver Tanks (AP-107 become Vendor returns tank
DSSF	AP-108		Conc. to $5M$ Na & Transfer to any of DSSF Receiver Tanks
	AZ-101	AY-101	Transfer supernatants only
	AZ-102	AP-108	Transfer supernatants only
	C-106	AZ-101	Washed C-106 Solids

Tables A-1 through A-18 show the full tank inventory used in the simulation. Finally, a listing of the FORTRAN program used to update the inventory is provided.

Table A-1a. Revised Tank Inventory for Liquid Phase Constituents (A,AX)

		Mass (kg)									
	Chemical	101A	102A	103A	104A	105A	106A	101AX	102AX	103AX	104AX
1.	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
2.	AL(OH)4-	8.97E+04	3.01E+03	2.81E+04	0.00E+00	0.00E+00	2.97E+03	6.47E+04	2.67E+03	6.06E+03	0.00E+00
3.	AL+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	3.01E+02	1.08E+01	9.45E+01	0.00E+00	0.00E+00	2.36E+01	2.21E+02	8.19E+00	2.55E+01	0.00E+00
10.	CA+2	1.27E+02	4.52E+00	6.09E+01	2.69E-01	1.84E-01	1.05E+01	1.06E+02	5.13E+00	1.65E+01	6.78E-02
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	0.00E+00	1.52E+01	5.61E-01	9.32E-24	1.06E-05	3.29E-08	8.74E-11	4.67E-22	1.77E+00	1.85E-02
14.	CL-	1.76E+04	6.56E+02	6.42E+03	7.03E+01	5.99E+00	1.69E+03	1.35E+04	5.51E+02	1.73E+03	2.21E+00
15.	CM+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
16.	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
17.	CO3-2	5.19E+04	1.97E+03	1.79E+04	4.16E+02	2.83E+02	5.51E+03	3.92E+04	2.05E+03	5.02E+03	1.05E+02
18.	CR(OH)4-	4.87E+03	1.75E+02	1.48E+03	5.78E+00	3.58E-01	3.87E+02	3.55E+03	1.30E+02	4.00E+02	1.32E-01
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	1.51E+04	5.41E+02	4.85E+03	0.00E+00	0.00E+00	1.18E+03	1.11E+04	4.18E+02	1.31E+03	0.00E+00
24.	FE+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
25.	FE+3	3.54E+02	1.35E+01	1.67E+02	1.55E+01	3.88E+01	4.95E+01	3.09E+02	2.94E+01	7.34E+01	1.43E+01
26.	FECN6-3	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
27.	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
28.	H2O	1.34E+07	4.93E+05	5.04E+06	1.58E+05	2.82E+05	1.26E+06	1.05E+07	4.22E+05	1.51E+06	1.04E+05
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	2.87E+03	1.03E+02	9.37E+02	0.00E+00	0.00E+00	2.26E+02	2.13E+03	8.04E+01	2.53E+02	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+4	4.74E+01	1.70E+00	1.69E+01	0.00E+00	0.00E+00	3.74E+00	3.60E+01	1.42E+00	4.56E+00	0.00E+00
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	1.68E+06	6.17E+04	6.38E+05	1.77E+04	3.13E+04	1.57E+05	1.31E+06	5.34E+04	1.89E+05	1.15E+04
40.	NB+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
41.	NI+3	7.85E+01	2.77E+00	3.76E+01	4.21E-01	2.85E-01	6.54E+00	6.52E+01	3.03E+00	1.03E+01	1.05E-01
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	3.19E+05	1.15E+04	1.01E+05	1.50E+00	3.09E+00	2.51E+04	2.34E+05	8.76E+03	2.73E+04	1.14E+00
44.	NO3-	2.35E+06	8.40E+04	1.01E+06	8.71E+03	5.87E+02	1.93E+05	1.88E+06	8.30E+04	2.69E+05	2.17E+02
45.	NP+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
46.	OH-	4.47E+05	1.91E+04	1.47E+05	1.04E+04	2.24E+04	6.77E+04	3.44E+05	1.23E+04	5.33E+04	8.26E+03
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	2.73E+02	9.81E+00	8.63E+01	0.00E+00	0.00E+00	2.14E+01	2.01E+02	7.48E+00	2.33E+01	0.00E+00
49.	PO4-3	4.77E+04	1.71E+03	1.50E+04	8.31E+01	0.00E+00	3.81E+03	3.50E+04	1.32E+03	4.05E+03	0.00E+00
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	5.06E+04	1.82E+03	2.44E+04	1.17E+02	8.18E+03	4.44E+03	4.63E+04	1.95E+03	1.26E+04	3.02E+03
61.	SR+2	2.36E-02	0.00E+00	0.00E+00	7.85E-03	1.57E-02	0.00E+00	8.27E-03	9.46E-03	1.16E-02	5.79E-03
62.	TC04-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TM+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
65.	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
66.	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
67.	TOC	3.68E+04	2.39E+03	1.16E+04	0.00E+00	0.00E+00	1.25E+04	2.82E+04	1.01E+03	3.24E+03	0.00E+00
68.	UO2+2	5.16E+02	1.62E+01	2.31E+02	1.88E+01	6.07E+02	3.66E+01	7.07E+02	1.80E+01	5.10E+02	2.24E+02
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	1.86E+07	6.81E+05	7.05E+06	1.95E+05	3.46E+05	1.73E+06	1.45E+07	5.90E+05	2.09E+06	1.27E+05
	Diluted Vol (ML)	14608.7	536.5	5547.8	153.9	272.2	1365.2	11391.3	464.3	1643.5	100.0
74.	C14 (Ci)	0.00E+00	7.51E+01	5.35E+00	1.28E+02	9.57E-01	1.04E-02	2.41E-02	3.13E-16	1.61E+00	1.49E+01
75.	Sr90 (Ci)	1.98E+04	5.01E+04	1.36E+02	2.61E+04	1.98E-04	3.36E-05	2.22E-08	1.00E-12	1.39E+02	6.48E+04
76.	Y90 (Ci)	1.98E+04	5.01E+04	1.36E+02	2.61E+04	1.98E-04	3.36E-05	2.22E-08	1.00E-12	1.39E+02	6.48E+04
77.	Tc99 (Ci)	0.00E+00	6.91E+01	2.07E+01	1.89E-17	3.11E+00	6.37E-08	5.41E-09	4.76E-16	3.96E+00	9.05E+00
78.	Cs137 (Ci)	0.00E+00	7.35E+04	4.80E+03	3.50E-14	8.79E+03	6.80E-05	7.21E-07	1.01E-12	4.22E+03	2.85E+04
79.	Ba137 (Ci)	0.00E+00	6.99E+04	4.56E+03	3.30E-14	8.35E+03	6.46E-05	6.85E-07	9.61E-13	4.01E+03	2.71E+04
80.	U235 (Ci)	3.09E-01	4.11E-02	5.80E-02	3.83E-03	6.61E-12	1.53E-01	5.38E-02	1.93E-03	1.13E-13	2.93E-04
81.	U238 (Ci)	7.30E+00	9.82E-01	1.33E+00	9.20E-02	2.64E-10	3.63E+00	1.09E+00	3.75E-02	3.28E-09	6.44E-03
82.	Np237 (Ci)	1.79E-04	3.77E-02	9.52E-04	2.78E-04	4.52E-03	6.35E-05	1.52E-07	3.13E-07	2.35E-03	2.97E-03
83.	Pu238 (Ci)	1.54E+00	2.60E-01	3.73E-01	2.91E-01	8.23E-06	8.65E-01	4.64E-01	1.69E-01	8.72E-06	4.01E-01
84.	Pu239 (Ci)	3.89E+01	5.38E+00	5.54E+00	9.08E+00	3.04E-08	1.83E+01	4.43E+00	2.07E+00	2.81E-07	4.88E+00
85.	Pu240 (Ci)	9.95E+00	1.36E+00	1.50E+00	2.46E+00	1.82E-07	4.87E+00	1.35E+00	6.29E-01	4.48E-07	1.41E+00
86.	Pu241 (Ci)	6.84E+01	8.84E+00	1.25E+01	1.79E+01	2.81E-08	3.60E+01	1.76E+01	8.72E+00	1.07E-06	1.58E+01
87.	Am241 (Ci)	5.88E+01	2.02E+02	3.38E+01	5.03E+01	7.69E-07	1.58E+01	3.26E-01	3.33E-01	1.27E+00	5.11E+00
88.	Cm244 (Ci)	0.00E+00	3.59E-02	2.73E-02	1.63E-22	2.78E-05	5.54E-12	3.76E-12	1.03E-20	4.36E-04	1.27E-03

Table A-1b. Revised Tank Inventory for Solid Phase Constituents (A,AX)

		Mass (kg)									
	Chemical	101A	102A	103A	104A	105A	106A	101AX	102AX	103AX	104AX
1.	AG+	0.00E+00	1.74E-06	4.96E-07	6.13E-25	1.10E-07	2.00E-15	7.00E-17	1.23E-23	8.99E-08	2.47E-07
2.	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
3.	AL+3	2.57E+02	8.64E+00	8.07E+01	0.00E+00	0.00E+00	8.53E+00	1.86E+02	6.51E+02	1.74E+01	0.00E+00
4.	AM+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
5.	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
6.	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
7.	BA+2	7.00E+01	9.76E+00	1.20E+01	1.87E+01	1.96E-01	3.80E+01	1.44E+01	1.92E+00	1.04E-02	2.80E+01
8.	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
9.	BI+3	3.04E+00	1.09E-01	9.54E-01	0.00E+00	0.00E+00	2.39E-01	2.23E+00	8.28E-02	2.57E-01	0.00E+00
10.	CA+2	1.12E+02	3.27E+01	6.01E+01	3.42E+02	2.33E+02	5.55E+02	1.98E+02	4.47E+02	1.79E+02	8.61E+01
11.	CANCRINITE	5.37E+04	5.08E+03	2.96E+04	0.00E+00	0.00E+00	6.44E+04	6.26E+04	1.98E+03	3.03E+04	0.00E+00
12.	CD+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
13.	CE+3	0.00E+00	1.51E+03	5.56E+01	9.22E-22	1.05E-03	3.26E-06	8.65E-09	4.63E-20	1.75E+02	1.83E+00
14.	CL-	1.78E+02	7.72E+00	6.52E+01	3.70E+00	3.15E-01	3.00E+01	1.37E+02	6.26E+00	1.77E+01	1.16E-01
15.	CM+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
16.	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
17.	CO3-2	5.32E+02	3.17E+01	1.85E+02	4.62E+01	3.15E+01	2.00E+02	4.23E+02	7.53E+01	7.19E+01	1.16E+01
18.	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
19.	CR+3	2.23E+01	7.66E-01	7.72E+00	1.14E+01	7.07E-01	1.03E+01	1.59E+01	1.38E+00	2.27E+00	2.61E-01
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	1.52E+02	5.47E+00	4.90E+01	0.00E+00	0.00E+00	1.20E+01	1.12E+02	4.22E+00	1.32E+01	0.00E+00
24.	FE+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
25.	FE+3	6.83E+02	1.19E+02	1.47E+02	1.53E+03	3.84E+03	2.17E+03	2.15E+03	1.62E+03	2.84E+03	1.42E+03
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	2.90E+01	1.04E+00	9.46E+00	0.00E+00	0.00E+00	2.28E+00	2.15E+01	8.12E-01	2.55E+00	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+4	9.34E+02	3.34E+01	3.34E+02	0.00E+00	0.00E+00	7.36E+01	7.09E+02	2.80E+01	8.99E+01	0.00E+00
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	6.79E+03	3.46E+02	2.63E+03	7.39E+02	1.30E+03	1.98E+03	5.96E+03	2.46E+02	1.60E+03	4.81E+02
40.	NB+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
41.	NI+3	1.14E+02	6.87E-01	6.22E+01	5.06E+02	3.42E+02	3.72E+02	1.97E+02	9.69E+01	2.55E+02	1.26E+02
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	8.22E+02	1.16E+02	0.00E+00	1.51E-02	3.12E-02	2.53E+02	2.37E+03	8.84E+01	2.75E+02	1.15E-02
44.	NO3-	2.38E+04	8.48E+02	9.15E+03	8.80E+01	5.93E+00	1.94E+03	1.90E+04	8.39E+02	2.71E+03	2.19E+00
45.	NP+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
46.	OH-	0.00E+00	6.26E+02	0.00E+00	3.95E+03	7.44E+03	3.01E+03	8.12E+02	2.75E+03	4.09E+03	2.75E+03
47.	P2O5.24WO2.44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	2.76E+00	9.91E-02	8.72E-01	0.00E+00	0.00E+00	2.17E-01	2.03E+00	1.66E-01	2.35E-01	0.00E+00
49.	PO4-3	4.81E+02	1.73E+01	1.66E+02	1.25E+02	0.00E+00	1.35E+02	3.54E+02	3.55E+01	4.09E+01	0.00E+00
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+4	0.00E+00	0.00E+00	0.00E+00	6.91E+02	5.80E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+02
58.	SM+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
59.	SN+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
60.	SO4-2	5.12E+02	1.88E+01	2.47E+02	2.38E+00	1.67E+02	4.92E+01	5.13E+02	2.01E+01	1.90E+02	6.17E+01
61.	SR+2	2.34E+00	0.00E+00	0.00E+00	7.78E-01	1.55E+00	0.00E+00	8.19E-01	9.36E-01	1.15E+00	5.73E-01
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	3.72E+02	1.34E+02	1.17E+02	0.00E+00	0.00E+00	1.12E+03	3.97E+02	1.16E+01	3.27E+01	0.00E+00
68.	UO2+2	1.08E+03	1.64E-01	2.34E+00	3.57E+02	1.15E+04	3.69E-01	6.09E+03	1.82E-01	8.51E+03	4.26E+03
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2.2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	9.06E+04	8.92E+03	4.30E+04	8.41E+03	2.54E+04	7.64E+04	1.02E+05	8.90E+03	5.14E+04	9.44E+03
	Vol (ML) spg=3	30.2	3.0	14.3	2.8	8.5	25.5	34.1	3.0	17.1	3.1
74.	C14 (Ci)	0.00E+00	7.58E-01	5.41E-02	1.30E+00	9.67E-03	1.05E-04	2.44E-04	3.17E-18	1.63E-02	1.50E-01
75.	Sr90 (Ci)	1.96E+06	4.96E+06	1.34E+04	2.59E+06	1.96E-02	3.32E-03	2.20E-06	9.94E-11	1.38E+04	6.41E+06
76.	Y90 (Ci)	1.96E+06	4.96E+06	1.34E+04	2.59E+06	1.96E-02	3.32E-03	2.20E-06	9.94E-11	1.38E+04	6.41E+06
77.	Tc99 (Ci)	0.00E+00	6.91E+01	2.07E+01	1.89E-17	3.11E+00	6.37E-08	5.41E-09	4.76E-16	3.96E+00	9.05E+00
78.	Cs137 (Ci)	0.00E+00	2.45E+04	1.60E+03	1.20E-14	2.93E+03	2.27E-05	2.40E-07	3.37E-13	1.41E+03	9.51E+03
79.	Ba137 (Ci)	0.00E+00	2.33E+04	1.52E+03	1.10E-14	2.78E+03	2.15E-05	2.28E-07	3.20E-13	1.34E+03	9.03E+03
80.	U235 (Ci)	3.36E-03	4.15E-04	5.86E-04	7.28E-02	1.26E-10	1.55E-03	1.25E-03	1.95E-05	5.50E-14	5.57E-03
81.	U238 (Ci)	7.94E-02	9.92E-03	1.34E-02	1.75E+00	5.01E-09	3.66E-02	2.52E-02	3.79E-04	1.61E-09	1.22E-01
82.	Np237 (Ci)	1.62E-03	3.40E-01	8.57E-03	2.50E-03	4.07E-02	5.72E-04	1.37E-06	2.82E-06	2.11E-02	2.67E-02
83.	Pu238 (Ci)	7.54E+01	1.28E+01	1.83E+01	1.43E+01	4.03E-04	4.24E+01	2.28E+01	8.27E+00	4.27E-04	1.97E+01
84.	Pu239 (Ci)	1.91E+03	2.63E+02	2.72E+02	4.45E+02	1.49E-06	8.97E+02	2.17E+02	1.02E+02	1.37E-05	2.39E+02
85.	Pu240 (Ci)	4.88E+02	6.68E+01	7.36E+01	1.21E+02	8.90E-06	2.38E+02	6.59E+01	3.08E+01	2.19E-05	6.91E+01
86.	Pu241 (Ci)	3.35E+03	4.33E+02	6.15E+02	8.79E+02	1.38E-06	1.76E+03	8.64E+02	4.27E+02	5.22E-05	7.73E+02
87.	Am241 (Ci)	5.29E+02	1.82E+03	3.04E+02	4.52E+02	6.92E-06	1.43E+02	2.93E+00	3.00E+00	1.14E+01	4.60E+01
88.	Cm244 (Ci)	0.00E+00	3.55E+00	2.70E+00	1.62E-20	2.75E-03	5.48E-10	3.72E-10	1.02E-18	4.32E-02	1.26E-01

Table A-2a. Revised Tank Inventory for Liquid Phase Constituents (B)

		Mass (kg)									
	Chemical	101B	102B	103B	104B	105B	106B	107B	108B	109B	110B
1.	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
2.	AL(OH)4-	9.16E+02	1.85E+02	0.00E+00	4.17E+03	2.29E+02	0.00E+00	6.91E+03	1.40E+03	2.56E+03	0.00E+00
3.	AL+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	1.42E+02	4.54E+01	1.06E+02	1.89E+02	5.37E+02	2.19E+02	4.74E+01	1.23E+02	1.59E+02	9.54E+01
10.	CA+2	3.16E+01	9.87E+00	2.30E+01	2.61E+01	1.14E+02	4.76E+01	5.81E-01	2.47E+01	3.46E+01	1.49E+00
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	2.36E-31	2.65E-01	9.10E-01	2.02E+01	1.50E+00	1.75E-01	9.21E+00	1.85E+00	1.06E+00	0.00E+00
14.	CL-	9.77E+02	2.37E+02	5.48E+02	1.16E+03	2.80E+03	1.13E+03	1.88E+03	6.47E+02	8.41E+02	8.61E+02
15.	CM+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
16.	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
17.	CO3-2	4.68E+03	1.08E+03	2.09E+03	3.55E+03	9.17E+03	3.73E+03	8.97E+02	2.12E+03	2.95E+03	2.30E+03
18.	CR(OH)4-	1.51E+02	4.86E+01	1.12E+02	1.65E+02	5.64E+02	2.32E+02	3.21E+01	1.27E+02	1.71E+02	4.73E+01
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	6.59E+03	2.11E+03	4.92E+03	1.54E+04	2.98E+04	1.02E+04	6.84E+03	6.68E+03	7.38E+03	1.23E+04
24.	FE+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
25.	FE+3	1.29E+02	2.80E+01	6.31E+01	1.46E+02	3.22E+02	1.30E+02	4.20E+01	7.58E+01	1.03E+02	1.18E+02
26.	FECN6-3	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
27.	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
28.	H2O	1.21E+06	3.57E+05	8.04E+05	2.42E+06	4.08E+06	1.62E+06	1.22E+06	1.08E+06	1.19E+06	1.82E+06
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+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
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	1.45E+05	4.26E+04	9.61E+04	2.80E+05	4.87E+05	1.94E+05	1.37E+05	1.28E+05	1.43E+05	2.08E+05
40.	NB+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
41.	NI+3	2.16E+01	6.11E+00	1.42E+01	1.69E+01	7.07E+01	2.93E+01	7.57E-01	1.53E+01	2.15E+01	2.17E+00
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	2.96E+03	9.72E+02	2.16E+03	5.21E+03	1.12E+04	4.48E+03	3.85E+03	3.12E+03	3.82E+03	3.25E-01
44.	NO3-	1.38E+05	3.87E+04	8.96E+04	1.72E+05	4.53E+05	1.85E+05	3.56E+04	1.03E+05	1.38E+05	1.27E+05
45.	NP+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
46.	OH-	3.68E+04	9.77E+03	2.11E+04	9.45E+04	1.06E+05	4.07E+04	5.98E+04	3.33E+04	2.93E+04	7.99E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	3.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
49.	PO4-3	4.70E+04	1.52E+04	3.51E+04	8.74E+04	1.80E+05	7.22E+04	4.01E+04	4.67E+04	5.24E+04	4.85E+04
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+4	0.00E+00	0.00E+00	3.70E+01	0.00E+00	0.00E+00	7.64E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
58.	SM+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
59.	SN+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
60.	SO4-2	7.26E+03	2.45E+03	5.22E+03	6.52E+03	2.43E+04	1.00E+04	9.55E+02	5.39E+03	7.28E+03	2.13E+03
61.	SR+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	1.65E-03
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	6.54E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
68.	UO2+2	2.34E+03	1.81E+02	1.72E+02	9.00E+00	2.70E+01	1.11E+01	3.85E+00	6.53E+00	1.55E+02	6.46E+01
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	3.89E+01	5.15E+00	0.00E+00	5.27E+01	1.09E+01	0.00E+00	0.00E+00
	Total	1.60E+06	4.70E+05	1.06E+06	3.09E+06	5.38E+06	2.14E+06	1.51E+06	1.41E+06	1.58E+06	2.30E+06
	Diluted Vol (ML)	1260.9	370.4	835.7	2434.8	4234.8	1687.0	1191.3	1113.0	1243.5	1808.7
74.	C14 (Ci)	8.52E-01	2.60E-01	6.20E-01	8.10E-02	2.02E+00	8.49E-02	2.41E+00	1.81E+00	1.27E+00	2.14E+01
75.	Sr90 (Ci)	3.92E-28	2.28E+00	6.84E+01	5.64E+01	8.47E+00	1.11E+00	1.67E+02	2.99E+02	3.89E+01	4.36E+02
76.	Y90 (Ci)	3.92E-28	2.28E+00	6.84E+01	5.64E+01	8.47E+00	1.11E+00	1.67E+02	2.99E+02	3.89E+01	4.36E+02
77.	Tc99 (Ci)	5.84E-29	2.86E-01	1.59E+00	5.57E-01	4.38E+00	2.07E-01	3.99E+00	8.36E+00	2.89E+00	9.27E+01
78.	Cs137 (Ci)	2.57E-26	6.03E+02	2.44E+03	1.14E+03	9.49E+03	4.29E+02	1.11E+04	7.77E+03	3.13E+03	1.56E+04
79.	Ba137 (Ci)	2.45E-26	5.73E+02	2.31E+03	1.08E+03	9.01E+03	4.08E+02	1.06E+04	7.38E+03	2.97E+03	1.48E+04
80.	U235 (Ci)	1.52E-01	9.73E-03	3.63E-02	3.72E-03	7.71E-03	1.21E-02	0.00E+00	3.61E-01	9.16E-02	1.62E-02
81.	U238 (Ci)	3.20E+00	2.05E-01	8.64E-01	8.36E-02	1.74E-01	2.73E-01	0.00E+00	8.31E+00	2.10E+00	3.61E-01
82.	Np237 (Ci)	1.89E-05	3.89E-04	1.89E-03	7.00E-04	5.47E-03	2.76E-04	6.86E-03	9.19E-03	3.23E-03	3.03E-03
83.	Pu238 (Ci)	6.35E-01	7.37E-02	9.79E-02	4.18E-03	4.52E-04	7.52E-05	1.61E-03	3.96E-04	2.52E-04	2.76E-01
84.	Pu239 (Ci)	8.72E+00	8.32E-01	2.85E+00	1.69E+00	1.69E-01	1.88E-02	6.67E-01	6.67E-02	7.40E-03	3.91E+00
85.	Pu240 (Ci)	2.55E+00	2.42E-01	8.26E-01	1.74E-01	1.74E-02	1.94E-03	5.63E-02	5.63E-03	6.28E-04	7.82E-01
86.	Pu241 (Ci)	3.91E+01	3.70E+00	7.18E+00	2.61E-01	2.61E-02	2.89E-03	6.11E-02	6.11E-03	6.80E-04	8.32E+00
87.	Am241 (Ci)	5.78E+00	5.47E-01	3.61E+00	2.56E-01	2.62E-03	1.48E-02	7.33E-02	3.28E-01	1.21E-01	8.20E+01
88.	Cm244 (Ci)	1.48E-32	1.13E-05	1.11E-04	3.22E-08	1.43E-06	9.59E-06	3.19E-05	6.95E-04	2.21E-04	1.02E-01

Table A-2b. Revised Tank Inventory for Solid Phase Constituents (B)

		Mass (kg)									
	Chemical	101B	102B	103B	104B	105B	106B	107B	108B	109B	110B
1.	AG+	1.01E-36	9.58E-09	4.80E-08	1.65E-08	1.51E-07	6.89E-09	1.42E-07	2.34E-07	8.28E-08	2.44E-06
2.	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
3.	AL+3	2.76E+03	4.64E+02	0.00E+00	1.33E+04	3.90E+02	0.00E+00	2.26E+04	4.19E+03	7.73E+03	0.00E+00
4.	AM+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
5.	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
6.	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
7.	BA+2	1.61E+01	1.23E+00	8.01E-01	1.16E-01	7.76E-01	6.62E-02	9.38E-01	7.00E-01	8.50E-01	1.65E+01
8.	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
9.	BI+3	1.43E+00	4.59E-01	1.07E+00	7.30E+03	9.33E+02	2.22E+00	4.69E+03	9.73E+02	1.61E+00	9.45E+03
10.	CA+2	1.03E+03	3.45E+01	2.37E+01	1.31E+03	2.10E+02	1.89E+01	7.39E+02	1.63E+02	2.20E+02	1.90E+03
11.	CANORINITE	3.83E+04	1.77E+03	2.07E+03	4.48E+04	2.56E+04	4.29E+03	2.23E+04	9.02E+03	6.17E+03	0.00E+00
12.	CD+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
13.	CE+3	2.33E-29	2.62E+01	9.00E+01	2.00E+03	1.48E+02	1.73E+01	9.11E+02	1.83E+02	1.05E+02	0.00E+00
14.	CL-	2.02E+01	2.53E+00	5.59E+00	3.58E+01	3.13E+01	1.14E+01	9.89E+01	9.11E+00	9.32E+00	4.53E+01
15.	CM+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
16.	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
17.	CO3-2	2.76E+02	4.25E+01	5.07E+01	1.96E+02	0.00E+00	3.77E+01	9.96E+01	4.01E+01	5.51E+01	0.00E+00
18.	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
19.	CR+3	1.78E+00	1.29E+00	1.21E+00	8.52E+01	1.33E+01	1.02E+00	6.34E+01	1.36E+01	5.40E+00	9.32E+01
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	6.66E+01	2.13E+01	4.97E+01	5.83E+02	3.15E+02	1.03E+02	3.60E+02	1.28E+02	7.46E+01	6.49E+02
24.	FE+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
25.	FE+3	4.46E+03	1.16E+02	4.93E+01	7.65E+03	9.69E+02	1.31E+00	4.16E+03	8.63E+02	8.70E+02	1.17E+04
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+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
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	1.58E+03	2.68E+02	4.74E+02	7.95E+03	2.85E+03	7.80E+02	5.71E+03	1.60E+03	6.76E+02	8.65E+03
40.	NB+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
41.	NI+3	3.16E+03	4.43E+01	2.22E+01	1.72E+03	2.34E+02	7.26E+00	9.09E+02	1.92E+02	3.19E+02	2.60E+03
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	2.99E+01	9.82E+00	2.19E+01	5.27E+01	0.00E+00	0.00E+00	3.89E+01	3.15E+01	3.66E+01	0.00E+00
44.	NO3-	1.39E+03	3.91E+02	9.05E+02	1.73E+03	0.00E+00	7.13E+02	3.60E+02	1.04E+03	1.39E+03	0.00E+00
45.	NP+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
46.	OH-	1.71E+04	1.21E+03	1.07E+03	8.14E+02	0.00E+00	0.00E+00	2.01E+04	3.01E+03	1.57E+04	0.00E+00
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	5.51E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
49.	PO4-3	9.06E+02	5.22E+02	7.23E+02	7.44E+04	1.12E+04	7.30E+02	6.02E+04	1.28E+04	5.29E+02	7.27E+04
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+4	0.00E+00	0.00E+00	4.24E-01	0.00E+00	0.00E+00	7.72E-01	0.00E+00	0.00E+00	0.00E+00	1.13E+03
58.	SM+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
59.	SN+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
60.	SO4-2	8.11E+01	2.85E+01	5.65E+01	7.84E+01	2.47E+02	1.01E+02	1.95E+01	5.65E+01	7.36E+01	4.34E+01
61.	SR+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	1.63E-01
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	7.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
68.	UO2+2	4.44E+04	3.39E+03	3.18E+03	6.01E+01	8.15E+00	1.12E-01	7.31E+01	1.52E+01	2.79E+03	1.23E+03
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	3.85E+03	5.10E+02	0.00E+00	5.21E+03	1.08E+03	0.00E+00	0.00E+00
	Total	1.16E+05	8.34E+03	7.83E+03	1.68E+05	4.37E+04	6.82E+03	1.49E+05	3.54E+04	3.68E+04	1.10E+05
	Vol (ML) spg=3	38.6	2.8	2.6	56.0	14.6	2.3	49.5	11.8	12.3	36.7
74.	C14 (Ci)	8.61E-03	2.63E-03	6.26E-03	8.19E-04	2.04E-02	8.57E-04	2.44E-02	1.83E-02	1.29E-02	2.16E-01
75.	Sr90 (Ci)	3.88E-26	2.26E+02	6.78E+03	5.58E+03	8.38E+02	1.10E+02	1.65E+04	2.96E+04	3.85E+03	4.32E+04
76.	Y90 (Ci)	3.88E-26	2.26E+02	6.78E+03	5.58E+03	8.38E+02	1.10E+02	1.65E+04	2.96E+04	3.85E+03	4.32E+04
77.	Tc99 (Ci)	5.84E-29	2.86E-01	1.59E+00	5.57E-01	4.38E+00	2.07E-01	3.99E+00	8.36E+00	2.89E+00	9.27E+01
78.	Cs137 (Ci)	8.56E-27	2.01E+02	8.12E+02	3.80E+02	3.16E+03	1.43E+02	3.70E+03	2.59E+03	1.04E+03	5.19E+03
79.	Ba137 (Ci)	8.15E-27	1.91E+02	7.71E+02	3.61E+02	3.00E+03	1.36E+02	3.52E+03	2.46E+03	9.92E+02	4.93E+03
80.	U235 (Ci)	1.93E-01	2.60E-02	4.54E-02	1.07E-02	7.73E-04	1.22E-04	8.64E-02	3.63E-03	9.25E-04	3.07E-01
81.	U238 (Ci)	4.07E+00	5.46E-01	1.08E+00	2.40E-01	1.74E-02	2.76E-03	1.97E+00	8.40E-02	2.12E-02	6.86E+00
82.	Np237 (Ci)	1.70E-04	3.50E-03	1.71E-02	6.30E-03	4.93E-02	2.48E-03	6.18E-02	8.27E-02	2.90E-02	2.73E-02
83.	Pu238 (Ci)	3.11E+01	3.61E+00	4.79E+00	2.05E-01	2.21E-02	3.68E-03	7.89E-02	1.94E-02	1.23E-02	1.35E+01
84.	Pu239 (Ci)	4.27E+02	4.08E+01	1.40E+02	8.30E+01	8.30E+00	9.22E-01	3.27E+01	3.27E+00	3.63E-01	1.92E+02
85.	Pu240 (Ci)	1.25E+02	1.19E+01	4.05E+01	8.54E+00	8.54E-01	9.48E-02	2.76E+00	2.76E-01	3.08E-02	3.83E+01
86.	Pu241 (Ci)	1.91E+03	1.81E+02	3.52E+02	1.28E+01	1.28E+00	1.42E-01	2.99E+00	2.99E-01	3.33E-02	4.07E+02
87.	Am241 (Ci)	5.20E+01	4.92E+00	3.25E+01	2.31E+00	2.35E-01	1.33E-01	6.59E-01	2.95E+00	1.09E+00	7.38E+02
88.	Cm244 (Ci)	1.47E-30	1.12E-03	1.10E-02	3.19E-06	1.42E-04	8.51E-04	3.16E-03	6.88E-02	2.18E-02	1.01E+01

Table A-3a. Revised Tank Inventory for Liquid Phase Constituents (B,BX)

		Mass (kg)									
	Chemical	111B	112B	201B	202B	203B	204B	101BX	102BX	103BX	104BX
1.	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
2.	AL(OH)4-	0.00E+00	6.35E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.37E+02	9.92E+02	1.59E+03	0.00E+00
3.	AL+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	8.77E+01	9.68E+00	1.06E+01	1.03E+01	1.90E+01	1.86E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10.	CA+2	1.55E+00	6.37E+00	2.73E-01	2.64E-01	4.88E-01	4.78E-01	3.08E-01	1.97E-01	3.07E-01	1.57E-01
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	3.62E-02	1.25E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E-20	7.71E+00	7.69E-18	4.48E-04
14.	CL-	7.96E+02	2.73E+02	1.12E+02	1.09E+02	2.01E+02	1.97E+02	1.13E+02	2.12E+01	3.33E+01	1.61E+01
15.	CM+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
16.	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
17.	CO3-2	2.39E+03	7.75E+02	4.21E+02	4.07E+02	7.52E+02	7.38E+02	3.46E+03	3.51E+03	5.43E+03	4.01E+03
18.	CR(OH)4-	4.37E+01	2.03E+02	6.18E+00	5.97E+00	1.10E+01	1.08E+01	3.52E+00	5.16E+00	8.03E+00	4.99E+00
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	1.13E+04	9.29E+02	8.71E+03	8.42E+03	1.56E+04	1.53E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
24.	FE+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
25.	FE+3	1.34E+02	2.39E+01	1.40E+01	1.36E+01	2.51E+01	2.46E+01	1.76E+01	9.10E+00	1.43E+01	6.72E+00
26.	FECN6-3	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
27.	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
28.	H2O	1.83E+06	3.52E+05	1.81E+05	1.75E+05	3.23E+05	3.17E+05	5.71E+05	4.79E+05	7.32E+05	4.32E+05
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	3.42E+01	2.39E+02	2.31E+02	4.27E+02	4.19E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32.	LA+3	0.00E+00	0.00E+00	1.63E+00	1.58E+00	2.92E+00	2.86E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33.	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
34.	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
35.	MN+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
36.	MN+4	0.00E+00	0.00E+00	3.19E-02	3.08E-02	5.69E-02	5.59E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	2.09E+05	4.46E+04	2.15E+04	2.08E+04	3.84E+04	3.77E+04	3.06E+04	2.86E+04	4.42E+04	3.23E+04
40.	NB+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
41.	NI+3	2.17E+00	4.05E+00	4.21E-01	4.07E-01	7.51E-01	7.37E-01	1.26E+00	2.82E-01	4.42E-01	2.13E-01
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	3.54E+00	3.84E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E+01	2.19E+02	3.51E+02	0.00E+00
44.	NO3-	1.17E+05	7.67E+04	2.12E+04	2.05E+04	3.79E+04	3.72E+04	9.65E+03	4.11E+03	6.45E+03	2.96E+03
45.	NP+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
46.	OH-	8.65E+04	7.38E+03	3.03E+03	2.93E+03	5.41E+03	5.31E+03	1.82E+04	1.69E+04	2.61E+04	1.98E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	7.06E-05	4.32E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
49.	PO4-3	4.46E+04	3.62E+03	7.72E+02	7.46E+02	1.38E+03	1.35E+03	2.41E+03	2.88E+03	4.45E+03	3.38E+03
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	6.80E+03	1.32E+03	1.29E+01	1.25E+01	2.30E+01	2.26E+01	3.73E+03	4.31E+03	6.66E+03	5.05E+03
61.	SR+2	1.08E-02	0.00E+00	3.11E+01	3.00E+01	5.55E+01	5.44E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	2.45E+00	1.64E+02	7.64E+02	7.39E+02	1.36E+03	1.34E+03	2.76E+02	0.00E+00	0.00E+00	0.00E+00
68.	UO2+2	4.18E+02	2.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.55E+03	2.01E+03	3.10E+03	2.29E+03
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	2.31E+06	4.93E+05	2.37E+05	2.30E+05	4.24E+05	4.16E+05	7.42E+05	5.43E+05	8.31E+05	5.02E+05
	Diluted Vol (ML)	1817.4	387.8	187.0	180.9	333.9	327.8	670.6	475.6	726.7	426.0
74.	C14 (Ci)	4.52E+02	1.40E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.25E+00	1.03E+02	1.61E+01	2.11E+02
75.	Sr90 (Ci)	8.03E-07	9.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.96E-18	8.90E+02	1.74E+03	1.31E+02
76.	Y90 (Ci)	8.03E-07	9.40E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.96E-18	8.90E+02	1.74E+03	1.31E+02
77.	Tc99 (Ci)	9.43E+02	6.37E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-17	1.99E+02	1.19E-16	1.02E+03
78.	Cs137 (Ci)	1.39E+05	5.71E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-15	6.43E+04	2.22E-13	1.54E+05
79.	Ba137 (Ci)	1.32E+05	5.42E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E-15	6.10E+04	2.11E-13	1.46E+05
80.	U235 (Ci)	9.38E-04	8.36E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.38E-03	9.67E-05	9.90E-05	1.73E-03
81.	U238 (Ci)	2.16E-02	1.92E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.56E-01	2.21E-03	2.10E-03	4.16E-02
82.	Np237 (Ci)	1.42E+00	6.86E-02	0.00E+00	1.50E-05	7.16E-08	7.16E-07	2.58E-05	1.05E-01	7.33E-10	1.13E+00
83.	Pu238 (Ci)	3.38E-03	2.75E-02	0.00E+00	6.73E-02	8.86E-05	8.86E-04	2.18E-01	2.00E-02	3.51E-03	3.20E-02
84.	Pu239 (Ci)	5.38E-01	5.59E-02	0.00E+00	3.11E+00	1.05E-02	1.05E-01	7.64E+00	4.31E-01	3.80E-06	1.00E+00
85.	Pu240 (Ci)	1.00E-01	1.03E-02	0.00E+00	8.64E-01	2.52E-03	2.52E-02	2.30E+00	1.47E-01	5.11E-06	2.90E-01
86.	Pu241 (Ci)	3.22E-01	3.25E-02	0.00E+00	6.31E+00	9.55E-03	9.55E-02	3.14E+01	2.19E+00	2.10E-05	2.47E+00
87.	Am241 (Ci)	2.48E-01	2.44E+00	0.00E+00	2.26E+00	6.71E-03	6.71E-02	6.14E+00	4.40E+01	9.60E-05	1.12E+00
88.	Cm244 (Ci)	7.95E-03	5.24E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.43E-21	2.47E-02	5.19E-22	1.08E-02

Table A-3b. Revised Tank Inventory for Solid Phase Constituents (B,BX)

		Mass (kg)										
	Chemical	111B	112B	201B	202B	203B	204B	101BX	102BX	103BX	104BX	
1.	AG+	3.20E-05	1.76E-06	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.49E-25	5.64E-06	3.82E-24	3.45E-05	
2.	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	
3.	AL+3	0.00E+00	1.82E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+03	3.24E+03	5.20E+03	0.00E+00	
4.	AM+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	
5.	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	
6.	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	
7.	BA+2	2.55E+00	6.74E+00	0.00E+00	1.12E-01	0.00E+00	0.00E+00	4.64E-01	1.31E+00	6.30E-01	3.36E+00	
8.	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	
9.	BI+3	8.69E+03	5.46E+02	1.05E+03	1.02E+03	1.88E+03	1.84E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
10.	CA+2	1.97E+03	1.11E+02	3.47E+02	3.35E+02	6.20E+02	6.08E+02	3.91E+02	2.50E+02	3.91E+02	2.00E+02	
11.	CANCRINITE	1.09E+03	4.98E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.43E+04	6.50E+01	1.00E+02	0.00E+00	
12.	CD+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	
13.	CE+3	3.59E+00	1.24E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-18	7.64E+02	7.61E-16	4.43E-02	
14.	CL-	4.19E+01	4.87E+00	5.92E+00	5.72E+00	1.06E+01	1.04E+01	5.97E+00	1.12E+00	1.75E+00	8.48E-01	
15.	CM+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	
16.	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	
17.	CO3-2	0.00E+00	0.00E+00	4.68E+01	4.52E+01	8.36E+01	8.20E+01	3.85E+02	3.90E+02	6.04E+02	4.45E+02	
18.	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	
19.	CR+3	8.62E+01	6.26E+00	1.22E+01	1.18E+01	2.17E+01	2.13E+01	6.95E+00	1.02E+01	1.58E+01	9.84E+00	
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
22.	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	
23.	F-	5.96E+02	3.97E+01	4.58E+02	4.43E+02	8.19E+02	8.03E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
24.	FE+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	
25.	FE+3	1.33E+04	6.51E+02	1.39E+03	1.34E+03	2.48E+03	2.44E+03	1.74E+03	9.01E+02	1.41E+03	6.65E+02	
26.	FECN6-3	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	
27.	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	
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
29.	HG+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	
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
31.	K+	0.00E+00	3.45E-01	1.53E+02	1.48E+02	2.73E+02	2.68E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
32.	LA+3	0.00E+00	0.00E+00	1.62E+02	1.56E+02	2.89E+02	2.83E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
33.	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	
34.	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	
35.	MN+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	
36.	MN+4	0.00E+00	0.00E+00	6.16E+03	5.95E+03	1.10E+04	1.08E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
38.	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	
39.	NA+	8.71E+03	6.12E+02	8.97E+02	8.67E+02	1.60E+03	1.57E+03	1.27E+03	1.19E+03	1.84E+03	1.35E+03	
40.	NB+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	
41.	NI+3	2.61E+03	1.49E+02	5.05E+02	4.88E+02	9.02E+02	8.85E+02	1.51E+03	3.39E+02	5.30E+02	2.56E+02	
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
43.	NO2-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-01	2.21E+00	3.55E+00	0.00E+00	
44.	NO3-	0.00E+00	0.00E+00	2.14E+02	2.07E+02	3.83E+02	3.76E+02	9.74E+01	4.15E+01	6.51E+01	2.99E+01	
45.	NP+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	
46.	OH-	0.00E+00	0.00E+00	2.99E+03	2.89E+03	5.34E+03	5.23E+03	9.47E+03	1.06E+04	1.63E+04	4.22E+03	
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
48.	PB+4	1.11E-03	4.36E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
49.	PO4-3	6.68E+04	4.21E+03	1.16E+03	1.12E+03	2.07E+03	2.03E+03	3.61E+03	4.32E+03	6.68E+03	5.07E+03	
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
51.	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	
52.	RE+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	
53.	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	
54.	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	
55.	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	
56.	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	
57.	SI+4	1.36E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.39E+00	
58.	SM+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	
59.	SN+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	
60.	SO4-2	1.39E+02	1.41E+01	2.63E-01	2.54E-01	4.70E-01	4.61E-01	7.60E+01	8.80E+01	1.36E+02	1.03E+02	
61.	SR+2	1.07E+00	0.00E+00	3.08E+03	2.97E+03	5.49E+03	5.39E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
63.	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	
64.	TH+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	
65.	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	
66.	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	
67.	TOC	2.72E-01	1.66E+00	8.49E+01	8.21E+01	1.52E+02	1.49E+02	3.07E+01	0.00E+00	0.00E+00	0.00E+00	
68.	UO2+2	7.95E+03	1.09E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E+04	3.81E+04	5.90E+04	4.34E+04	
69.	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	
70.	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	
71.	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	
72.	ZR+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	
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
	Total	1.13E+05	1.26E+04	1.87E+04	1.81E+04	3.34E+04	3.28E+04	8.25E+04	6.03E+04	9.23E+04	5.58E+04	
	Vol (ML) spg=3	37.8	4.2	6.2	6.0	11.1	10.9	27.5	20.1	30.8	18.6	
74.	C14 (Ci)	4.57E+00	1.41E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.29E-02	1.05E+00	1.63E-01	2.13E+00	
75.	Sr90 (Ci)	7.95E-05	9.30E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.88E-16	8.81E+04	1.72E+05	1.29E+04	
76.	Y90 (Ci)	7.95E-05	9.30E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.88E-16	8.81E+04	1.72E+05	1.29E+04	
77.	Tc99 (Ci)	9.43E+02	6.37E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E-17	1.99E+02	1.19E-16	1.02E+03	
78.	Cs137 (Ci)	4.63E+04	1.90E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.98E-16	2.14E+04	7.40E-14	5.12E+04	
79.	Ba137 (Ci)	4.40E+04	1.81E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.63E-16	2.03E+04	7.00E-14	4.86E+04	
80.	U235 (Ci)	1.78E-02	1.70E-02	0.00E+00	1.11E-01	1.85E-08	1.85E-07	1.40E-01	1.84E-03	1.88E-03	3.29E-02	
81.	U238 (Ci)	4.11E-01	3.91E-01	0.00E+00	2.68E+00	0.00E+00	0.00E+00	2.97E+00	4.20E-02	4.00E-02	7.90E-01	
82.	Np237 (Ci)	1.27E+01	6.18E-01	0.00E+00	1.35E-04	6.44E-07	6.44E-06	2.32E-04	9.45E-01	6.60E-09	1.02E+01	
83.	Pu238 (Ci)	1.66E-01	1.35E+00	0.00E+00	3.30E+00	4.34E-03	4.34E-02	1.07E+01	9.80E-01	1.72E-01	1.57E+00	
84.	Pu239 (Ci)	2.63E+01	2.74E+00	0.00E+00	1.53E+02	5.13E-01	5.13E+00	3.74E+02	2.11E+01	1.86E-04	4.92E+01	
85.	Pu240 (Ci)	4.92E+00	5.06E-01	0.00E+00	4.24E+01	1.23E-01	1.23E+00	1.13E+02	7.18E+00	2.50E-04	1.42E+01	
86.	Pu241 (Ci)	1.58E+01	1.60E+00	0.00E+00	3.09E+02	4.68E-01	4.68E+00	1.54E+03	1.07E+02	1.03E-03	1.21E+02	
87.	Am241 (Ci)	2.23E+00	2.19E+01	0.00E+00	2.03E+01	6.04E-02	6.04E-01	5.53E+01	3.96E+02	8.64E-04	1.01E+01	
88.	Cm244 (Ci)	7.87E-01	5.18E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E-19	2.44E+00	5.13E-20	1.07E+00	

Table A-4a. Revised Tank Inventory for Liquid Phase Constituents (BX,BY)

		Mass (kg)									
	Chemical	105BX	106BX	107BX	108BX	109BX	110BX	111BX	112BX	101BY	102BY
1.	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
2.	Al(OH)4-	0.00E+00	0.00E+00	1.45E+04	1.10E+03	6.74E+03	8.82E+03	1.11E+04	5.55E+03	1.89E+04	1.69E+04
3.	Al+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	0.00E+00	0.00E+00	9.94E+01	7.52E+00	4.62E+01	5.58E+01	5.60E+01	9.87E+01	9.10E+01	8.12E+01
10.	CA+2	1.76E-01	1.19E-01	1.22E+00	9.23E-02	1.09E+01	1.70E+01	7.07E+01	1.36E+01	1.37E+02	1.23E+02
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CO+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
13.	CE+3	6.33E+00	1.79E+02	3.23E+01	7.13E-02	4.73E-03	1.98E+01	2.03E+01	1.56E+01	2.61E+01	7.55E+00
14.	CL-	1.80E+01	1.22E+01	6.13E+02	4.64E+01	8.73E+03	8.61E+02	2.56E+03	5.48E+02	4.88E+03	4.36E+03
15.	CM+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
16.	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
17.	CO3-2	4.49E+03	3.03E+03	1.88E+03	1.42E+02	2.90E+04	2.53E+03	7.40E+03	1.75E+03	1.77E+04	1.43E+04
18.	CR(OH)4-	5.59E+00	3.77E+00	6.74E+01	5.10E+00	1.57E+02	5.54E+02	2.25E+03	9.00E+01	4.37E+03	3.90E+03
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	0.00E+00	0.00E+00	1.43E+04	1.09E+03	6.65E+03	7.05E+03	3.77E+03	8.31E+03	4.74E+03	4.23E+03
24.	FE+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
25.	FE+3	7.53E+00	5.08E+00	8.82E+01	6.67E+00	9.75E+02	8.53E+01	2.03E+02	6.96E+01	3.85E+02	3.41E+02
26.	FECN6-3	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
27.	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
28.	H2O	4.92E+05	5.45E+05	2.55E+06	1.93E+05	5.70E+06	1.83E+06	3.10E+06	1.42E+06	5.84E+06	5.12E+06
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.95E+01	3.84E+02	0.00E+00	7.47E+02	6.67E+02
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+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
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	3.62E+04	2.44E+04	2.87E+05	2.17E+04	6.97E+05	2.18E+05	4.03E+05	1.63E+05	7.62E+05	6.69E+05
40.	NB+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
41.	NI+3	2.39E-01	1.61E-01	1.59E+00	1.20E-01	1.62E+01	1.10E+01	4.42E+01	8.70E+00	8.59E+01	7.66E+01
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	0.00E+00	0.00E+00	8.08E+03	6.11E+02	3.75E+03	1.37E+04	4.38E+04	4.34E+03	8.38E+04	7.48E+04
44.	NO3-	3.32E+03	2.24E+03	7.47E+04	5.66E+03	8.76E+05	2.17E+05	7.91E+05	7.96E+04	1.53E+06	1.36E+06
45.	NP+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
46.	OH-	2.21E+04	1.50E+04	1.27E+05	9.62E+03	2.10E+05	6.09E+04	4.90E+04	5.98E+04	9.03E+04	7.34E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+01	4.85E+01	0.00E+00	9.43E+01	8.42E+01
49.	PO4-3	3.78E+03	2.56E+03	8.42E+04	6.37E+03	5.13E+04	4.02E+04	1.70E+04	5.22E+04	2.08E+04	1.74E+04
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	5.66E+03	3.82E+03	2.00E+03	1.52E+02	1.01E+05	4.16E+03	1.42E+04	3.54E+03	3.17E+04	2.65E+04
61.	SR+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
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.10E+02	1.98E+03	0.00E+00	3.93E+03	3.52E+03
68.	UO2+2	2.56E+03	1.73E+03	8.07E+00	6.11E-01	1.21E+03	6.27E+01	2.54E+02	6.15E+00	2.55E+03	1.44E+03
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	1.10E+02	8.36E+00	5.13E+01	4.99E+01	1.03E+01	4.24E+01	0.00E+00	0.00E+00
	Total	5.70E+05	5.98E+05	3.17E+06	2.40E+05	7.70E+06	2.41E+06	4.45E+06	1.80E+06	8.42E+06	7.39E+06
	Diluted Vol (ML)	484.7	540.4	2495.7	188.7	6060.9	1895.7	3504.3	1417.4	6626.1	5817.4
74.	C14 (Ci)	1.43E+02	3.92E+02	4.55E-02	1.47E-02	1.24E+00	2.21E+01	2.28E+01	5.93E-01	2.91E+01	8.44E+00
75.	Sr90 (Ci)	2.81E+04	1.15E+04	3.10E+02	3.39E+01	2.74E+03	1.53E+03	1.52E+03	3.11E+01	2.38E+03	9.76E+02
76.	Y90 (Ci)	2.81E+04	1.15E+04	3.10E+02	3.39E+01	2.74E+03	1.53E+03	1.52E+03	3.11E+01	2.38E+03	9.76E+02
77.	Tc99 (Ci)	4.79E+02	7.44E+02	1.64E+00	3.81E-02	1.40E+00	1.01E+02	1.04E+02	6.27E-01	1.33E+02	3.86E+01
78.	Cs137 (Ci)	3.66E+04	1.37E+06	3.36E+03	1.10E+02	3.80E+03	9.05E+04	9.30E+04	1.68E+03	1.19E+05	3.46E+04
79.	Ba137 (Ci)	3.48E+04	1.30E+06	3.20E+03	1.05E+02	3.61E+03	8.59E+04	8.84E+04	1.60E+03	1.13E+05	3.28E+04
80.	U235 (Ci)	9.79E-05	1.05E-04	0.00E+00	0.00E+00	9.10E-03	1.04E-02	4.34E-03	1.63E+00	6.03E-04	7.02E-03
81.	U238 (Ci)	2.31E-03	1.96E-03	0.00E+00	0.00E+00	2.14E-01	2.40E-01	9.98E-02	3.85E+01	1.39E-02	1.63E-01
82.	Np237 (Ci)	1.22E-01	4.89E-01	2.11E-03	6.24E-05	2.87E-03	1.09E-01	1.12E-01	1.22E-03	1.43E-01	4.15E-02
83.	Pu238 (Ci)	8.58E-03	6.40E-03	1.87E-03	2.19E-04	8.55E-03	2.25E-03	7.23E-04	2.37E-03	2.42E-03	3.57E-03
84.	Pu239 (Ci)	1.93E-05	2.20E-05	7.40E-01	7.40E-02	9.29E-01	2.85E-01	2.85E-02	1.88E-01	6.20E-04	6.34E-05
85.	Pu240 (Ci)	3.16E-04	3.15E-04	7.59E-02	7.59E-03	1.25E-01	3.98E-02	4.01E-03	4.06E-02	1.42E-04	2.76E-05
86.	Pu241 (Ci)	2.31E-05	4.51E-05	1.19E-01	1.19E-02	2.61E-01	8.07E-02	8.07E-03	1.38E-01	2.10E-04	2.89E-05
87.	Am241 (Ci)	2.26E+02	1.59E+02	1.82E-01	1.82E-02	1.57E+00	3.92E+00	3.94E+00	1.50E-01	5.03E+00	1.45E+00
88.	Cm244 (Ci)	1.03E-01	8.58E-02	1.12E-07	3.44E-07	9.81E-06	8.29E-03	8.53E-03	5.34E-06	1.09E-02	3.17E-03

Table A-4b. Revised Tank Inventory for Solid Phase Constituents (BX,BY)

		Mass (kg)									
	Chemical	105BX	106BX	107BX	108BX	109BX	110BX	111BX	112BX	101BY	102BY
1.	AG+	1.24E-05	4.27E-05	4.92E-08	1.33E-09	4.68E-08	2.78E-06	2.86E-06	2.14E-08	3.67E-06	1.06E-06
2.	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
3.	AL+3	0.00E+00	0.00E+00	4.74E+04	3.58E+03	2.20E+04	2.14E+04	4.44E+03	1.79E+04	5.42E+01	4.84E+01
4.	AM+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
5.	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
6.	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
7.	BA+2	1.57E+00	1.63E+01	4.12E-01	2.47E-01	1.65E+00	1.58E+00	1.41E+00	2.36E-01	4.23E+00	1.40E+00
8.	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
9.	BI+3	0.00E+00	0.00E+00	9.84E+03	7.45E+02	4.57E+03	4.45E+03	9.18E+02	3.78E+03	9.19E-01	8.21E-01
10.	CA+2	2.24E+02	1.51E+02	1.55E+03	1.17E+02	1.39E+04	7.07E+02	1.73E+02	6.00E+02	2.35E+02	1.36E+02
11.	CANORINITE	0.00E+00	0.00E+00	4.67E+04	3.54E+03	2.17E+04	2.53E+04	2.21E+04	2.03E+04	3.47E+04	3.09E+04
12.	CD+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
13.	CE+3	6.27E+02	1.77E+04	3.20E+03	7.06E+00	4.68E-01	1.96E+03	2.01E+03	1.55E+03	2.58E+03	7.47E+02
14.	CL-	9.49E-01	6.41E-01	3.23E+01	2.44E+00	4.60E+02	2.05E+01	2.83E+01	1.55E+01	5.00E+01	4.43E+01
15.	CM+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
16.	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
17.	CO3-2	4.99E+02	3.37E+02	2.09E+02	1.58E+01	3.22E+03	1.11E+02	9.24E+01	9.06E+01	5.43E+02	3.22E+02
18.	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
19.	CR+3	1.10E+01	7.44E+00	1.33E+02	1.01E+01	3.10E+02	5.23E+01	2.22E+01	5.13E+01	2.79E+01	2.14E+01
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	0.00E+00	0.00E+00	7.54E+02	5.71E+01	3.51E+02	3.47E+02	9.50E+01	3.18E+02	4.78E+01	4.27E+01
24.	FE+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
25.	FE+3	7.45E+02	5.03E+02	8.73E+03	6.61E+02	9.66E+04	3.95E+03	8.16E+02	3.35E+03	6.03E+02	2.95E+02
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.04E-01	3.88E+00	0.00E+00	7.54E+00	6.74E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+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
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	1.51E+03	1.02E+03	1.20E+04	9.06E+02	2.90E+04	5.81E+03	2.65E+03	4.84E+03	4.14E+03	3.21E+03
40.	NB+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
41.	NI+3	2.87E+02	1.94E+02	1.91E+03	1.44E+02	1.95E+04	8.64E+02	1.89E+02	7.33E+02	2.52E+02	1.31E+02
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	0.00E+00	0.00E+00	8.16E+01	6.18E+00	3.79E+01	1.38E+02	4.42E+02	4.38E+01	8.46E+02	5.75E+02
44.	NO3-	3.35E+01	2.27E+01	7.55E+02	5.71E+01	8.85E+03	2.19E+03	7.99E+03	8.04E+02	1.54E+04	1.38E+04
45.	NP+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
46.	OH-	4.96E+03	9.64E+03	4.27E+04	3.15E+03	1.23E+05	1.92E+04	3.31E+03	1.59E+04	2.19E+03	0.00E+00
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-01	4.90E-01	0.00E+00	9.53E-01	8.51E-01
49.	PO4-3	5.68E+03	3.84E+03	1.26E+05	9.56E+03	7.69E+04	5.71E+04	1.19E+04	4.86E+04	4.74E+03	2.39E+03
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+4	1.56E+00	1.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
58.	SM+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
59.	SN+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
60.	SO4-2	1.15E+02	7.80E+01	4.09E+01	3.09E+00	2.05E+03	5.14E+01	1.45E+02	4.37E+01	3.68E+02	2.91E+02
61.	SR+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
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.14E+00	2.00E+01	0.00E+00	3.97E+01	3.55E+01
68.	UO2+2	4.86E+04	3.29E+04	1.53E+02	1.16E+01	2.30E+04	6.99E+01	1.69E+01	5.88E+01	3.91E+04	1.91E+04
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H20	0.00E+00	0.00E+00	1.09E+04	8.28E+02	5.08E+03	4.94E+03	1.02E+03	4.19E+03	0.00E+00	0.00E+00
	Total	6.33E+04	6.64E+04	3.13E+05	2.34E+04	4.51E+05	1.49E+05	5.84E+04	1.23E+05	1.06E+05	7.21E+04
	Vol (ML) spg=3	21.1	22.1	104.4	7.8	150.2	49.6	19.5	41.1	35.3	24.0
74.	C14 (Ci)	1.45E+00	3.96E+00	4.60E-04	1.48E-04	1.25E-02	2.23E-01	2.30E-01	5.99E-03	2.94E-01	8.53E-02
75.	Sr90 (Ci)	2.78E+06	1.14E+06	3.07E+04	3.36E+03	2.71E+05	1.51E+05	1.51E+05	3.08E+03	2.36E+05	9.66E+04
76.	Y90 (Ci)	2.78E+06	1.14E+06	3.07E+04	3.36E+03	2.71E+05	1.51E+05	1.51E+05	3.08E+03	2.36E+05	9.66E+04
77.	Tc99 (Ci)	4.79E+02	7.44E+02	1.64E+00	3.81E-02	1.49E+00	1.01E+02	1.04E+02	6.27E-01	1.33E+02	3.86E+01
78.	Cs137 (Ci)	1.22E+04	4.57E+05	1.12E+03	3.68E+01	1.27E+03	3.02E+04	3.10E+04	5.61E+02	3.97E+04	1.15E+04
79.	Ba137 (Ci)	1.16E+04	4.34E+05	1.07E+03	3.50E+01	1.20E+03	2.86E+04	2.95E+04	5.33E+02	3.78E+04	1.09E+04
80.	U235 (Ci)	1.86E-03	2.00E-03	3.38E-02	6.07E-03	1.73E-01	1.05E-04	4.38E-05	1.65E-02	1.67E-03	1.14E-02
81.	U238 (Ci)	4.38E-02	3.72E-02	7.75E-01	1.38E-01	4.06E+00	2.42E-03	1.01E-03	3.90E-01	3.85E-02	2.64E-01
82.	Np237 (Ci)	1.10E+00	4.40E+00	1.90E-02	5.61E-04	2.59E-02	9.78E-01	1.01E+00	1.10E-02	1.29E+00	3.73E-01
83.	Pu238 (Ci)	4.20E-01	3.14E-01	9.17E-02	1.07E-02	4.24E-01	1.10E-01	3.54E-02	1.16E-01	1.18E-01	1.75E-01
84.	Pu239 (Ci)	9.45E-04	1.08E-03	3.63E+01	3.63E+00	4.55E+01	1.40E+01	1.40E+00	9.22E+00	3.04E-02	3.11E-03
85.	Pu240 (Ci)	1.55E-02	1.54E-02	3.72E+00	3.72E-01	6.14E+00	1.95E+00	1.96E-01	1.99E+00	6.95E-03	1.35E-03
86.	Pu241 (Ci)	1.13E-03	2.21E-03	5.82E+00	5.82E-01	1.28E+01	3.96E+00	3.96E-01	6.74E+00	1.03E-02	1.42E-03
87.	Am241 (Ci)	2.04E+03	1.43E+03	1.63E+00	1.63E-01	1.42E+01	3.53E+01	3.54E+01	1.35E+00	4.53E+01	1.31E+01
88.	Cm244 (Ci)	1.02E+01	8.50E+00	1.11E-05	3.41E-05	9.71E-04	8.21E-01	8.45E-01	5.28E-04	1.08E+00	3.14E-01

Table A-5a. Revised Tank Inventory for Liquid Phase Constituents (BY)

		Mass (kg)										
	Chemical	103BY	104BY	105BY	106BY	107BY	108BY	109BY	110BY	111BY	112BY
1.	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
2.	AL(OH)4-	2.31E+04	9.38E+03	1.40E+04	2.67E+04	5.99E+03	0.00E+00	2.09E+04	9.06E+03	2.34E+04	1.46E+04
3.	AL+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	1.02E+02	2.35E+02	2.48E+02	2.43E+02	1.19E+02	1.85E+02	1.01E+02	2.20E+02	1.13E+02	7.81E+01
10.	CA+2	1.54E+02	1.02E+02	1.34E+02	2.15E+02	5.99E+01	2.67E+01	1.52E+02	8.37E+01	1.70E+02	1.08E+02
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	1.35E+00	2.66E+01	2.07E+01	2.64E+01	9.65E+00	1.50E+01	8.46E+00	2.36E+01	2.67E+01	4.89E+00
14.	CL-	5.47E+03	4.42E+03	5.52E+03	8.18E+03	3.01E+03	1.93E+03	5.41E+03	3.96E+03	6.05E+03	3.91E+03
15.	CM+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
16.	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
17.	CO3-2	1.59E+04	1.31E+04	1.78E+04	2.36E+04	8.65E+03	5.42E+03	1.91E+04	1.12E+04	2.00E+04	1.19E+04
18.	CR(OH)4-	4.89E+03	3.21E+03	4.23E+03	6.80E+03	1.88E+03	8.08E+02	4.84E+03	2.63E+03	5.42E+03	3.43E+03
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	5.30E+03	1.14E+04	1.21E+04	1.23E+04	6.03E+03	9.09E+03	5.25E+03	1.20E+04	5.87E+03	4.03E+03
24.	FE+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
25.	FE+3	4.30E+02	4.09E+02	4.93E+02	6.71E+02	2.69E+02	2.04E+02	4.26E+02	3.61E+02	4.75E+02	3.10E+02
26.	FECN6-3	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
27.	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
28.	H2O	6.26E+06	5.48E+06	6.83E+06	9.52E+06	3.31E+06	2.52E+06	6.44E+06	4.97E+06	7.11E+06	4.50E+06
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	8.36E+02	5.47E+02	7.21E+02	1.16E+03	3.18E+02	1.35E+02	8.28E+02	4.45E+02	9.27E+02	5.86E+02
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+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
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	8.22E+05	7.00E+05	8.75E+05	1.24E+06	4.25E+05	3.11E+05	8.41E+05	6.30E+05	9.30E+05	5.90E+05
40.	NB+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
41.	NI+3	9.61E+01	6.67E+01	8.66E+01	1.36E+02	4.01E+01	2.08E+01	9.52E+01	5.62E+01	1.06E+02	6.75E+01
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	9.42E+04	6.14E+04	8.09E+04	1.30E+05	3.57E+04	1.51E+04	9.28E+04	5.08E+04	1.04E+05	6.57E+04
44.	NO3-	1.71E+06	1.21E+06	1.56E+06	2.44E+06	7.51E+05	3.95E+05	1.69E+06	1.03E+06	1.89E+06	1.21E+06
45.	NP+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
46.	OH-	8.13E+04	1.38E+05	1.58E+05	1.67E+05	8.33E+04	1.07E+05	9.77E+04	1.42E+05	1.02E+05	6.42E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	1.06E+02	6.91E+01	9.11E+01	1.47E+02	4.02E+01	1.70E+01	1.05E+02	5.62E+01	1.17E+02	7.40E+01
49.	PO4-3	1.99E+04	2.40E+04	2.89E+04	3.44E+04	1.38E+04	1.45E+04	2.27E+04	3.01E+04	2.42E+04	1.50E+04
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
58.	SM+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
59.	SN+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
60.	SO4-2	3.05E+04	6.27E+04	6.87E+04	6.82E+04	3.65E+04	4.79E+04	3.46E+04	5.60E+04	3.70E+04	2.45E+04
61.	SR+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
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	4.42E+03	7.48E+03	8.15E+03	1.04E+04	5.98E+03	8.26E+03	4.35E+03	9.46E+03	4.89E+03	3.28E+03
68.	UO2+2	6.54E+02	1.37E+03	2.32E+03	1.38E+03	9.47E+02	1.10E+03	2.55E+03	1.22E+03	2.05E+03	8.00E+02
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E-01	0.00E+00	0.00E+00	1.19E+01	0.00E+00	0.00E+00
	Total	9.08E+06	7.73E+06	9.65E+06	1.37E+07	4.69E+06	3.43E+06	9.29E+06	6.95E+06	1.03E+07	6.52E+06
	Diluted Vol (ML)	7147.8	6087.0	7608.7	10782.6	3695.7	2704.3	7313.0	5478.3	8087.0	5130.4
74.	C14 (Ci)	2.49E+00	3.04E+01	2.41E+01	2.95E+01	1.08E+01	1.11E+01	9.43E+00	2.64E+01	3.01E+01	5.48E+00
75.	Sr90 (Ci)	4.89E+03	1.99E+03	1.67E+03	2.54E+03	1.09E+03	3.53E+02	7.01E+02	2.32E+03	2.34E+03	5.29E+02
76.	Y90 (Ci)	4.89E+03	1.99E+03	1.67E+03	2.54E+03	1.09E+03	3.53E+02	7.01E+02	2.32E+03	2.34E+03	5.29E+02
77.	Tc99 (Ci)	6.27E+00	1.36E+02	1.06E+02	1.35E+02	4.92E+01	5.95E+01	4.32E+01	1.21E+02	1.37E+02	2.51E+01
78.	Cs137 (Ci)	5.73E+03	1.22E+05	9.44E+04	1.21E+05	4.41E+04	5.71E+04	3.85E+04	1.08E+05	1.22E+05	2.24E+04
79.	Ba137 (Ci)	5.44E+03	1.15E+05	8.97E+04	1.15E+05	4.19E+04	5.42E+04	3.66E+04	1.02E+05	1.16E+05	2.13E+04
80.	U235 (Ci)	2.12E-01	1.80E+00	3.17E-01	1.02E-02	1.51E-01	2.43E-02	4.14E-03	2.30E-03	1.78E-02	1.34E-03
81.	U238 (Ci)	4.66E+00	4.24E+01	7.49E+00	2.31E-01	3.56E+00	5.71E-01	9.47E-02	5.40E-02	4.21E-01	3.14E-02
82.	Np237 (Ci)	7.27E-03	1.46E-01	1.14E-01	1.45E-01	5.30E-02	8.45E-02	4.63E-02	1.30E-01	1.47E-01	2.70E-02
83.	Pu238 (Ci)	3.64E-01	7.30E-01	2.12E-01	1.94E-01	1.25E-01	1.91E-01	2.75E-03	2.32E-01	2.20E-03	2.43E-03
84.	Pu239 (Ci)	1.47E+01	2.38E+00	1.41E+00	5.26E-01	5.23E-01	5.40E-01	1.19E-06	8.09E-01	3.68E-03	2.32E-06
85.	Pu240 (Ci)	3.82E+00	4.24E-01	2.70E-01	1.01E-01	9.95E-02	1.07E-01	1.91E-05	1.62E-01	9.15E-04	2.24E-05
86.	Pu241 (Ci)	3.28E+01	1.62E+00	9.39E-01	4.51E-01	4.29E-01	4.98E-01	5.24E-06	7.00E-01	3.14E-03	9.83E-06
87.	Am241 (Ci)	1.02E+01	1.38E+01	9.44E+00	7.48E+00	3.86E+00	5.62E+00	1.63E+00	7.89E+00	5.16E+00	9.44E-01
88.	Cm244 (Ci)	5.52E-04	1.11E-02	8.66E-03	1.10E-02	4.04E-03	6.35E-03	3.54E-03	9.89E-03	1.12E-02	2.06E-03

Table A-5b. Revised Tank Inventory for Solid Phase Constituents (BY)

		Mass (kg)									
	Chemical	103BY	104BY	105BY	106BY	107BY	108BY	109BY	110BY	111BY	112BY
1.	AG+	1.79E-07	3.74E-05	2.91E-06	3.71E-06	1.36E-06	1.96E-06	1.19E-06	3.32E-06	3.75E-06	6.89E-07
2.	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
3.	AL+3	5.35E+03	2.69E+01	4.02E+01	7.65E+01	1.19E+02	0.00E+00	6.01E+01	3.62E+03	6.73E+01	4.20E+01
4.	AM+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
5.	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
6.	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
7.	BA+2	2.75E+00	3.68E+00	3.35E+00	2.76E+00	1.87E+00	1.81E+00	1.25E+00	2.75E+00	2.32E+00	1.58E+00
8.	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
9.	BI+3	1.03E+00	1.67E+04	1.58E+04	1.01E+04	7.92E+03	1.67E+04	1.02E+00	1.64E+04	1.14E+00	6.69E+02
10.	CA+2	2.04E+02	2.39E+03	2.36E+03	1.52E+03	1.76E+03	2.39E+03	2.36E+02	2.39E+03	1.95E+02	2.54E+02
11.	CANCRINITE	3.87E+04	9.11E+04	9.58E+04	9.37E+04	4.62E+04	5.66E+04	3.84E+04	8.66E+04	4.30E+04	2.98E+04
12.	CD+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
13.	CE+3	1.34E+02	2.63E+03	2.04E+03	2.62E+03	9.55E+02	1.48E+03	8.37E+02	2.34E+03	2.64E+03	4.84E+02
14.	CL-	5.58E+01	8.11E+01	9.05E+01	1.09E+02	7.03E+01	6.44E+01	5.53E+01	8.47E+01	6.16E+01	4.35E+01
15.	CM+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
16.	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
17.	CO3-2	1.78E+02	4.21E+02	6.12E+02	4.14E+02	3.55E+02	3.46E+02	5.48E+02	4.02E+02	4.59E+02	2.10E+02
18.	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
19.	CR+3	2.46E+01	4.49E+01	5.16E+01	5.18E+01	3.97E+01	4.16E+01	2.98E+01	6.13E+01	2.99E+01	1.93E+01
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	5.35E+01	4.52E+02	4.41E+02	3.34E+02	2.32E+02	4.42E+02	5.30E+01	5.10E+02	5.93E+01	5.42E+01
24.	FE+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
25.	FE+3	6.06E+02	1.30E+04	1.26E+04	8.05E+03	1.07E+04	1.34E+04	5.89E+02	1.33E+04	4.27E+02	1.24E+03
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	8.44E+00	5.53E+00	7.29E+00	1.17E+01	3.22E+00	1.36E+00	8.36E+00	4.50E+00	9.36E+00	5.92E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+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
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	3.37E+03	9.33E+03	1.02E+04	9.20E+03	6.10E+03	8.14E+03	4.43E+03	1.01E+04	4.50E+03	2.95E+03
40.	NB+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
41.	NI+3	2.41E+02	4.75E+03	4.61E+03	3.68E+03	4.30E+03	6.38E+03	2.48E+02	6.21E+03	1.89E+02	3.68E+02
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	9.51E+02	6.20E+02	8.17E+02	1.32E+03	3.61E+02	1.53E+02	9.38E+02	5.13E+02	1.05E+03	6.64E+02
44.	NO3-	1.73E+04	1.22E+04	1.58E+04	2.46E+04	7.58E+03	3.99E+03	1.71E+04	1.04E+04	1.91E+04	1.22E+04
45.	NP+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
46.	OH-	8.20E+03	1.58E+04	1.58E+04	7.76E+03	1.34E+04	1.87E+04	1.18E+03	1.77E+04	4.77E+02	2.34E+02
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	1.07E+00	6.98E-01	9.20E-01	1.48E+00	4.06E-01	1.72E-01	1.06E+00	5.68E-01	1.18E+00	7.48E-01
49.	PO4-3	2.01E+02	1.65E+04	1.77E+04	1.04E+04	9.42E+03	1.70E+04	4.65E+03	2.94E+04	3.44E+03	1.66E+03
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
58.	SM+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
59.	SN+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
60.	SO4-2	3.08E+02	1.07E+03	1.13E+03	9.56E+02	6.26E+02	9.27E+02	3.95E+02	9.77E+02	4.06E+02	2.79E+02
61.	SR+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
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	4.47E+01	5.41E+02	5.23E+02	5.39E+02	5.00E+02	8.49E+02	4.40E+01	8.20E+02	4.94E+01	5.18E+01
68.	UO2+2	1.94E+03	1.91E+04	3.51E+04	1.16E+04	1.40E+04	1.92E+04	3.82E+04	1.77E+04	2.76E+04	7.85E+03
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.18E+01	0.00E+00	0.00E+00	1.18E+03	0.00E+00	0.00E+00
	Total	7.79E+04	2.07E+05	2.32E+05	1.87E+05	1.25E+05	1.67E+05	1.08E+05	2.21E+05	1.04E+05	5.91E+04
	Vol (ML) spg=3	26.0	68.9	77.2	62.3	41.6	55.7	36.0	73.6	34.6	19.7
74.	C14 (Ci)	2.52E-02	3.07E-01	2.44E-01	2.98E-01	1.09E-01	1.12E-01	9.53E-02	2.66E-01	3.04E-01	5.53E-02
75.	Sr90 (Ci)	4.84E+05	1.97E+05	1.65E+05	2.51E+05	1.08E+05	3.49E+04	6.94E+04	2.30E+05	2.32E+05	5.24E+04
76.	Y90 (Ci)	4.84E+05	1.97E+05	1.65E+05	2.51E+05	1.08E+05	3.49E+04	6.94E+04	2.30E+05	2.32E+05	5.24E+04
77.	Tc99 (Ci)	6.27E+00	1.35E+02	1.08E+02	1.35E+02	4.92E+01	5.95E+01	4.32E+01	1.21E+02	1.37E+02	2.51E+01
78.	Cs137 (Ci)	1.91E+03	4.05E+04	3.15E+04	4.32E+04	1.47E+04	1.90E+04	1.28E+04	3.60E+04	4.07E+04	7.46E+03
79.	Ba137 (Ci)	1.81E+03	3.85E+04	2.99E+04	3.82E+04	1.40E+04	1.81E+04	1.22E+04	3.42E+04	3.86E+04	7.09E+03
80.	U235 (Ci)	2.14E-03	2.43E-01	4.54E-01	5.14E-04	6.48E-02	1.41E-02	1.03E-02	4.02E-04	2.99E-02	9.13E-04
81.	U238 (Ci)	4.70E-02	5.74E+00	1.07E+01	1.16E-02	1.53E+00	3.32E-01	2.35E-01	9.43E-03	7.07E-01	2.14E-02
82.	Np237 (Ci)	6.55E-02	1.31E+00	1.02E+00	1.31E+00	4.77E-01	7.60E-01	4.17E-01	1.17E+00	1.32E+00	2.43E-01
83.	Pu238 (Ci)	1.79E+01	3.58E+01	1.04E+01	9.52E+00	6.12E+00	9.38E+00	1.35E-01	1.14E+01	1.08E-01	1.19E-01
84.	Pu239 (Ci)	7.22E+02	1.17E+02	6.90E+01	2.58E+01	2.56E+01	2.65E+01	5.85E-05	3.96E+01	1.80E-01	1.14E-04
85.	Pu240 (Ci)	1.87E+02	2.08E+01	1.32E+01	4.97E+00	4.88E+00	5.24E+00	9.35E-04	7.95E+00	4.48E-02	1.10E-03
86.	Pu241 (Ci)	1.61E+03	7.92E+01	4.60E+01	2.26E+01	2.10E+01	2.44E+01	2.57E-04	3.43E+01	1.54E-01	4.82E-04
87.	Am241 (Ci)	9.19E+01	1.24E+02	8.50E+01	6.73E+01	3.47E+01	5.06E+01	1.47E+01	7.10E+01	4.64E+01	8.50E+00
88.	Cm244 (Ci)	5.46E-02	1.10E+00	8.57E-01	1.09E+00	4.00E-01	6.28E-01	3.50E-01	9.79E-01	1.11E+00	2.04E-01

Table A-6a. Revised Tank Inventory for Liquid Phase Constituents (C)

		Mass (kg)									
	Chemical	101C	102C	103C	104C	105C	106C	107C	108C	109C	110C
1.	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
2.	AL(OH)4-	6.77E+03	6.97E+04	6.33E+03	3.43E+04	2.49E+04	0.00E+00	9.14E+03	7.59E+02	4.22E+02	7.88E+03
3.	AL+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.09E+01	5.20E+00	2.89E+00	5.40E+01
10.	CA+2	1.18E+00	4.84E+00	7.00E-01	3.12E+00	1.30E+00	0.00E+00	1.10E+00	7.96E-01	1.65E+00	6.63E-01
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	1.66E-03	7.66E-17	2.06E-09	3.00E-15	7.16E-05	0.00E+00	1.71E-01	3.57E-03	5.61E-01	2.88E-09
14.	CL-	6.51E+02	1.08E+03	1.18E+02	1.45E+03	3.36E+02	0.00E+00	6.86E+02	5.64E+02	4.08E+02	3.33E+02
15.	CM+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
16.	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
17.	CO3-2	2.75E+03	8.38E+03	1.08E+03	6.94E+03	2.25E+03	0.00E+00	2.46E+03	1.96E+03	2.55E+03	1.02E+03
18.	CR(OH)4-	1.52E+01	7.75E+01	1.19E+01	4.24E+01	2.85E+01	0.00E+00	4.81E+01	1.11E+01	3.34E+00	3.56E+01
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	0.00E+00	1.97E+04	0.00E+00	4.04E+04	0.00E+00	0.00E+00	1.02E+04	7.51E+02	4.17E+02	7.79E+03
24.	FE+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
25.	FE+3	8.94E+01	2.79E+02	3.74E+01	1.74E+02	7.48E+01	0.00E+00	7.45E+01	6.15E+01	2.31E+01	4.79E+01
26.	FECN6-3	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
27.	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
28.	H2O	8.31E+05	7.98E+06	9.76E+05	5.69E+06	2.41E+06	0.00E+00	1.96E+06	4.18E+05	5.04E+05	1.39E+06
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	8.04E+01	0.00E+00	1.51E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E+01	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+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
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	4.79E+04	1.49E+05	1.59E+04	1.61E+05	4.96E+04	0.00E+00	2.23E+05	5.07E+04	3.66E+04	1.58E+05
40.	NB+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
41.	NI+3	1.79E+00	7.67E+00	1.11E+00	4.32E+00	2.00E+00	0.00E+00	1.13E+00	1.47E+00	7.08E+00	8.62E-01
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	1.49E+03	1.86E+04	1.67E+03	1.22E+04	1.32E+04	0.00E+00	5.81E+03	5.21E+02	1.71E+03	4.39E+03
44.	NO3-	7.06E+04	1.84E+05	1.46E+04	1.16E+05	6.22E+04	0.00E+00	5.74E+04	5.82E+04	5.99E+04	4.06E+04
45.	NP+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
46.	OH-	1.18E+04	1.94E+04	5.57E+03	6.66E+04	9.30E+03	0.00E+00	1.18E+05	1.67E+04	1.87E+04	6.92E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	0.00E+00	0.00E+00	0.00E+00	2.70E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E+03	0.00E+00
49.	PO4-3	9.43E+02	1.25E+03	7.41E+01	6.22E+02	2.44E+02	0.00E+00	6.00E+04	5.20E+03	3.41E+03	4.57E+04
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	7.20E+03	4.69E+03	8.57E+01	9.48E+02	2.06E+03	0.00E+00	1.79E+03	6.11E+03	2.29E+02	1.09E+03
61.	SR+2	0.00E+00	0.00E+00	0.00E+00	1.04E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	0.00E+00	4.54E+00	0.00E+00	1.77E+04	0.00E+00	0.00E+00	9.39E+03	4.09E+02	6.99E+03	0.00E+00
68.	UO2+2	8.45E+02	4.26E+03	4.30E+02	2.14E+03	1.16E+03	0.00E+00	5.75E+00	3.89E+02	6.78E+02	4.38E+00
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	9.85E+02	0.00E+00	2.04E+03	0.00E+00	0.00E+00	7.88E+01	5.78E+00	3.21E+00	6.00E+01
	Total	9.82E+05	8.44E+06	1.02E+06	6.15E+06	2.57E+06	0.00E+00	2.46E+06	5.60E+05	6.37E+05	1.72E+06
	Diluted Vol (ML)	870.0	8088.3	984.2	5769.9	2456.9	2456.9	1939.1	440.9	551.2	1356.5
74.	C14 (Ci)	3.90E+00	2.14E-04	8.53E+01	5.33E-06	9.15E+01	0.00E+00	6.26E-01	5.07E-02	3.46E-01	1.43E-11
75.	Sr90 (Ci)	4.90E+02	7.32E+03	2.84E+03	2.63E+03	2.00E+04	0.00E+00	5.96E+02	1.60E+02	4.89E-01	8.68E+01
76.	Y90 (Ci)	4.90E+02	7.32E+03	2.84E+03	2.63E+03	2.00E+04	0.00E+00	5.96E+02	1.60E+02	4.89E-01	8.68E+01
77.	Tc99 (Ci)	1.48E+01	9.96E-09	7.98E-09	2.57E-09	3.45E+02	0.00E+00	6.69E-01	4.57E-04	4.51E-01	8.68E-11
78.	Cs137 (Ci)	4.18E+04	3.32E-05	3.20E-05	1.03E-05	6.40E+04	0.00E+00	1.95E+03	1.04E+00	1.25E+03	2.92E-07
79.	Ba137 (Ci)	3.97E+04	3.15E-05	3.04E-05	9.78E-06	6.08E+04	0.00E+00	1.85E+03	9.92E-01	1.19E+03	2.78E-07
80.	U235 (Ci)	4.14E-03	3.29E-02	0.00E+00	0.00E+00	3.01E-02	0.00E+00	0.00E+00	3.14E-03	0.00E+00	0.00E+00
81.	U238 (Ci)	9.92E-02	7.64E-01	0.00E+00	0.00E+00	7.08E-01	0.00E+00	0.00E+00	7.44E-02	0.00E+00	0.00E+00
82.	Np237 (Ci)	2.33E-02	4.89E-04	6.32E-05	3.09E-04	5.08E-03	0.00E+00	8.86E-04	2.03E-05	7.29E-04	9.19E-06
83.	Pu238 (Ci)	4.16E-02	1.00E+00	1.72E-01	9.50E-01	1.00E+00	0.00E+00	8.08E-02	3.58E-02	2.77E-03	2.18E-01
84.	Pu239 (Ci)	1.94E+00	3.23E+01	4.76E+00	1.11E+01	2.43E+01	0.00E+00	3.98E+00	1.41E+00	1.60E-02	1.89E+00
85.	Pu240 (Ci)	5.07E-01	8.98E+00	1.32E+00	3.12E+00	6.14E+00	0.00E+00	1.05E+00	3.69E-01	1.35E-03	4.29E-01
86.	Pu241 (Ci)	3.50E+00	8.86E+01	1.19E+01	8.11E+01	4.07E+01	0.00E+00	7.32E+00	2.53E+00	1.50E-03	2.29E+00
87.	Am241 (Ci)	2.98E+00	6.55E+01	8.31E+00	5.11E+01	6.24E+02	0.00E+00	7.12E+00	2.08E+00	8.25E-03	1.28E+00
88.	Cm244 (Ci)	1.12E-04	9.20E-12	6.30E-13	1.01E-13	4.81E-01	0.00E+00	4.76E-05	1.02E-09	4.60E-06	5.00E-15

Table A-6b. Revised Tank Inventory for Solid Phase Constituents (C)

		Mass (kg)									
	Chemical	101C	102C	103C	104C	105C	106C	107C	108C	109C	110C
1.	AG+	5.34E-07	3.45E-16	2.24E-16	1.43E-16	8.32E-06	0.00E+00	2.21E-08	1.65E-11	1.70E-08	3.28E-18
2.	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
3.	AL+3	2.21E+04	2.28E+05	2.07E+04	1.10E+05	8.13E+04	0.00E+00	2.99E+04	2.48E+03	1.38E+03	2.57E+04
4.	AM+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
5.	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
6.	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
7.	BA+2	1.50E+01	3.46E-01	1.48E+01	1.10E+00	4.53E+01	0.00E+00	2.31E-01	4.60E-01	6.15E-01	7.57E-02
8.	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
9.	BI+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.02E+03	5.15E+02	2.86E+02	5.35E+03
10.	CA+2	1.48E+03	6.15E+03	8.90E+02	3.97E+03	1.65E+03	0.00E+00	1.40E+03	1.01E+03	2.09E+03	8.42E+02
11.	CANCRINITE	1.86E+00	6.41E+02	3.27E+04	5.57E+04	1.46E+03	0.00E+00	6.50E+04	2.45E+03	1.36E+03	2.54E+04
12.	CD+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
13.	CE+3	1.64E-01	8.00E-15	2.04E-07	2.50E-13	7.09E-03	0.00E+00	1.69E+01	3.53E-01	5.56E+01	2.85E-07
14.	CL-	3.42E+01	5.67E+01	6.23E+00	5.71E+01	1.77E+01	0.00E+00	3.61E+01	2.97E+01	2.15E+01	1.75E+01
15.	CM+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
16.	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
17.	CO3-2	3.05E+02	9.32E+02	1.20E+02	6.93E+02	2.50E+02	0.00E+00	2.74E+02	2.18E+02	2.83E+02	1.14E+02
18.	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
19.	CR+3	3.01E+01	1.53E+02	2.35E+01	8.36E+01	5.62E+01	0.00E+00	9.48E+01	2.19E+01	6.58E+00	7.22E+01
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	0.00E+00	1.04E+03	0.00E+00	2.13E+03	0.00E+00	0.00E+00	5.38E+02	3.95E+01	2.20E+01	4.10E+02
24.	FE+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
25.	FE+3	8.85E+03	2.76E+04	3.70E+03	1.72E+04	7.41E+03	0.00E+00	7.39E+03	6.09E+03	2.29E+03	4.74E+03
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	5.14E+01	0.00E+00	9.67E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E+01	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+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
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	2.00E+03	6.21E+03	6.61E+02	6.34E+03	2.07E+03	0.00E+00	9.31E+03	2.11E+03	1.53E+03	6.50E+03
40.	NB+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
41.	NI+3	2.15E+03	9.22E+03	1.34E+03	5.18E+03	2.40E+03	0.00E+00	1.36E+03	1.77E+03	8.51E+03	1.04E+03
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	1.51E+01	1.88E+02	1.68E+01	1.23E+02	1.33E+02	0.00E+00	5.87E+01	5.26E+00	1.73E+01	4.43E+01
44.	NO3-	7.13E+02	1.85E+03	1.47E+02	1.17E+03	6.28E+02	0.00E+00	5.80E+02	5.88E+02	6.05E+02	4.10E+02
45.	NP+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
46.	OH-	5.39E+04	4.75E+05	4.49E+04	2.35E+05	1.66E+05	0.00E+00	2.39E+04	9.58E+03	1.57E+04	2.26E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	0.00E+00	0.00E+00	0.00E+00	4.22E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E+04	0.00E+00
49.	PO4-3	1.42E+03	1.88E+03	1.11E+02	6.60E+02	3.65E+02	0.00E+00	9.01E+04	7.81E+03	5.12E+03	6.86E+04
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	1.47E+02	9.57E+01	1.75E+00	1.92E+01	4.20E+01	0.00E+00	3.66E+01	1.25E+02	4.68E+00	2.22E+01
61.	SR+2	0.00E+00	0.00E+00	0.00E+00	1.03E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	0.00E+00	5.05E-01	0.00E+00	1.97E+03	0.00E+00	0.00E+00	1.04E+03	4.55E+01	7.77E+02	0.00E+00
68.	UO2+2	1.60E+04	8.10E+04	8.17E+03	4.07E+04	2.21E+04	0.00E+00	1.09E+02	7.39E+03	1.29E+04	8.33E+01
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	9.75E+04	0.00E+00	2.02E+05	0.00E+00	0.00E+00	7.80E+03	5.73E+02	3.18E+02	5.94E+03
	Total	1.09E+05	9.38E+05	1.14E+05	6.83E+05	2.86E+05	0.00E+00	2.46E+05	4.29E+04	7.08E+04	1.68E+05
	Vol (ML) spg=3	36.4	312.5	37.8	227.7	95.3	95.3	82.0	14.3	23.6	56.0
74.	C14 (Ci)	3.94E-02	2.16E-06	8.62E-01	5.39E-08	9.25E-01	0.00E+00	6.32E-03	5.12E-04	3.50E-03	1.45E-13
75.	Sr90 (Ci)	4.85E+04	7.24E+05	2.81E+05	2.60E+05	1.98E+06	0.00E+00	5.90E+04	1.58E+04	4.84E+01	8.59E+03
76.	Y90 (Ci)	4.85E+04	7.24E+05	2.81E+05	2.60E+05	1.98E+06	0.00E+00	5.90E+04	1.58E+04	4.84E+01	8.59E+03
77.	Tc99 (Ci)	1.48E+01	9.96E-09	7.98E-09	2.57E-09	3.45E+02	0.00E+00	6.69E-01	4.57E-04	4.61E-01	8.68E-11
78.	Cs137 (Ci)	1.39E+04	1.11E-05	1.07E-05	3.43E-06	2.13E+04	0.00E+00	6.51E+02	3.48E-01	4.18E+02	9.74E-08
79.	Ba137 (Ci)	1.32E+04	1.05E-05	1.01E-05	3.26E-06	2.03E+04	0.00E+00	6.18E+02	3.31E-01	3.97E+02	9.26E-08
80.	U235 (Ci)	7.86E-02	6.25E-01	3.36E-01	4.29E-01	5.71E-01	0.00E+00	1.50E-01	5.96E-02	1.04E-02	5.66E-03
81.	U238 (Ci)	1.88E+00	1.45E+01	7.19E+00	9.28E+00	1.34E+01	0.00E+00	3.58E+00	1.41E+00	2.36E-01	1.27E-01
82.	Np237 (Ci)	2.09E-01	4.40E-03	5.68E-04	2.78E-03	4.58E-02	0.00E+00	7.97E-03	1.83E-04	6.56E-03	8.27E-05
83.	Pu238 (Ci)	2.04E+00	4.90E+01	8.41E+00	4.66E+01	4.90E+01	0.00E+00	3.96E+00	1.75E+00	1.36E-01	1.07E+01
84.	Pu239 (Ci)	9.49E+01	1.58E+03	2.33E+02	5.44E+02	1.19E+03	0.00E+00	1.95E+02	6.93E+01	7.82E-01	9.27E+01
85.	Pu240 (Ci)	2.48E+01	4.40E+02	6.46E+01	1.53E+02	3.01E+02	0.00E+00	5.15E+01	1.81E+01	6.64E-02	2.10E+01
86.	Pu241 (Ci)	1.72E+02	4.34E+03	5.81E+02	2.01E+03	1.99E+03	0.00E+00	3.59E+02	1.24E+02	7.37E-02	1.12E+02
87.	Am241 (Ci)	2.68E+01	5.90E+02	7.48E+01	4.60E+02	5.62E+03	0.00E+00	6.41E+01	1.87E+01	7.43E-02	1.16E+01
88.	Cm244 (Ci)	1.11E-02	9.10E-10	6.24E-11	1.00E-11	4.77E+01	0.00E+00	4.72E-03	1.01E-07	4.56E-04	5.05E-13

Table A-7a. Revised Tank Inventory for Liquid Phase Constituents (C,S)

		Mass (kg)									
	Chemical	111C	112C	201C	202C	203C	204C	101S	102S	103S	104S
1.	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
2.	AL(OH)4-	4.30E+03	3.81E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.88E+04	6.65E+04	2.77E+04	4.68E+04
3.	AL+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	1.04E+01	4.33E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.92E+01	1.16E+02	4.56E+01	0.00E+00
10.	CA+2	3.89E-01	2.75E+00	7.67E-03	3.84E-03	1.92E-02	1.15E-02	3.44E+01	7.02E+01	3.57E+01	1.99E+00
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CO+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
13.	CE+3	3.46E-01	1.57E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.94E+00	4.40E-08	6.58E-08	0.00E+00
14.	CL-	1.19E+02	6.07E+02	7.85E-01	3.92E-01	1.96E+00	1.18E+00	4.67E+03	1.02E+04	4.12E+03	1.54E+03
15.	CM+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
16.	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
17.	CO3-2	6.00E+02	4.26E+03	1.95E+02	9.76E+01	4.88E+02	2.93E+02	1.90E+04	4.01E+04	1.90E+04	3.07E+03
18.	CR(OH)4-	1.02E+01	6.43E+00	2.43E-01	1.22E-01	6.08E-01	3.65E-01	4.23E+03	3.25E+03	1.92E+03	5.79E+03
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	1.50E+03	6.24E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.82E+03	5.40E+03	2.12E+03	0.00E+00
24.	FE+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
25.	FE+3	1.40E+01	3.27E+01	3.28E-01	1.64E-01	8.19E-01	4.91E-01	1.45E+02	9.26E+01	9.74E+01	1.12E+02
26.	FECN6-3	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
27.	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
28.	H2O	5.04E+05	8.47E+05	2.11E+04	1.06E+04	5.26E+04	2.12E+04	3.66E+06	7.99E+06	3.46E+06	4.58E+06
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	7.48E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.59E+02	2.11E+03	8.66E+02	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.05E+01	1.40E+02	5.76E+01	0.00E+00
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	3.82E+04	5.74E+04	1.57E+03	7.87E+02	3.94E+03	2.36E+03	4.71E+05	9.98E+05	4.34E+05	1.15E+05
40.	NH+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
41.	NI+3	1.04E+00	1.11E+01	1.04E-02	5.20E-03	2.60E-02	1.56E-02	2.20E+01	4.10E+01	2.20E+01	2.88E+00
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	3.14E+03	3.33E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.05E+04	2.18E+05	8.62E+04	0.00E+00
44.	NO3-	1.94E+04	9.41E+04	1.44E+02	7.22E+01	3.61E+02	2.17E+02	7.94E+05	1.38E+06	6.32E+05	2.70E+05
45.	NP+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
46.	OH-	1.57E+04	2.65E+04	9.64E+02	4.82E+02	2.41E+03	1.35E+03	8.29E+04	2.56E+05	1.04E+05	0.00E+00
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	0.00E+00	4.78E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.14E-01	3.17E-01	1.30E-01	0.00E+00
49.	PO4-3	8.91E+03	5.16E+03	1.65E+02	8.23E+01	4.12E+02	2.47E+02	7.06E+03	2.06E+04	8.16E+03	0.00E+00
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	2.27E+02	2.72E+02	2.46E+02	1.23E+02	6.16E+02	3.69E+02	6.88E+03	1.68E+04	7.25E+03	5.62E+02
61.	SR+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.25E-01	0.00E+00	0.00E+00	4.30E-01
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	6.69E+02	1.00E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E+03	1.39E+04	5.43E+03	0.00E+00
68.	UO2+2	1.62E+02	1.23E+03	1.11E+02	5.57E+01	2.79E+02	1.47E-01	4.45E+02	1.61E+02	6.17E+01	1.09E+03
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	1.15E+01	4.81E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	5.97E+05	1.06E+06	2.45E+04	1.23E+04	6.12E+04	2.61E+04	5.20E+06	1.10E+07	4.79E+06	5.02E+06
	Diluted Vol (ML)	507.5	920.3	20.8	10.4	51.9	20.5	4095.7	8678.3	3773.9	4753.0
74.	C14 (Ci)	1.28E-01	3.69E-01	9.51E-06	4.90E-04	4.59E-05	4.11E-07	8.34E+00	1.40E-08	3.01E-07	9.67E-01
75.	Sr90 (Ci)	6.36E+02	2.67E+02	4.36E-02	3.80E-16	4.56E+00	1.88E-03	4.16E+03	3.80E+02	2.11E-06	3.45E+03
76.	Y90 (Ci)	6.36E+02	2.67E+02	4.36E-02	3.80E-16	4.56E+00	1.88E-03	4.16E+03	3.80E+02	2.11E-06	3.45E+03
77.	Tc99 (Ci)	3.52E-01	2.91E-01	2.05E-04	5.95E-17	5.84E-10	8.84E-06	6.21E+01	8.52E-08	1.27E-07	3.20E+00
78.	Cs137 (Ci)	9.74E+02	8.42E+02	4.22E-01	1.00E-13	1.33E-06	1.82E-02	2.18E+04	8.88E-05	6.84E-05	7.75E+03
79.	Ba137 (Ci)	9.26E+02	8.00E+02	4.01E-01	9.50E-14	1.26E-06	1.73E-02	2.07E+04	8.44E-05	6.50E-05	7.36E+03
80.	U235 (Ci)	0.00E+00	0.00E+00	5.19E-06	5.09E-04	5.09E-05	1.93E-07	7.53E-02	1.42E-02	1.08E-03	4.22E-03
81	U238 (Ci)	0.00E+00	0.00E+00	1.16E-04	1.14E-02	1.14E-03	4.28E-06	1.75E+00	3.32E-01	2.52E-02	9.92E-02
82.	Np237 (Ci)	5.85E-04	4.89E-04	2.60E-07	3.89E-08	3.87E-09	1.10E-08	1.58E-02	1.03E-05	3.40E-07	4.46E-03
83.	Pu238 (Ci)	5.73E-02	2.30E-02	6.42E-07	1.87E-06	2.80E-07	6.72E-10	2.64E-01	2.91E-02	4.64E-03	1.69E-01
84.	Pu239 (Ci)	1.04E+00	9.76E-01	3.23E-04	8.87E-04	8.87E-05	3.35E-07	3.04E+00	3.04E-01	3.40E-02	2.88E+00
85.	Pu240 (Ci)	2.46E-01	2.53E-01	2.82E-05	7.75E-05	7.75E-06	2.94E-08	6.84E-01	6.84E-02	7.60E-03	6.47E-01
86.	Pu241 (Ci)	1.32E+00	1.62E+00	3.24E-05	8.90E-05	8.90E-06	3.38E-08	3.10E+00	3.10E-01	3.44E-02	2.69E+00
87.	Am241 (Ci)	1.26E+00	1.40E+00	6.86E-04	1.91E-03	1.91E-04	5.47E-07	2.49E+01	6.86E-01	7.64E-02	6.35E+00
88.	Cm244 (Ci)	3.56E-06	4.41E-06	2.97E-12	8.52E-25	8.79E-18	1.28E-13	8.10E-03	7.17E-12	1.12E-11	8.21E-06

Table A-7b. Revised Tank Inventory for Solid Phase Constituents (C,S)

		Mass (kg)										
	Chemical	111C	112C	201C	202C	203C	204C	101S	102S	103S	104S
1.	AG+	1.33E-08	9.92E-09	5.58E-12	1.12E-24	1.37E-17	2.41E-13	9.56E-07	2.00E-15	8.46E-16	1.26E-07
2.	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
3.	AL+3	1.41E+04	1.25E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E+05	1.99E+03	7.94E+01	1.53E+05
4.	AM+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
5.	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
6.	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
7.	BA+2	5.84E-01	3.06E-01	8.80E-04	1.08E-02	1.04E-02	1.66E-06	3.16E+00	3.05E+00	3.91E+00	2.68E+00
8.	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
9.	BI+3	1.03E+03	4.29E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.96E-01	1.17E+00	4.60E-01	0.00E+00
10.	CA+2	4.94E+02	3.50E+03	9.75E+00	4.87E+00	2.44E+01	1.46E+01	1.35E+03	1.12E+02	1.42E+01	2.53E+03
11.	CANCRINITE	5.17E+03	2.04E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.13E+04	1.60E+04	6.72E+03	2.96E+04
12.	CD+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
13.	CE+3	3.42E+01	1.55E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.88E+02	4.35E-06	6.51E-06	0.00E+00
14.	CL-	6.28E+00	3.20E+01	4.13E-02	2.06E-02	1.03E-01	6.19E-02	9.31E+01	1.04E+02	4.16E+01	8.10E+01
15.	CM+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
16.	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
17.	CO3-2	6.67E+01	4.73E+02	2.17E+01	1.08E+01	5.42E+01	0.00E+00	3.57E+02	4.16E+02	1.92E+02	3.41E+02
18.	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
19.	CR+3	2.02E+01	1.27E+01	4.79E-01	2.40E-01	1.20E+00	7.19E-01	4.92E+03	5.95E+02	8.40E+00	1.14E+04
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	7.89E+01	3.29E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.84E+01	5.45E+01	2.14E+01	0.00E+00
24.	FE+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
25.	FE+3	1.39E+03	3.24E+03	3.24E+01	1.62E+01	8.11E+01	4.86E+01	5.45E+03	2.10E+02	9.84E-01	1.11E+04
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	4.78E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.67E+00	2.13E+01	8.75E+00	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.95E+02	2.76E+03	1.13E+03	0.00E+00
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	1.59E+03	2.39E+03	5.56E+01	3.28E+01	1.64E+02	9.84E+01	5.06E+03	4.12E+03	1.74E+03	4.78E+03
40.	NB+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
41.	NI+3	1.25E+03	1.33E+04	1.25E+01	6.24E+00	3.12E+01	1.87E+01	1.76E+03	1.22E+02	5.45E+00	3.46E+03
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	3.18E+01	3.36E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.14E+02	2.20E+03	0.00E+00	6.88E+01
44.	NO3-	1.96E+02	9.51E+02	1.46E+00	7.29E-01	3.65E+00	0.00E+00	8.02E+03	1.39E+04	5.94E+03	2.89E+03
45.	NP+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
46.	OH-	2.32E+04	3.79E+04	2.06E+02	1.03E+02	5.14E+02	0.00E+00	2.24E+05	2.74E+03	0.00E+00	3.18E+05
47.	P2O5.24WO2.44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	0.00E+00	7.49E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E-03	3.20E-03	1.31E-03	0.00E+00
49.	PO4-3	1.34E+04	7.74E+03	2.47E+02	1.24E+02	6.18E+02	3.71E+02	7.13E+01	2.08E+02	8.24E+01	0.00E+00
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+4	0.00E+00	0.00E+00	6.78E-02	3.39E-02	1.70E-01	1.02E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
58.	SM+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
59.	SN+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
60.	SO4-2	4.63E+00	5.54E+00	5.03E+00	2.51E+00	1.26E+01	7.54E+00	7.38E+01	1.70E+02	7.32E+01	1.15E+01
61.	SR+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.23E+01	0.00E+00	0.00E+00	4.26E+01
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	7.43E+01	1.12E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.47E+01	1.40E+02	5.48E+01	0.00E+00
68.	UO2+2	3.08E+03	2.34E+04	2.12E+03	1.06E+03	5.29E+03	2.80E+00	7.43E+03	7.54E+02	6.24E-01	2.08E+04
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	1.14E+03	4.76E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	6.64E+04	1.17E+05	2.72E+03	1.36E+03	6.79E+03	5.63E+02	3.84E+05	4.66E+04	1.60E+04	5.58E+05
	Vol (ML) spg=3	22.1	39.1	0.9	0.5	2.3	0.2	128.1	15.5	5.3	186.0
74.	C14 (Ci)	1.30E-03	3.72E-03	9.61E-08	4.95E-06	4.63E-07	4.16E-09	8.43E-02	1.41E-10	3.04E-09	9.77E-03
75.	Sr90 (Ci)	6.30E+04	2.64E+04	4.32E+00	3.80E-14	4.51E+02	1.86E-01	4.12E+05	3.76E+04	2.09E-04	3.42E+05
76.	Y90 (Ci)	6.30E+04	2.64E+04	4.32E+00	3.80E-14	4.51E+02	1.86E-01	4.12E+05	3.76E+04	2.09E-04	3.42E+05
77.	Tc99 (Ci)	3.52E-01	2.91E-01	2.05E-04	5.95E-17	5.84E-10	8.84E-06	6.21E+01	8.52E-08	1.27E-07	3.20E+00
78.	Cs137 (Ci)	3.25E+02	2.81E+02	1.41E-01	3.30E-14	4.43E-07	6.07E-03	7.25E+03	2.96E-05	2.28E-05	2.58E+03
79.	Ba137 (Ci)	3.09E+02	2.67E+02	1.34E-01	1.20E-14	4.21E-07	5.77E-03	6.89E+03	2.81E-05	2.17E-05	2.45E+03
80.	U235 (Ci)	4.43E-02	6.58E-02	9.87E-03	9.67E-03	9.67E-04	3.66E-06	2.29E-02	1.59E-04	1.09E-05	8.01E-02
81.	U238 (Ci)	1.04E+00	1.56E+00	2.20E-03	2.16E-01	2.16E-02	8.13E-05	5.32E-01	3.70E-03	2.54E-04	1.88E+00
82.	Np237 (Ci)	5.26E-03	4.40E-03	2.34E-06	3.50E-07	3.48E-08	9.94E-08	1.42E-01	9.24E-05	3.06E-06	4.01E-02
83.	Pu238 (Ci)	2.81E+00	1.13E+00	3.15E-05	9.17E-05	1.37E-05	3.29E-08	1.29E+01	1.43E+00	2.28E-01	8.27E+00
84.	Pu239 (Ci)	5.07E+01	4.78E+01	1.58E-02	4.34E-02	4.34E-03	1.64E-05	1.49E+02	1.49E+01	1.66E+00	1.41E+02
85.	Pu240 (Ci)	1.21E+01	1.24E+01	1.38E-03	3.80E-03	3.80E-04	1.44E-06	3.35E+01	3.35E+00	3.73E-01	3.17E+01
86.	Pu241 (Ci)	6.46E+01	7.93E+01	1.59E-03	4.36E-03	4.36E-04	1.66E-06	1.52E+02	1.52E+01	1.69E+00	1.32E+02
87.	Am241 (Ci)	1.14E+01	1.26E+01	6.18E-03	1.72E-02	1.72E-03	4.92E-06	2.24E+02	6.18E+00	6.87E-01	5.71E+01
88.	Cm244 (Ci)	3.52E-04	4.37E-04	2.94E-10	8.44E-23	8.70E-16	1.27E-11	8.02E-01	7.10E-10	1.11E-09	8.13E-04

Table A-8a. Revised Tank Inventory for Liquid Phase Constituents (S,SX)

		Mass (kg)									
	Chemical	105S	106S	107S	108S	109S	110S	111S	112S	101SX	102SX
1.	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
2.	AL(OH)4-	5.41E+04	6.66E+04	4.37E+04	7.17E+04	6.82E+04	5.04E+04	6.58E+04	7.57E+04	6.66E+04	6.41E+04
3.	AL+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	6.97E+01	7.84E+01	2.05E+01	9.19E+01	8.52E+01	4.25E+01	6.85E+01	9.68E+01	2.38E+01	7.87E+01
10.	CA+2	1.01E+02	1.21E+02	4.10E+01	1.32E+02	1.27E+02	6.22E+01	9.64E+01	1.39E+02	2.15E+01	1.13E+02
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	0.00E+00	1.50E-03	8.24E-09	7.27E+00	1.01E+01	9.95E-01	1.10E+00	6.88E+01	1.77E-09	2.70E-02
14.	CL-	7.14E+03	8.08E+03	3.18E+03	9.42E+03	8.73E+03	4.98E+03	7.39E+03	9.92E+03	4.04E+03	8.25E+03
15.	CM+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
16.	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
17.	CO3-2	4.88E+04	5.55E+04	9.84E+03	6.43E+04	5.98E+04	3.06E+04	4.85E+04	6.78E+04	1.29E+04	5.06E+04
18.	CR(OH)4-	4.46E+03	4.98E+03	4.56E+03	4.51E+03	5.41E+03	4.21E+03	4.73E+03	5.21E+03	5.50E+03	1.56E+04
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	3.24E+03	3.64E+03	4.80E+04	4.27E+03	3.95E+03	1.97E+03	3.18E+03	4.49E+03	1.11E+03	3.65E+03
24.	FE+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
25.	FE+3	2.77E+02	7.22E+02	1.96E+02	1.97E+02	6.32E+02	1.98E+02	2.23E+02	2.79E+02	1.42E+02	7.51E+02
26.	FECN6-3	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
27.	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
28.	H2O	7.29E+06	8.26E+06	3.77E+06	9.60E+06	8.88E+06	4.72E+06	7.38E+06	1.02E+07	3.78E+06	7.86E+06
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	1.56E+03	1.76E+03	5.13E+02	2.06E+03	1.91E+03	9.53E+02	1.54E+03	2.17E+03	4.59E+02	1.70E+03
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+4	1.04E+02	1.17E+02	1.68E+01	1.37E+02	1.27E+02	5.34E+01	1.02E+02	1.44E+02	3.05E+01	1.13E+02
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39	NA+	9.27E+05	1.05E+06	4.40E+05	1.22E+06	1.13E+06	6.06E+05	9.41E+05	1.29E+06	3.57E+05	9.99E+05
40.	NB+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
41.	NI+3	6.24E+01	8.75E+01	2.96E+01	7.81E+01	8.39E+01	3.88E+01	5.56E+01	8.42E+01	1.45E+01	8.55E+01
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	1.37E+05	1.55E+05	4.18E+04	1.80E+05	1.67E+05	8.32E+04	1.37E+05	1.90E+05	4.52E+04	1.53E+05
44.	NO3-	1.54E+06	1.74E+06	8.00E+05	2.03E+06	1.88E+06	1.06E+06	1.59E+06	2.13E+06	7.17E+05	1.63E+06
45.	NP+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
46.	OH-	1.84E+05	2.07E+05	3.52E+04	2.42E+05	2.25E+05	1.78E+05	2.55E+05	2.55E+05	3.25E+04	2.03E+05
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	2.35E-01	2.64E-01	3.80E-02	3.10E-01	2.87E-01	1.43E-01	2.31E-01	3.26E-01	6.90E-02	2.55E-01
49.	PO4-3	1.31E+04	1.47E+04	3.33E+03	1.73E+04	1.60E+04	7.97E+03	1.29E+04	1.82E+04	4.28E+03	1.46E+04
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	1.52E+04	1.71E+04	5.07E+03	2.00E+04	1.86E+04	9.49E+03	1.51E+04	2.11E+04	4.61E+03	1.61E+04
61.	SR+2	0.00E+00	2.62E-01	1.04E-01	0.00E+00	1.07E-01	0.00E+00	1.04E-01	2.46E-02	0.00E+00	0.00E+00
62.	TC04-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	8.09E+03	9.07E+03	1.74E+03	1.07E+04	9.87E+03	4.74E+03	7.81E+03	1.12E+04	2.60E+03	9.31E+03
68.	UO2+2	1.16E+02	5.58E+02	3.53E+02	1.65E+02	3.11E+02	1.49E+02	2.86E+02	2.08E+02	2.67E+02	4.67E+02
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H20	0.00E+00	0.00E+00	2.35E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	1.02E+07	1.16E+07	5.21E+06	1.35E+07	1.25E+07	6.69E+06	1.04E+07	1.42E+07	5.03E+06	1.10E+07
	Diluted Vol (ML)	8060.9	9130.4	4178.2	10608.7	9826.1	5269.6	8182.6	11217.4	4193.8	8687.0
74.	C14 (Ci)	2.62E+00	5.28E+00	2.10E-08	1.14E+01	5.35E+01	3.73E+01	3.48E+01	2.28E+02	1.13E-09	4.52E-02
75.	Sr90 (Ci)	3.42E+02	9.04E+01	4.70E+03	5.28E+02	6.04E+02	4.12E+03	5.18E+03	1.02E+04	5.18E+03	1.46E+04
76.	Y90 (Ci)	3.42E+02	9.04E+01	4.70E+03	5.28E+02	6.04E+02	4.12E+03	5.18E+03	1.02E+04	5.18E+03	1.46E+04
77.	Tc99 (Ci)	9.16E+00	1.78E+01	1.27E-07	5.19E+01	1.80E+02	1.19E+02	1.11E+02	7.77E+02	3.43E-09	3.57E-01
78.	Cs137 (Ci)	2.13E+04	4.20E+04	3.39E-05	5.68E+04	3.20E+05	3.57E+05	3.29E+05	1.11E+06	3.60E-06	9.86E+01
79.	Ba137 (Ci)	2.03E+04	3.99E+04	3.22E-05	5.40E+04	3.04E+05	3.39E+05	3.13E+05	1.06E+06	3.42E-06	9.37E+01
80.	U235 (Ci)	5.44E-03	6.06E-04	5.20E-01	1.11E-02	1.24E-03	3.42E-02	4.80E-03	6.61E-04	4.87E-02	7.49E-03
81.	U238 (Ci)	1.29E-01	1.43E-02	1.05E+01	2.32E-01	2.58E-02	8.11E-01	1.12E-01	1.54E-02	1.12E+00	1.73E-01
82.	Np237 (Ci)	1.26E-02	2.44E-02	2.46E-04	2.66E-02	1.46E-01	3.38E-02	3.32E-02	4.44E-01	1.37E-04	1.00E-04
83.	Pu238 (Ci)	4.95E-03	1.74E-03	9.15E-01	5.68E-02	7.59E-03	4.23E-02	5.79E-03	3.15E-03	6.69E-01	7.30E-02
84.	Pu239 (Ci)	2.11E-01	2.35E-02	1.77E+01	4.36E-01	4.83E-02	1.47E+00	1.47E-01	1.63E-02	3.11E+00	3.09E-01
85.	Pu240 (Ci)	4.93E-02	5.48E-03	4.14E+00	1.01E-01	1.12E-02	3.44E-01	3.44E-02	3.94E-03	6.41E-01	6.37E-02
86.	Pu241 (Ci)	1.94E-01	2.16E-02	3.01E+01	6.90E-01	7.67E-02	1.37E+00	1.37E-01	1.52E-02	3.01E+00	3.01E-01
87.	Am241 (Ci)	5.78E-01	9.49E-02	2.39E+01	9.80E+00	1.27E+01	3.82E+00	8.98E-01	6.60E+01	9.13E+00	1.02E+00
88.	Cm244 (Ci)	1.52E-05	7.01E-05	1.10E-11	4.08E-03	5.33E-03	1.58E-03	1.56E-03	3.64E-02	2.90E-13	4.76E-05

Table A-8b. Revised Tank Inventory for Solid Phase Constituents (S,SX)

		Mass (kg)									
	Chemical	105S	106S	107S	108S	109S	110S	111S	112S	101SX	102SX
1.	AG+	3.73E-07	7.16E-07	3.00E-15	1.23E-06	5.86E-06	3.38E-06	3.17E-06	2.34E-05	8.88E-17	5.32E-09
2.	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
3.	AL+3	1.16E+03	2.19E+04	9.90E+04	2.46E+03	9.05E+03	5.72E+04	4.11E+04	3.49E+03	1.69E+05	2.87E+04
4.	AM+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
5.	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
6.	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
7.	BA+2	2.06E+00	2.10E+00	1.11E+00	2.01E+00	5.03E+00	4.63E+00	4.53E+00	1.20E+01	4.22E+00	3.72E+00
8.	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
9.	BI+3	7.04E-01	7.92E-01	2.07E-01	9.28E-01	8.60E-01	4.29E-01	6.92E-01	9.77E-01	2.41E-01	7.95E-01
10.	CA+2	5.28E+01	2.73E+02	1.35E+03	1.58E+02	1.38E+02	7.38E+02	6.68E+02	1.65E+02	2.11E+03	4.62E+02
11.	CANCRINITE	1.31E+04	1.47E+04	1.19E+04	1.73E+04	1.60E+04	9.21E+03	1.51E+04	1.82E+04	7.26E+03	4.37E+04
12.	CD+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
13.	CE+3	0.00E+00	1.48E-01	8.16E-07	7.20E+02	1.00E+03	9.85E+01	1.09E+02	6.81E+03	1.75E-07	2.67E+00
14.	CL-	7.26E+01	8.36E+01	7.44E+01	9.71E+01	8.90E+01	7.73E+01	9.18E+01	1.02E+02	1.20E+02	9.76E+01
15.	CM+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
16.	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
17.	CO3-2	4.94E+02	5.87E+02	2.60E+02	6.63E+02	6.15E+02	3.96E+02	5.70E+02	6.98E+02	3.88E+02	5.58E+02
18.	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
19.	CR+3	7.24E+01	3.40E+01	4.77E+03	7.64E+02	2.86E+01	3.00E+03	1.99E+03	5.31E+02	8.80E+03	4.59E+03
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	3.27E+01	3.68E+01	1.62E+03	4.31E+01	3.99E+01	1.99E+01	3.21E+01	4.54E+01	1.12E+01	3.69E+01
24.	FE+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
25.	FE+3	5.51E+01	1.75E+03	6.52E+03	3.03E+02	5.86E+02	2.95E+03	2.08E+03	3.90E+02	8.68E+03	3.98E+03
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	1.58E+01	1.78E+01	5.18E+00	2.08E+01	1.93E+01	9.63E+00	1.55E+01	2.19E+01	4.64E+00	1.72E+01
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+4	2.05E+03	2.30E+03	3.31E+02	2.70E+03	2.50E+03	1.25E+03	2.01E+03	2.84E+03	6.01E+02	2.23E+03
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	3.75E+03	4.90E+03	5.09E+03	5.05E+03	4.84E+03	4.03E+03	4.86E+03	5.28E+03	6.12E+03	4.85E+03
40.	NB+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
41.	NI+3	3.19E+01	3.79E+02	1.98E+03	1.63E+02	1.49E+02	9.39E+02	8.18E+02	1.79E+02	2.74E+03	6.84E+02
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	1.38E+03	1.57E+03	4.22E+02	1.82E+03	1.69E+03	8.41E+02	1.38E+03	1.92E+03	4.57E+02	1.54E+03
44.	NO3-	1.55E+04	1.76E+04	8.08E+03	2.05E+04	1.90E+04	1.07E+04	1.60E+04	2.16E+04	7.24E+03	1.65E+04
45.	NP+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
46.	OH-	0.00E+00	4.20E+04	2.00E+03	3.10E+03	1.55E+04	1.14E+05	8.10E+04	7.00E+03	3.41E+05	6.13E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	2.37E-03	2.67E-03	3.84E-04	3.13E-03	2.90E-03	1.45E-03	2.33E-03	3.30E-03	6.97E-04	2.58E-03
49.	PO4-3	1.32E+02	1.49E+02	3.37E+01	1.74E+02	1.61E+02	8.05E+01	1.30E+02	1.83E+02	4.33E+01	1.47E+02
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	SR+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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	1.54E+02	1.73E+02	5.50E+01	2.02E+02	1.87E+02	9.84E+01	1.54E+02	2.13E+02	5.40E+01	1.64E+02
61.	SR+2	0.00E+00	2.60E+01	1.03E+01	0.00E+00	1.05E+01	0.00E+00	1.03E+01	2.43E+00	0.00E+00	0.00E+00
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	8.17E+01	9.16E+01	1.75E+01	1.08E+02	9.97E+01	4.78E+01	7.89E+01	1.13E+02	2.63E+01	9.40E+01
68.	UO2+2	2.80E+01	7.56E+03	4.51E+03	9.03E+02	2.85E+03	1.51E+03	3.74E+03	1.30E+03	4.45E+03	2.24E+03
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	2.33E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	3.82E+04	1.16E+05	5.79E+05	5.73E+04	7.49E+04	2.07E+05	1.72E+05	7.11E+04	5.59E+05	1.72E+05
	Vol (ML) spg=3	12.7	38.7	193.0	19.1	25.0	69.1	57.3	23.7	186.4	57.3
74.	C14 (Ci)	2.64E-02	5.33E-02	2.12E-10	1.15E-01	5.41E-01	3.77E-01	3.52E-01	2.30E+00	1.14E-11	4.57E-04
75.	Sr90 (Ci)	3.39E+04	8.95E+03	4.65E+05	5.23E+04	5.98E+04	4.08E+05	5.13E+05	1.01E+05	5.13E+05	1.45E+06
76.	Y90 (Ci)	3.39E+04	8.95E+03	4.65E+05	5.23E+04	5.98E+04	4.08E+05	5.13E+05	1.01E+06	5.13E+05	1.45E+06
77.	Tc99 (Ci)	9.16E+00	1.78E+01	1.27E-07	5.19E+01	1.80E+02	1.19E+02	1.11E+02	7.77E+02	3.43E-09	3.57E-01
78.	Cs137 (Ci)	7.11E+03	1.40E+04	1.13E-05	1.89E+04	1.07E+05	1.19E+05	1.10E+05	3.70E+05	1.20E-06	3.29E+01
79.	Ba137 (Ci)	6.76E+03	1.33E+04	1.07E-05	1.80E+04	1.01E+05	1.13E+05	1.04E+05	3.52E+05	1.14E-06	3.12E+01
80.	U235 (Ci)	5.77E-05	6.12E-06	8.13E-02	1.30E-04	1.25E-05	1.90E-03	1.30E-04	7.26E-06	1.25E-02	1.73E-04
81.	U238 (Ci)	1.37E-03	1.45E-04	1.64E+00	2.71E-03	2.61E-04	4.51E-02	3.04E-03	1.69E-04	2.86E-01	3.99E-03
82.	Np237 (Ci)	1.13E-01	2.20E-01	2.22E-03	2.39E-01	1.31E+00	3.04E-01	2.99E-01	3.99E+00	1.24E-03	9.01E-04
83.	Pu238 (Ci)	2.43E-01	8.51E-02	4.48E+01	2.78E+00	3.72E-01	2.07E+00	2.84E-01	1.54E-01	3.28E+01	3.58E+00
84.	Pu239 (Ci)	1.03E+01	1.15E+00	8.68E+02	2.14E+01	2.37E+00	7.19E+01	7.19E+00	7.98E-01	1.53E+02	1.51E+01
85.	Pu240 (Ci)	2.42E+00	2.69E-01	2.03E+02	4.97E+00	5.51E-01	1.68E+01	1.68E+00	1.93E-01	3.14E+01	3.12E+00
86.	Pu241 (Ci)	9.51E+00	1.06E+00	1.48E+03	3.38E+01	3.76E+00	6.71E+01	6.71E+00	7.47E-01	1.48E+02	1.48E+01
87.	Am241 (Ci)	5.20E+00	8.54E-01	2.15E+02	8.82E+01	1.15E+02	3.44E+01	8.08E+00	5.94E+02	8.22E+01	9.19E+00
88.	Cm244 (Ci)	1.51E-03	6.94E-03	1.09E-09	4.04E-01	5.27E-01	1.57E-01	1.55E-01	3.60E+00	2.87E-11	4.72E-03

Table A-9a. Revised Tank Inventory for Liquid Phase Constituents (SX)

		Mass (kg)									
	Chemical	103SX	104SX	105SX	106SX	107SX	108SX	109SX	110SX	111SX	112SX
1.	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
2.	AL(OH)4-	8.14E+04	7.90E+04	8.11E+04	5.80E+04	1.49E+04	1.66E+04	1.83E+04	3.84E+03	1.19E+04	1.06E+04
3.	AL+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	8.27E+01	6.82E+01	9.57E+01	1.10E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10.	CA+2	1.21E+02	9.98E+01	1.42E+02	4.87E+01	8.37E-01	8.91E-01	8.54E+01	1.34E+01	1.79E+01	7.99E+00
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	4.67E+01	9.65E+00	1.60E+01	2.96E+01	0.00E+00	0.00E+00	0.00E+00	3.29E-08	0.00E+00	0.00E+00
14.	CL-	9.09E+03	7.92E+03	1.02E+04	9.29E+03	6.69E+02	7.31E+02	1.09E+03	3.73E+02	7.31E+02	5.50E+02
15.	CM+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
16.	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
17.	CO3-2	5.87E+04	4.90E+04	6.66E+04	3.00E+04	1.29E+03	1.38E+03	5.95E+03	1.81E+03	2.74E+03	1.64E+03
18.	CR(OH)4-	6.76E+03	6.60E+03	8.16E+03	3.11E+03	3.92E+03	4.06E+03	8.66E+03	4.40E+03	6.30E+03	3.93E+03
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	3.84E+03	3.17E+03	4.44E+03	5.11E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
24.	FE+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
25.	FE+3	3.57E+02	3.14E+02	4.11E+02	8.75E+01	5.11E+01	5.40E+01	1.69E+02	6.19E+01	9.29E+01	5.73E+01
26.	FECN6-3	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
27.	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
28.	H2O	8.92E+06	7.58E+06	1.03E+07	6.74E+06	1.69E+06	1.83E+06	4.30E+06	9.45E+05	1.40E+06	1.02E+06
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	1.86E+03	1.53E+03	2.10E+03	1.90E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+4	1.23E+02	1.02E+02	1.40E+02	1.26E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	1.14E+06	9.69E+05	1.31E+06	8.38E+05	4.33E+04	4.74E+04	5.87E+05	1.29E+05	1.91E+05	1.02E+05
40.	NB+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
41.	NI+3	7.48E+01	6.22E+01	8.78E+01	2.94E+01	1.21E+00	1.28E+00	4.15E+01	7.35E+00	1.01E+01	4.89E+00
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	1.62E+05	1.34E+05	1.87E+05	2.04E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
44.	NO3-	1.95E+06	1.69E+06	2.22E+06	1.08E+06	1.02E+05	1.12E+05	1.56E+06	3.40E+05	4.99E+05	2.63E+05
45.	NP+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
46.	OH-	2.10E+05	1.68E+05	2.46E+05	3.32E+05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	2.79E-01	2.30E-01	3.16E-01	2.86E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
49.	PO4-3	1.55E+04	1.26E+04	1.78E+04	1.92E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	1.83E+04	1.52E+04	2.12E+04	1.42E+04	2.39E+02	2.62E+02	3.82E+02	1.15E+02	2.44E+02	1.90E+02
61.	SR+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
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	9.38E+03	7.62E+03	1.09E+04	1.32E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
68.	UO2+2	2.15E+02	2.31E+02	3.53E+02	1.37E+02	3.82E+02	3.89E+02	7.00E+02	4.87E+02	6.63E+02	4.00E+02
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	1.26E+07	1.07E+07	1.45E+07	9.25E+06	1.86E+06	2.02E+06	6.48E+06	1.42E+06	2.11E+06	1.40E+06
	Diluted Vol (ML)	9913.0	8426.1	11391.3	7287.0	1753.6	1905.0	5104.3	1121.7	1660.9	1159.9
74.	C14 (Ci)	1.10E+02	1.23E+01	2.68E+01	4.04E+00	3.36E-07	6.71E-07	3.36E-07	2.58E-07	1.00E-14	7.28E-02
75.	Sr90 (Ci)	5.04E+03	5.19E+02	2.65E+03	1.16E+03	1.29E+04	8.03E+03	2.42E+03	5.28E+03	7.39E+03	8.54E+03
76.	Y90 (Ci)	5.04E+03	5.19E+02	2.65E+03	1.16E+03	1.29E+04	8.03E+03	2.42E+03	5.28E+03	7.39E+03	8.54E+03
77.	Tc99 (Ci)	6.75E+02	9.43E+01	2.12E+02	7.98E+01	1.02E-06	2.04E-06	1.02E-06	6.37E-08	3.00E-14	2.31E-01
78.	Cs137 (Ci)	4.15E+05	2.83E+04	5.85E+04	5.71E+04	1.65E-03	3.18E-03	3.39E-03	6.12E-05	1.12E-10	6.89E+02
79.	Ba137 (Ci)	3.94E+05	2.69E+04	5.55E+04	5.42E+04	1.57E-03	3.02E-03	3.22E-03	5.82E-05	1.07E-10	6.54E+02
80.	U235 (Ci)	2.34E-03	4.82E-02	4.21E-03	9.06E-03	4.01E-03	4.42E-03	5.44E-02	7.30E-02	7.84E-02	3.56E-02
81.	U238 (Ci)	5.44E-02	1.10E+00	9.63E-02	2.11E-01	8.24E-02	8.84E-02	1.08E+00	1.30E+00	1.51E+00	7.13E-01
82.	Np237 (Ci)	1.96E-01	2.37E-02	5.14E-02	5.49E-02	2.87E-04	3.17E-04	1.14E-04	2.74E-04	5.32E-04	2.33E-04
83.	Pu238 (Ci)	1.65E-02	6.53E-01	6.65E-02	3.09E-04	3.79E-01	3.12E-01	3.08E-01	1.11E-01	5.80E-01	3.45E-01
84.	Pu239 (Ci)	3.44E-02	3.07E+00	2.59E-01	4.08E-06	4.29E+00	4.64E+00	2.83E+00	4.39E+00	5.61E+00	3.21E+00
85.	Pu240 (Ci)	7.29E-03	5.91E-01	5.21E-02	1.35E-05	1.00E+00	1.06E+00	6.03E-01	1.11E+00	1.39E+00	7.47E-01
86.	Pu241 (Ci)	3.34E-02	2.79E+00	2.49E-01	1.27E-05	6.56E+00	7.02E+00	3.72E+00	9.69E+00	1.40E+01	4.71E+00
87.	Am241 (Ci)	1.77E+02	3.60E+01	6.29E+01	2.70E+01	2.96E+01	3.19E+01	1.31E+01	4.57E+01	5.88E+01	1.84E+01
88.	Cm244 (Ci)	8.02E-02	1.24E-02	2.83E-02	5.49E-03	7.02E-12	2.65E-11	7.29E-12	4.66E-12	5.21E-19	2.22E-06

Table A-9b. Revised Tank Inventory for Solid Phase Constituents (SX)

		Mass (kg)									
	Chemical	103SX	104SX	105SX	106SX	107SX	108SX	109SX	110SX	111SX	112SX
1.	AG+	1.14E-05	1.41E-06	3.16E-06	6.61E-07	2.20E-14	4.80E-14	2.70E-14	2.00E-15	6.30E-22	6.80E-09
2.	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
3.	AL+3	5.67E+04	8.55E+04	2.70E+04	6.16E+02	4.85E+04	5.41E+04	3.70E+04	8.70E+03	3.19E+04	3.10E+04
4.	AM+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
5.	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
6.	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
7.	BA+2	1.90E+01	4.33E+00	3.71E+00	2.35E-01	6.19E+00	6.04E+00	4.82E+00	1.32E+01	9.34E+00	4.28E+00
8.	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
9.	BI+3	8.36E-01	6.89E-01	9.67E-01	1.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10.	CA+2	7.56E+02	1.11E+03	5.85E+02	4.05E+01	1.06E+03	1.13E+03	1.31E+03	9.48E+02	1.53E+03	1.04E+03
11.	CANCRINITE	1.67E+04	1.46E+04	3.04E+04	1.40E+04	2.50E+04	2.51E+04	4.59E+04	3.49E+04	4.57E+04	2.69E+04
12.	CD+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
13.	CE+3	4.63E+03	9.55E+02	1.58E+03	2.93E+03	0.00E+00	0.00E+00	0.00E+00	3.26E-06	0.00E+00	0.00E+00
14.	CL-	1.19E+02	1.20E+02	1.17E+02	9.42E+01	3.52E+01	3.85E+01	1.85E+01	1.02E+01	2.35E+01	2.09E+01
15.	CM+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
16.	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
17.	CO3-2	6.80E+02	6.26E+02	7.37E+02	3.06E+02	1.43E+02	1.53E+02	1.56E+02	1.16E+02	1.90E+02	1.31E+02
18.	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
19.	CR+3	2.99E+03	4.49E+03	3.70E+03	1.97E+02	7.72E+03	8.01E+03	8.59E+03	7.41E+03	1.07E+04	5.97E+03
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	3.88E+01	3.20E+01	4.49E+01	5.16E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
24.	FE+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
25.	FE+3	2.93E+03	4.41E+03	2.49E+03	7.40E+01	5.06E+03	5.35E+03	4.27E+03	3.64E+03	5.79E+03	4.10E+03
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	1.88E+01	1.55E+01	2.12E+01	1.92E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+4	2.43E+03	2.00E+03	2.75E+03	2.49E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	6.16E+03	6.27E+03	6.19E+03	3.39E+03	1.80E+03	1.97E+03	2.42E+03	1.76E+03	3.14E+03	2.16E+03
40.	NB+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
41.	NI+3	9.41E+02	1.40E+03	7.39E+02	3.66E+01	1.45E+03	1.54E+03	1.66E+03	1.10E+03	1.78E+03	1.24E+03
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	1.64E+03	1.35E+03	1.89E+03	2.07E+03	0.00E+00	0.00E+00	5.68E+01	1.17E+01	1.60E+01	7.43E+00
44.	NO3-	1.97E+04	1.71E+04	2.24E+04	1.09E+04	1.11E+03	1.23E+03	1.84E+04	3.84E+03	5.71E+03	3.02E+03
45.	NP+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
46.	OH-	1.14E+05	1.71E+05	5.58E+04	9.87E+02	1.07E+05	1.18E+05	8.12E+04	2.92E+04	7.97E+04	7.18E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	2.82E-03	2.32E-03	3.19E-03	2.89E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
49.	PO4-3	1.57E+02	1.29E+02	1.80E+02	1.94E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	1.87E+02	1.57E+02	2.15E+02	1.44E+02	4.87E+00	5.35E+00	3.46E+00	1.25E+00	2.77E+00	2.32E+00
61.	SR+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
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	9.47E+01	7.69E+01	1.10E+02	1.33E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
68.	UO2+2	1.50E+03	2.26E+03	3.35E+03	2.18E+02	7.25E+03	7.40E+03	7.25E+03	8.41E+03	1.15E+04	7.09E+03
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	2.32E+05	3.14E+05	1.60E+05	3.89E+04	2.06E+05	2.24E+05	2.08E+05	1.00E+05	1.98E+05	1.55E+05
	Vol (ML) spg=3	77.5	104.5	53.4	13.0	68.7	74.7	69.4	33.4	65.9	51.8
74.	C14 (Ci)	1.11E+00	1.24E-01	2.71E-01	4.08E-02	3.39E-09	6.77E-09	3.39E-09	2.61E-09	1.01E-16	7.36E-04
75.	Sr90 (Ci)	4.99E+05	5.13E+04	2.62E+05	1.15E+05	1.28E+06	7.95E+05	2.39E+05	5.23E+05	7.32E+05	8.45E+05
76.	Y90 (Ci)	4.99E+05	5.13E+04	2.62E+05	1.15E+05	1.28E+06	7.95E+05	2.39E+05	5.23E+05	7.32E+05	8.45E+05
77.	Tc99 (Ci)	6.75E+02	9.43E+01	2.12E+02	7.98E+01	1.02E-06	2.04E-06	1.02E-06	6.37E-08	3.00E-14	2.31E-01
78.	Cs137 (Ci)	1.38E+05	9.43E+03	1.95E+04	1.90E+04	5.50E-04	1.06E-03	1.13E-03	2.04E-05	3.74E-11	2.30E+02
79.	Ba137 (Ci)	1.31E+05	8.96E+03	1.85E+04	1.81E+04	5.22E-04	1.03E-03	1.07E-03	1.94E-05	3.56E-11	2.18E+02
80.	U235 (Ci)	7.80E-05	2.53E-03	8.99E-05	9.40E-05	7.62E-02	8.40E-02	1.12E-04	2.06E-02	3.32E-02	2.55E-02
81.	U238 (Ci)	1.81E-03	5.78E-02	2.06E-03	2.19E-03	1.57E+00	1.68E+00	2.23E-03	3.67E-01	6.37E-01	5.11E-01
82.	Np237 (Ci)	1.76E+00	2.13E-01	4.63E-01	4.94E-01	2.59E-03	2.85E-03	1.03E-03	2.46E-03	4.79E-03	2.09E-03
83.	Pu238 (Ci)	8.06E-01	3.20E+01	3.26E+00	1.51E-02	1.86E+01	1.53E+01	1.51E+01	5.46E+00	2.84E+01	1.69E+01
84.	Pu239 (Ci)	1.69E+00	1.50E+02	1.27E+01	2.00E-04	2.10E+02	2.28E+02	1.39E+02	2.15E+02	2.75E+02	1.57E+02
85.	Pu240 (Ci)	3.57E-01	2.89E+01	2.55E+00	6.64E-04	4.92E+01	5.19E+01	2.95E+01	5.42E+01	6.82E+01	3.66E+01
86.	Pu241 (Ci)	1.64E+00	1.37E+02	1.22E+01	6.21E-04	3.21E+02	3.44E+02	1.82E+02	4.75E+02	6.86E+02	2.31E+02
87.	Am241 (Ci)	1.60E+03	3.24E+02	5.66E+02	2.43E+02	2.67E+02	2.87E+02	1.18E+02	4.11E+02	5.29E+02	1.65E+02
88.	Cm244 (Ci)	7.94E+00	1.23E+00	2.80E+00	5.43E-01	6.95E-10	2.62E-09	7.22E-10	4.62E-10	5.15E-17	2.19E-04

Table A-10a. Revised Tank Inventory for Liquid Phase Constituents (SX,T)

		Mass (kg)									
	Chemical	113SX	114SX	115SX	101T	102T	103T	104T	105T	106T	107T
1.	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
2.	AL(OH)4-	3.12E+02	7.05E+03	7.16E+02	6.98E+03	3.37E+03	3.71E+03	1.52E+04	1.89E+01	2.11E+03	5.52E+03
3.	AL+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.85E-03	1.01E+02	3.25E+01	1.61E+00	3.78E+01
10.	CA+2	9.97E-03	7.11E+01	4.77E+00	4.47E-01	2.19E-01	1.74E+00	1.34E+00	5.01E-01	8.60E-02	4.64E-01
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	0.00E+00	0.00E+00	0.00E+00	8.02E+00	1.36E-01	2.76E-03	1.17E+02	1.05E-16	4.51E-01	5.42E-17
14.	CL-	1.13E+01	7.86E+02	7.15E+01	7.24E+01	2.62E+01	9.45E+01	8.63E+02	3.11E+02	3.59E+01	2.33E+02
15.	CM+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
16.	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
17.	CO3-2	1.54E+01	5.44E+03	3.62E+02	8.74E+02	5.20E+02	5.46E+02	2.06E+03	7.73E+02	1.33E+02	7.16E+02
18.	CR(OH)4-	2.69E+01	8.96E+03	1.42E+03	6.62E+00	3.32E+00	1.00E+02	9.62E+01	2.03E+01	4.14E+00	2.57E+01
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.58E+01	1.64E+04	4.50E+03	3.22E+02	5.46E+03
24.	FE+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
25.	FE+3	5.29E-01	1.60E+02	2.80E+01	2.40E+01	1.17E+01	1.58E+01	8.90E+01	3.75E+01	4.46E+00	3.36E+01
26.	FECN6-3	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
27.	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
28.	H2O	2.70E+04	3.81E+06	1.88E+05	7.51E+05	3.62E+05	3.14E+05	2.86E+06	6.35E+05	2.21E+05	9.70E+05
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+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
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	7.49E+02	5.20E+05	2.57E+05	9.82E+03	5.14E+03	1.58E+04	3.23E+05	7.27E+04	1.05E+04	1.09E+05
40.	NB+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
41.	NI+3	1.37E-02	3.58E+01	3.65E+00	7.14E-01	3.50E-01	1.29E+00	1.65E+00	7.06E-01	1.20E-01	6.04E-01
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	0.00E+00	0.00E+00	0.00E+00	1.54E+03	7.42E+02	1.83E+03	1.15E+04	7.52E+02	2.02E+03	3.08E+03
44.	NO3-	1.75E+03	1.39E+06	5.78E+04	1.43E+04	5.55E+03	3.37E+04	1.09E+05	4.24E+04	6.49E+03	2.84E+04
45.	NP+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
46.	OH-	0.00E+00	0.00E+00	0.00E+00	1.30E+03	1.17E+03	7.83E+02	1.37E+05	2.73E+04	3.68E+03	4.84E+04
47.	P205:24WO2:44H20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+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
49.	PO4-3	0.00E+00	0.00E+00	0.00E+00	1.65E+02	1.64E+02	1.58E+02	9.01E+04	1.85E+04	1.59E+03	3.21E+04
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	4.35E+00	2.54E+02	2.20E+01	2.62E+02	2.52E+02	3.09E+02	2.86E+03	5.63E+02	7.57E+01	7.62E+02
61.	SR+2	0.00E+00	0.00E+00	0.00E+00	2.87E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.70E-02	0.00E+00
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
68.	UO2+2	1.41E+00	8.80E+02	7.85E+01	5.93E+02	3.02E+02	2.54E+02	2.42E+01	2.54E+00	9.85E+01	3.07E+00
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZR02:2H20	0.00E+00	0.00E+00	0.00E+00	7.00E+00	0.00E+00	1.81E-01	1.86E+02	8.80E+00	3.39E+00	6.51E+01
	Total	2.99E+04	5.74E+06	2.84E+05	7.87E+05	3.79E+05	3.72E+05	3.57E+06	8.03E+05	2.48E+05	1.20E+06
	Diluted Vol (ML)	28.2	4521.7	223.5	763.9	366.9	334.4	2808.7	632.2	223.8	947.8
74.	C14 (Ci)	1.19E+01	1.00E-14	2.32E+01	1.34E+01	2.27E-01	1.27E+00	3.02E-02	3.35E-17	1.87E-02	6.10E-04
75.	Sr90 (Ci)	2.25E+03	7.75E+03	5.55E+03	1.80E+01	3.06E-01	1.51E+02	2.86E+02	3.48E+01	1.78E+00	2.52E+02
76.	Y90 (Ci)	2.25E+03	7.75E+03	5.55E+03	1.80E+01	3.06E-01	1.51E+02	2.86E+02	3.48E+01	1.78E+00	2.52E+02
77.	Tc99 (Ci)	3.82E+01	3.00E-14	7.44E+01	2.39E+01	4.05E-01	2.24E+00	1.08E+00	1.02E-16	5.62E-02	5.26E-17
78.	Cs137 (Ci)	1.03E+05	1.08E-10	2.09E+05	6.19E+03	1.05E+02	5.03E+02	2.62E+03	1.88E-13	1.48E+02	1.89E-13
79.	Ba137 (Ci)	9.78E+04	1.02E-10	1.98E+05	5.88E+03	9.96E+01	4.78E+02	2.49E+03	1.78E-13	1.41E+02	1.80E-13
80.	U235 (Ci)	8.23E-04	1.23E-01	2.93E-02	1.04E-04	1.16E-05	4.19E-05	2.01E-03	5.22E-03	2.72E-03	6.94E-04
81.	U238 (Ci)	1.93E-02	2.48E+00	5.97E-01	2.39E-03	2.66E-04	9.56E-04	4.64E-02	1.19E-01	6.28E-02	1.56E-02
82.	Np237 (Ci)	5.46E-02	3.48E-04	2.91E-02	8.86E-03	1.50E-04	7.39E-04	1.56E-03	1.46E-05	7.66E-05	1.88E-06
83.	Pu238 (Ci)	1.51E-02	2.34E-01	4.79E-02	3.33E-04	5.10E-06	1.50E-03	3.50E-02	4.25E-01	4.77E-02	1.65E-03
84.	Pu239 (Ci)	1.02E+00	7.10E+00	1.82E+00	8.58E-07	1.66E-08	1.76E-03	2.12E+00	2.76E+00	3.07E-01	7.38E-01
85.	Pu240 (Ci)	2.10E-01	1.70E+00	4.43E-01	1.34E-05	3.59E-07	2.53E-04	3.94E-01	4.66E-01	5.12E-02	5.94E-02
86.	Pu241 (Ci)	9.37E-01	1.16E+01	2.79E+00	2.14E-06	2.23E-08	9.93E-04	1.46E+00	1.95E+00	2.16E-01	6.23E-02
87.	Am241 (Ci)	2.49E+00	4.90E+01	1.01E+01	5.88E+00	1.00E-01	5.62E-01	1.33E+00	1.38E+00	1.54E-01	1.19E-01
88.	Cm244 (Ci)	9.33E-05	2.44E-19	5.93E-04	3.19E-03	5.41E-05	3.04E-04	8.79E-06	8.71E-22	4.25E-07	4.32E-22

Table A-10b. Revised Tank Inventory for Solid Phase Constituents (SX,T)

		Mass (kg)										
	Chemical	113SX	114SX	115SX	101T	102T	103T	104T	105T	106T	107T
1.	AG+	1.31E-06	6.97E-22	2.48E-06	6.56E-07	1.11E-08	6.16E-08	4.13E-08	2.10E-24	1.84E-09	1.78E-24
2.	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
3.	AL+3	1.02E+03	1.02E+04	1.65E+03	2.28E+04	1.10E+04	1.10E+04	4.98E+04	6.17E+01	6.91E+03	1.80E+04
4.	AM+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
5.	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
6.	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
7.	BA+2	4.34E+00	1.16E+01	8.25E+00	4.50E-01	2.36E-03	9.27E-02	1.77E-01	1.52E-01	6.12E-01	3.71E-01
8.	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
9.	BI+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.79E-01	9.97E+03	3.22E+03	1.59E+02	3.75E+03
10.	CA+2	1.27E+01	1.51E+03	9.89E+01	5.68E+02	2.78E+02	2.75E+02	1.70E+03	6.37E+02	1.09E+02	5.90E+02
11.	CANCRINITE	2.22E+01	6.11E+04	6.62E+03	3.72E+00	3.70E+00	1.32E+02	4.89E+04	1.96E+04	1.73E+03	1.78E+04
12.	CD+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
13.	CE+3	0.00E+00	0.00E+00	0.00E+00	7.94E+02	1.35E+01	2.74E-01	1.15E+04	1.00E-14	4.46E+01	5.00E-15
14.	CL-	5.93E-01	1.38E+01	1.61E+00	3.81E+00	1.38E+00	2.06E+00	4.54E+01	1.54E+01	1.89E+00	1.23E+01
15.	CM+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
16.	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
17.	CO3-2	1.71E+00	1.90E+02	1.25E+01	9.71E+01	5.78E+01	4.84E+01	2.29E+02	0.00E+00	1.47E+01	7.96E+01
18.	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
19.	CR+3	5.31E+01	1.09E+04	1.15E+03	1.31E+01	6.55E+00	6.77E+00	1.90E+02	4.00E+01	8.16E+00	5.06E+01
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+00	8.64E+02	2.37E+02	1.70E+01	2.87E+02
24.	FE+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
25.	FE+3	5.24E+01	4.59E+03	6.67E+02	2.37E+03	1.16E+03	1.15E+03	8.82E+03	3.71E+03	4.42E+02	3.32E+03
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+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
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	3.12E+01	3.93E+03	2.39E+02	4.12E+02	2.14E+02	2.28E+02	1.35E+04	3.03E+03	4.37E+02	4.56E+03
40.	NB+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
41.	NI+3	1.65E+01	1.67E+03	1.55E+02	8.58E+02	4.20E+02	4.16E+02	1.98E+03	8.48E+02	1.44E+02	7.26E+02
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	0.00E+00	5.20E+01	2.35E+00	1.55E+01	7.50E+00	1.85E+01	1.16E+02	0.00E+00	2.04E+01	3.11E+01
44.	NO3-	2.27E+01	1.62E+04	7.65E+02	1.44E+02	5.60E+01	3.41E+02	1.11E+03	0.00E+00	6.56E+01	2.57E+02
45.	NP+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
46.	OH-	2.06E+03	3.53E+04	5.00E+03	4.78E+04	2.29E+04	2.28E+04	4.68E+04	0.00E+00	1.29E+04	1.58E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+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
49.	PO4-3	0.00E+00	0.00E+00	0.00E+00	2.48E+02	2.46E+02	1.24E+02	1.35E+05	2.78E+04	2.39E+03	4.81E+04
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	8.88E-02	2.63E+00	2.35E-01	5.34E+00	5.15E+00	4.47E+00	5.83E+01	1.15E+01	1.55E+00	1.56E+01
61.	SR+2	0.00E+00	0.00E+00	0.00E+00	2.84E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.63E+00	0.00E+00
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
68.	UO2+2	2.69E+01	1.22E+04	5.30E+02	1.13E+04	5.74E+03	4.71E+03	4.60E+02	4.83E+01	1.87E+03	5.84E+01
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.79E+01	1.84E+04	8.71E+02	3.35E+02	6.45E+03
	Total	3.32E+03	1.58E+05	1.69E+04	8.75E+04	4.21E+04	4.13E+04	3.49E+05	6.01E+04	2.76E+04	1.20E+05
	Vol (ML) spg=3	1.1	52.6	5.6	29.2	14.0	13.8	116.5	20.0	9.2	40.0
74.	C14 (Ci)	1.21E-01	1.01E-16	2.35E-01	1.35E-01	2.29E-03	1.29E-02	3.05E-04	3.38E-19	1.89E-04	6.16E-06
75.	Sr90 (Ci)	2.23E+05	7.67E+05	5.50E+05	1.78E+03	3.03E+01	1.50E+04	2.83E+04	3.44E+03	1.76E+02	2.49E+04
76.	Y90 (Ci)	2.23E+05	7.67E+05	5.50E+05	1.78E+03	3.03E+01	1.50E+04	2.83E+04	3.44E+03	1.76E+02	2.49E+04
77.	Tc99 (Ci)	3.82E+01	3.00E-14	7.44E+01	2.39E+01	4.05E-01	2.24E+00	1.08E+00	1.02E-16	6.62E-02	5.26E-17
78.	Cs137 (Ci)	3.43E+04	3.60E-11	6.95E+04	2.08E+03	3.49E+01	1.68E+02	8.74E+02	6.30E-14	4.93E+01	6.30E-14
79.	Ba137 (Ci)	3.26E+04	3.42E-11	6.60E+04	1.96E+03	3.32E+01	1.59E+02	8.30E+02	5.90E-14	4.69E+01	6.00E-14
80.	U235 (Ci)	1.56E-02	1.16E-02	4.83E-03	1.98E-03	2.20E-04	7.96E-04	3.82E-02	9.92E-02	5.18E-02	1.32E-02
81.	U238 (Ci)	3.67E-01	2.34E-01	9.84E-02	4.54E-02	5.05E-03	1.82E-02	8.81E-01	2.26E+00	1.19E+00	2.96E-01
82.	Np237 (Ci)	4.91E-01	3.13E-03	2.62E-01	7.97E-02	1.35E-03	6.65E-03	1.40E-02	1.31E-04	6.90E-04	1.70E-05
83.	Pu238 (Ci)	7.40E-01	1.15E+01	2.35E+00	1.63E-02	2.50E-04	7.37E-02	1.71E+00	2.08E+01	2.34E+00	8.10E-02
84.	Pu239 (Ci)	4.99E+01	3.48E+02	8.91E+01	4.21E-05	8.16E-07	8.62E-02	1.04E+02	1.35E+02	1.50E+01	3.62E+01
85.	Pu240 (Ci)	1.03E+01	8.31E+01	2.17E+01	6.55E-04	1.76E-05	1.24E-02	1.93E+01	2.29E+01	2.54E+00	2.91E+00
86.	Pu241 (Ci)	4.59E+01	5.67E+02	1.37E+02	1.05E-04	1.09E-06	4.87E-02	7.17E+01	9.56E+01	1.06E+01	3.05E+00
87.	Am241 (Ci)	2.24E+01	4.41E+02	9.05E+01	5.29E+01	9.01E-01	5.06E+00	1.19E+01	1.24E+01	1.38E+00	1.07E+00
88.	Cm244 (Ci)	9.23E-03	2.41E-17	5.87E-02	3.16E-01	5.35E-03	3.01E-02	8.70E-04	8.62E-20	4.21E-05	4.28E-20

Table A-11a. Revised Tank Inventory for Liquid Phase Constituents (T,TX)

		Mass (kg)									
	Chemical	108T	109T	110T	111T	112T	201T	202T	203T	204T	101TX
1.	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
2.	AL(OH)4-	8.69E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.18E+04
3.	AL+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	5.06E+01	1.13E+02	1.51E+02	2.12E+02	3.06E+01	1.06E+01	7.99E+00	1.33E+01	1.44E+01	9.25E-01
10.	CA+2	9.75E+00	2.45E+01	2.42E+00	4.27E+00	6.56E-01	2.73E-01	2.05E-01	3.41E-01	3.70E-01	2.82E+00
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	1.24E-01	6.83E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E-09
14.	CL-	2.57E+02	5.56E+02	1.34E+03	1.62E+03	2.10E+02	1.12E+02	8.45E+01	1.40E+02	1.52E+02	5.50E+02
15.	CM+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
16.	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
17.	CO3-2	8.61E+02	1.89E+03	3.74E+03	6.58E+03	1.01E+03	4.21E+02	3.17E+02	5.26E+02	5.71E+02	1.11E+03
18.	CR(OH)4-	4.91E+01	1.14E+02	7.75E+01	1.43E+02	2.31E+01	6.18E+00	4.64E+00	7.71E+00	8.37E+00	1.09E+03
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	2.94E+03	5.23E+03	2.10E+04	2.24E+04	8.74E+02	8.71E+03	6.55E+03	1.09E+04	1.18E+04	4.29E+01
24.	FE+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
25.	FE+3	3.18E+01	6.68E+01	1.84E+02	3.17E+02	4.98E+01	1.40E+01	1.06E+01	1.75E+01	1.90E+01	2.64E+01
26.	FECN6-3	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
27.	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
28.	H2O	4.82E+05	8.30E+05	2.67E+06	2.03E+06	1.64E+05	1.81E+05	1.36E+05	2.26E+05	2.45E+05	9.31E+05
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	8.56E+01	3.07E+02	0.00E+00	2.39E+02	1.80E+02	2.99E+02	3.24E+02	0.00E+00
32.	LA+3	0.00E+00	0.00E+00	5.84E-01	2.10E+00	0.00E+00	1.63E+00	1.23E+00	2.04E+00	2.21E+00	0.00E+00
33.	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
34.	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
35.	MN+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
36.	MN+4	0.00E+00	0.00E+00	1.14E-02	4.10E-02	0.00E+00	3.19E-02	2.40E-02	3.98E-02	4.32E-02	0.00E+00
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	5.65E+04	9.93E+04	3.07E+05	2.40E+05	2.02E+04	2.15E+04	1.62E+04	2.69E+04	2.92E+04	4.82E+04
40.	NB+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
41.	NI+3	6.06E+00	1.51E+01	3.55E+00	6.59E+00	1.03E+00	4.21E-01	3.16E-01	5.25E-01	5.70E-01	2.02E+00
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	1.36E+03	2.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
44.	NO3-	4.16E+04	9.42E+04	1.99E+05	2.36E+05	2.89E+04	2.12E+04	1.60E+04	2.65E+04	2.88E+04	1.18E+05
45.	NP+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
46.	OH-	1.59E+04	2.10E+04	1.13E+05	6.63E+04	3.86E+03	3.03E+03	2.28E+03	3.78E+03	4.11E+03	0.00E+00
47	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+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
49.	PO4-3	1.98E+04	3.71E+04	7.07E+04	4.44E+04	3.32E+03	7.72E+02	5.80E+02	9.63E+02	1.05E+03	3.68E+02
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+4	0.00E+00	1.11E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
58.	SM+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
59.	SN+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
60.	SO4-2	2.16E+03	5.16E+03	1.91E+03	2.07E+03	2.82E+02	1.29E+01	9.69E+00	1.61E+01	1.75E+01	8.10E+02
61.	SR+2	0.00E+00	0.00E+00	1.11E+01	3.99E+01	0.00E+00	3.11E+01	2.34E+01	3.88E+01	4.21E+01	0.00E+00
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	0.00E+00	0.00E+00	2.55E+02	8.87E+02	0.00E+00	7.64E+02	5.75E+02	9.54E+02	1.04E+03	3.21E+01
68.	UO2+2	2.64E+00	5.43E+00	1.17E+00	1.24E+00	1.68E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E+02
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	1.04E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	6.24E+05	1.10E+06	3.39E+06	2.65E+06	2.23E+05	2.37E+05	1.79E+05	2.97E+05	3.22E+05	1.11E+06
	Diluted Vol (ML)	491.3	863.5	2669.6	2087.0	175.7	187.0	140.9	233.9	253.9	999.9
74.	C14 (Ci)	2.49E-02	2.23E-02	3.20E-13	0.00E+00	6.62E-38	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.00E+00
75.	Sr90 (Ci)	2.53E+01	5.09E-01	2.59E+01	2.20E+01	3.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.11E+01
76.	Y90 (Ci)	2.53E+01	5.09E-01	2.59E+01	2.20E+01	3.26E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.11E+01
77.	Tc99 (Ci)	9.95E-02	6.21E-01	3.12E-11	0.00E+00	1.61E-36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-08
78.	Cs137 (Ci)	3.06E+02	1.29E+03	5.75E-08	0.00E+00	2.32E-32	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E-05
79.	Ba137 (Ci)	2.91E+02	1.22E+03	5.47E-08	0.00E+00	2.20E-32	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.59E-05
80.	U235 (Ci)	2.83E-04	8.84E-05	5.14E-04	1.33E-03	4.45E-03	0.00E+00	3.98E-10	3.98E-09	0.00E+00	9.92E-11
81.	U238 (Ci)	6.36E-03	1.98E-03	1.16E-02	3.07E-02	1.05E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.95E-09
82.	Np237 (Ci)	2.44E-04	8.11E-04	5.61E-06	1.05E-05	1.96E-05	0.00E+00	3.09E-08	3.09E-07	0.00E+00	6.10E-10
83.	Pu238 (Ci)	1.46E-04	2.95E-05	7.52E-03	1.24E-02	1.84E-01	0.00E+00	3.75E-05	3.75E-04	0.00E+00	6.35E-06
84.	Pu239 (Ci)	7.38E-02	8.18E-03	2.81E+00	1.88E+00	3.11E+00	0.00E+00	4.46E-03	4.46E-02	0.00E+00	4.69E-07
85.	Pu240 (Ci)	5.94E-03	6.59E-04	3.06E-01	3.78E-01	6.81E-01	0.00E+00	1.07E-03	1.07E-02	0.00E+00	8.77E-06
86.	Pu241 (Ci)	6.23E-03	6.94E-04	5.14E-01	1.26E+00	2.93E+00	0.00E+00	4.01E-03	4.01E-02	0.00E+00	1.73E-06
87.	Am241 (Ci)	1.20E-02	1.34E-03	4.52E-01	9.39E-01	1.92E+00	0.00E+00	2.85E-03	2.85E-02	0.00E+00	6.29E-05
88.	Cm244 (Ci)	7.28E-07	1.09E-07	4.16E-18	0.00E+00	6.89E-36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.34E-12

Table A-11b. Revised Tank Inventory for Solid Phase Constituents (T,TX)

		Mass (kg)										
	Chemical	108T	109T	110T	111T	112T	201T	202T	203T	204T	101TX
1.	AG+	2.51E-09	1.81E-08	1.63E-18	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.42E-16
2.	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
3.	AL+3	2.69E+03	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+04
4.	AM+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
5.	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
6.	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
7.	BA+2	3.46E-01	3.32E-01	2.47E-04	0.00E+00	7.68E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.22E+00
8.	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
9.	BI+3	6.00E+02	1.14E+00	1.49E+04	2.10E+04	3.03E+03	1.05E+03	7.91E+02	1.31E+03	1.43E+03	9.34E-03
10.	CA+2	9.82E+01	9.71E+00	3.08E+03	5.42E+03	8.33E+02	3.47E+02	2.61E+02	4.33E+02	4.70E+02	4.78E+02
11.	CANCRINITE	4.58E+03	2.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E+02
12.	CD+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
13.	CE+3	1.23E+01	6.76E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E-07
14.	CL-	4.18E+00	5.61E+00	7.05E+01	8.54E+01	1.11E+01	5.92E+00	4.45E+00	7.39E+00	8.02E+00	2.43E+01
15.	CM+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
16.	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
17.	CO3-2	2.03E+01	1.91E+01	0.00E+00	7.32E+02	1.12E+02	4.68E+01	3.52E+01	5.84E+01	6.35E+01	1.04E+02
18.	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
19.	CR+3	8.29E+00	4.98E-01	1.53E+02	2.82E+02	4.55E+01	1.22E+01	9.15E+00	1.52E+01	1.65E+01	1.85E+03
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	6.68E+01	5.28E+01	1.11E+03	1.18E+03	4.60E+01	4.58E+02	3.45E+02	5.72E+02	6.22E+02	4.34E-01
24.	FE+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
25.	FE+3	5.32E+02	6.74E-01	1.83E+04	3.13E+04	4.93E+03	1.39E+03	1.05E+03	1.74E+03	1.89E+03	1.95E+03
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	5.47E+01	1.97E+02	0.00E+00	1.53E+02	1.15E+02	1.91E+02	2.07E+02	0.00E+00
32.	LA+3	0.00E+00	0.00E+00	5.78E+01	2.08E+02	0.00E+00	1.62E+02	1.22E+02	2.02E+02	2.19E+02	0.00E+00
33.	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
34.	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
35.	MN+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
36.	MN+4	0.00E+00	0.00E+00	2.20E+03	7.92E+03	0.00E+00	5.16E+03	4.63E+03	7.69E+03	8.35E+03	0.00E+00
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	8.97E+02	3.99E+02	1.28E+04	9.98E+03	8.43E+02	8.97E+02	6.74E+02	1.12E+03	1.22E+03	1.32E+03
40.	NB+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
41.	NI+3	1.18E+02	3.74E+00	4.26E+03	7.91E+03	1.24E+03	5.05E+02	3.80E+02	6.31E+02	6.85E+02	6.22E+02
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	1.37E+01	2.22E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.76E+01
44.	NO3-	4.21E+02	9.51E+02	0.00E+00	2.38E+03	2.92E+02	2.14E+02	1.61E+02	2.68E+02	2.91E+02	1.29E+03
45.	NP+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
46.	OH-	2.08E+03	4.63E-01	0.00E+00	2.16E+04	5.28E+03	2.99E+03	2.25E+03	3.73E+03	4.05E+03	7.45E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+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
49.	PO4-3	7.84E+03	3.75E+02	1.06E+05	6.65E+04	4.99E+03	1.16E+03	8.70E+02	1.45E+03	1.57E+03	3.72E+02
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+4	0.00E+00	1.12E+00	4.33E+03	4.11E+03	5.22E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
58.	SM+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
59.	SN+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
60.	SO4-2	2.31E+01	5.21E+01	3.90E+01	4.22E+01	5.75E+00	2.63E-01	1.98E-01	3.28E-01	3.57E-01	1.36E+01
61.	SR+2	0.00E+00	0.00E+00	1.10E+03	3.95E+03	0.00E+00	3.08E+03	2.31E+03	3.84E+03	4.17E+03	0.00E+00
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	TE+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
64.	TH+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
65.	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
66.	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
67.	TOC	0.00E+00	0.00E+00	2.84E+01	9.86E+01	0.00E+00	8.49E+01	6.39E+01	1.06E+02	1.15E+02	3.24E-01
68.	UO2+2	9.36E+00	5.49E-02	2.23E+01	2.35E+01	3.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E+03
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	1.03E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	2.10E+04	4.67E+03	1.69E+05	1.85E+05	2.22E+04	1.87E+04	1.41E+04	2.34E+04	2.54E+04	1.24E+05
	Vol (ML) spg=3	7.0	1.6	56.2	61.6	7.4	6.2	4.7	7.8	8.5	41.2
74.	C14 (Ci)	2.52E-04	2.25E-04	3.00E-15	0.00E+00	6.68E-40	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.03E-02
75.	Sr90 (Ci)	2.50E+03	5.04E+01	2.56E+03	2.17E+03	3.23E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.04E+03
76.	Y90 (Ci)	2.50E+03	5.04E+01	2.56E+03	2.17E+03	3.23E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.04E+03
77.	Tc99 (Ci)	9.96E-02	6.21E-01	3.12E-11	0.00E+00	1.61E-36	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.19E-08
78.	Cs137 (Ci)	1.02E+02	4.28E+02	1.92E-08	0.00E+00	7.73E-33	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.57E-06
79.	Ba137 (Ci)	9.70E+01	4.07E+02	1.82E-08	0.00E+00	7.35E-33	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.29E-06
80.	U235 (Ci)	5.37E-03	1.68E-03	9.77E-03	2.53E-02	8.45E-02	0.00E+00	7.57E-09	7.57E-08	0.00E+00	1.89E-09
81.	U238 (Ci)	1.21E-01	3.77E-02	2.20E-01	5.84E-01	1.99E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.51E-08
82.	Np237 (Ci)	2.20E-03	7.30E-03	5.05E-05	9.41E-05	1.76E-04	0.00E+00	2.78E-07	2.78E-06	0.00E+00	5.49E-09
83.	Pu238 (Ci)	7.16E-03	1.45E-03	3.68E-01	6.08E-01	9.03E+00	0.00E+00	1.84E-03	1.84E-02	0.00E+00	3.11E-04
84.	Pu239 (Ci)	3.62E+00	4.01E-01	1.37E+02	9.22E+01	1.53E+02	0.00E+00	2.18E-01	2.18E+00	0.00E+00	2.30E-05
85.	Pu240 (Ci)	2.91E-01	3.23E-02	1.50E+01	1.85E+01	3.34E+01	0.00E+00	5.24E-02	5.24E-01	0.00E+00	4.30E-04
86.	Pu241 (Ci)	3.05E-01	3.40E-02	2.52E+01	6.18E+01	1.44E+02	0.00E+00	1.96E-01	1.96E+00	0.00E+00	8.47E-05
87.	Am241 (Ci)	1.08E-01	1.21E-02	4.07E+00	8.45E+00	1.73E+01	0.00E+00	2.57E-02	2.57E-01	0.00E+00	5.66E-04
88.	Cm244 (Ci)	7.21E-05	1.08E-05	4.12E-16	0.00E+00	6.82E-34	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E-10

Table A-12a. Revised Tank Inventory for Liquid Phase Constituents (TX)

		Mass (kg)									
	Chemical	102TX	103TX	104TX	105TX	106TX	107TX	108TX	109TX	110TX	111TX
1.	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
2.	AL(OH)4-	7.14E+03	9.95E+03	2.96E+03	3.87E+04	2.95E+04	1.74E+03	8.24E+03	1.62E+04	2.84E+04	2.21E+04
3.	AL+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	1.28E+01	1.79E+01	5.32E+00	5.96E+01	5.18E+01	3.12E+00	1.48E+01	1.11E+02	5.63E+01	4.47E+01
10.	CA+2	3.39E+01	4.72E+01	1.41E+01	1.84E+02	1.37E+02	8.28E+00	3.34E+01	1.36E+00	1.30E+02	9.99E+01
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	4.29E-02	4.15E-01	6.58E-08	5.03E-01	0.00E+00	0.00E+00	2.55E+02	2.20E+02	1.71E+02	4.45E+01
14.	CL-	1.52E+03	2.12E+03	6.37E+02	8.25E+03	6.15E+03	3.72E+02	1.79E+03	6.86E+02	5.90E+03	4.57E+03
15.	CM+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
16.	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
17.	CO3-2	2.87E+03	4.02E+03	2.87E+03	1.56E+04	1.09E+04	1.69E+03	3.35E+03	2.10E+03	1.04E+04	8.04E+03
18.	CR(OH)4-	2.15E+03	3.00E+03	8.93E+02	1.17E+04	8.78E+03	5.24E+02	2.47E+03	7.54E+01	8.25E+03	6.34E+03
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	5.96E+02	8.30E+02	2.47E+02	3.23E+03	2.40E+03	1.45E+02	6.88E+02	1.60E+04	3.56E+03	3.14E+03
24.	FE+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
25.	FE+3	9.28E+01	1.29E+02	4.13E+01	5.03E+02	3.99E+02	2.38E+01	3.30E+01	9.86E+01	3.61E+02	2.78E+02
26.	FECN6-3	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
27.	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
28.	H2O	1.89E+06	2.52E+06	9.00E+05	1.01E+07	7.52E+06	5.14E+05	2.18E+06	2.86E+06	7.35E+06	5.70E+06
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+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
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	2.54E+05	3.54E+05	1.19E+05	1.37E+06	1.02E+06	6.83E+04	2.95E+05	3.21E+05	9.92E+05	7.69E+05
40.	NB+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
41.	NI+3	2.09E+01	2.91E+01	8.76E+00	1.13E+02	8.47E+01	5.13E+00	1.56E+01	1.77E+00	8.03E+01	6.17E+01
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	2.41E+04	3.35E+04	9.98E+03	1.31E+05	9.70E+04	5.86E+03	2.78E+04	9.03E+03	9.33E+04	7.21E+04
44.	NO3-	6.09E+05	8.72E+05	2.61E+05	3.39E+06	2.53E+06	1.53E+05	7.27E+05	8.36E+04	2.41E+06	1.86E+06
45.	NP+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
46.	OH-	7.62E+03	4.37E+03	9.53E+03	1.57E+04	8.64E+03	4.89E+03	3.98E+03	1.42E+05	1.82E+04	1.66E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+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
49.	PO4-3	1.85E+03	2.60E+03	2.18E+03	9.80E+03	6.91E+03	1.07E+03	1.66E+03	9.42E+04	1.31E+04	1.18E+04
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	4.22E+03	5.90E+03	3.86E+03	2.25E+04	1.61E+04	1.95E+03	5.34E+03	2.24E+03	1.55E+04	1.20E+04
61.	SR+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
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	5.28E+02	7.36E+02	2.13E+02	2.87E+03	2.13E+03	1.26E+02	6.07E+02	0.00E+00	1.99E+03	1.51E+03
68.	UO2+2	2.54E+02	3.66E+02	1.06E+03	1.53E+03	6.28E+02	7.92E+02	3.38E+02	9.02E+00	5.48E+02	4.23E+02
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+02	1.40E+01	1.45E+01
	Total	2.81E+06	3.91E+06	1.31E+06	1.51E+07	1.13E+07	7.54E+05	3.26E+06	3.54E+06	1.10E+07	8.49E+06
	Diluted Vol (ML)	2208.7	3078.3	1034.8	11913.0	8869.6	593.9	2565.2	2791.3	8626.1	6687.0
74.	C14 (Ci)	4.98E-01	1.44E-01	8.39E-08	4.67E+00	9.41E-01	2.00E-09	2.64E+00	5.65E+01	2.03E+01	2.18E+00
75.	Sr90 (Ci)	2.34E+00	5.20E+00	4.58E-07	2.29E+01	3.76E-08	7.10E-06	3.68E+01	1.05E+03	7.39E+02	3.49E+02
76.	Y90 (Ci)	2.34E+00	5.20E+00	4.58E-07	2.29E+01	3.76E-08	7.10E-06	3.68E+01	1.05E+03	7.39E+02	3.49E+02
77.	Tc99 (Ci)	3.32E+00	4.77E-01	5.11E-07	3.05E+01	3.01E+00	1.46E-07	1.14E+01	2.90E+02	1.04E+02	1.54E+01
78.	Cs137 (Ci)	5.15E+02	7.14E+02	1.20E-04	4.99E+03	8.07E+03	2.39E-04	2.99E+04	2.15E+05	9.02E+04	2.04E+04
79.	Ba137 (Ci)	4.88E+02	6.79E+02	1.14E-04	4.74E+03	7.67E+03	2.27E-04	2.84E+04	2.04E+05	8.57E+04	1.94E+04
80.	U235 (Ci)	2.45E-11	3.93E-10	3.01E-07	5.76E-12	7.84E-10	7.84E-10	3.47E-04	2.72E-03	9.36E-04	3.91E-04
81.	U238 (Ci)	4.88E-10	7.80E-09	6.92E-06	6.10E-14	1.56E-08	7.80E-09	7.84E-03	6.32E-02	2.17E-02	9.04E-03
82.	Np237 (Ci)	2.76E-03	5.18E-04	5.85E-10	2.60E-02	4.46E-03	2.23E-10	9.44E-03	2.66E-01	9.78E-02	1.62E-02
83.	Pu238 (Ci)	2.64E-06	9.08E-06	4.93E-05	1.45E-05	2.13E-07	3.40E-09	2.10E-03	8.93E-02	2.89E-03	3.22E-04
84.	Pu239 (Ci)	1.45E-09	1.38E-08	4.64E-06	5.99E-06	4.50E-10	1.40E-08	9.62E-03	2.38E+00	1.78E-01	1.87E-02
85.	Pu240 (Ci)	1.63E-06	6.54E-08	2.49E-06	5.94E-06	7.83E-08	3.42E-09	2.51E-03	4.58E-01	3.25E-02	3.48E-03
86.	Pu241 (Ci)	5.89E-09	4.11E-08	1.70E-06	3.93E-05	4.07E-10	2.97E-08	1.45E-02	1.69E+00	1.08E-01	1.17E-02
87.	Am241 (Ci)	3.09E-05	6.81E-03	4.01E-07	2.14E-04	3.91E-06	4.29E-08	6.09E-02	8.67E+00	2.95E+00	3.02E-01
88.	Cm244 (Ci)	3.74E-05	7.72E-06	8.99E-12	3.53E-04	1.14E-05	1.69E-12	3.43E-04	8.34E-03	3.19E-03	3.23E-04

Table A-12b. Revised Tank Inventory for Solid Phase Constituents (TX)

		Mass (kg)										
	Chemical	102TX	103TX	104TX	105TX	106TX	107TX	108TX	109TX	110TX	111TX
1.	AG+	1.04E-07	1.59E-08	2.00E-14	1.02E-06	1.07E-07	6.00E-15	4.17E-07	9.15E-06	3.28E-06	4.94E-07
2.	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
3.	AL+3	2.05E+01	2.65E+01	8.48E+00	1.11E+02	1.58E+03	4.98E+00	2.36E+01	5.30E+04	4.01E+03	4.02E+03
4.	AM+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
5.	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
6.	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
7.	BA+2	2.31E+00	5.75E-01	1.07E+00	3.83E+00	1.33E-01	1.24E-08	1.22E+00	2.62E+00	1.29E+00	5.95E-01
8.	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
9.	BI+3	1.30E-01	1.81E-01	5.37E-02	7.03E-01	5.23E-01	3.15E-02	1.50E-01	1.10E+04	7.05E+02	6.85E+02
10.	CA+2	2.32E+01	3.34E+01	9.33E+01	1.12E+02	7.68E+01	4.23E+01	3.24E+02	1.73E+03	1.80E+02	1.74E+02
11.	CANCRINITE	2.89E+03	4.03E+03	1.23E+03	1.57E+04	1.16E+04	7.13E+02	3.34E+03	5.23E+04	1.46E+04	1.21E+04
12.	CD+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
13.	CE+3	4.24E+00	4.11E+01	6.51E-06	4.98E+01	0.00E+00	0.00E+00	2.53E+04	2.17E+04	1.69E+04	4.41E+03
14.	CL-	1.54E+01	2.15E+01	5.74E+00	8.34E+01	6.29E+01	3.85E+00	2.63E+01	3.61E+01	6.29E+01	5.01E+01
15.	CM+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
16.	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
17.	CO3-2	4.87E+01	7.04E+01	2.07E+02	2.62E+02	1.20E+02	1.22E+02	1.49E+02	2.34E+02	1.21E+02	9.77E+01
18.	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
19.	CR+3	9.88E+00	1.38E+01	8.21E+00	5.23E+01	1.18E+02	3.63E+00	1.90E+01	1.49E+02	5.29E+01	4.81E+01
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	6.02E+00	8.39E+00	2.50E+00	3.26E+01	2.43E+01	1.46E+00	6.95E+00	8.44E+02	9.03E+01	9.05E+01
24.	FE+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
25.	FE+3	3.34E+01	5.01E+01	2.92E+02	1.35E+02	9.98E+01	1.30E+02	6.07E+02	9.76E+03	6.24E+02	6.04E+02
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+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
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	1.08E+03	1.51E+03	1.01E+03	5.78E+03	4.16E+03	5.34E+02	1.93E+03	1.34E+04	4.94E+03	4.11E+03
40.	NB+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
41.	NI+3	1.77E+01	2.60E+01	1.14E+02	7.81E+01	5.02E+01	5.12E+01	3.29E+02	2.13E+03	1.62E+02	1.57E+02
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	0.00E+00	0.00E+00	1.01E+02	0.00E+00	0.00E+00	5.92E+01	2.80E+02	9.13E+01	9.42E+02	7.28E+02
44.	NO3-	4.04E+03	5.73E+03	2.63E+03	2.30E+04	2.53E+04	1.54E+03	7.34E+03	8.44E+02	2.43E+04	1.87E+04
45.	NP+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
46.	OH-	0.00E+00	0.00E+00	1.41E+03	0.00E+00	0.00E+00	1.31E+03	9.43E+03	5.44E+04	5.70E+03	2.02E+03
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+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
49.	PO4-3	2.64E+02	3.96E+02	2.23E+03	1.08E+03	1.62E+02	9.92E+02	8.82E+02	1.41E+05	1.01E+04	1.03E+04
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	4.51E+01	6.34E+01	6.19E+01	2.38E+02	1.64E+02	2.99E+01	7.81E+01	4.57E+01	1.59E+02	1.24E+02
61.	SR+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
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	5.34E+00	7.44E+00	2.15E+00	2.90E+01	2.15E+01	1.27E+00	6.13E+00	0.00E+00	2.01E+01	1.53E+01
68.	UO2+2	2.12E+03	3.19E+03	1.91E+04	1.44E+04	8.49E+02	1.44E+04	5.13E+03	1.71E+02	5.69E+01	7.68E+01
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.89E+04	1.38E+03	1.44E+03
	Total	1.06E+04	1.52E+04	2.85E+04	6.11E+04	4.44E+04	1.99E+04	5.52E+04	3.82E+05	8.51E+04	6.00E+04
	Vol (ML) spg=3	3.5	5.1	9.5	20.4	14.8	6.6	18.4	127.2	28.4	20.0
74.	C14 (Ci)	5.03E-03	1.46E-03	8.47E-10	4.71E-02	9.51E-03	2.02E-11	2.66E-02	5.70E-01	2.05E-01	2.20E-02
75.	Sr90 (Ci)	2.32E+02	5.15E+02	4.54E-05	2.27E+03	3.72E-06	7.02E-04	3.64E+03	1.04E+05	7.32E+04	3.45E+04
76.	Y90 (Ci)	2.32E+02	5.15E+02	4.54E-05	2.27E+03	3.72E-06	7.02E-04	3.64E+03	1.04E+05	7.32E+04	3.45E+04
77.	Tc99 (Ci)	3.32E+00	4.77E-01	5.11E-07	3.05E+01	3.01E+00	1.46E-07	1.14E+01	2.90E+02	1.04E+02	1.54E+01
78.	Cs137 (Ci)	1.72E+02	2.38E+02	3.99E-05	1.66E+03	2.69E+03	7.96E-05	9.97E+03	7.16E+04	3.01E+04	6.81E+03
79.	Ba137 (Ci)	1.63E+02	2.26E+02	3.79E-05	1.58E+03	2.56E+03	7.57E-05	9.48E+03	6.80E+04	2.86E+04	6.47E+03
80.	U235 (Ci)	4.65E-10	7.47E-09	5.71E-06	1.09E-10	1.49E-08	1.49E-08	6.59E-03	5.18E-02	1.78E-02	7.42E-03
81.	U238 (Ci)	9.27E-09	1.48E-07	1.31E-04	1.15E-12	2.97E-07	1.48E-07	1.49E-01	1.20E+00	4.13E-01	1.72E-01
82.	Np237 (Ci)	2.48E-02	4.66E-03	5.26E-09	2.34E-01	4.01E-02	2.01E-09	8.50E-02	2.39E+00	8.80E-01	1.46E-01
83.	Pu238 (Ci)	1.29E-04	4.45E-04	2.41E-03	7.09E-04	1.05E-05	1.67E-07	1.03E-01	4.38E+00	1.42E-01	1.58E-02
84.	Pu239 (Ci)	7.08E-08	6.78E-07	2.28E-04	2.93E-04	2.21E-08	6.87E-07	4.71E-01	1.17E+02	8.70E+00	9.17E-01
85.	Pu240 (Ci)	7.99E-05	3.21E-06	1.22E-04	2.91E-04	3.84E-06	1.68E-07	1.23E-01	2.24E+01	1.59E+00	1.71E-01
86.	Pu241 (Ci)	2.89E-07	2.01E-06	8.35E-05	1.92E-03	1.99E-08	1.46E-06	7.12E-01	8.27E+01	5.27E+00	5.72E-01
87.	Am241 (Ci)	2.78E-04	6.13E-02	3.61E-06	1.93E-03	3.52E-05	3.86E-07	5.48E-01	7.80E+01	2.65E+01	2.72E+00
88.	Cm244 (Ci)	3.70E-03	7.65E-04	8.90E-10	3.49E-02	1.13E-03	1.68E-10	3.40E-02	8.26E-01	3.16E-01	3.20E-02

Table A-13a. Revised Tank Inventory for Liquid Phase Constituents (TX,TY)

		Mass (kg)									
	Chemical	112TX	113TX	114TX	115TX	116TX	117TX	118TX	101TY	102TY	103TY
1.	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
2.	AL(OH)4-	4.02E+04	3.46E+04	3.05E+04	4.08E+04	1.77E+04	2.66E+04	2.36E+04	0.00E+00	2.18E+03	2.63E+03
3.	AL+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	1.19E+02	1.02E+02	1.69E+02	7.31E+01	6.60E+02	4.31E+02	4.73E+01	1.33E+02	6.04E+01	3.46E+01
10.	CA+2	2.01E+02	1.30E+02	1.69E+02	1.93E+02	2.24E+02	2.12E+02	9.69E+01	2.00E+01	2.29E+01	1.78E+01
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	2.25E+02	1.45E+02	4.04E+01	6.25E+01	3.37E+01	1.37E+01	1.40E+02	5.67E+00	4.42E+00	2.79E+00
14.	CL-	8.80E+03	6.13E+03	7.04E+03	8.75E+03	7.03E+03	7.67E+03	4.79E+03	4.99E+02	7.58E+02	1.47E+03
15.	CM+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
16.	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
17.	CO3-2	1.59E+04	1.12E+04	1.33E+04	1.55E+04	1.74E+04	1.66E+04	8.58E+03	2.45E+03	1.79E+03	4.22E+03
18.	CR(OH)4-	1.22E+04	8.24E+03	9.29E+03	1.22E+04	6.21E+03	8.56E+03	5.99E+03	9.14E+01	7.36E+02	1.06E+03
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	5.53E+03	9.89E+03	7.93E+03	3.39E+03	3.06E+04	2.00E+04	2.20E+03	8.83E+03	2.80E+03	3.35E+03
24.	FE+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
25.	FE+3	5.49E+02	4.00E+02	4.63E+02	5.36E+02	6.11E+02	5.78E+02	2.72E+02	7.18E+01	6.26E+01	1.34E+02
26.	FECN6-3	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
27.	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
28.	H2O	1.08E+07	8.41E+06	8.82E+06	1.06E+07	9.38E+06	9.83E+06	5.39E+06	1.76E+06	9.99E+05	1.97E+06
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+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
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	1.46E+06	1.11E+06	1.18E+06	1.44E+06	1.20E+06	1.29E+06	7.29E+05	2.00E+05	1.29E+05	2.45E+05
40.	NB+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
41.	NI+3	1.24E+02	8.06E+01	1.04E+02	1.19E+02	1.38E+02	1.31E+02	5.99E+01	1.43E+01	1.41E+01	1.30E+01
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	1.37E+05	9.62E+04	1.05E+05	1.37E+05	7.47E+04	9.90E+04	6.72E+04	2.43E+03	8.70E+03	1.22E+04
44.	NO3-	3.57E+06	2.43E+06	2.76E+06	3.57E+06	2.15E+06	2.70E+06	1.79E+06	8.06E+04	2.45E+05	3.75E+05
45.	NP+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
46.	OH-	2.04E+04	7.52E+04	3.10E+04	1.36E+04	1.20E+05	7.78E+04	7.59E+03	8.25E+04	1.10E+04	5.50E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+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
49.	PO4-3	2.49E+04	5.11E+04	4.53E+04	9.72E+03	2.11E+05	1.32E+05	8.52E+03	6.84E+04	1.91E+04	2.72E+04
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.57E+02	0.00E+00	0.00E+00
58.	SM+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
59.	SN+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
60.	SO4-2	2.45E+04	1.62E+04	2.21E+04	2.37E+04	3.90E+04	3.26E+04	1.16E+04	4.30E+03	3.83E+03	1.02E+04
61.	SR+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
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	2.98E+03	1.90E+03	2.23E+03	3.01E+03	1.31E+03	1.96E+03	1.44E+03	2.13E+03	1.61E+02	1.61E+03
68.	UO2+2	8.04E+02	5.47E+02	6.12E+02	8.71E+02	3.99E+02	5.59E+02	3.96E+02	6.48E+00	4.76E+01	5.36E+02
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZNO2:2H2O	0.00E+00	9.08E+01	1.95E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.39E+01	0.00E+00	4.17E+01
	Total	1.61E+07	1.23E+07	1.30E+07	1.59E+07	1.33E+07	1.42E+07	8.05E+06	2.21E+06	1.42E+06	2.71E+06
	Diluted Vol (ML)	12695.7	9652.2	10260.9	12521.7	10434.8	11217.4	6339.1	1739.1	1121.7	2130.4
74.	C14 (Ci)	3.52E-01	2.36E+00	6.59E-01	1.27E+00	1.72E-01	2.01E+00	1.93E+02	5.18E-01	1.22E+01	3.25E+01
75.	Sr90 (Ci)	5.52E+01	5.92E+01	5.55E+00	2.16E+02	2.81E+02	5.34E+02	5.50E+03	1.23E+02	8.68E+01	7.82E+02
76.	Y90 (Ci)	5.52E+01	5.92E+01	5.55E+00	2.16E+02	2.81E+02	5.34E+02	5.50E+03	1.23E+02	8.68E+01	7.82E+02
77.	Tc99 (Ci)	7.87E+00	2.62E+00	7.34E+00	3.50E+00	1.77E+00	7.18E-01	2.73E+02	6.59E-01	7.77E+01	2.16E+02
78.	Cs137 (Ci)	1.58E+04	5.43E+03	1.58E+04	8.84E+03	3.76E+03	1.52E+03	2.51E+05	1.46E+03	1.68E+04	3.36E+04
79.	Ba137 (Ci)	1.51E+04	5.16E+03	1.50E+04	8.40E+03	3.57E+03	1.45E+03	2.38E+05	1.39E+03	1.60E+04	3.20E+04
80.	U235 (Ci)	8.12E-05	2.15E-01	7.28E-03	3.75E-02	6.74E-03	4.40E-02	1.63E-02	5.53E-04	1.48E-05	4.04E-03
81.	U238 (Ci)	1.86E-03	5.08E+00	1.72E-01	8.84E-01	1.52E-01	1.04E+00	3.79E-01	1.25E-02	3.36E-04	9.20E-02
82.	Np237 (Ci)	9.82E-03	3.30E-03	9.15E-03	3.15E-03	2.21E-03	9.01E-04	2.52E-01	8.68E-04	6.55E-02	1.79E-01
83.	Pu238 (Ci)	1.49E-05	4.77E-03	2.37E-03	1.09E-03	6.18E-05	4.27E-04	3.60E-01	6.22E-01	9.57E-03	2.27E+00
84.	Pu239 (Ci)	1.02E-03	7.45E-01	7.45E-02	8.28E-03	1.01E-11	4.93E-11	1.45E+01	2.88E+00	5.42E-02	4.10E+00
85.	Pu240 (Ci)	1.35E-04	1.29E-01	1.29E-02	1.44E-03	1.22E-08	1.94E-07	3.75E+00	6.85E-01	9.86E-03	6.21E-01
86.	Pu241 (Ci)	2.67E-04	3.54E-01	3.54E-02	3.95E-03	9.53E-12	1.87E-10	4.84E+01	3.54E+00	4.78E-02	2.65E+00
87.	Am241 (Ci)	1.77E-02	3.79E-01	3.79E-02	4.27E-03	6.19E-04	1.01E-03	1.04E+02	2.80E+00	1.40E-02	2.26E+00
88.	Cm244 (Ci)	2.00E-05	2.75E-07	1.60E-06	2.26E-05	2.93E-07	1.19E-07	9.51E-03	1.02E-06	8.47E-04	2.43E-03

Table A-13b. Revised Tank Inventory for Solid Phase Constituents (TX,TY)

	Chemical	Mass (kg)										
		112TX	113TX	114TX	115TX	116TX	117TX	118TX	101TY	102TY	103TY	
1.	AG+	2.46E-07	7.93E-08	2.48E-07	1.03E-07	5.65E-08	2.30E-08	1.56E-05	2.38E-08	2.43E-08	6.74E-06	
2.	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	
3.	AL+3	1.15E+02	2.67E+04	5.66E+02	1.17E+02	5.07E+01	7.64E+01	1.21E+04	0.00E+00	6.25E+00	7.54E+00	
4.	AM+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	
5.	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	
6.	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	
7.	BA+2	8.09E-01	3.63E-01	9.81E-01	1.80E-01	4.71E-01	4.64E-01	8.94E+00	3.78E-01	9.94E-01	1.65E+00	
8.	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	
9.	BI+3	1.20E+00	5.23E+03	1.16E+02	7.38E-01	6.66E+00	4.35E+00	4.75E-01	4.30E+03	6.10E-01	2.81E+03	
10.	CA+2	7.99E+01	8.74E+02	7.34E+01	2.17E+02	8.89E+01	8.41E+01	2.74E+02	7.94E+02	9.11E+00	1.59E+03	
11.	CANCRINITE	1.81E+04	3.59E+04	1.72E+04	1.64E+04	3.18E+04	2.58E+04	8.48E+03	1.67E+03	3.10E+03	1.39E+04	
12.	CD+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	
13.	CE+3	2.23E+04	1.44E+04	4.00E+03	6.19E+03	3.34E+03	1.35E+03	1.39E+04	5.61E+02	4.38E+02	2.76E+02	
14.	CL-	8.89E+01	7.58E+01	7.09E+01	9.22E+01	7.10E+01	7.74E+01	6.99E+01	7.54E+00	7.66E+00	4.58E+01	
15.	CM+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	
16.	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	
17.	CO3-2	1.60E+02	2.14E+02	1.35E+02	1.87E+02	1.76E+02	1.68E+02	1.82E+02	0.00E+00	1.81E+01	0.00E+00	
18.	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	
19.	CR+3	5.32E+01	1.06E+02	3.53E+01	5.62E+01	2.72E+01	3.74E+01	4.21E+01	2.72E+00	3.22E+00	2.54E+01	
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
22.	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	
23.	F-	5.58E+01	4.24E+02	8.70E+01	3.43E+01	3.09E+02	2.02E+02	2.22E+01	2.88E+02	2.83E+01	1.64E+02	
24.	FE+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	
25.	FE+3	5.55E+00	4.64E+03	1.05E+02	9.94E+02	6.17E+00	5.84E+00	8.19E+02	1.87E+03	6.32E-01	8.77E+03	
26.	FECN6-3	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	
27.	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	
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
29.	HG+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	
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
31.	K+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
32.	LA+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	
33.	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	
34.	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	
35.	MN+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	
36.	MN+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	
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
38.	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	
39.	NA+	5.88E+03	1.04E+04	4.77E+03	6.02E+03	4.83E+03	5.20E+03	3.62E+03	5.36E+03	5.18E+02	5.63E+03	
40.	NB+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	
41.	NI+3	3.07E+01	1.03E+03	4.34E+01	2.29E+02	3.42E+01	3.24E+01	3.15E+02	2.86E+03	3.50E+00	3.39E+03	
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
43.	NO2-	1.38E+03	9.71E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.78E+02	0.00E+00	0.00E+00	0.00E+00	
44.	NO3-	3.60E+04	2.45E+04	2.15E+04	3.31E+04	1.52E+04	1.60E+04	1.81E+04	0.00E+00	1.84E+03	0.00E+00	
45.	NP+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	
46.	OH-	1.97E+03	2.62E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E+04	0.00E+00	0.00E+00	0.00E+00	
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
48.	PB+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	
49.	PO4-3	2.51E+02	6.71E+04	1.91E+03	2.92E+02	2.13E+03	1.34E+03	8.71E+01	5.87E+04	1.93E+02	3.96E+04	
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
51.	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	
52.	RE+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	
53.	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	
54.	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	
55.	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	
56.	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	
57.	SI+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.81E+02	0.00E+00	0.00E+00	
58.	SM+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	
59.	SN+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	
60.	SO4-2	2.48E+02	1.75E+02	2.23E+02	2.50E+02	3.94E+02	3.29E+02	1.17E+02	4.55E+01	3.87E+01	1.88E+02	
61.	SR+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	
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	
63.	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	
64.	TH+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	
65.	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	
66.	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	
67.	TOC	3.01E+01	1.92E+01	2.21E+01	3.04E+01	1.33E+01	1.98E+01	1.45E+01	2.37E+02	1.63E+00	1.55E+02	
68.	UO2+2	8.12E+00	8.69E+01	6.18E+00	1.17E+03	4.03E+00	5.65E+00	4.00E+00	4.14E+01	4.81E-01	8.86E+03	
69.	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	
70.	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	
71.	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	
72.	ZR+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	
73.	ZRO2:2H2O	0.00E+00	8.99E+03	1.93E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.32E+03	0.00E+00	4.13E+03	
	Total	8.68E+04	2.28E+05	5.11E+04	6.54E+04	5.85E+04	5.07E+04	8.49E+04	8.39E+04	6.21E+03	8.95E+04	
	Vol (ML) spg=3	28.9	76.0	17.0	21.8	19.5	16.9	28.3	28.0	2.1	29.8	
74.	C14 (Ci)	3.55E-03	2.38E-02	6.66E-03	1.29E-02	1.74E-03	2.03E-02	1.95E+00	5.24E-03	1.23E-01	3.28E-01	
75.	Sr90 (Ci)	5.47E+03	5.86E+03	5.49E+02	2.14E+04	2.78E+04	5.28E+04	5.45E+05	1.21E+04	8.59E+03	7.74E+04	
76.	Y90 (Ci)	5.47E+03	5.86E+03	5.49E+02	2.14E+04	2.78E+04	5.28E+04	5.45E+05	1.21E+04	8.59E+03	7.74E+04	
77.	Tc99 (Ci)	7.87E+00	2.62E+00	7.34E+00	3.50E+00	1.77E+00	7.18E-01	2.73E+02	6.59E-01	7.77E+01	2.16E+02	
78.	Cs137 (Ci)	5.28E+03	1.81E+03	5.27E+03	2.95E+03	1.25E+03	5.08E+02	8.35E+04	4.87E+02	5.61E+03	1.12E+04	
79.	Ba137 (Ci)	5.02E+03	1.72E+03	5.00E+03	2.80E+03	1.19E+03	4.83E+02	7.93E+04	4.63E+02	5.33E+03	1.07E+04	
80.	U235 (Ci)	1.54E-03	4.08E+00	1.38E-01	7.13E-01	1.28E-01	8.35E-01	3.10E-01	1.05E-02	2.82E-04	7.67E-02	
81.	U238 (Ci)	3.53E-02	9.65E+01	3.26E+00	1.68E+01	2.89E+00	1.97E+01	7.20E+00	2.37E-01	6.38E-03	1.75E+00	
82.	Np237 (Ci)	8.83E-02	2.97E-02	8.24E-02	2.83E-02	1.99E-02	8.11E-03	2.27E+00	7.81E-03	5.90E-01	1.61E+00	
83.	Pu238 (Ci)	7.30E-04	2.33E-01	1.16E-01	5.35E-02	3.03E-03	2.09E-02	1.76E+01	3.05E+01	4.69E-01	1.11E+02	
84.	Pu239 (Ci)	5.00E-02	3.65E+01	3.65E+00	4.06E-01	4.93E-10	2.41E-09	7.09E+02	1.41E+02	2.66E+00	2.01E+02	
85.	Pu240 (Ci)	6.59E-03	6.32E+00	6.32E-01	7.04E-02	5.96E-07	9.48E-06	1.84E+02	3.36E+01	4.83E-01	3.04E+01	
86.	Pu241 (Ci)	1.31E-02	1.74E+01	1.74E+00	1.93E-01	4.67E-10	9.16E-09	2.37E+03	1.74E+02	2.34E+00	1.30E+02	
87.	Am241 (Ci)	1.59E-01	3.41E+00	3.41E-01	3.84E-02	5.57E-03	9.05E-03	9.33E+02	2.52E+01	1.26E-01	2.04E+01	
88.	Cm244 (Ci)	1.98E-03	2.72E-05	1.59E-04	2.23E-03	2.90E-05	1.18E-05	9.41E-01	1.01E-04	8.39E-02	2.40E-01	

Table A-14a. Revised Tank Inventory for Liquid Phase Constituents (TY,U)

		Mass (kg)									
	Chemical	104TY	105TY	106TY	101U	102U	103U	104U	105U	106U	107U
1.	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
2.	AL(OH)4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.46E+04	5.04E+04	0.00E+00	3.80E+04	2.19E+04	4.32E+04
3.	AL+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
4.	AM+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
5.	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
6.	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
7.	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
8.	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
9.	BI+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.92E+01	7.63E+01	0.00E+00	7.69E+01	2.84E+01	7.25E+01
10.	CA+2	5.96E-01	2.19E+00	2.22E-01	8.41E-02	7.43E+01	7.65E+01	1.53E-01	4.45E+01	4.13E+01	2.15E+01
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	2.29E+00	2.82E-02	1.29E-10	1.50E-20	4.98E+01	1.41E-04	0.00E+00	0.00E+00	1.23E-16	1.06E+01
14.	CL-	4.86E+02	1.78E+03	1.81E+02	8.60E+00	4.80E+03	7.01E+03	1.57E+01	6.44E+03	2.83E+03	5.91E+03
15.	CM+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
16.	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
17.	CO3-2	1.62E+03	5.94E+03	6.02E+02	2.14E+03	1.47E+04	4.19E+04	3.91E+03	1.96E+04	2.24E+04	1.95E+04
18.	CR(OH)4-	7.24E+00	2.66E+01	2.70E+00	2.66E+00	4.73E+03	3.75E+03	4.86E+00	3.27E+03	1.81E+03	2.20E+03
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E+03	3.54E+03	0.00E+00	3.57E+03	1.32E+03	3.37E+03
24.	FE+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
25.	FE+3	5.37E+01	1.97E+02	2.00E+01	3.59E+00	2.54E+02	2.14E+02	6.55E+00	1.43E+02	1.17E+02	5.12E+01
26.	FECN6-3	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
27.	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
28.	H2O	2.59E+05	9.52E+05	9.69E+04	2.31E+05	5.25E+06	6.73E+06	4.21E+05	5.26E+06	3.15E+06	4.60E+06
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.08E+02	1.54E+03	0.00E+00	1.13E+03	6.37E+02	1.18E+03
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.71E+01	1.02E+02	0.00E+00	7.54E+01	4.26E+01	7.81E+01
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	3.24E+04	1.19E+05	1.21E+04	1.73E+04	6.89E+05	8.45E+05	3.15E+04	6.62E+05	3.98E+05	5.68E+05
40.	NB+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
41.	NI+3	8.92E-01	3.28E+00	3.32E-01	1.14E-01	4.75E+01	4.73E+01	2.08E-01	2.82E+01	2.55E+01	1.07E+01
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.14E+04	1.46E+05	0.00E+00	1.42E+05	5.56E+04	1.43E+05
44.	NO3-	4.84E+04	1.78E+05	1.80E+04	1.58E+03	1.41E+06	1.26E+06	2.89E+03	9.73E+05	6.27E+05	6.71E+05
45.	NP+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
46.	OH-	8.83E+03	3.25E+04	3.29E+03	1.06E+04	7.47E+04	1.99E+05	1.93E+04	1.56E+05	8.74E+04	1.70E+05
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.12E-02	2.31E-01	0.00E+00	1.70E-01	9.57E-02	1.77E-01
49.	PO4-3	6.98E+02	2.57E+03	2.60E+02	1.81E+03	1.57E+04	1.65E+04	3.29E+03	1.83E+04	7.47E+03	1.56E+04
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	5.73E+03	2.11E+04	2.13E+03	2.70E+03	1.58E+04	1.75E+04	4.92E+03	1.46E+04	9.39E+03	1.35E+04
61.	SR+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	3.29E-01
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E+03	9.00E+03	0.00E+00	8.69E+03	3.27E+03	8.60E+03
68.	UO2+2	3.28E+02	1.20E+03	1.22E+02	1.22E+03	2.78E+03	1.89E+03	2.23E+03	1.99E+03	1.50E+03	2.60E+03
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	3.55E+05	1.31E+06	1.34E+05	2.68E+05	7.51E+06	9.33E+06	4.89E+05	7.31E+06	4.40E+06	6.27E+06
	Diluted Vol (ML)	281.7	1034.8	105.2	227.5	5991.3	7347.8	415.0	5756.5	3460.9	4939.1
74.	C14 (Ci)	4.54E-02	2.75E+00	2.32E-02	1.88E+00	4.67E+00	6.77E-04	3.70E-10	1.30E-03	1.05E-08	1.40E+00
75.	Sr90 (Ci)	4.43E+01	1.84E+03	6.74E+01	9.61E+01	3.67E+02	1.51E-02	2.60E-06	2.35E-02	1.51E-05	5.50E+02
76.	Y90 (Ci)	4.43E+01	1.84E+03	6.74E+01	9.61E+01	3.67E+02	1.51E-02	2.60E-06	2.35E-02	1.51E-05	5.50E+02
77.	Tc99 (Ci)	1.42E-01	3.03E+00	1.60E-08	5.78E+00	1.46E+01	2.28E-03	3.61E-08	4.20E-03	1.60E-08	2.88E+01
78.	Cs137 (Ci)	3.83E+02	6.68E+03	4.22E-05	1.45E+04	3.64E+04	5.95E-01	8.74E-05	1.12E+01	6.12E-05	2.05E+04
79.	Ba137 (Ci)	3.64E+02	6.35E+03	4.01E-05	1.38E+04	3.45E+04	5.66E+00	8.31E-05	1.06E+01	5.82E-05	1.95E+04
80.	U235 (Ci)	4.96E-04	1.05E-02	1.16E-03	5.32E-03	7.10E-11	9.98E-11	1.96E-10	1.99E-04	2.37E-09	6.00E-09
81.	U238 (Ci)	1.09E-02	2.46E-01	2.73E-02	1.20E-01	1.41E-09	1.99E-09	3.91E-09	4.51E-03	4.70E-08	1.74E-07
82.	Np237 (Ci)	1.80E-04	3.81E-03	2.64E-06	9.05E-03	1.95E-02	3.52E-05	4.13E-11	4.38E-06	3.66E-11	1.97E-02
83.	Pu238 (Ci)	1.12E-02	9.29E-03	1.07E-03	4.13E-03	3.73E-05	2.62E-04	4.24E-10	1.76E-04	2.87E-07	2.45E-04
84.	Pu239 (Ci)	1.28E-01	1.09E+00	1.21E-01	2.52E-02	1.81E-07	6.06E-11	1.75E-09	7.33E-04	2.97E-09	1.14E-06
85.	Pu240 (Ci)	2.66E-02	1.36E-01	1.52E-02	5.96E-03	1.16E-06	2.72E-06	4.28E-10	1.82E-04	7.54E-07	2.09E-06
86.	Pu241 (Ci)	1.37E-01	2.73E-01	3.04E-02	3.34E-02	2.77E-07	4.33E-09	1.81E-09	8.76E-04	6.19E-09	3.66E-06
87.	Am241 (Ci)	1.40E-01	1.52E+00	1.69E-01	5.47E-01	3.44E-01	8.25E-06	7.33E-09	1.11E-02	4.81E-08	9.73E+00
88.	Cm244 (Ci)	1.55E-06	1.44E-06	1.00E-14	5.46E-05	1.46E-04	1.51E-08	1.54E-13	6.30E-08	1.45E-13	1.98E-03

Table A-14b. Revised Tank Inventory for Solid Phase Constituents (TY,U)

		Mass (kg)									
	Chemical	104TY	105TY	106TY	101U	102U	103U	104U	105U	106U	107U
1.	AG+	4.64E-09	1.09E-07	6.18E-16	2.21E-07	5.44E-07	8.73E-11	1.00E-15	1.50E-10	8.71E-16	2.38E-07
2.	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
3.	AL+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.11E+01	1.45E+02	0.00E+00	1.09E+02	6.28E+01	2.48E+04
4.	AM+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
5.	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
6.	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
7.	BA+2	2.46E-01	1.55E+00	3.17E-01	7.90E-01	1.39E+00	2.39E+00	4.66E-09	4.17E-01	6.40E-01	6.88E-01
8.	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
9.	BI+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.97E-01	7.71E-01	0.00E+00	7.77E-01	2.87E-01	7.33E-01
10.	CA+2	7.57E+02	2.78E+03	2.82E+02	1.07E+02	1.89E+02	1.86E+02	1.92E+02	1.50E+02	1.43E+02	6.43E+02
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.28E+04	1.23E+04	0.00E+00	1.51E+04	5.37E+03	1.47E+04
12.	CD+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
13.	CE+3	2.27E+02	2.79E+00	1.28E-08	1.48E-18	4.93E+03	1.40E-02	0.00E+00	0.00E+00	1.20E-14	1.05E+03
14.	CL-	2.56E+01	9.39E+01	9.52E+00	4.53E-01	1.85E+02	2.70E+02	8.26E-01	2.48E+02	1.09E+02	2.29E+02
15.	CM+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
16.	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
17.	CO3-2	1.80E+02	6.60E+02	6.69E+01	2.38E+02	5.26E+02	7.39E+02	4.34E+02	5.04E+02	4.83E+02	6.36E+02
18.	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
19.	CR+3	1.43E+01	5.25E+01	5.32E+00	5.26E+00	6.54E+01	2.41E+01	9.59E+00	2.69E+01	1.41E+01	3.23E+01
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.31E+01	3.58E+01	0.00E+00	3.61E+01	1.33E+01	3.40E+01
24.	FE+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
25.	FE+3	5.32E+03	1.95E+04	1.98E+03	3.55E+02	6.50E+02	5.20E+02	6.48E+02	5.02E+02	4.23E+02	1.56E+03
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.12E+00	1.55E+01	0.00E+00	1.15E+01	6.44E+00	1.19E+01
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.34E+02	2.01E+03	0.00E+00	1.49E+03	8.35E+02	1.54E+03
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	1.35E+03	4.96E+03	5.02E+02	7.19E+02	4.31E+03	4.34E+03	1.31E+03	3.67E+03	2.37E+03	3.77E+03
40.	NB+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
41.	NI+3	1.07E+03	3.94E+03	3.99E+02	1.37E+02	2.22E+02	2.11E+02	2.50E+02	1.81E+02	1.69E+02	7.27E+02
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.24E+02	1.48E+03	0.00E+00	1.43E+03	5.62E+02	1.44E+03
44.	NO3-	4.89E+02	1.80E+03	1.82E+02	1.60E+01	1.42E+04	1.28E+04	2.92E+01	9.82E+03	6.33E+03	6.77E+03
45.	NP+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
46.	OH-	6.67E+03	2.42E+04	2.45E+03	2.26E+03	7.36E+03	1.55E+03	4.11E+03	3.65E+03	1.79E+03	5.26E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.19E-04	2.33E-03	0.00E+00	1.72E-03	9.67E-04	1.78E-03
49.	PO4-3	1.05E+03	3.85E+03	3.90E+02	2.71E+03	7.30E+02	4.09E+03	4.94E+03	1.35E+03	3.27E+03	4.82E+03
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+4	0.00E+00	0.00E+00	0.00E+00	7.43E-01	0.00E+00	0.00E+00	1.36E+00	0.00E+00	0.00E+00	0.00E+00
58.	SM+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
59.	SN+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
60.	SO4-2	1.17E+02	4.30E+02	4.35E+01	5.51E+01	1.92E+02	2.18E+02	1.00E+02	1.80E+02	1.28E+02	1.85E+02
61.	SR+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	3.26E+01
62.	TC04-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.16E+01	9.09E+01	0.00E+00	8.78E+01	3.30E+01	8.68E+01
68.	UO2+2	6.23E+03	2.29E+04	2.32E+03	2.32E+04	5.18E+04	3.38E+04	4.23E+04	3.60E+04	2.75E+04	4.76E+04
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	2.35E+04	8.52E+04	8.63E+03	2.98E+04	1.10E+05	7.48E+04	5.43E+04	7.45E+04	4.95E+04	1.63E+05
	Vol (ML) spg=3	7.8	28.4	2.9	9.9	36.6	24.9	18.1	24.8	16.5	54.4
74.	C14 (Ci)	4.59E-04	2.78E-02	2.35E-04	1.90E-02	4.71E-02	6.84E-06	3.73E-12	1.31E-05	1.06E-10	1.41E-02
75.	Sr90 (Ci)	4.39E+03	1.82E+05	6.68E+03	9.52E+03	3.64E+04	1.50E+00	2.58E-04	2.32E+00	1.49E-03	5.44E+04
76.	Y90 (Ci)	4.39E+03	1.82E+05	6.68E+03	9.52E+03	3.64E+04	1.50E+00	2.58E-04	2.32E+00	1.49E-03	5.44E+04
77.	Tc99 (Ci)	1.42E-01	3.03E+00	1.60E-08	5.78E+00	1.46E+01	2.28E-03	3.61E-08	4.20E-03	1.60E-08	2.88E+01
78.	Cs137 (Ci)	1.28E+02	2.23E+03	1.41E-05	4.83E+03	1.21E+04	1.99E+00	2.91E-05	3.73E+00	2.04E-05	6.84E+03
79.	Ba137 (Ci)	1.21E+02	2.12E+03	1.34E-05	4.59E+03	1.15E+04	1.89E+00	2.77E-05	3.55E+00	1.94E-05	6.50E+03
80.	U235 (Ci)	9.43E-03	1.99E-01	2.21E-02	1.01E-01	1.74E-10	1.45E-10	3.73E-09	2.89E-04	6.73E-09	1.12E-08
81.	U238 (Ci)	2.07E-01	4.67E+00	5.19E-01	2.28E+00	3.47E-09	2.89E-09	7.42E-08	6.53E-03	1.34E-07	3.24E-07
82.	Np237 (Ci)	1.62E-03	3.43E-02	2.38E-05	8.15E-02	1.75E-01	3.17E-05	3.71E-10	3.94E-05	3.29E-10	1.78E-01
83.	Pu238 (Ci)	5.49E-01	4.55E-01	5.25E-02	2.03E-01	1.83E-03	1.28E-02	2.08E-08	8.62E-03	1.41E-05	1.20E-02
84.	Pu239 (Ci)	6.27E+00	5.33E+01	5.92E+00	1.24E+00	8.85E-06	2.97E-09	8.60E-08	3.59E-02	1.46E-07	5.59E-05
85.	Pu240 (Ci)	1.31E+00	6.68E+00	7.45E-01	2.92E-01	5.69E-05	1.33E-04	2.10E-08	8.94E-03	3.69E-05	1.03E-04
86.	Pu241 (Ci)	6.69E+00	1.34E+01	1.49E+00	1.64E+00	1.36E-05	2.12E-07	8.88E-08	4.29E-02	3.03E-07	1.79E-04
87.	Am241 (Ci)	1.26E+00	1.37E+01	1.52E+00	4.92E+00	3.10E+00	7.43E-05	6.59E-08	1.00E-01	4.33E-07	8.78E+01
88.	Cm244 (Ci)	1.54E-04	1.43E-04	9.73E-13	5.40E-03	1.45E-02	1.50E-06	1.53E-11	6.24E-06	1.44E-11	1.96E-01

Table A-15a. Revised Tank Inventory for Liquid Phase Constituents (U,AN)

		Mass (kg)									
	Chemical	108U	109U	110U	111U	112U	201U	202U	203U	204U	101AN
1.	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
2.	AL(OH)4-	5.51E+04	5.27E+04	4.62E+03	3.88E+04	3.68E+03	8.29E+02	8.29E+02	4.15E+02	4.15E+02	1.91E+05
3.	AL+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
4.	AM+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
5.	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
6.	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	2.18E+01
7.	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	2.45E-01
8.	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
9.	BI+3	8.13E+01	7.79E+01	2.85E+01	4.28E+01	9.24E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.53E+00
10.	CA+2	6.59E+01	5.72E+01	4.70E+01	3.90E+01	1.78E-01	2.07E-02	2.07E-02	1.03E-02	1.03E-02	2.14E+01
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	3.82E-04	9.70E-02	6.16E-03	2.85E+00	3.51E+01	1.85E+00	1.84E+00	1.62E+00	3.70E-01	9.02E-01
14.	CL-	7.23E+03	6.90E+03	3.82E+02	5.60E+03	1.05E+02	5.94E+00	5.94E+00	2.97E+00	2.97E+00	1.31E+04
15.	CM+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
16.	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
17.	CO3-2	3.54E+04	3.52E+04	1.55E+03	2.22E+04	2.77E+02	3.19E+01	3.19E+01	1.60E+01	1.60E+01	5.08E+04
18.	CR(OH)4-	3.49E+03	3.31E+03	4.38E+01	2.54E+03	1.01E+02	7.75E-01	7.75E-01	3.87E-01	3.87E-01	1.39E+03
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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	1.33E+00
23.	F-	3.77E+03	3.62E+03	5.70E+03	3.42E+03	1.33E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.12E+03
24.	FE+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
25.	FE+3	1.97E+02	9.88E+01	2.65E+01	9.22E+01	1.15E+01	9.67E-01	9.67E-01	4.83E-01	4.83E-01	3.18E+01
26.	FECN6-3	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
27.	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
28.	H2O	6.31E+06	6.21E+06	1.02E+06	4.53E+06	4.57E+05	8.28E+04	8.28E+04	4.23E+04	3.46E+04	3.48E+06
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	1.56E+03	1.48E+03	0.00E+00	1.17E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.40E+03
32.	LA+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	9.29E-04
33.	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
34.	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
35.	MN+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
36.	MN+4	1.03E+02	9.87E+01	0.00E+00	7.80E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.42E+00
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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	6.72E+01
39.	NA+	7.93E+05	7.77E+05	1.16E+05	5.65E+05	3.26E+04	2.20E+03	2.20E+03	1.10E+03	1.10E+03	4.41E+05
40.	NB+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
41.	NI+3	4.10E+01	3.01E+01	5.33E-01	2.34E+01	2.40E-01	2.99E-02	2.99E-02	1.49E-02	1.49E-02	1.08E+01
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	1.55E+05	1.53E+05	5.12E+03	1.22E+05	2.15E+03	9.34E+02	9.34E+02	4.67E+02	4.67E+02	3.02E+05
44.	NO3-	1.16E+06	1.10E+06	5.04E+04	7.77E+05	1.72E+04	1.64E+03	1.64E+03	8.19E+02	8.19E+02	2.47E+05
45.	NP+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
46.	OH-	1.89E+05	1.95E+05	4.78E+04	1.45E+05	1.24E+04	6.91E+02	6.91E+02	3.46E+02	3.34E+02	1.02E+05
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	2.34E-01	2.23E-01	0.00E+00	1.76E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.76E+01
49.	PO4-3	1.48E+04	1.59E+04	2.89E+04	1.26E+04	7.82E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.82E+03
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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	1.74E+01
58.	SM+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
59.	SN+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
60.	SO4-2	1.35E+04	1.54E+04	2.38E+03	9.42E+03	2.04E+02	1.80E+00	1.80E+00	8.99E-01	8.99E-01	1.15E+04
61.	SR+2	2.13E-01	2.08E-01	0.00E+00	0.00E+00	5.20E-02	3.46E-02	3.46E-02	1.73E-02	1.73E-02	2.19E-02
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	9.66E+03	9.26E+03	0.00E+00	7.65E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.24E+03
68.	UO2+2	6.36E+02	1.68E+03	5.17E+02	9.31E+01	6.58E+01	4.00E+01	4.00E+01	2.00E+01	3.11E-01	1.39E+02
69.	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
70.	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	1.36E+02
71.	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	4.81E+00
72.	ZR+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	7.04E-01
73.	ZRO2:2H2O	0.00E+00	0.00E+00	3.87E+01	3.85E+00	1.03E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.44E+00
	Total	8.76E+06	8.58E+06	1.28E+06	6.24E+06	5.35E+05	8.92E+04	8.92E+04	4.54E+04	3.78E+04	4.87E+06
	Diluted Vol (ML)	6895.7	6756.5	1008.7	4913.0	458.9	84.0	84.0	42.9	35.2	3834.8
74.	C14 (Ci)	1.84E-03	5.70E-01	3.93E-02	3.49E-01	3.02E+00	4.89E-01	5.06E-01	4.46E-01	1.17E-01	1.12E+01
75.	Sr90 (Ci)	3.59E+02	6.38E+00	2.23E+03	2.87E+02	1.97E+01	1.25E-01	1.15E-01	1.06E-01	3.31E-02	1.37E+03
76.	Y90 (Ci)	3.59E+02	6.38E+00	2.23E+03	2.87E+02	1.97E+01	1.25E-01	1.15E-01	1.06E-01	3.31E-02	1.37E+03
77.	Tc99 (Ci)	6.16E-03	1.79E+00	9.96E-02	7.55E+00	9.85E+00	1.54E+00	1.61E+00	1.42E+00	3.74E-01	8.42E+01
78.	Cs137 (Ci)	1.61E+01	5.01E+03	2.60E+02	5.45E+03	2.37E+04	3.73E+03	3.92E+03	3.46E+03	9.16E+02	1.81E+05
79.	Ba137 (Ci)	1.53E+01	4.76E+03	2.47E+02	5.18E+03	2.25E+04	3.55E+03	3.72E+03	3.28E+03	8.70E+02	1.72E+05
80.	U235 (Ci)	4.37E-02	4.36E-04	5.89E-02	1.19E-02	1.52E-04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.28E-03
81.	U238 (Ci)	7.93E-01	1.01E-02	1.37E+00	2.77E-01	3.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.59E-02
82.	Np237 (Ci)	1.31E-05	1.34E-03	2.27E-04	5.28E-03	1.44E-02	2.27E-03	2.39E-03	2.09E-03	5.55E-04	2.63E-03
83.	Pu238 (Ci)	6.94E-03	7.16E-04	6.71E-01	2.76E-03	1.28E-03	4.46E-05	5.94E-05	5.23E-05	1.78E-05	3.86E-02
84.	Pu239 (Ci)	1.98E-01	9.53E-04	3.49E+00	3.82E-02	4.24E-03	1.42E-12	2.05E-12	1.84E-12	4.86E-13	1.47E+00
85.	Pu240 (Ci)	5.72E-02	1.98E-04	6.94E-01	7.61E-03	8.46E-04	7.08E-08	9.22E-08	8.11E-08	2.72E-08	3.24E-01
86.	Pu241 (Ci)	5.12E-01	8.82E-04	3.36E+00	3.14E-02	3.48E-03	1.11E-10	1.57E-10	1.38E-10	4.98E-11	2.21E+00
87.	Am241 (Ci)	4.97E-01	1.71E-02	5.73E+00	2.82E+00	2.92E-02	8.51E-06	7.79E-06	7.22E-06	2.24E-06	4.47E+00
88.	Cm244 (Ci)	4.09E-08	1.48E-05	6.62E-07	5.04E-04	2.60E-05	4.77E-06	6.22E-06	5.48E-06	1.87E-06	1.51E-03

Table A-15b. Revised Tank Inventory for Solid Phase Constituents (U,AN)

		Mass (kg)									
	Chemical	108U	109U	110U	111U	112U	201U	202U	203U	204U	101AN
1.	AG+	2.36E-10	5.82E-08	3.82E-09	6.11E-08	3.99E-07	6.09E-08	6.38E-08	5.61E-08	1.46E-08	0.00E+00
2.	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
3.	AL+3	1.68E+04	1.56E+04	1.51E+04	8.51E+03	1.20E+04	2.71E+03	2.71E+03	1.35E+03	1.35E+03	0.00E+00
4.	AM+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
5.	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
6.	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
7.	BA+2	8.90E-01	5.07E-01	6.77E-01	1.57E+00	1.22E+00	1.74E-01	1.84E-01	1.62E-01	4.23E-02	0.00E+00
8.	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
9.	BI+3	8.21E-01	7.87E-01	2.82E+03	2.32E+02	9.15E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
10.	CA+2	4.55E+02	4.82E+02	5.97E+02	1.54E+02	2.28E+02	2.63E+01	2.63E+01	1.32E+01	1.32E+01	0.00E+00
11.	CANCRINITE	1.21E+04	1.47E+04	1.47E+04	1.01E+04	5.20E+03	5.14E+02	5.14E+02	2.57E+02	0.00E+00	0.00E+00
12.	CD+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
13.	CE+3	3.78E-02	9.61E+00	6.10E-01	2.82E+02	3.48E+03	1.82E+02	1.82E+02	1.60E+02	3.67E+01	0.00E+00
14.	CL-	2.79E+02	2.67E+02	2.01E+01	2.17E+02	5.54E+00	3.13E-01	3.13E-01	1.56E-01	1.56E-01	0.00E+00
15.	CM+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
16.	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
17.	CO3-2	4.38E+02	6.36E+02	1.72E+02	2.42E+02	3.07E+01	3.55E+00	3.55E+00	1.77E+00	1.77E+00	0.00E+00
18.	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
19.	CR+3	2.53E+01	2.88E+01	8.64E+01	3.60E+02	2.00E+02	1.53E+00	1.53E+00	7.64E-01	7.64E-01	0.00E+00
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	3.81E+01	3.65E+01	3.00E+02	5.68E+01	7.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
24.	FE+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
25.	FE+3	1.79E+03	1.04E+03	2.62E+03	5.42E+02	1.14E+03	9.57E+01	9.57E+01	4.79E+01	4.79E+01	0.00E+00
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	1.57E+01	1.50E+01	0.00E+00	1.19E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32.	LA+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
33.	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
34.	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
35.	MN+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
36.	MN+4	2.04E+03	1.94E+03	0.00E+00	1.54E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	3.50E+03	4.05E+03	4.84E+03	2.87E+03	1.36E+03	9.18E+01	9.18E+01	4.59E+01	4.59E+01	0.00E+00
40.	NB+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
41.	NI+3	6.56E+02	5.75E+02	6.40E+02	1.78E+02	2.89E+02	3.59E+01	3.59E+01	1.79E+01	1.79E+01	0.00E+00
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	1.57E+03	1.55E+03	5.17E+01	1.23E+03	2.18E+01	9.43E+00	9.43E+00	4.72E+00	4.72E+00	0.00E+00
44.	NO3-	1.17E+04	1.11E+04	5.09E+02	7.85E+03	1.74E+02	1.65E+01	1.65E+01	8.27E+00	8.27E+00	0.00E+00
45.	NP+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
46.	OH-	3.34E+04	3.19E+04	1.32E+04	1.43E+04	2.04E+04	5.46E+03	5.46E+03	2.76E+03	2.66E+03	0.00E+00
47.	PZ05·24W02:44N20	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	2.36E-03	2.25E-03	0.00E+00	1.78E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
49.	PO4-3	5.18E+02	3.10E+03	4.34E+04	4.19E+03	1.17E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+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
58.	SM+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
59.	SN+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
60.	SO4-2	1.40E+02	1.86E+02	4.85E+01	9.63E+01	4.16E+00	3.67E-02	3.67E-02	1.84E-02	1.84E-02	0.00E+00
61.	SR+2	2.11E+01	2.06E+01	0.00E+00	0.00E+00	5.14E+00	3.42E+00	3.42E+00	1.71E+00	1.71E+00	0.00E+00
62.	TC04-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	9.76E+01	9.35E+01	0.00E+00	7.74E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
68.	UO2+2	9.97E+03	3.01E+04	9.83E+03	1.82E+02	1.25E+03	7.60E+02	7.60E+02	3.80E+02	5.91E+00	0.00E+00
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2·2H2O	0.00E+00	0.00E+00	3.83E+03	3.81E+02	1.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	9.56E+04	1.17E+05	1.13E+05	5.36E+04	5.95E+04	9.91E+03	9.91E+03	5.05E+03	4.19E+03	0.00E+00
	Vol (ML) spg=3	31.9	39.1	37.6	17.9	19.8	3.3	3.3	1.7	1.4	0.0
74.	C14 (Ci)	1.86E-05	5.76E-03	3.97E-04	3.53E-03	3.05E-02	4.94E-03	5.11E-03	4.50E-03	1.18E-03	0.00E+00
75.	Sr90 (Ci)	3.56E+04	6.32E+02	2.21E+05	2.84E+04	1.95E+03	1.24E+01	1.14E+01	1.05E+01	3.28E+00	0.00E+00
76.	Y90 (Ci)	3.56E+04	6.32E+02	2.21E+05	2.84E+04	1.95E+03	1.24E+01	1.14E+01	1.05E+01	3.28E+00	0.00E+00
77.	Tc99 (Ci)	6.16E-03	1.79E+00	9.96E-02	7.55E+00	9.85E+00	1.54E+00	1.61E+00	1.42E+00	3.74E-01	0.00E+00
78.	Cs137 (Ci)	5.38E+00	1.67E+03	8.66E+01	1.82E+03	7.89E+03	1.24E+03	1.31E+03	1.15E+03	3.05E+02	0.00E+00
79.	Ba137 (Ci)	5.11E+00	1.59E+03	8.23E+01	1.73E+03	7.49E+03	1.18E+03	1.24E+03	1.09E+03	2.90E+02	0.00E+00
80.	U235 (Ci)	6.52E-03	4.84E-04	1.12E+00	1.64E-04	2.89E-03	1.25E-10	2.51E-18	2.24E-18	5.71E-19	0.00E+00
81.	U238 (Ci)	1.18E-01	1.12E-02	2.60E+01	3.80E-03	6.56E-02	2.48E-09	2.22E-23	2.06E-23	9.12E-24	0.00E+00
82.	Np237 (Ci)	1.18E-04	1.20E-02	2.04E-03	4.75E-02	1.30E-01	2.04E-02	2.15E-02	1.88E-02	5.00E-03	0.00E+00
83.	Pu238 (Ci)	3.40E-01	3.51E-02	3.29E+01	1.35E-01	6.25E-02	2.19E-03	2.91E-03	2.56E-03	8.72E-04	0.00E+00
84.	Pu239 (Ci)	9.68E+00	4.67E-02	1.71E+02	1.87E+00	2.08E-01	6.94E-11	1.00E-10	9.02E-11	2.38E-11	0.00E+00
85.	Pu240 (Ci)	2.80E+00	9.71E-03	3.40E+01	3.73E-01	4.15E-02	3.47E-06	4.52E-06	3.97E-06	1.33E-06	0.00E+00
86.	Pu241 (Ci)	2.51E+01	4.32E-02	1.65E+02	1.54E+00	1.71E-01	5.45E-09	7.68E-09	6.75E-09	2.44E-09	0.00E+00
87.	Am241 (Ci)	4.48E+00	1.54E-01	5.15E+01	2.54E-01	2.63E-01	7.66E-05	7.01E-05	6.50E-05	2.02E-05	0.00E+00
88.	Cm244 (Ci)	4.05E-06	1.47E-03	6.55E-05	4.99E-02	2.57E-03	4.73E-04	6.16E-04	5.42E-04	1.85E-04	0.00E+00

Table A-16a. Revised Tank Inventory for Liquid Phase Constituents (AN,AP)

		Mass (kg)										
	Chemical	102AN	103AN	104AN	105AN	106AN	107AN	101AP	102AP	103AP	104AP
1.	AG+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.00E+01	0.00E+00	4.30E-01	0.00E+00	0.00E+00	8.09E-03
2.	AL(OH)4-	1.97E+05	7.33E+05	3.99E+05	7.09E+05	6.33E+04	1.48E+04	1.36E+05	1.70E+05	8.85E+01	3.61E+03
3.	AL+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
4.	AM+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
5.	AS+5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+01	0.00E+00	2.81E+00	3.69E-01	4.95E-03	8.09E-04
6.	B+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.62E+01	0.00E+00	0.00E+00	1.80E+01
7.	BA+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.21E+01	0.00E+00	2.02E+00	1.18E+00	0.00E+00	4.04E-02
8.	BE+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.72E-05	6.07E-01	0.00E+00	0.00E+00
9.	BI+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.64E+01	0.00E+00	1.38E+01	0.00E+00	0.00E+00	2.42E-01
10.	CA+2	1.66E+03	3.13E+02	0.00E+00	0.00E+00	3.97E+02	1.92E+03	2.20E+02	0.00E+00	0.00E+00	4.75E+00
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+2	0.00E+00	5.79E+01	0.00E+00	0.00E+00	1.63E+01	0.00E+00	6.10E+00	6.11E+00	1.13E-02	1.62E-02
13.	CE+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.65E+00	0.00E+00	1.65E+00	0.00E+00	0.00E+00	0.00E+00
14.	CL-	1.47E+04	3.47E+04	2.27E+04	3.65E+04	5.80E+03	1.08E+04	8.36E+03	1.21E+04	5.06E+00	3.26E+02
15.	CM+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
16.	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
17.	CO3-2	2.53E+05	3.24E+04	8.56E+04	9.35E+04	5.58E+04	2.62E+05	7.49E+04	1.11E+05	2.63E+02	8.32E-02
18.	CR(OH)4-	2.48E+03	7.08E+03	4.71E+03	6.70E+03	1.18E+03	1.37E+03	1.95E+03	5.93E+03	1.04E+00	3.63E+01
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	CU+2	0.00E+00	4.34E+01	0.00E+00	0.00E+00	3.26E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E-02
23.	F-	7.86E+03	2.66E+03	0.00E+00	0.00E+00	3.99E+04	0.00E+00	6.07E+03	0.00E+00	1.32E+01	1.22E+03
24.	FE+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
25.	FE+3	0.00E+00	2.55E+02	3.37E+01	4.79E+01	4.41E+02	5.24E+03	6.74E+01	1.58E+01	1.26E-01	1.86E-01
26.	FECN6-3	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
27.	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
28.	H2O	7.90E+06	9.92E+06	6.74E+06	9.32E+06	4.07E+06	5.47E+06	5.00E+06	3.35E+06	4.15E+03	2.29E+05
29.	HG+2	0.00E+00	5.79E+01	0.00E+00	0.00E+00	7.92E-02	0.00E+00	0.00E+00	0.00E+00	5.11E-04	0.00E+00
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	1.47E+04	5.50E+04	2.16E+04	2.63E+04	7.19E+03	7.41E+03	9.65E+04	5.37E+03	1.55E+02	3.91E+03
32.	LA+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E+02	0.00E+00	1.70E-03	0.00E+00	0.00E+00	0.00E+00
33.	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
34.	MG+2	0.00E+00	1.04E+02	0.00E+00	0.00E+00	1.15E+02	0.00E+00	2.83E+01	0.00E+00	1.22E-01	1.29E-01
35.	MN+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
36.	MN+4	0.00E+00	1.04E+02	0.00E+00	0.00E+00	1.13E+01	1.75E+03	9.30E+00	0.00E+00	4.40E-03	9.74E-03
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	MO+6	0.00E+00	3.18E+02	0.00E+00	0.00E+00	5.80E+00	0.00E+00	7.65E-02	0.00E+00	0.00E+00	4.04E-01
39.	NA+	9.69E+05	1.22E+06	8.34E+05	1.18E+06	5.02E+05	6.95E+05	6.38E+05	4.24E+05	5.43E+02	2.89E+04
40.	NB+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
41.	NI+3	1.32E+03	8.68E+01	0.00E+00	0.00E+00	1.21E+02	1.57E+03	4.09E+01	1.11E+02	0.00E+00	1.62E-02
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	8.33E+05	5.79E+05	5.81E+05	8.30E+05	3.51E+05	8.28E+05	5.30E+05	3.25E+05	4.13E+02	3.80E+04
44.	NO3-	3.15E+05	4.99E+05	2.67E+05	5.15E+05	2.73E+05	1.72E+05	3.34E+05	1.58E+05	1.33E+02	5.21E+03
45.	NP+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
46.	OH-	1.54E+04	3.53E+05	2.10E+05	2.66E+05	9.35E+04	1.19E+03	1.94E+05	3.81E+04	1.73E+02	5.61E+03
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	0.00E+00	2.61E+02	0.00E+00	0.00E+00	7.39E+01	1.15E+03	2.09E+01	1.37E+01	0.00E+00	3.23E-01
49.	PO4-3	1.86E+04	3.36E+03	8.43E+03	8.15E+03	1.11E+04	1.85E+03	4.35E+03	4.83E+04	1.42E+01	1.99E+03
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	SE+6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.81E-02	0.00E+00	4.36E-01	1.53E-03	0.00E+00	0.00E+00
57.	SI+4	0.00E+00	9.84E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.52E+02	0.00E+00	0.00E+00	2.15E+02
58.	SM+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
59.	SN+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	4.04E-01
60.	SO4-2	5.42E+04	5.79E+03	1.98E+04	2.81E+04	3.74E+04	4.79E+04	1.04E+04	1.88E+04	3.58E+01	9.74E+02
61.	SR+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.01E-02	0.00E+00	4.00E-02	0.00E+00	0.00E+00	0.00E+00
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	TI+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.06E-01	0.00E+00	1.97E-07	0.00E+00	0.00E+00	8.09E-03
66.	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
67.	TOC	9.89E+04	2.66E+04	1.39E+04	1.67E+04	2.57E+04	1.50E+05	9.90E+03	1.36E+04	1.14E+01	4.20E+02
68.	UO2+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.54E+02	0.00E+00	2.53E+02	0.00E+00	0.00E+00	0.00E+00
69.	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
70.	W+6	0.00E+00	7.53E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
71.	ZN+2	0.00E+00	1.74E+02	0.00E+00	0.00E+00	4.10E+02	0.00E+00	1.82E+02	0.00E+00	4.51E-02	0.00E+00
72.	ZR+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.42E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.04E-01
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.12E+00	0.00E+00	8.11E+00	0.00E+00	0.00E+00	0.00E+00
	Total	1.07E+07	1.35E+07	9.21E+06	1.30E+07	5.54E+06	7.68E+06	7.05E+06	4.68E+06	6.00E+03	3.19E+05
	Diluted Vol (ML)	8426.1	10608.7	7252.2	10260.9	4365.2	6043.5	5547.8	3687.0	4.7	251.3
74.	C14 (Ci)	6.89E+01	7.10E+00	0.00E+00	0.00E+00	2.01E+01	0.00E+00	2.07E+01	1.74E+00	4.56E-04	1.00E-04
75.	Sr90 (Ci)	2.97E+05	3.98E+04	2.56E+04	1.19E+04	4.94E+04	2.46E+05	1.68E+03	5.17E+03	2.31E-01	2.18E-03
76.	Y90 (Ci)	2.97E+05	3.98E+04	2.56E+04	1.19E+04	4.94E+04	2.46E+05	1.68E+03	5.17E+03	2.31E-01	2.18E-03
77.	Tc99 (Ci)	1.17E+03	6.04E+02	5.44E+02	7.51E+02	2.63E+02	1.75E+03	2.27E+02	3.57E+02	1.11E-01	4.23E-03
78.	Cs137 (Ci)	9.69E+05	2.31E+06	1.98E+06	1.87E+06	1.23E+05	6.92E+05	6.21E+05	8.24E+03	5.80E+02	4.94E-02
79.	Ba137 (Ci)	9.21E+05	2.20E+06	1.88E+06	1.78E+06	1.17E+05	6.57E+05	5.89E+05	7.83E+03	5.51E+02	4.70E-02
80.	U235 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.84E-03	0.00E+00	7.83E-03	0.00E+00	0.00E+00	0.00E+00
81.	U238 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.75E-01	0.00E+00	1.75E-01	0.00E+00	0.00E+00	0.00E+00
82.	Np237 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.80E-03	0.00E+00	4.83E-03	0.00E+00	0.00E+00	2.72E-07
83.	Pu238 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.07E-02	0.00E+00	1.03E-01	0.00E+00	0.00E+00	0.00E+00
84.	Pu239 (Ci)	2.92E+02	6.75E+00	3.14E+01	4.46E+01	1.58E+01	1.31E+02	2.10E+00	3.12E-01	7.13E-04	2.80E-04
85.	Pu240 (Ci)	6.39E+01	1.04E+00	4.82E+00	6.84E+00	3.97E+00	3.32E+01	5.03E-01	4.79E-02	1.09E-04	4.31E-05
86.	Pu241 (Ci)	1.14E+02	3.06E+00	1.43E+01	2.02E+01	6.08E+00	5.94E+01	3.78E+00	1.42E-01	3.23E-04	1.29E-04
87.	Am241 (Ci)	2.33E+02	8.09E+00	4.58E+00	6.49E+00	8.54E+01	1.29E+03	8.26E+00	1.73E+00	1.15E-03	6.76E-05
88.	Cm244 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.77E-03	0.00E+00	2.77E-03	0.00E+00	0.00E+00	0.00E+00

Table A-16b. Revised Tank Inventory for Solid Phase Constituents (AN,AP)

		Mass (kg)										
	Chemical	102AN	103AN	104AN	105AN	106AN	107AN	101AP	102AP	103AP	104AP
1.	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
2.	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
3.	AL+3	2.90E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.	AM+3	3.85E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.24E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
5.	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
6.	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
7.	BA+2	6.53E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
8.	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
9.	BI+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
10.	CA+2	2.31E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.29E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+2	2.43E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
13.	CE+3	1.61E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.44E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
14.	CL-	2.58E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.29E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
15.	CM+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
16.	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
17.	CO3-2	1.92E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.11E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
18.	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
19.	CR+3	1.13E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.15E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	1.33E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.01E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
22.	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
23.	F-	1.56E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.75E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
24.	FE+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
25.	FE+3	3.55E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	7.24E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
32.	LA+3	5.99E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.91E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
33.	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
34.	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
35.	MN+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
36.	MN+4	1.99E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.57E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	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
39.	NA+	8.51E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.20E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
40.	NB+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
41.	NI+3	7.58E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.42E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	2.11E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
44.	NO3-	7.82E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.69E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
45.	NP+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
46.	OH-	1.24E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.43E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	8.25E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.95E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
49.	PO4-3	3.12E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.66E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
50.	PU-239	6.40E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
51.	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
52.	RE+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
53.	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
54.	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
55.	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
56.	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
57.	SI+4	1.62E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.17E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
58.	SM+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
59.	SN+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
60.	SO4-2	3.83E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.36E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
61.	SR+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
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+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
65.	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
66.	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
67.	TOC	1.56E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.80E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
68.	UO2+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
69.	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
70.	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
71.	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
72.	ZR+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
73.	ZRO2:2H2O	3.84E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.53E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Total	4.30E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.96E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
	Vol (ML) spg=3	14.3	0.0	0.0	0.0	0.0	9.9	0.0	0.0	0.0	0.0
74.	C14 (Ci)	8.72E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
75.	Sr90 (Ci)	2.30E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
76.	Y90 (Ci)	2.30E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.83E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00
77.	Tc99 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
78.	Cs137 (Ci)	1.15E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.78E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
79.	Ba137 (Ci)	1.09E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.34E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
80.	U235 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
81.	U238 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
82.	Np237 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
83.	Pu238 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
84.	Pu239 (Ci)	3.97E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.62E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
85.	Pu240 (Ci)	1.01E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.11E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
86.	Pu241 (Ci)	3.60E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.47E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
87.	Am241 (Ci)	1.32E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.68E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
88.	Cm244 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table A-17a. Revised Tank Inventory for Liquid Phase Constituents (AP,AW)

		Mass (kg)									
	Chemical	105AP	106AP	107AP	108AP	101AW	102AW	103AW	104AW	105AW	106AW
1.	AG+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E+00	0.00E+00	0.00E+00	9.50E+00	0.00E+00
2.	AL(OH)4-	3.49E+04	3.50E+04	3.49E+04	1.61E+03	3.87E+05	6.90E+04	5.21E+03	3.41E+04	6.93E+04	2.39E+04
3.	AL+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
4.	AM+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.27E-01	0.00E+00	0.00E+00	1.27E-01	0.00E+00
5.	AS+5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.35E+00	0.00E+00	0.00E+00	3.35E+00	0.00E+00
6.	B+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.60E+00	1.11E+01	0.00E+00	3.60E+00	0.00E+00
7.	BA+2	0.00E+00	6.58E-02	0.00E+00	0.00E+00	0.00E+00	2.02E+00	3.03E-01	0.00E+00	2.04E+00	0.00E+00
8.	BE+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.10E-02	0.00E+00	0.00E+00	1.63E-02	0.00E+00
9.	BI+3	5.54E+01	5.52E+01	5.54E+01	0.00E+00	0.00E+00	6.15E+00	0.00E+00	5.24E+01	6.15E+00	3.80E+01
10.	CA+2	4.44E+01	4.42E+01	4.44E+01	0.00E+00	1.30E+02	2.83E+01	6.23E+00	4.19E+01	3.36E+01	3.04E+01
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+2	0.00E+00	2.42E+00	0.00E+00	0.00E+00	0.00E+00	5.15E+00	0.00E+00	0.00E+00	5.15E+00	0.00E+00
13.	CE+3	6.64E+00	6.60E+00	6.64E+00	0.00E+00	0.00E+00	3.21E+00	0.00E+00	6.27E+00	3.21E+00	4.55E+00
14.	CL-	4.14E+03	4.14E+03	4.14E+03	0.00E+00	2.04E+04	1.17E+03	7.55E+02	4.10E+03	1.23E+03	2.84E+03
15.	CM+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.17E-04	0.00E+00	0.00E+00	1.17E-04	0.00E+00
16.	CO+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.90E-04	0.00E+00	0.00E+00	3.90E-04	0.00E+00
17.	CO3-2	1.92E+04	2.02E+04	1.92E+04	0.00E+00	0.00E+00	9.70E+04	7.29E+02	2.48E+04	9.73E+04	1.32E+04
18.	CR(OH)4-	2.49E+03	2.49E+03	2.49E+03	6.61E+03	1.46E+03	4.06E+03	1.13E+02	2.36E+03	4.07E+03	1.71E+03
19.	CR+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
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E+02	0.00E+00	0.00E+00	1.54E+02	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.35E+01	0.00E+00	0.00E+00	5.35E+01	0.00E+00
22.	CU+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.55E-01	0.00E+00	0.00E+00	8.55E-01	0.00E+00
23.	F-	3.63E+03	3.68E+03	3.63E+03	2.97E+03	0.00E+00	4.80E+03	1.54E+04	3.47E+03	6.31E+03	2.49E+03
24.	FE+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
25.	FE+3	1.85E+02	1.87E+02	1.85E+02	0.00E+00	0.00E+00	2.13E+00	8.52E+00	1.75E+02	4.83E+01	1.27E+02
26.	FECN6-3	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
27.	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
28.	H2O	3.80E+06	3.80E+06	3.80E+06	1.37E+06	6.92E+06	2.33E+06	6.25E+06	3.80E+06	2.35E+06	2.60E+06
29.	HG+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
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.12E-01	0.00E+00	0.00E+00	2.12E-01	0.00E+00
31.	K+	7.36E+02	1.07E+03	7.36E+02	0.00E+00	1.65E+05	5.90E+02	1.34E+04	6.96E+02	2.23E+03	5.05E+02
32.	LA+3	6.84E-03	6.80E-03	6.84E-03	0.00E+00	0.00E+00	4.67E-01	0.00E+00	6.46E-03	4.67E-01	4.69E-03
33.	LI+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.68E-01	0.00E+00	0.00E+00	3.68E-01	0.00E+00
34.	MG+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.06E+02	4.66E+00	3.71E-01	0.00E+00	1.11E+01	0.00E+00
35.	MN+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.16E+00	0.00E+00	0.00E+00	2.16E+00	0.00E+00
36.	MN+4	3.99E+01	3.97E+01	3.99E+01	0.00E+00	1.03E+02	0.00E+00	0.00E+00	3.77E+01	0.00E+00	2.74E+01
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	MO+6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.27E+02	1.01E+01	1.40E+00	1.29E+01	0.00E+00
39.	NA+	4.80E+05	4.80E+05	4.80E+05	1.58E+05	9.06E+05	2.86E+05	4.17E+04	4.80E+05	2.91E+05	3.29E+05
40.	NB+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
41.	NI+3	2.88E+01	2.88E+01	2.88E+01	0.00E+00	0.00E+00	1.34E+01	1.60E+00	2.72E+01	1.34E+01	1.97E+01
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	7.69E+04	7.82E+04	7.69E+04	7.04E+04	8.43E+05	1.48E+05	3.23E+04	1.07E+05	1.66E+05	5.27E+04
44.	NO3-	7.45E+05	7.42E+05	7.45E+05	8.17E+04	4.02E+05	1.56E+05	5.94E+03	7.11E+05	1.56E+05	5.11E+05
45.	NP+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
46.	OH-	1.05E+05	1.05E+05	1.05E+05	5.56E+03	3.40E+05	2.14E+04	9.27E+03	9.96E+04	2.33E+04	7.22E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	1.67E+01	1.66E+01	1.67E+01	0.00E+00	1.19E+03	1.91E+01	0.00E+00	1.58E+01	1.91E+01	1.15E+01
49.	PO4-3	1.19E+04	1.19E+04	1.19E+04	0.00E+00	8.31E+03	6.90E+02	6.74E+02	1.12E+04	9.16E+02	8.13E+03
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E+00	0.00E+00	0.00E+00	1.30E+00	0.00E+00
51.	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
52.	RE+7	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.20E-01	0.00E+00	0.00E+00	2.20E-01	0.00E+00
53.	RH+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.17E+00	0.00E+00	0.00E+00	2.17E+00	0.00E+00
54.	RU+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.25E-01	0.00E+00	0.00E+00	7.25E-01	0.00E+00
55.	SB+5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.03E+00	0.00E+00	0.00E+00	1.03E+00	0.00E+00
56.	SE+6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.30E-01	3.61E+00	0.00E+00	0.00E+00	3.61E+00	0.00E+00
57.	SI+4	0.00E+00	0.00E+00	0.00E+00	1.58E+03	0.00E+00	1.51E+03	2.67E+02	0.00E+00	1.51E+03	0.00E+00
58.	SM+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
59.	SN+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
60.	SO4-2	1.13E+04	1.13E+04	1.13E+04	5.11E+04	4.06E+03	2.98E+04	7.32E+02	1.16E+04	3.01E+04	7.75E+03
61.	SR+2	1.61E-01	1.60E-01	1.61E-01	0.00E+00	0.00E+00	4.49E+00	0.00E+00	1.52E-01	4.49E+00	1.11E-01
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.92E+01	0.00E+00	0.00E+00	4.92E+01	0.00E+00
63.	TE+6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.50E+00	0.00E+00	0.00E+00	2.50E+00	0.00E+00
64.	TH+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.67E+00	0.00E+00	0.00E+00	1.67E+00	0.00E+00
65.	TI+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.86E+01	7.15E-01	0.00E+00	0.00E+00	7.15E-01	0.00E+00
66.	TL+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.09E+01	0.00E+00	0.00E+00	2.09E+01	0.00E+00
67.	TOC	5.34E+03	5.52E+03	5.34E+03	0.00E+00	9.69E+03	6.55E+03	1.32E+03	6.50E+03	6.94E+03	3.66E+03
68.	UO2+2	1.02E+03	1.01E+03	1.02E+03	0.00E+00	0.00E+00	3.42E+03	0.00E+00	9.64E+02	3.42E+03	6.99E+02
69.	V+5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.98E-01	0.00E+00	0.00E+00	1.98E-01	0.00E+00
70.	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
71.	ZN+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E+03	1.74E-01	2.49E+00	0.00E+00	1.74E-01	0.00E+00
72.	ZR+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.99E+02	4.58E+01	0.00E+00	0.00E+00	4.58E+01	0.00E+00
73.	ZRO2:2H2O	3.27E+01	3.25E+01	3.27E+01	0.00E+00	0.00E+00	8.10E-01	0.00E+00	3.09E+01	8.10E-01	2.24E+01
	Total	5.30E+06	5.30E+06	5.30E+06	1.74E+06	1.00E+07	3.16E+06	6.38E+06	5.30E+06	3.21E+06	3.63E+06
	Diluted Vol (ML)	4173.9	4173.9	4173.9	1373.9	7878.3	2487.0	6283.3	4173.9	2530.4	2860.9
74.	C14 (Ci)	8.06E+01	8.02E+01	8.06E+01	0.00E+00	1.45E+00	3.57E-02	0.00E+00	7.66E+01	3.57E-02	5.53E+01
75.	Sr90 (Ci)	4.53E+03	4.51E+03	4.53E+03	5.21E+03	3.39E+03	1.04E+00	1.09E+00	5.40E+03	1.04E+00	3.11E+03
76.	Y90 (Ci)	4.53E+03	4.51E+03	4.53E+03	5.21E+03	3.39E+03	0.00E+00	1.09E+00	5.40E+03	0.00E+00	3.11E+03
77.	Tc99 (Ci)	4.51E+01	5.04E+01	4.51E+01	0.00E+00	5.94E+02	0.00E+00	0.00E+00	1.57E+02	0.00E+00	3.09E+01
78.	Cs137 (Ci)	4.19E+04	4.32E+04	4.19E+04	3.07E+06	1.58E+06	0.00E+00	4.39E+04	2.96E+05	7.82E+03	2.87E+04
79.	Ba137 (Ci)	3.98E+04	4.12E+04	3.98E+04	2.92E+06	1.50E+06	0.00E+00	4.16E+04	2.81E+05	7.42E+03	2.73E+04
80.	U235 (Ci)	3.15E-02	3.14E-02	3.15E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.98E-02	0.00E+00	2.16E-02
81.	U238 (Ci)	7.06E-01	7.02E-01	7.06E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.67E-01	0.00E+00	4.84E-01
82.	Np237 (Ci)	1.93E-02	1.92E-02	1.93E-02	0.00E+00	0.00E+00	0.00E+00	1.68E-01	1.83E-02	2.80E-03	1.33E-02
83.	Pu238 (Ci)	2.84E-01	2.83E-01	2.84E-01	0.00E+00	0.00E+00	0.00E+00	6.26E+01	2.69E-01	2.57E+00	1.95E-01
84.	Pu239 (Ci)	6.47E+00	6.50E+00	6.47E+00	0.00E+00	6.05E+00	0.00E+00	1.40E-01	6.99E+00	0.00E+00	4.44E+00
85.	Pu240 (Ci)	1.72E+00	1.72E+00	1.72E+00	0.00E+00	9.29E-01	0.00E+00	5.04E-02	1.76E+00	0.00E+00	1.18E+00
86.	Pu241 (Ci)	1.43E+01	1.43E+01	1.43E+01	0.00E+00	2.74E+00	0.00E+00	1.24E+00	1.39E+01	0.00E+00	9.81E+00
87.	Am241 (Ci)	2.82E+01	2.81E+01	2.82E+01	0.00E+00	6.36E+00	0.00E+00	8.33E-07	2.76E+01	0.00E+00	1.93E+01
88.	Cm244 (Ci)	1.11E-02	1.11E-02	1.11E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E-02	0.00E+00	7.64E-03

Table A-17b. Revised Tank Inventory for Solid Phase Constituents (AP,AW)

		Mass (kg)									
	Chemical	105AP	106AP	107AP	108AP	101AW	102AW	103AW	104AW	105AW	106AW
1.	AG+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.58E+02	0.00E+00	0.00E+00	0.00E+00
2.	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
3.	AL+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.69E+03	0.00E+00	2.95E+04	0.00E+00	2.73E+03	0.00E+00
4.	AM+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.78E-02	0.00E+00	3.35E+00	0.00E+00	5.07E-02	0.00E+00
5.	AS+5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.26E+00	0.00E+00	0.00E+00	0.00E+00
6.	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
7.	BA+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.42E+02	0.00E+00	8.00E-01	0.00E+00
8.	BE+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.08E+00	0.00E+00	0.00E+00	0.00E+00
9.	BI+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
10.	CA+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.85E+02	0.00E+00	6.51E+03	0.00E+00	3.23E+02	0.00E+00
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.26E+02	0.00E+00	0.00E+00	0.00E+00
13.	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
14.	CL-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.27E+01	0.00E+00	2.38E+01	0.00E+00	1.80E+01	0.00E+00
15.	CM+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.53E-04	0.00E+00	0.00E+00	0.00E+00
16.	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
17.	CO3-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.26E+02	0.00E+00	1.42E+04	0.00E+00	3.00E+03	0.00E+00
18.	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
19.	CR+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.19E+03	0.00E+00	3.72E+02	0.00E+00
20.	CS+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.19E+00	0.00E+00	4.87E-01	0.00E+00	1.27E+00	0.00E+00
22.	CU+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.88E+02	0.00E+00	0.00E+00	0.00E+00
23.	F-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.32E+04	0.00E+00	9.11E+03	0.00E+00	8.96E+03	0.00E+00
24.	FE+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
25.	FE+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.94E+04	0.00E+00	5.20E+02	0.00E+00
26.	FECN6-3	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
27.	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
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.83E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
30.	I-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.73E+03	0.00E+00	1.28E+04	0.00E+00	1.06E+04	0.00E+00
32.	LA+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.53E+02	0.00E+00	4.50E+02	0.00E+00
33.	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
34.	MG+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.71E+02	0.00E+00	0.00E+00	0.00E+00
35.	MN+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
36.	MN+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.50E+02	0.00E+00	0.00E+00	0.00E+00
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.58E+03	0.00E+00	0.00E+00	0.00E+00
38.	MO+6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.21E+01	0.00E+00	0.00E+00	0.00E+00
39.	NA+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.16E+04	0.00E+00	5.78E+04	0.00E+00
40.	NB+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
41.	NI+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	8.13E+02	0.00E+00	7.00E+01	0.00E+00
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.48E+01	0.00E+00	3.87E+02	0.00E+00	5.70E+02	0.00E+00
44.	NO3-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.79E+03	0.00E+00	4.60E+03	0.00E+00	3.96E+03	0.00E+00
45.	NP+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.57E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
46.	OH-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.60E-01	0.00E+00	1.76E+05	0.00E+00	5.36E+04	0.00E+00
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.36E+03	0.00E+00	0.00E+00	0.00E+00
49.	PO4-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.43E+03	0.00E+00	4.00E+02	0.00E+00
50.	PU-239	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.83E-01	0.00E+00	4.63E+01	0.00E+00	6.77E+00	0.00E+00
51.	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
52.	RE+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
53.	RH+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.93E+02	0.00E+00	0.00E+00	0.00E+00
54.	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
55.	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
56.	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	2.59E+03	0.00E+00
57.	SI+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.25E+04	0.00E+00	2.82E+03	0.00E+00
58.	SM+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
59.	SN+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
60.	SO4-2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.90E+01	0.00E+00	1.25E+03	0.00E+00
61.	SR+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.78E+01	0.00E+00	4.00E-01	0.00E+00
62.	TCO4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.72E+00	0.00E+00	0.00E+00	0.00E+00
63.	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
64.	TH+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.79E+03	0.00E+00	0.00E+00	0.00E+00
65.	TI+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.54E+02	0.00E+00	0.00E+00	0.00E+00
66.	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
67.	TOC	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.78E+03	0.00E+00	4.60E+03	0.00E+00
68.	UO2+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.92E+04	0.00E+00	1.01E+04	0.00E+00
69.	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
70.	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
71.	ZN+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.06E+02	0.00E+00	0.00E+00	0.00E+00
72.	ZR+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
73.	ZRO2:2H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.41E+04	0.00E+00	2.79E+05	0.00E+00	1.73E+05	0.00E+00
	Total	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.99E+04	0.00E+00	7.09E+05	0.00E+00	3.38E+05	0.00E+00
	Vol (ML) spg=3	0.0	0.0	0.0	0.0	23.3	0.0	236.3	0.0	112.6	0.0
74.	C14 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.14E-01	0.00E+00	0.00E+00	0.00E+00
75.	Sr90 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.61E+04	0.00E+00	1.96E+04	0.00E+00
76.	Y90 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.61E+04	0.00E+00	1.96E+04	0.00E+00
77.	Tc99 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
78.	Cs137 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.22E+04	0.00E+00	1.10E+05	0.00E+00
79.	Ba137 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.00E+04	0.00E+00	1.05E+05	0.00E+00
80.	U235 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
81.	U238 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
82.	Np237 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.99E-01	0.00E+00	1.99E-02	0.00E+00
83.	Pu238 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+03	0.00E+00	1.82E+01	0.00E+00
84.	Pu239 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.88E+03	0.00E+00	4.19E+02	0.00E+00
85.	Pu240 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.74E+02	0.00E+00	1.19E+02	0.00E+00
86.	Pu241 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.51E+04	0.00E+00	3.53E+03	0.00E+00
87.	Am241 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.15E+04	0.00E+00	1.74E+02	0.00E+00
88.	Cm244 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table A-18a. Revised Tank Inventory for Liquid Phase Constituents (AY,AZ,SY)

		Mass (kg)						
	Chemical	101AY	102AY	101AZ	102AZ	101SY	102SY	103SY
1.	AG+	0.00E+00	8.18E+00	8.23E-01	1.68E+00	0.00E+00	0.00E+00	0.00E+00
2.	AL(OH)4-	9.44E+04	1.98E+01	2.10E+02	1.11E+03	6.52E+05	0.00E+00	4.98E+05
3.	AL+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
4.	AM+3	0.00E+00	8.33E-04	5.44E-04	1.97E-03	0.00E+00	0.00E+00	0.00E+00
5.	AS+5	0.00E+00	0.00E+00	8.36E-03	7.72E-02	0.00E+00	0.00E+00	0.00E+00
6.	B+3	0.00E+00	9.34E-01	1.77E-01	2.52E-01	0.00E+00	0.00E+00	0.00E+00
7.	BA+2	6.48E+00	1.12E+00	1.57E-01	2.47E-01	0.00E+00	0.00E+00	2.93E+01
8.	BE+2	0.00E+00	0.00E+00	2.32E-05	3.07E-04	0.00E+00	0.00E+00	0.00E+00
9.	BI+3	0.00E+00	2.84E+00	5.28E-01	6.47E-01	0.00E+00	0.00E+00	0.00E+00
10.	CA+2	2.35E+02	1.18E+01	1.90E+00	2.79E+00	3.68E+03	0.00E+00	5.65E+02
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+2	0.00E+00	2.33E+00	4.25E-01	5.35E-01	0.00E+00	0.00E+00	0.00E+00
13.	CE+3	0.00E+00	0.00E+00	7.91E-03	7.44E-02	0.00E+00	0.00E+00	0.00E+00
14.	CL-	9.36E+02	7.70E+02	7.63E+01	1.62E+02	4.82E+04	0.00E+00	2.28E+04
15.	CM+3	0.00E+00	4.91E-08	3.72E-07	1.67E-06	0.00E+00	0.00E+00	0.00E+00
16.	CO+3	0.00E+00	0.00E+00	1.20E-06	5.80E-06	0.00E+00	0.00E+00	0.00E+00
17.	CO3-2	9.53E+04	0.00E+00	2.55E+02	2.05E+03	0.00E+00	0.00E+00	6.97E+04
18.	CR(OH)4-	3.71E+03	4.30E+01	1.28E+01	1.20E+02	2.72E+03	0.00E+00	3.56E+04
19.	CR+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
20.	CS+	0.00E+00	6.44E-01	5.36E-01	3.07E+00	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	1.51E-01	1.73E-01	1.05E+00	0.00E+00	0.00E+00	0.00E+00
22.	CU+2	0.00E+00	2.81E-01	5.28E-02	6.97E-02	0.00E+00	0.00E+00	0.00E+00
23.	F-	4.77E+03	1.85E+02	3.07E+01	1.27E+02	6.95E+02	0.00E+00	4.83E+03
24.	FE+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
25.	FE+3	1.13E+01	3.42E-01	3.73E-02	1.17E-01	1.43E+02	0.00E+00	4.03E+03
26.	FECN6-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
27.	H+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
28.	H2O	8.16E+06	2.35E+06	5.71E+05	3.31E+06	9.85E+06	0.00E+00	7.00E+06
29.	HG+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
30.	I-	0.00E+00	0.00E+00	6.19E-04	3.62E-03	0.00E+00	0.00E+00	0.00E+00
31.	K+	1.03E+04	8.05E+01	1.18E+01	2.57E+01	1.90E+04	0.00E+00	1.07E+04
32.	LA+3	6.94E+01	4.84E-02	5.69E-03	2.04E-02	0.00E+00	0.00E+00	0.00E+00
33.	LI+	0.00E+00	0.00E+00	1.00E-03	7.33E-03	0.00E+00	0.00E+00	0.00E+00
34.	MG+2	1.50E+01	2.05E+00	3.81E-01	4.74E-01	0.00E+00	0.00E+00	0.00E+00
35.	MN+2	0.00E+00	9.27E-01	1.73E-01	2.16E-01	0.00E+00	0.00E+00	0.00E+00
36.	MN+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.42E+03
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	MO+6	0.00E+00	0.00E+00	2.81E-02	1.92E-01	0.00E+00	0.00E+00	0.00E+00
39.	NA+	1.23E+04	1.19E+04	2.70E+03	7.69E+03	1.19E+06	0.00E+00	8.70E+05
40.	NB+5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
41.	NI+3	7.05E+01	6.09E+00	1.12E+00	1.40E+00	1.70E+02	0.00E+00	3.84E+02
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	2.45E+05	9.69E+02	5.05E+02	2.93E+03	2.65E+05	0.00E+00	6.54E+05
44.	NO3-	1.64E+05	3.82E+02	4.99E+02	2.83E+03	2.28E+05	0.00E+00	0.00E+00
45.	NP+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
46.	OH-	3.73E+04	2.10E+03	2.62E+02	7.41E+02	7.26E+05	0.00E+00	3.72E+05
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	0.00E+00	8.31E+00	1.55E+00	1.92E+00	0.00E+00	0.00E+00	0.00E+00
49.	PO4-3	5.00E+03	3.55E+02	5.64E+01	7.91E+01	4.01E+04	0.00E+00	1.57E+04
50.	PU-239	0.00E+00	4.51E-01	8.43E-02	1.12E-01	0.00E+00	0.00E+00	0.00E+00
51.	RB+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
52.	RE+7	0.00E+00	0.00E+00	5.74E-04	4.67E-03	0.00E+00	0.00E+00	0.00E+00
53.	RH+3	0.00E+00	0.00E+00	5.36E-03	5.08E-02	0.00E+00	0.00E+00	0.00E+00
54.	RU+3	0.00E+00	0.00E+00	1.90E-03	1.52E-02	0.00E+00	0.00E+00	0.00E+00
55.	SB+5	0.00E+00	0.00E+00	3.24E-03	1.46E-02	0.00E+00	0.00E+00	0.00E+00
56.	SE+6	0.00E+00	0.00E+00	9.54E-03	7.56E-02	0.00E+00	0.00E+00	0.00E+00
57.	SI+4	0.00E+00	5.22E+02	5.34E+01	1.33E+02	0.00E+00	0.00E+00	0.00E+00
58.	SM+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
59.	SN+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
60.	SO4-2	4.59E+04	1.13E+03	2.57E+02	1.04E+03	2.54E+04	0.00E+00	1.15E+04
61.	SR+2	0.00E+00	1.66E-01	2.95E-02	1.01E-01	0.00E+00	0.00E+00	0.00E+00
62.	TCO4-	0.00E+00	1.35E+00	3.23E-01	1.17E+00	0.00E+00	0.00E+00	0.00E+00
63.	TE+6	0.00E+00	0.00E+00	7.37E-03	4.15E-02	0.00E+00	0.00E+00	0.00E+00
64.	TH+4	0.00E+00	0.00E+00	5.24E-03	2.37E-02	0.00E+00	0.00E+00	0.00E+00
65.	TI+4	0.00E+00	0.00E+00	2.12E-03	1.19E-02	0.00E+00	0.00E+00	0.00E+00
66.	TL+3	0.00E+00	0.00E+00	6.55E-02	3.02E-01	0.00E+00	0.00E+00	0.00E+00
67.	TOC	1.39E+04	1.24E+03	2.12E+02	3.70E+02	9.44E+04	0.00E+00	3.31E+04
68.	UO2+2	0.00E+00	5.11E+02	5.62E+01	1.85E+02	0.00E+00	0.00E+00	0.00E+00
69.	V+5	0.00E+00	0.00E+00	4.86E-04	4.64E-03	0.00E+00	0.00E+00	0.00E+00
70.	W+6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
71.	ZN+2	1.22E+01	0.00E+00	4.74E-04	3.47E-03	0.00E+00	0.00E+00	0.00E+00
72.	ZR+4	0.00E+00	2.12E+01	3.93E+00	4.82E+00	0.00E+00	0.00E+00	0.00E+00
73.	ZRO2:2H2O	0.00E+00	1.46E-01	1.57E-02	4.75E-02	0.00E+00	0.00E+00	0.00E+00
	Total	8.89E+06	2.37E+06	5.76E+05	3.33E+06	1.31E+07	0.00E+00	9.61E+06
	Diluted Vol (ML)	8863.4	2338.0	569.7	3315.6	10347.8	0.0	7565.2
74.	C14 (Ci)	0.00E+00	0.00E+00	9.63E-05	7.20E-04	0.00E+00	0.00E+00	0.00E+00
75.	Sr90 (Ci)	3.28E+04	7.61E-03	3.97E-03	1.67E-02	4.62E+04	0.00E+00	8.80E+04
76.	Y90 (Ci)	3.28E+04	0.00E+00	0.00E+00	0.00E+00	4.62E+04	0.00E+00	8.80E+04
77.	Tc99 (Ci)	1.53E+02	0.00E+00	0.00E+00	0.00E+00	2.57E+03	0.00E+00	1.88E+03
78.	Cs137 (Ci)	3.98E+06	0.00E+00	0.00E+00	0.00E+00	1.43E+06	0.00E+00	1.12E+06
79.	Ba137 (Ci)	3.78E+06	0.00E+00	0.00E+00	0.00E+00	1.36E+06	0.00E+00	1.06E+06
80.	U235 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
81.	U238 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
82.	Np237 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
83.	Pu238 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
84.	Pu239 (Ci)	9.63E+00	0.00E+00	0.00E+00	0.00E+00	8.81E+00	0.00E+00	1.14E+01
85.	Pu240 (Ci)	2.43E+00	0.00E+00	0.00E+00	0.00E+00	2.39E+00	0.00E+00	3.11E+00
86.	Pu241 (Ci)	8.44E+00	0.00E+00	0.00E+00	0.00E+00	1.29E+01	0.00E+00	1.74E+01
87.	Am241 (Ci)	8.93E+01	0.00E+00	0.00E+00	0.00E+00	8.03E+01	0.00E+00	8.21E+01
88.	Cm244 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Table A-18b. Revised Tank Inventory for Solid Phase Constituents (AY,AZ,SY)

		Mass (kg)						
	Chemical	101AY	102AY	101AZ	102AZ	101SY	102SY	103SY
1.	AG+	0.00E+00	1.39E+03	0.00E+00	2.11E+02	0.00E+00	0.00E+00	0.00E+00
2.	AL(OH)4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
3.	AL+3	1.74E+04	3.23E+04	5.40E+03	3.80E+04	5.06E+03	0.00E+00	7.45E+03
4.	AM+3	3.52E+00	1.15E+00	2.61E+00	1.06E+01	9.98E-02	0.00E+00	1.26E-03
5.	AS+5	0.00E+00	0.00E+00	6.00E+01	2.40E+02	0.00E+00	0.00E+00	0.00E+00
6.	B+3	0.00E+00	1.03E+01	4.20E+01	1.74E+02	0.00E+00	0.00E+00	0.00E+00
7.	BA+2	1.68E+03	3.49E+03	6.68E+01	2.22E+03	0.00E+00	0.00E+00	3.26E+00
8.	BE+2	0.00E+00	0.00E+00	1.61E+00	6.44E+00	0.00E+00	0.00E+00	0.00E+00
9.	BI+3	0.00E+00	3.27E+02	0.00E+00	2.00E+02	0.00E+00	0.00E+00	0.00E+00
10.	CA+2	4.12E+03	9.83E+03	2.79E+02	5.87E+03	3.06E+02	0.00E+00	6.28E+01
11.	CANCRINITE	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
12.	CD+2	5.03E+02	2.97E+02	1.14E+03	4.69E+03	0.00E+00	0.00E+00	0.00E+00
13.	CE+3	2.20E+03	0.00E+00	1.03E+02	4.10E+02	0.00E+00	0.00E+00	0.00E+00
14.	CL-	0.00E+00	1.57E+02	1.38E+01	5.53E+01	4.87E+02	0.00E+00	2.31E+02
15.	CM+3	0.00E+00	0.00E+00	3.11E-03	1.24E-02	0.00E+00	0.00E+00	0.00E+00
16.	CO+3	0.00E+00	3.15E+00	1.78E-04	1.92E+00	0.00E+00	0.00E+00	0.00E+00
17.	CO3-2	0.00E+00	0.00E+00	5.21E+03	2.09E+04	0.00E+00	0.00E+00	7.04E+02
18.	CR(OH)4-	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
19.	CR+3	8.70E+03	1.13E+03	1.10E+02	8.34E+02	2.12E+04	0.00E+00	8.12E+02
20.	CS+	0.00E+00	9.69E+00	3.52E+00	1.94E+01	0.00E+00	0.00E+00	0.00E+00
21.	CS-137	0.00E+00	2.27E+00	1.22E+00	6.13E+00	1.67E-01	0.00E+00	1.30E-01
22.	CU+2	0.00E+00	8.32E+01	4.08E+01	2.14E+02	0.00E+00	0.00E+00	0.00E+00
23.	F-	0.00E+00	1.86E+02	3.67E+01	1.47E+02	7.02E+00	0.00E+00	4.88E+01
24.	FE+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
25.	FE+3	6.06E+04	4.63E+04	1.24E+04	7.03E+04	2.06E+03	0.00E+00	2.12E+02
26.	FECN6-3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
27.	H+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
28.	H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
29.	HG+2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
30.	I-	0.00E+00	0.00E+00	9.79E-02	3.91E-01	0.00E+00	0.00E+00	0.00E+00
31.	K+	0.00E+00	1.04E+03	2.15E+02	1.41E+03	1.92E+02	0.00E+00	1.08E+02
32.	LA+3	1.60E+04	5.75E+02	4.40E+02	1.76E+03	0.00E+00	0.00E+00	9.89E+01
33.	LI+	0.00E+00	0.00E+00	5.03E+00	2.01E+01	0.00E+00	0.00E+00	0.00E+00
34.	MG+2	0.00E+00	4.30E+03	8.40E+01	2.95E+03	0.00E+00	0.00E+00	0.00E+00
35.	MN+2	0.00E+00	2.50E+03	3.12E+02	1.99E+03	0.00E+00	0.00E+00	0.00E+00
36.	MN+4	1.18E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.47E+01
37.	MNO2	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
38.	MO+6	0.00E+00	0.00E+00	3.97E+00	1.59E+01	0.00E+00	0.00E+00	0.00E+00
39.	NA+	2.83E+04	5.45E+04	3.16E+03	4.42E+04	1.20E+04	0.00E+00	8.78E+03
40.	NB+5	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
41.	NI+3	1.04E+03	1.06E+03	7.24E+02	3.28E+03	9.30E+02	0.00E+00	2.02E+01
42.	NI2FECN6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
43.	NO2-	0.00E+00	3.49E+01	5.56E+02	2.22E+03	2.30E+03	0.00E+00	0.00E+00
44.	NO3-	0.00E+00	2.72E+01	3.36E+02	1.35E+03	2.68E+03	0.00E+00	6.61E+03
45.	NP+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
46.	OH-	5.88E+05	3.77E+04	2.52E+04	1.01E+05	4.02E+04	0.00E+00	2.83E+04
47.	P2O5:24WO2:44H2O	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
48.	PB+4	1.51E+03	1.55E+03	8.84E+01	1.30E+03	0.00E+00	0.00E+00	0.00E+00
49.	PO4-3	1.32E+04	4.94E+03	2.65E+01	3.12E+03	4.11E+02	0.00E+00	1.58E+02
50.	PU-239	4.50E+01	4.25E+01	3.29E+00	3.27E+01	6.06E-01	0.00E+00	9.71E-03
51.	RB+	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
52.	RE+7	0.00E+00	0.00E+00	6.84E+00	2.74E+01	0.00E+00	0.00E+00	0.00E+00
53.	RH+3	0.00E+00	0.00E+00	4.46E+01	1.78E+02	0.00E+00	0.00E+00	0.00E+00
54.	RU+3	0.00E+00	0.00E+00	5.29E+01	2.12E+02	0.00E+00	0.00E+00	0.00E+00
55.	SB+5	0.00E+00	0.00E+00	1.31E+02	5.23E+02	0.00E+00	0.00E+00	0.00E+00
56.	SE+6	0.00E+00	0.00E+00	1.44E+02	5.78E+02	0.00E+00	0.00E+00	0.00E+00
57.	SI+4	1.86E+05	5.05E+04	5.12E+02	3.04E+04	0.00E+00	0.00E+00	1.36E+03
58.	SM+3	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
59.	SN+4	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
60.	SO4-2	0.00E+00	9.41E+01	2.03E+00	5.33E+01	2.57E+02	0.00E+00	1.16E+02
61.	SR+2	7.45E+01	1.74E+02	4.76E+01	2.32E+02	0.00E+00	0.00E+00	0.00E+00
62.	TCO4-	0.00E+00	1.26E+01	5.72E+00	3.06E+01	0.00E+00	0.00E+00	0.00E+00
63.	TE+6	0.00E+00	0.00E+00	1.12E+02	4.48E+02	0.00E+00	0.00E+00	0.00E+00
64.	TH+4	0.00E+00	0.00E+00	5.92E+01	2.37E+02	0.00E+00	0.00E+00	0.00E+00
65.	TI+4	0.00E+00	0.00E+00	3.60E+01	1.44E+02	0.00E+00	0.00E+00	0.00E+00
66.	TL+3	0.00E+00	0.00E+00	3.19E+02	1.28E+03	0.00E+00	0.00E+00	0.00E+00
67.	TOC	4.24E+04	5.65E+03	5.62E+02	2.25E+03	9.54E+02	0.00E+00	3.34E+02
68.	UO2+2	0.00E+00	1.27E+03	1.09E+03	4.58E+03	0.00E+00	0.00E+00	0.00E+00
69.	V+5	0.00E+00	0.00E+00	3.04E+00	1.22E+01	0.00E+00	0.00E+00	0.00E+00
70.	W+6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
71.	ZN+2	0.00E+00	3.04E+01	2.76E+01	1.29E+02	0.00E+00	0.00E+00	0.00E+00
72.	ZR+4	0.00E+00	1.37E+03	0.00E+00	8.35E+02	0.00E+00	0.00E+00	0.00E+00
73.	ZRO2:2H2O	4.45E+03	5.26E-03	4.78E+03	1.91E+04	0.00E+00	0.00E+00	2.38E+02
	Total	9.88E+05	2.63E+05	6.40E+04	3.70E+05	8.90E+04	0.00E+00	5.57E+04
	Vol (ML) spg=3	329.3	87.6	21.3	123.5	29.7	0.0	18.6
74.	C14 (Ci)	0.00E+00	8.11E-05	1.25E-03	5.04E-03	0.00E+00	0.00E+00	0.00E+00
75.	Sr90 (Ci)	3.96E+05	2.32E+01	1.16E+01	5.19E+01	3.50E+04	0.00E+00	4.61E+02
76.	Y90 (Ci)	3.96E+05	0.00E+00	0.00E+00	0.00E+00	3.50E+04	0.00E+00	4.61E+02
77.	Tc99 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
78.	Cs137 (Ci)	1.32E+05	0.00E+00	0.00E+00	0.00E+00	1.45E+04	0.00E+00	1.13E+04
79.	Ba137 (Ci)	1.26E+05	0.00E+00	0.00E+00	0.00E+00	1.37E+04	0.00E+00	1.07E+04
80.	U235 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
81.	U238 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
82.	Np237 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
83.	Pu238 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
84.	Pu239 (Ci)	2.79E+03	0.00E+00	0.00E+00	0.00E+00	3.76E+01	0.00E+00	6.02E-01
85.	Pu240 (Ci)	6.97E+02	0.00E+00	0.00E+00	0.00E+00	9.54E+00	0.00E+00	1.53E-01
86.	Pu241 (Ci)	4.91E+02	0.00E+00	0.00E+00	0.00E+00	1.71E+01	0.00E+00	5.46E-02
87.	Am241 (Ci)	1.21E+04	0.00E+00	0.00E+00	0.00E+00	3.42E+02	0.00E+00	4.32E+00
88.	Cm244 (Ci)	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

Listing of FORTRAN program to update Tank Inventory

```
      implicit real*8 (a-h,o-z)
      character  tname*6, achem*18, atank*5, aname*6,
     1           a1*6, a2*6
      dimension tname(300),achem(100),vswliq(50),
     1 atank(200),cliq(200,100),cinsol(200,100),
     2 wliq(100),winsol(100),rhoLT(200)
      common /inve/ cliq,cinsol
      common /names/ tname
      open(1,file='inve.txt',status='old')
      open(2,file='dst_su2a.txt',status='old')
      open(4,file='near-new.txt',status='old')
      call ftanks(tname)
      rkgal21 = 3785.412d0  !  liter/kgal
      icH2O   = 28
      icNa    = 39
      icAlOH  =  2
      icNO2   = 43
      icNO3   = 44
      icOH    = 46
      icTot   = 100
      icSWL   = 200
      wtNa  = 0.0230
      wtH2O = 0.0180
      rhoI  = 3.3d0
      fsol = 0.20
C-----------------------------------------------------------------
      TmSol = 0.d0
      read(1,700)
      read(1,700)
      read(1,700)
      read(1,700)
      do 20 it=1,177
        read(1,720) atank(it),(cliq(it,ic),ic=1,88)
   20 continue
      read(1,700)
      read(1,700)
      do 30 it=1,177
        read(1,720)  atank(it),(cinsol(it,ic),ic=1,88)
        do 32 ic=1,73
          TmSol = TmSol + cinsol(it,ic)
   32   continue
   30 continue
      write(*,*) TmSol
C-----------------------------------------------------------------
      read(2,700)
      do 40 ic=1,89
        read(2,730) achem(ic),(cliq(it,ic),it=150,179)
        cliq(175,ic) = cliq(178,ic)
        cliq(177,ic) = cliq(179,ic)
c        write(9,730) achem(ic),(cliq(it,ic),it=150,177)
   40 continue
      read(2,700)
      ic = 90
      read(2,730) achem(ic),(cliq(it,ic),it=150,179)
      cliq(175,ic) = cliq(178,ic)
      cliq(177,ic) = cliq(179,ic)
c      write(9,730) achem(ic),(cliq(it,ic),it=150,177)
      ic = 91
      read(2,730) achem(ic),(cliq(it,ic),it=150,179)
      cliq(175,ic) = cliq(178,ic)
      cliq(177,ic) = cliq(179,ic)
c      write(9,730) achem(ic),(cliq(it,ic),it=150,177)
C-----------------------------------------------------------------
      do 50 it=1,177
        cliq(it,icTot)   = 0.d0
        cinsol(it,icTot) = 0.d0
        do 50 ic=1,73
          if(it.ge.150) then
            if(ic.ne.28) cliq(it,ic) = cliq(it,ic)*1000.d0
          endif
          cliq(it,icTot)   = cliq(it,icTot)   + cliq(it,ic)
          cinsol(it,icTot) = cinsol(it,icTot) + cinsol(it,ic)
   50 continue
      totna = 0.d0
      do 100 it=150,177
        totna = totna + cliq(it,icNa)
        H2Oadd = cliq(it,91)*cliq(it,90) - cliq(it,icTot)
c     1    cliq(it,icH2O)
        cliq(it,icH2O) = cliq(it,icH2O)+H2Oadd
        cliq(it,icTot) = cliq(it,icTot)+H2Oadd
        rhoL = spg(it,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
        rhoLT(it) = rhoL
        write(*,'(3x,a6,6(1pe11.3))') tname(it),cliq(it,icH2O),
     1  cliq(it,icNa),cliq(it,icTot)/rhoL,
     2     cinsol(it,icTot)/(rhoI*rkgal21) +
     3   cliq(it,icTot)/(rhoL*rkgal21),
     2  cliq(it,icNa)*rhoL/(cliq(it,icTot)*wtNa),rhoL
  100 continue
      do 110 ic=1,89
        write(9,730) achem(ic),(cliq(it,ic),it=150,177)
  110 continue
      ic = 90
        write(9,730) achem(ic),(cliq(it,icTot)/rhoLT(it),
     1          it=150,177)
      ic = 91
        write(9,730) achem(ic),(rhoLT(it),it=150,177)
      write(*,'(" Total sodium (kg) =",1pe11.3)') totna
C-----------------------------------------------------------------
C  Estimate comp of SWL remaining after FY1995
      do 120 ic=1,100
        cliq(icSWL,ic)   = 0.d0
        cinsol(icSWL,ic) = 0.d0
  120 continue
      rho5Na = 1.d0 + 0.054d0*5.d0
      do 200 isw=1,37
        read(4,'(ix,a6,16x,f13.4)') aname,vswliq(isw)
        it = itname(aname)
        cliq(it,icH2O) = cliq(it,icH2O) +
     1      rho5Na*cliq(it,icNa)/(wtNa*5.d0)
     2      - cliq(it,icTot)
        cliq(it,icTot) =  rho5Na*cliq(it,icNa)/(wtNa*5.d0)
        rhoL = spg(it,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
        vol = cliq(it,icTot)/(rhoL*rkgal21)
        rat = vswliq(isw)*5796.d0/(vol*4806.d0)
C       write(*,'(ix,a6,4f13.4)') aname,vswliq(isw),vol,rhoL
        do 150 ic=1,88
          cliq(icSWL,ic) = cliq(icSWL,ic) + rat*cliq(it,ic)
  150   continue
  200 continue
      do 250 ic=1,73
        cliq(icSWL,icTot)   = cliq(icSWL,icTot)   + cliq(icSWL,ic)
        cinsol(icSWL,icTot) = cinsol(icSWL,icTot) + cinsol(icSWL,ic)
  250 continue
        it = icSWL
        rhoL = spg(it,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
        vol  = cliq(it,icTot)/(rhoL*rkgal21)
        rat  = vswliq(isw)/vol
c        write(*,'(ix,a6,4f13.4)') tname(it),vswliq(isw),vol,rhoL
      do 300 ic=1,88
c        write(9,730) achem(ic),cliq(icSWL,ic)
  300 continue
      vdssf = 3318.d0
      vcc   = 2478.d0
      vtis  = 5796.d0
C-----------------------------------------------------------------
C  Update Inv-E to 1998 Consistent with R.O. Transfer Script
C-----------------------------------------------------------------
      fsol = 0.40    !  Settled Solids at 40 wt% !
C-     -1-  Conc AP-101 to 5M Na
      a1  = 'AP-101'
      it1 = itname(a1)
      EMH2O = cliq(it1,icTot)-cliq(it1,icNa)*rho5Na/(wtNa*5.d0)
      cliq(it1,icTot) = cliq(it1,icTot) - EMH2O
      cliq(it1,icH2O) = cliq(it1,icH2O) - EMH2O
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(" Event 1")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa),rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2      cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -2-  Conc AP-104 to 5M Na
      a1  = 'AP-104'
      it1 = itname(a1)
      EMH2O = cliq(it1,icTot)-cliq(it1,icNa)*rho5Na/(wtNa*5.d0)
      cliq(it1,icTot) = cliq(it1,icTot) - EMH2O
      cliq(it1,icH2O) = cliq(it1,icH2O) - EMH2O
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(" Event 2")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa),rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2      cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -3-  Conc AP-106 to 5M Na
      a1  = 'AP-106'
      it1 = itname(a1)
      EMH2O = cliq(it1,icTot)-cliq(it1,icNa)*rho5Na/(wtNa*5.d0)
      cliq(it1,icTot) = cliq(it1,icTot) - EMH2O
      cliq(it1,icH2O) = cliq(it1,icH2O) - EMH2O
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(" Event 3")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa),rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2      cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -4-  Conc AP-107 to 5M Na
```

```
      a1  = 'AP-107'
      it1 = itname(a1)
      EMH20 = cliq(it1,icTot)-cliq(it1,icNa)*rho5Na/(wtNa*5.d0)
      cliq(it1,icTot) = cliq(it1,icTot) - EMH20
      cliq(it1,icH20) = cliq(it1,icH20) - EMH20
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'("  Event 4")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa),rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2      cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -5-  Conc AP-108 to 5M Na
      a1  = 'AP-108'
      it1 = itname(a1)
      EMH20 = cliq(it1,icTot)-cliq(it1,icNa)*rho5Na/(wtNa*5.d0)
      cliq(it1,icTot) = cliq(it1,icTot) - EMH20
      cliq(it1,icH20) = cliq(it1,icH20) - EMH20
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'("  Event 5")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa),rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2      cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -6-  Conc AW-104 to 5M Na
      a1  = 'AW-104'
      it1 = itname(a1)
      EMH20 = cliq(it1,icTot)-cliq(it1,icNa)*rho5Na/(wtNa*5.d0)
      cliq(it1,icTot) = cliq(it1,icTot) - EMH20
      cliq(it1,icH20) = cliq(it1,icH20) - EMH20
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'("  Event 6")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa),rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2      cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -7- Move
      fsol = 0.40
      a1  = 'AY-101'
      a2  = 'AN-106'
      it1 = itname(a1)
      it2 = itname(a2)
      TMtran = (fsol*(cinsol(it1,icTot)+cliq(it1,icTot)) -
     1          cinsol(it1,icTot) )/fsol
C      TMtran = 0.d0
      FLtran = TMtran/cliq(it1,icTot)
      do 330 ic=1,88
        wliq(ic)     = cliq(it1,ic)*FLtran
        cliq(it1,ic) = cliq(it1,ic) - cliq(it1,ic)*FLtran
  330 continue
      wliq(icTot)      = cliq(it1,icTot)*FLtran
      cliq(it1,icTot) = cliq(it1,icTot) - cliq(it1,icTot)*FLtran
      EMH20 = wliq(icTot)-wliq(icNa)*rho5Na/(wtNa*5.d0)
      wliq(icTot) = wliq(icTot) - EMH20
      wliq(icH20) = wliq(icH20) - EMH20
      do 340 ic=1,88
        cliq(it2,ic) = cliq(it2,ic) + wliq(ic)
  340 continue
      cliq(it2,icTot) = cliq(it2,icTot) + wliq(icTot)
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'("  Event 7")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa),rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2      cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(2x,a6)') a2
      write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
      write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
     1   (cliq(it2,icTot))/(rhoL*rkgal21),
     2      cinsol(it2,icTot)/(rhoI*rkgal21) +
     3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -8-  Move
      f = 1.d0
      a1  = 'SY-102'
      a2  = 'AW-103'
      it1 = itname(a1)
      it2 = itname(a2)
      do 400 ic=1,88
        cliq(it2,ic) = cliq(it2,ic) + f*cliq(it1,ic)
        cinsol(it2,ic) = cinsol(it2,ic) + f*cinsol(it1,ic)
        cliq(it1,ic) = cliq(it1,ic) - f*cliq(it1,ic)
        cinsol(it1,ic) = cinsol(it1,ic) - f*cinsol(it1,ic)
  400 continue
      cliq(it2,icTot) = cliq(it2,icTot) + f*cliq(it1,icTot)
      cinsol(it2,icTot) = cinsol(it2,icTot) + f*cinsol(it1,icTot)
      cliq(it1,icTot) = cliq(it1,icTot) - f*cliq(it1,icTot)
      cinsol(it1,icTot) = cinsol(it1,icTot) - f*cinsol(it1,icTot)
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.d-10
      write(*,'("  Event 8")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa+1.d-10),
     1   rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2      cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(2x,a6)') a2
      write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
      write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
     1   (cliq(it2,icTot))/(rhoL*rkgal21),
     2      cinsol(it2,icTot)/(rhoI*rkgal21) +
     3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -9-  Move
      f = 1.d0
      a1  = 'AP-105'
      a2  = 'AP-101'
      it1 = itname(a1)
      it2 = itname(a2)
      do 405 ic=1,88
        cliq(it2,ic) = cliq(it2,ic) + f*cliq(it1,ic)
        cinsol(it2,ic) = cinsol(it2,ic) + f*cinsol(it1,ic)
        cliq(it1,ic) = cliq(it1,ic) - f*cliq(it1,ic)
        cinsol(it1,ic) = cinsol(it1,ic) - f*cinsol(it1,ic)
  405 continue
      cliq(it2,icTot) = cliq(it2,icTot) + f*cliq(it1,icTot)
      cinsol(it2,icTot) = cinsol(it2,icTot) + f*cinsol(it1,icTot)
      cliq(it1,icTot) = cliq(it1,icTot) - f*cliq(it1,icTot)
      cinsol(it1,icTot) = cinsol(it1,icTot) - f*cinsol(it1,icTot)
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.d-10
      write(*,'("  Event 9")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa+1.d-10),
     1   rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2      cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(2x,a6)') a2
      write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
      write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
     1   (cliq(it2,icTot))/(rhoL*rkgal21),
     2      cinsol(it2,icTot)/(rhoI*rkgal21) +
     3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -10-  Move
      f = 1.d0
      a1  = 'AP-107'
      a2  = 'AP-101'
      it1 = itname(a1)
      it2 = itname(a2)
      do 410 ic=1,88
        cliq(it2,ic) = cliq(it2,ic) + f*cliq(it1,ic)
        cinsol(it2,ic) = cinsol(it2,ic) + f*cinsol(it1,ic)
        cliq(it1,ic) = cliq(it1,ic) - f*cliq(it1,ic)
        cinsol(it1,ic) = cinsol(it1,ic) - f*cinsol(it1,ic)
  410 continue
      cliq(it2,icTot) = cliq(it2,icTot) + f*cliq(it1,icTot)
      cinsol(it2,icTot) = cinsol(it2,icTot) + f*cinsol(it1,icTot)
      cliq(it1,icTot) = cliq(it1,icTot) - f*cliq(it1,icTot)
      cinsol(it1,icTot) = cinsol(it1,icTot) - f*cinsol(it1,icTot)
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.d-10
      write(*,'("  Event 10")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa+1.d-10),
     1   rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2      cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(2x,a6)') a2
      write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
      write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
     1   (cliq(it2,icTot))/(rhoL*rkgal21),
     2      cinsol(it2,icTot)/(rhoI*rkgal21) +
     3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -11-  Move
      f = 1.d0
      a1  = 'AP-108'
      a2  = 'AP-101'
      it1 = itname(a1)
      it2 = itname(a2)
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```
      do 415 ic=1,88
        cliq(it2,ic) = cliq(it2,ic) + f*cliq(it1,ic)
        cinsol(it2,ic) = cinsol(it2,ic) + f*cinsol(it1,ic)
        cliq(it1,ic) = cliq(it1,ic) - f*cliq(it1,ic)
        cinsol(it1,ic) = cinsol(it1,ic) - f*cinsol(it1,ic)
  415 continue
      cliq(it2,icTot) = cliq(it2,icTot) + f*cliq(it1,icTot)
      cinsol(it2,icTot) = cinsol(it2,icTot) + f*cinsol(it1,icTot)
      cliq(it1,icTot) = cliq(it1,icTot) - f*cliq(it1,icTot)
      cinsol(it1,icTot) = cinsol(it1,icTot) - f*cinsol(it1,icTot)
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.d-10
      write(*,'(" Event 11")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa+1.d-10),
     1   rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2     cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(2x,a6)') a2
      write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
      write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
     1   (cliq(it2,icTot))/(rhoL*rkgal21),
     2     cinsol(it2,icTot)/(rhoI*rkgal21) +
     3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -12- Move
      fsol = 0.40
      a1  = 'AZ-102'
      a2  = 'AP-108'
      it1 = itname(a1)
      it2 = itname(a2)
      TMtran = (fsol*(cinsol(it1,icTot)+cliq(it1,icTot)) -
     1            cinsol(it1,icTot) )/fsol
C      TMtran = 0.d0
      FLtran = TMtran/cliq(it1,icTot)
      do 420 ic=1,88
        wliq(ic)     = cliq(it1,ic)*FLtran
        cliq(it1,ic) = cliq(it1,ic) - cliq(it1,ic)*FLtran
  420 continue
      wliq(icTot)     = cliq(it1,icTot)*FLtran
      cliq(it1,icTot) = cliq(it1,icTot) - cliq(it1,icTot)*FLtran
      EMH20 = wliq(icTot)-wliq(icNa)*rhoSNa/(wtNa*5.d0)
      wliq(icTot) = wliq(icTot) - EMH20
      wliq(icH2O) = wliq(icH2O) - EMH20
      do 425 ic=1,88
        cliq(it2,ic) = cliq(it2,ic) + wliq(ic)
  425 continue
      cliq(it2,icTot) = cliq(it2,icTot) + wliq(icTot)
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(" Event 12")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa),rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2     cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(2x,a6)') a2
      write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
      write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
     1   (cliq(it2,icTot))/(rhoL*rkgal21),
     2     cinsol(it2,icTot)/(rhoI*rkgal21) +
     3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -13- Move
      vdssf = 3318.d0
      vcc   = 2478.d0
      vtis  = 5796.d0
      f = 1160.d0*0.95d0/vtis
      a1  = 'Common'
      a2  = 'AP-105'
      it1 = itname(a1)
      it2 = itname(a2)
      do 430 ic=1,88
        cliq(it2,ic) = cliq(it2,ic) + f*cliq(it1,ic)
        cinsol(it2,ic) = cinsol(it2,ic) + f*cinsol(it1,ic)
        cliq(it1,ic) = cliq(it1,ic) - f*cliq(it1,ic)
        cinsol(it1,ic) = cinsol(it1,ic) - f*cinsol(it1,ic)
  430 continue
      cliq(it2,icTot) = cliq(it2,icTot) + f*cliq(it1,icTot)
      cinsol(it2,icTot) = cinsol(it2,icTot) + f*cinsol(it1,icTot)
      cliq(it1,icTot) = cliq(it1,icTot) - f*cliq(it1,icTot)
      cinsol(it1,icTot) = cinsol(it1,icTot) - f*cinsol(it1,icTot)
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.d-10
      write(*,'(" Event 13")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa+1.d-10),
     1   rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2     cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(2x,a6)') a2
      write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
      write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
     1   (cliq(it2,icTot))/(rhoL*rkgal21),
     2     cinsol(it2,icTot)/(rhoI*rkgal21) +
     3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -14- Move
      vdssf = 3318.d0
      vcc   = 2478.d0
      vtis  = 5796.d0
      f = 1160.d0*0.95d0/(vtis-1160.d0*0.95d0)
      a1  = 'Common'
      a2  = 'AP-107'
      it1 = itname(a1)
      it2 = itname(a2)
      do 435 ic=1,88
        cliq(it2,ic) = cliq(it2,ic) + f*cliq(it1,ic)
        cinsol(it2,ic) = cinsol(it2,ic) + f*cinsol(it1,ic)
        cliq(it1,ic) = cliq(it1,ic) - f*cliq(it1,ic)
        cinsol(it1,ic) = cinsol(it1,ic) - f*cinsol(it1,ic)
  435 continue
      cliq(it2,icTot) = cliq(it2,icTot) + f*cliq(it1,icTot)
      cinsol(it2,icTot) = cinsol(it2,icTot) + f*cinsol(it1,icTot)
      cliq(it1,icTot) = cliq(it1,icTot) - f*cliq(it1,icTot)
      cinsol(it1,icTot) = cinsol(it1,icTot) - f*cinsol(it1,icTot)
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.d-10
      write(*,'(" Event 14")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa+1.d-10),
     1   rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2     cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(2x,a6)') a2
      write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
      write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
     1   (cliq(it2,icTot))/(rhoL*rkgal21),
     2     cinsol(it2,icTot)/(rhoI*rkgal21) +
     3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -15- Move
      vdssf = 3318.d0
      vcc   = 2478.d0
      vtis  = 5796.d0
      f = (vcc-2.0*1160.d0*0.95d0)/(vtis-2.d0*1160.d0*0.95d0)
      a1  = 'Common'
      a2  = 'AN-106'
      it1 = itname(a1)
      it2 = itname(a2)
      do 440 ic=1,88
        cliq(it2,ic) = cliq(it2,ic) + f*cliq(it1,ic)
        cinsol(it2,ic) = cinsol(it2,ic) + f*cinsol(it1,ic)
        cliq(it1,ic) = cliq(it1,ic) - f*cliq(it1,ic)
        cinsol(it1,ic) = cinsol(it1,ic) - f*cinsol(it1,ic)
  440 continue
      cliq(it2,icTot) = cliq(it2,icTot) + f*cliq(it1,icTot)
      cinsol(it2,icTot) = cinsol(it2,icTot) + f*cinsol(it1,icTot)
      cliq(it1,icTot) = cliq(it1,icTot) - f*cliq(it1,icTot)
      cinsol(it1,icTot) = cinsol(it1,icTot) - f*cinsol(it1,icTot)
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.d-10
      write(*,'(" Event 15")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa+1.d-10),
     1   rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2     cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(2x,a6)') a2
      write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
      write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
     1   (cliq(it2,icTot))/(rhoL*rkgal21),
     2     cinsol(it2,icTot)/(rhoI*rkgal21) +
     3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -16- Move
      vdssf = 3318.d0
      vcc   = 2478.d0
      vtis  = 5796.d0
      a1  = 'Common'
      a2  = 'AN-101'
      it1 = itname(a1)
      it2 = itname(a2)
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      Vadd1 = 1160.d0*0.95d0-cliq(it2,icTot)/(rhoL*rkgal21)
      f =  Vadd1/(vtis-vcc)
      do 445 ic=1,88
        cliq(it2,ic) = cliq(it2,ic) + f*cliq(it1,ic)
        cinsol(it2,ic) = cinsol(it2,ic) + f*cinsol(it1,ic)
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      cliq(it1,ic) = cliq(it1,ic) - f*cliq(it1,ic)
      cinsol(it1,ic) = cinsol(it1,ic) - f*cinsol(it1,ic)
445 continue
    cliq(it2,icTot) = cliq(it2,icTot) + f*cliq(it1,icTot)
    cinsol(it2,icTot) = cinsol(it2,icTot) + f*cinsol(it1,icTot)
    cliq(it1,icTot) = cliq(it1,icTot) - f*cliq(it1,icTot)
    cinsol(it1,icTot) = cinsol(it1,icTot) - f*cinsol(it1,icTot)
    rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.d-10
    write(*,'(" Event 16")')
    write(*,'(2x,a6)') a1
    write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa+1.d-10),
   1   rhoL
    write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
   1   (cliq(it1,icTot))/(rhoL*rkgal21),
   2     cinsol(it1,icTot)/(rhoI*rkgal21) +
   3   (cliq(it1,icTot))/(rhoL*rkgal21)
    rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
    write(*,'(2x,a6)') a2
    write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
    write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
   1   (cliq(it2,icTot))/(rhoL*rkgal21),
   2     cinsol(it2,icTot)/(rhoI*rkgal21) +
   3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -17-  Move
    vdssf = 3318.d0
    vcc   = 2478.d0
    vtis  = 5796.d0
    a1  = 'Common'
    a2  = 'AP-101'
    it1 = itname(a1)
    it2 = itname(a2)
    rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
    Vadd2 = 1160.d0*0.95d0-cliq(it2,icTot)/(rhoL*rkgal21)
    f =  Vadd2/(vtis-vcc-Vadd1)
    do 450 ic=1,88
      cliq(it2,ic) = cliq(it2,ic) + f*cliq(it1,ic)
      cinsol(it2,ic) = cinsol(it2,ic) + f*cinsol(it1,ic)
      cliq(it1,ic) = cliq(it1,ic) - f*cliq(it1,ic)
      cinsol(it1,ic) = cinsol(it1,ic) - f*cinsol(it1,ic)
450 continue
    cliq(it2,icTot) = cliq(it2,icTot) + f*cliq(it1,icTot)
    cinsol(it2,icTot) = cinsol(it2,icTot) + f*cinsol(it1,icTot)
    cliq(it1,icTot) = cliq(it1,icTot) - f*cliq(it1,icTot)
    cinsol(it1,icTot) = cinsol(it1,icTot) - f*cinsol(it1,icTot)
    rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.d-10
    write(*,'(" Event 17")')
    write(*,'(2x,a6)') a1
    write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa+1.d-10),
   1   rhoL
    write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
   1   (cliq(it1,icTot))/(rhoL*rkgal21),
   2     cinsol(it1,icTot)/(rhoI*rkgal21) +
   3   (cliq(it1,icTot))/(rhoL*rkgal21)
    rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
    write(*,'(2x,a6)') a2
    write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
    write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
   1   (cliq(it2,icTot))/(rhoL*rkgal21),
   2     cinsol(it2,icTot)/(rhoI*rkgal21) +
   3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -18-  Move
    vdssf = 3318.d0
    vcc   = 2478.d0
    vtis  = 5796.d0
    a1  = 'Common'
    a2  = 'AP-106'
    it1 = itname(a1)
    it2 = itname(a2)
    rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
    Vadd3 = 1160.d0*0.95d0-cliq(it2,icTot)/(rhoL*rkgal21)
    f =  Vadd3/(vtis-vcc-Vadd1-Vadd2)
    do 455 ic=1,88
      cliq(it2,ic) = cliq(it2,ic) + f*cliq(it1,ic)
      cinsol(it2,ic) = cinsol(it2,ic) + f*cinsol(it1,ic)
      cliq(it1,ic) = cliq(it1,ic) - f*cliq(it1,ic)
      cinsol(it1,ic) = cinsol(it1,ic) - f*cinsol(it1,ic)
455 continue
    cliq(it2,icTot) = cliq(it2,icTot) + f*cliq(it1,icTot)
    cinsol(it2,icTot) = cinsol(it2,icTot) + f*cinsol(it1,icTot)
    cliq(it1,icTot) = cliq(it1,icTot) - f*cliq(it1,icTot)
    cinsol(it1,icTot) = cinsol(it1,icTot) - f*cinsol(it1,icTot)
    rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.d-10
    write(*,'(" Event 18")')
    write(*,'(2x,a6)') a1
    write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa+1.d-10),
   1   rhoL
    write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
   1   (cliq(it1,icTot))/(rhoL*rkgal21),
   2     cinsol(it1,icTot)/(rhoI*rkgal21) +
   3   (cliq(it1,icTot))/(rhoL*rkgal21)
    rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
    write(*,'(2x,a6)') a2
    write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
    write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
   1   (cliq(it2,icTot))/(rhoL*rkgal21),
   2     cinsol(it2,icTot)/(rhoI*rkgal21) +
   3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -19-  Move
    vdssf = 3318.d0
    vcc   = 2478.d0
    vtis  = 5796.d0
    a1  = 'Common'
    a2  = 'AW-104'
    it1 = itname(a1)
    it2 = itname(a2)
    rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
    Vadd4 = 1160.d0*0.95d0-cliq(it2,icTot)/(rhoL*rkgal21)
   1          -cinsol(it2,icTot)/(rhoI*rkgal21)
    f =  Vadd4/(vtis-vcc-Vadd1-Vadd2-Vadd3)
    do 460 ic=1,88
      cliq(it2,ic) = cliq(it2,ic) + f*cliq(it1,ic)
      cinsol(it2,ic) = cinsol(it2,ic) + f*cinsol(it1,ic)
      cliq(it1,ic) = cliq(it1,ic) - f*cliq(it1,ic)
      cinsol(it1,ic) = cinsol(it1,ic) - f*cinsol(it1,ic)
460 continue
    cliq(it2,icTot) = cliq(it2,icTot) + f*cliq(it1,icTot)
    cinsol(it2,icTot) = cinsol(it2,icTot) + f*cinsol(it1,icTot)
    cliq(it1,icTot) = cliq(it1,icTot) - f*cliq(it1,icTot)
    cinsol(it1,icTot) = cinsol(it1,icTot) - f*cinsol(it1,icTot)
    rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.d-10
    write(*,'(" Event 19")')
    write(*,'(2x,a6)') a1
    write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa+1.d-10),
   1   rhoL
    write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
   1   (cliq(it1,icTot))/(rhoL*rkgal21),
   2     cinsol(it1,icTot)/(rhoI*rkgal21) +
   3   (cliq(it1,icTot))/(rhoL*rkgal21)
    rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
    write(*,'(2x,a6)') a2
    write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
    write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
   1   (cliq(it2,icTot))/(rhoL*rkgal21),
   2     cinsol(it2,icTot)/(rhoI*rkgal21) +
   3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -20-  Move
    vdssf = 3318.d0
    vcc   = 2478.d0
    vtis  = 5796.d0
    a1  = 'Common'
    a2  = 'AW-106'
    it1 = itname(a1)
    it2 = itname(a2)
    rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
    f =  1.d0
    do 465 ic=1,88
      cliq(it2,ic) = cliq(it2,ic) + f*cliq(it1,ic)
      cinsol(it2,ic) = cinsol(it2,ic) + f*cinsol(it1,ic)
      cliq(it1,ic) = cliq(it1,ic) - f*cliq(it1,ic)
      cinsol(it1,ic) = cinsol(it1,ic) - f*cinsol(it1,ic)
465 continue
    cliq(it2,icTot) = cliq(it2,icTot) + f*cliq(it1,icTot)
    cinsol(it2,icTot) = cinsol(it2,icTot) + f*cinsol(it1,icTot)
    cliq(it1,icTot) = cliq(it1,icTot) - f*cliq(it1,icTot)
    cinsol(it1,icTot) = cinsol(it1,icTot) - f*cinsol(it1,icTot)
    rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.d-10
    write(*,'(" Event 20")')
    write(*,'(2x,a6)') a1
    write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa+1.d-10),
   1   rhoL
    write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
   1   (cliq(it1,icTot))/(rhoL*rkgal21),
   2     cinsol(it1,icTot)/(rhoI*rkgal21) +
   3   (cliq(it1,icTot))/(rhoL*rkgal21)
    rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
    write(*,'(2x,a6)') a2
    write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
    write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
   1   (cliq(it2,icTot))/(rhoL*rkgal21),
   2     cinsol(it2,icTot)/(rhoI*rkgal21) +
   3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-     -21- Move
    fsol = 0.40
    a1  = 'AZ-101'
    a2  = 'AY-101'
    it1 = itname(a1)
    it2 = itname(a2)
    TMtran = (fsol*(cinsol(it1,icTot)+cliq(it1,icTot)) -
   1          cinsol(it1,icTot) )/fsol
C   TMtran = 0.d0
    FLtran = TMtran/cliq(it1,icTot)
    do 470 ic=1,88
      wliq(ic)      = cliq(it1,ic)*FLtran
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  470 continue
      wliq(icTot)      = cliq(it1,icTot)*FLtran
      EMH2O = wliq(icTot)-wliq(icNa)*rhoSNa/(wtNa*5.d0)
      wliq(icTot) = wliq(icTot) - EMH2O
      wliq(icH2O) = wliq(icH2O) - EMH2O
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      f = (1000.d0*0.95d0-cliq(it2,icTot)/(rhoL*rkgal21)-
     1      cinsol(it2,icTot)/(rhoI*rkgal21))/
     2    ( wliq(icTot)/(rhoSNa*rkgal21) )
      do 475 ic=1,88
        cliq(it1,ic) = cliq(it1,ic) - cliq(it1,ic)*FLtran+f
        cliq(it2,ic) = cliq(it2,ic) + wliq(ic)*f
  475 continue
      cliq(it1,icTot) = cliq(it1,icTot) - cliq(it1,icTot)*FLtran+f
      cliq(it2,icTot) = cliq(it2,icTot) + wliq(icTot)*f
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(" Event 21")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa),rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2      cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(2x,a6)') a2
      write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
      write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
     1   (cliq(it2,icTot))/(rhoL*rkgal21),
     2      cinsol(it2,icTot)/(rhoI*rkgal21) +
     3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-      -22-  Move
      f = 1.d0
      a1  = 'C_-106'
      a2  = 'AZ-102'
      it1 = itname(a1)
      it2 = itname(a2)
      do 480 ic=1,88
        cliq(it2,ic) = cliq(it2,ic) + f*cliq(it1,ic)
        cinsol(it2,ic) = cinsol(it2,ic) + f*cinsol(it1,ic)
        cliq(it1,ic) = cliq(it1,ic) - f*cliq(it1,ic)
        cinsol(it1,ic) = cinsol(it1,ic) - f*cinsol(it1,ic)
  480 continue
      cliq(it2,icTot) = cliq(it2,icTot) + f*cliq(it1,icTot)
      cinsol(it2,icTot) = cinsol(it2,icTot) + f*cinsol(it1,icTot)
      cliq(it1,icTot) = cliq(it1,icTot) - f*cliq(it1,icTot)
      cinsol(it1,icTot) = cinsol(it1,icTot) - f*cinsol(it1,icTot)
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.d-10
      write(*,'(" Event 22")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa+1.d-10),
     1   rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2      cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(2x,a6)') a2
      write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
      write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
     1   (cliq(it2,icTot))/(rhoL*rkgal21),
     2      cinsol(it2,icTot)/(rhoI*rkgal21) +
     3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
C-      -23- Move
      fsol = 0.40
      a1  = 'AY-102'
      a2  = 'AZ-101'
      it1 = itname(a1)
      it2 = itname(a2)
      TMtran = (fsol*(cinsol(it1,icTot)+cliq(it1,icTot)) -
     1              cinsol(it1,icTot) )/fsol
C     TMtran = 0.d0
      FLtran = TMtran/cliq(it1,icTot)
      do 485 ic=1,88
        wliq(ic)      = cliq(it1,ic)*FLtran
        cliq(it1,ic) = cliq(it1,ic) - cliq(it1,ic)*FLtran
  485 continue
      wliq(icTot)      = cliq(it1,icTot)*FLtran
      cliq(it1,icTot) = cliq(it1,icTot) - cliq(it1,icTot)*FLtran
      EMH2O = wliq(icTot)-wliq(icNa)*rhoSNa/(wtNa*5.d0)
      wliq(icTot) = wliq(icTot) - EMH2O
      wliq(icH2O) = wliq(icH2O) - EMH2O
      do 490 ic=1,88
        cliq(it2,ic) = cliq(it2,ic) + wliq(ic)
  490 continue
      cliq(it2,icTot) = cliq(it2,icTot) + wliq(icTot)
      rhoL = spg(it1,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(" Event 23")')
      write(*,'(2x,a6)') a1
      write(*,*)  cliq(it1,icNa)*rhoL/(cliq(it1,icTot)*wtNa),rhoL
      write(*,*) cinsol(it1,icTot)/(rhoI*rkgal21),
     1   (cliq(it1,icTot))/(rhoL*rkgal21),
     2      cinsol(it1,icTot)/(rhoI*rkgal21) +
     3   (cliq(it1,icTot))/(rhoL*rkgal21)
      rhoL = spg(it2,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      write(*,'(2x,a6)') a2
      write(*,*)  cliq(it2,icNa)*rhoL/(cliq(it2,icTot)*wtNa),rhoL
      write(*,*) cinsol(it2,icTot)/(rhoI*rkgal21),
     1   (cliq(it2,icTot))/(rhoL*rkgal21),
     2      cinsol(it2,icTot)/(rhoI*rkgal21) +
     3   (cliq(it2,icTot))/(rhoL*rkgal21)
C-----------------------------------------------------------------
      totna = 0.d0
      do 1000 it=150,177
        totna = totna + cliq(it,icNa)
        rhoL = spg(it,icAlOH,icNa,icNO2,icNO3,icOH,icTot) + 1.e-10
        rhoLT(it) = rhoL
        write(*,'(3x,a6,6(1ps11.3))') tname(it),cliq(it,icH2O),
     1  cliq(it,icNa),cliq(it,icTot)/rhoL,
     2      cinsol(it,icTot)/(rhoI*rkgal21) +
     3   cliq(it,icTot)/(rhoL*rkgal21),
     2  cliq(it,icNa)*rhoL/(cliq(it,icTot)*wtNa + 1.e-10),rhoL
 1000 continue
      do 1010 ic=1,89
        write(9,730) achem(ic),(cliq(it,ic),it=150,177)
 1010 continue
      ic = 90
        write(9,730) achem(ic),(cliq(it,icTot)/rhoLT(it),
     1            it=150,177)
      ic = 91
        write(9,730) achem(ic),(rhoLT(it),it=150,177)
      write(*,'(" Total sodium (kg) =",1pe11.3)') totna
C-----------------------------------------------------------------
      write(40,700)
      write(40,700)
      write(40,700)
      do 1020 it=1,177
        write(40,720) atank(it),(cliq(it,ic),ic=1,88)
 1020 continue
      write(40,700)
      write(40,700)
      TmSol = 0.d0
      do 1030 it=1,177
        write(40,720)  atank(it),(cinsol(it,ic),ic=1,88)
        do 1022 ic=1,73
          TmSol = TmSol + cinsol(it,ic)
 1022   continue
 1030 continue
      write(*,*) TmSol
C-----------------------------------------------
  700 format(1x)
  720 format(a5,88(1pe10.2))
  730 format(a18,30(1pe10.2))
      stop
      end
      subroutine atanks(tname)
      character*6 tname
      character*3 tfarm
      dimension tfarm(18),nt1(18),nt2(18),tname(1)
      data tfarm  /'A -','AX-','B -','BX-','BY-','C -',
     1 'S -','SX-','T -','TX-','TY-','U -','AN-','AP-',
     2 'AW-','AY-','AZ-','SY-'/
      data nt1  /6, 4,12,12,12,12,12,15,12,18, 6,12,
     1           7, 8, 6, 2, 2, 3/
      data nt2  /0, 0, 4, 0, 0, 4, 0, 0, 4, 0, 0, 4,
     1           0, 0, 0, 0, 0, 0/
      itank = 0
      do 100 ifarm=1,18
        if (nt1(ifarm).ne.0) then
          do 20 itcnt=1,nt1(ifarm)
            itnum = 100 + itcnt
            itank = itank + 1
            write(tname(itank),"(a3,i3)") tfarm(ifarm),itnum
   20     continue
        endif
        if (nt2(ifarm).ne.0) then
          do 40 itcnt=1,nt2(ifarm)
            itnum = 200 + itcnt
            itank = itank + 1
            write(tname(itank),"(a3,i3)") tfarm(ifarm),itnum
   40     continue
        endif
  100 continue
      return
      end
      subroutine ftanks(tname)
      character*6 tname
      character*3 tfarm
      dimension tfarm(18),nt1(18),nt2(18),tname(1)
      data tfarm  /'A_-','AX-','B_-','BX-','BY-','C_-',
     1 'S_-','SX-','T_-','TX-','TY-','U_-','AN-','AP-',
     2 'AW-','AY-','AZ-','SY-'/
      data nt1  /6, 4,12,12,12,12,12,15,12,18, 6,12,
     1           7, 8, 6, 2, 2, 3/
      data nt2  /0, 0, 4, 0, 0, 4, 0, 0, 4, 0, 0, 4,
     1           0, 0, 0, 0, 0, 0/
      itank = 0
```

```
      do 100 ifarm=1,18
        if (nt1(ifarm).ne.0) then
          do 20 itcnt=1,nt1(ifarm)
            itnum = 100 + itcnt
            itank = itank + 1
            write(tname(itank),"(a3,i3)") tfarm(ifarm),itnum
 20       continue
        endif
        if (nt2(ifarm).ne.0) then
          do 40 itcnt=1,nt2(ifarm)
            itnum = 200 + itcnt
            itank = itank + 1
            write(tname(itank),"(a3,i3)") tfarm(ifarm),itnum
 40       continue
        endif
100 continue
      tname(180) = 'PreTre'
      tname(181) = 'HLWWit'
      tname(200) = 'Common'
      tname(201) = 'A,AX,C'
      tname(202) = 'A,AX,C'
      tname(203) = 'A,AX,C'
      tname(204) = 'A,AX,C'
      tname(205) = 'B,BX-Y'
      tname(206) = 'B,BX-Y'
      tname(207) = 'B,BX-Y'
      tname(208) = 'B,BX-Y'
      tname(209) = 'T,TX-Y'
      tname(210) = 'T,TX-Y'
      tname(211) = 'T,TX-Y'
      tname(212) = 'T,TX-Y'
      tname(213) = 'S,SX,U'
      tname(214) = 'S,SX,U'
      tname(215) = 'S,SX,U'
      tname(216) = 'S,SX,U'
      return
      end
      real*8 function spg(it,icAlOH,icNa,icNO2,icNO3,icOH,icTot)
      implicit real*8 (a-h,o-z)
      dimension cliq(200,100),cinsol(200,100),ichem(10),wtchem(5),
     1          c1(5),c2(5)
      common /inve/ cliq,cinsol
Chemical MolWt      AlOH)4-   Na+      NO2-      NO3-      OH-   (Kg/Mole)
      data wtchem /0.0950d0,0.0230d0,0.0460d0,0.0620d0,0.0170d0/
      data c1 /0.383d0,0.1096d0,0.373d0,0.201d0,0.0077d0/
      data c2 /-0.0955d0,-0.0054d0,-0.073d0,0.00046d0,0.0197d0/
      rhoH2O   = 1.0d0        !  Kg/liter
      ichem(1) = icAlOH
      ichem(2) = icNa
      ichem(3) = icNO2
      ichem(4) = icNO3
      ichem(5) = icOH
      spg   = 0.d0
      if(cliq(it,icTot).eq.0.d0) return
      slin  = 0.d0
      squad = 0.d0
      slin = (0.054d0*cliq(it,icNa)/0.0230d0)*rhoH2O/cliq(it,icTot)
      spg = 1.d0/(1.d0-slin)
c      do 10 is=1,5
c        slin  = slin  +
c     1   c1(is)*(cliq(it,ichem(is))/wtchem(is))/
c     2                                  cliq(it,icTot)
c        squad = squad +
c     1   c2(is)*( (cliq(it,ichem(is))/wtchem(is))/
c     2                                  cliq(it,icTot) )**2
c   10 continue
c      slin  =      slin*rhoH2O/5.d0
c      squad = squad*rhoH2O**2/5.d0
cc      write(*,*) slin,squad
c      spg = ((1.d0-slin) -
c     1          dsqrt((1.d0-slin)**2 - 4.d0*squad))/(2.d0*squad)
      return
      end
      integer function itname(aname)
      character*6  aname,tname
      dimension tname(300)
      common /names/ tname
      itname = 0
      do 100 it=1,300
        if(aname.eq.tname(it)) then
          itname = it
          goto 500
        endif
 100  continue
 500  continue
      return
      end
```

APPENDIX B
VERIFICATION AND VALIDATION (V&V) PLAN

B.1 SCOPE, DEFINITIONS and REFERENCES

B.1.1 Scope of V&V

The V&V Phases within the report scope are:

Requirements and Assumptions

Sensitivity studies on the assumptions are to be run and are to be traceable, e.g. assumption of constant water addition ratio for all SST retrieval.

Design

Implementation–Source Code Evaluation(Traceability), Test Case Generation and Test Procedure Generation, Component (Module) Test execution.

Test

Acceptance Test Procedure Generation, Test Execution Primarily Integration and System Tests. Create a few simple cases and validate the results, i.e., see whether the outputs match expected results. An alternate validated model may be used to determine the expected results for each test case. The ithink© TWRS model is suggested (Reference 2). Test cases shall use SST retrieval sequences that meet or nearly meet the TPA milestones. This allows comparison over the entire operating interval. At least one case shall be run where the TPA completion date is not met due to shut downs caused by reaching DST capacity limits. For this case, the initial point at which DST capacity limits are reached may be validated.

Subjective Validation

Animated presentations that contribute to the public awareness and involvement aspects of the Hanford Site mission.

B.1.2 Definitions

Verification refers to a set of practices for determining whether or not a product meets its requirements. For the SIMAN model, verification consists of evaluating the correctness of the algorithms.

Validation refers to the process of evaluating the product to ensure that it is free from failure; that is, free from incorrect product behavior. For the SIMAN model, validation consists of evaluating the algorithms and selected data adequately and sufficiently to achieve the objectives.

B.1.3 References

(1) "IEEE Standard for Software Verification and Validation Plans," ANSI/IEEE Std 1012-1986, reaffirmed September 17, 1992.

(2) "Waste Pretreatment and Interfacing Systems Dynamic Simulation Model," WHC-SD-WM-DR-013, dated June 20, 1995.

(3) WHC-CM-3-10, 1993, Software Practices, Westinghouse Hanford Company, Richland, Washington.

B.2 VERIFICATION AND VALIDATION ADMINISTRATION

B.2.1 Items to be V&V'd

The items that will be verified are the six top level modules which when integrated represent the total logical and calculational functionality of the model. Table B-1 depicts the modules to be verified.

Table B-1. Modules to be Verified.

Module	Initialization	DST Retrieval	SST Retrieval	Settle/ Decant	Cross-site Transfer	South Quadrant SST Retrieval
Process Duration		X	X	X	X	X
Product Waste Volume	X	X	X	X	X	X

B.2.2 Features for V&V

The modules for V&V are those specified in Table B-1. In addition, some of the underlying data (specifically the assumptions) will be reviewed. Section B.3 describes the methodology to be used in the V&V.

The features that will **not** be V&V'd are:

- Alternatives for each process – The rationale is that the alternatives were generated for a set of objectives. The V&V report will document the objectives.
- Constraints on the user-selectable inputs – When the user selects, for example, a pretreatment process, constraints are imposed on the types of facilities that can be used. These constraints were based on known "facts" that the engineering community for the TWRS program abide by.

B.2.3 Deliverables

Two deliverables are identified. They are a V&V report and a presentation summarizing the results of the V&V. The V&V report will contain a description of the objectives of the SIMAN model, results of the verification of the algorithms, and results of the data review. Included in the report are test cases, test data, customized software routines generated to test the algorithms/data, reference material that was used to verify the algorithms and data, and a list of experts who participated in the V&V activities. A presentation of the results provides the approval authorities with additional information to assess whether additional V&V are required.

B.2.4 Acceptance Criteria

Before performing the V&V activities, the V&V plan shall be approved by the manager of TWRS Systems Engineering (SE). This approval constitutes an agreement on the level of detail that the V&V activities sufficiently demonstrate the SIMAN model has met its objectives.

The V&V report shall be approved by the manager of the SE Risk Management and Modeling group and/or by other individuals he may designate.

B.2.5 V&V Tasks

The V&V tasks include:

- Verifying specifications (model assumptions) by reviewing the assumption spreadsheet and by experts.
- Determining the SIMAN model objectives by checking the assumption spread sheet. Developing test cases, test data, and customized software routines (if necessary).
- Verifying the algorithms by exercising the test cases and by interviewing experts who were not involved with SIMAN model development.
- Documenting the results of the V&V.
- Presenting the results of the V&V to the individuals identified in Section B.2.4 and perform additional V&V if required.

B.2.6 Environmental Needs

The hardware and software requirements for conducting the V&V include use of computer workstation with SIMAN language compiler and access to experts in the TWRS engineering community.

B.2.7 Responsibilities

The SE Risk Management and Modeling group within the TWRS Technical Integration organization is responsible for overseeing that the plan is executed. The SE Risk Management and Modeling group is responsible for resolving issues that may arise and ensuring that personnel, environmental needs, and other resources are provided.

B.2.8 Staffing and Training

A person who is experienced with software V&V techniques is required. In addition, knowledge of the TWRS is helpful. To implement the V&V objectively, this person should be independent of the SIMAN model development team.

B.2.9 Schedule

The implementation of this plan should commence after the plan has been approved. It is anticipated that the V&V will take approximately one month at a Level Of Effort (LOE) of 1.25 FTEs (full time equivalent). The duration and LOE accommodate the time required to schedule and meet with various experts, to review reference material, to develop customized routines and to develop and execute the test cases. Formal documentation in report form

will require an additional month at a LOE of 1.25 FTEs.

B.2.10 Risk and Contingencies

The SIMAN model should be under configuration management control to execute the V&V procedure. If the model is undergoing changes, a specific revision shall be selected for V&V.

B.3 TEST DESIGN

B.3.1 Approach

Verification and validation of the SIMAN model will be divided into three phases, involving specifications (or assumptions), modules and integrated performance.

B.3.2 Specifications (Assumptions)

Specifications (and assumptions) for the SIMAN model shall be individually reviewed for correctness, including review by experts as deemed necessary.

B.3.3 Modules

The SIMAN model developers have verified data interfaces among modules during model development. For the module verification activity described by this document, selected audits will be performed of the some of the module products and timing.

B.3.4 Integrated Performance

An alternate validated model is used to determine the expected results for each test case. Test cases will be run on the ithink© TWRS model . The test cases shall use SST retrieval sequences that meet or nearly meet the TPA milestones. This allows comparisons over the entire operating interval. At least one case shall be run where the TPA completion date is not met due to shut downs caused by reaching DST capacity limits. For this case, the initial point at which DST capacity limits are reached may be validated.

Products to be compared include DST utilization, waste oxide to glass production, water recycle and plant utilization.

B.3.5 Pass/Fail Criteria

Hand calculated module products such as dilute retrieval volume shall agree to within 0.5 percent of model output. Tank retrieval and transfer durations shall agree to the nearest day. Calculated chemical constituent separations factors shall agree to two significant digits and cross-site transfer rate calculations shall agree within 0.5 percent.

B.4 TEST CASES

Documentation of the individual test cases will include an individual test case identifying number, a reference to the specific items being tested, and any input and output specifications, environmental needs, and special procedural requirements that may exist.

B.4.1 Test Case Identifier

The method for identifying the individual test cases shall be selected by the person(s) assigned to perform the test case V&V.

B.4.2 Test Items

Test cases will be devised to test a limited selection of calculational pathways in the SIMAN model. The purpose of the test cases is to verify that a selection of the calculational algorithms produce the expected numerical results. Full testing of all calculational pathways is not feasible. Test cases will be designed to ensure appropriate and adequate coverage.

B.4.3 Input Specifications

Standard tank inventories and retrieval sequences shall be used for input. For the ithink© model, the data shall be separated for TX Farms (salt cake) and other SSTs (sludge-salt cake) and converted to multi-segment, piece-wise linear sequences with retrieval rates calculated using least squares curve fits. Root mean square error of curve fit is not to exceed 0.5 percent.

B.4.4 Output Specifications

The test cases are required to give numerically correct answers for the model performance parameters within reasonable roundoff tolerances. The answers depend on which test cases are chosen.

B.4.5 Special Requirements

There are expected to be no special requirements for running the test cases.

B.4.6 Interface Dependencies

None.

B.5 TEST PROCEDURES

B.5.1 Correctness Reviews

Not required.

B.5.2 Test Cases

Test cases are intended to demonstrate that the individual computational algorithms are working together correctly as a group. Specific test cases will be selected by the individual(s) performing the V&V. The test setup will be the normal setup for running the model.

B.6 TEST ITEM TRANSMITTAL REPORT

B.6.1 Transmitted Items

The item to be tested is the current version of the model implemented in SIMAN.

B.6.2 Location

The SIMAN model will be made available for testing as requested by the individual

performing the testing.

B.6.3 Status

The model software is expected to be transmitted in fully operational condition. If any exceptions to this condition are noted by the individual(s) performing the V&V, they shall be corrected or, if not correctable, then they shall be noted in the Test Log.

B.6.4 Approvals

The individual(s) tasked to perform the testing activities will sign a memo indicating that the model has been transmitted to them for approval. This memo will become part of the test record.

B.7 TEST LOG AND TEST REPORT

A test log will be maintained of the test cases that are run. At the discretion of the individual performing the testing, this test log may be similar to the example shown in Figure 4 in WHC-CM-3-10, *Software Practices*, Appendix J (See Ref. 3 in Section B.1.3).

A test report will be issued, documenting the results of both the correctness reviews of the algorithms and data, and the test case performance. This test report will be approved by the manager/technical lead for the SE Risk Management and Modeling group, and/or by other individuals he may designate.

APPENDIX C
VARIABLES DESCRIPTION AND SOURCE LISTING FOR TWRS SIMAN RETRIEVAL MODEL

The following tables (Tables C-1 to C-4) give a brief description of each variable (with dimension) in the model. The SIMAN source listing follows the tables.

Table C-1. General Tank Farm Related Variables.

Variable(Dim)	Initial Value	Description
volume(300)	0.0	Total volume of material in tank (kgal)
vLiq(300)	0.0	Liquid volume (kgal)
vSol(300)	0.0	Sludge and solid particulate volume (kgal)
vSC(300)	0.0	Salt-cake volume (dissolved on Retrieval) (kgal)
vPumpL(300)	0.0	Interstitial liquid (not used) (kgal)
capacity(300)	0.0	Capacity of tank (kgal)
fworking	0.95	Fraction of tank working vol
mass(300,100)	0.0	Total mass of component ind2 in tank ind1 (kg)
mLiq(300,100)	0.0	Liquid mass of component ind2 in tank ind1 (kg)
mSol(300,100)	0.0	Solids mass of component ind2 in tank ind1 (kg)
mSC(300,100)	0.0	Salt-cake mass of component ind2 in tank ind1 (kg)
fTank(300,177)	0.0	
Cipergram(20)	0.0	
BTUperhrCi(20)	0.0	

Table C-2. Retrieval Variables.

Variable	Initial Value	Description
TaddedH2O(300)	0.0	
RTcnt	0.0	
RTIcnt	0.0	
RTotH2O	0.0	
vLiqRetrieved	0.0	
vSolRetrieved	0.0	
Rvolume(300)	0.0	Total volume of material in tank (kgal)
RvLiq(300)	0.0	Liquid volume (kgal)
RvSol(300)	0.0	Sludge and solid particulate volume (kgal)
Rmass(300,100)	0.0	Total mass of component ind2 in tank ind1 (kg)
RmLiq(300,100)	0.0	Liquid mass of component ind2 in tank ind1 (kg)
RmSol(300,100)	0.0	Solids Mass of component ind2 in tank ind1 (kg)

Table C-3. Transfer Variables.

Variable	Initial Value	Description
Tindused(100)	0.0	
dTrate(100)	0.0	Total volume of material in tank (kgal)
Tvolume(100)	0.0	Total volume of material in tank (kgal)
dTvol(100)	0.0	Total volume of material in tank (kgal)
TcvLiq(100)	0.0	
TcvSol(100)	0.0	
TcvSC(100)	0.0	
TcFrac(100,177)	0.0	
Tcmass(100,100)	0.0	
TcmLiq(100,100)	0.0	
TcmSol(100,100)	0.0	
TcmSC(100,100)	0.0	
Wvolume	0.0	Wash Solution 7M Na & Water
WcvLiq(2)	1.0, 1.0	
WcvSol(2)	0.0, 0.0	
Wcmass(200,2)	0.0	
WcmLiq(200,2)	0.0	
WcmSol(200,2)	0.0	

Table C-4a. Tank Use/Function Indexing Variables.

Variable	Initial Value	Description
Ntanks	224.0	Number of tank
NmcompR	89.0	Number of distinguishable mass components to READ
Nmcomp	89.0	Number of distinguishable mass components
wrf#(20)	0.0	Waste Receiver Facility index assigned to Tank Farm
farm#(300)	0.0	Tank Farm index assigned to Tank
SSTind	1.0	Initialize a few Indices for "find"ing Tanks
DSTind(2)	150.0	" "
	178.0	
WRFtank#2(6)	0.0	
full1stflag(6)	0.0	
WRFind(6)	201.0	Absolute index for WRF Tanks
	205.0	
	209.0	
	213.0	
	217.0	
	221.0	
WRFTind(6)	0.0	Relative index for WRF Tanks
WRFTful(6)	0.0	Index flag for full WRF Tanks
WRFTtot(6)	25.0	Total SSTs with each WRF without C106
	40.0	
	40.0	
	43.0	
	0.0	
	0.0	
WRFTtot(6)	25.0	Total SSTs with each WRF without C106
	40.0	
	40.0	
	16.0	
	27.0	
	0.0	
WRFTcnt(6)	all 0.0	
WRFDirect(6)	all 0.0	WRF to DST Storage
WRFDirect(6,7)	all 0.0	Indexing
RFDirectR(6,7)	all 0.0	Indexing
rday0	0.0	
rday	0.0	
rdayDST0	0.0	
rdayDST	0.0	
rdaydumb	0.0	
rtime	0.0	
rtimeDST	0.0	
farmTcnt(40)	0.0	

Table C-4b. Tank Use/Function Indexing Variables.

Variable	Initial Value	Description
RWStorage(6)	150.0	
	168.0	
	0.0	
	0.0	
	0.0	
	0.0	
RWStorageR(6)	all 0.0	
NRWStorage	0.0	
NRWStorageR	6.0	
SD1st(18)	all 0.0	
SD1stR(18)	all 0.0	
SD1stC(18)	all 0.0	
SD1stOP(18)	all 0.0	
SD1stW(18)	all 0.0	
SD1stSol(18)	all 0.0	
SD1stAdd(18)	all 0.0	
SD1stUPT(18)	all 0.0	
NSD1st	0.0	
NSD1stR	18.0	
SD2nd(18)	all 0.0	
SD2ndR(18)	all 0.0	
SD2ndC(18)	all 0.0	
SD2ndOP(18)	all 0.0	
SD2ndW(18)	all 0.0	
SD2ndSol(18)	all 0.0	
SD2ndAdd(18)	all 0.0	
SD2ndUPT(18)	all 0.0	
NSD2nd	0.0	
NSD2ndR	18.0	
Decant(3)	all 0.0	
DecantR(3)	all 0.0	
DecantE(3)	all 0.0	
NDecant	0.0	
NDecantR	0.0	

Table C-4b(con'd). Tank Use/Function Indexing Variables.

Variable	Initial Value	Description
StoreWest(5)	all 0.0	
StoreWestR(5)	all 0.0	
NStoreWest	0.0	
NStoreWestR	5.0	
Sol(6)	all 0.0	
SolC(6)	all 2.0	
SolR(6)	all 0.0	
NSol	0.0	
NSolR	6.0	
NSD1stRmin	1.0	
NSD2ndRmin	1.0	
NDecantRmin	4.0	
NSolRmin	1.0	

```
;*********************************
;***  Input and Initalization Section
;*********************************
;***
;***  Read Tank Inialization Parameters
;***
        create;
          assign: im=1;
          while:im.le.15;
            read,RNinfo,"(9x,2e11.3)": Cipergram(im),BTUperhrCi(im);
            assign: im=im+1;
          endwhile;
          assign: im=1;
          while:im.le.177;
            assign: fTank(im,im) = 1.0;
                    im=im+1;
          endwhile;
        assign: tank#=1;
        while: tank#.le.177;
          read,inventoryE,"(5x,88e10.2)":
           RmLiq(tank#,1),RmLiq(tank#,2),RmLiq(tank#,3),RmLiq(tank#,4),RmLiq(tank#,5),
           RmLiq(tank#,6),RmLiq(tank#,7),RmLiq(tank#,8),RmLiq(tank#,9),RmLiq(tank#,10),
           RmLiq(tank#,11),RmLiq(tank#,12),RmLiq(tank#,13),RmLiq(tank#,14),RmLiq(tank#,15),
           RmLiq(tank#,16),RmLiq(tank#,17),RmLiq(tank#,18),RmLiq(tank#,19),RmLiq(tank#,20),
           RmLiq(tank#,21),RmLiq(tank#,22),RmLiq(tank#,23),RmLiq(tank#,24),RmLiq(tank#,25),
           RmLiq(tank#,26),RmLiq(tank#,27),RmLiq(tank#,28),RmLiq(tank#,29),RmLiq(tank#,30),
           RmLiq(tank#,31),RmLiq(tank#,32),RmLiq(tank#,33),RmLiq(tank#,34),RmLiq(tank#,35),
           RmLiq(tank#,36),RmLiq(tank#,37),RmLiq(tank#,38),RmLiq(tank#,39),RmLiq(tank#,40),
           RmLiq(tank#,41),RmLiq(tank#,42),RmLiq(tank#,43),RmLiq(tank#,44),RmLiq(tank#,45),
           RmLiq(tank#,46),RmLiq(tank#,47),RmLiq(tank#,48),RmLiq(tank#,49),RmLiq(tank#,50),
           RmLiq(tank#,51),RmLiq(tank#,52),RmLiq(tank#,53),RmLiq(tank#,54),RmLiq(tank#,55),
           RmLiq(tank#,56),RmLiq(tank#,57),RmLiq(tank#,58),RmLiq(tank#,59),RmLiq(tank#,60),
           RmLiq(tank#,61),RmLiq(tank#,62),RmLiq(tank#,63),RmLiq(tank#,64),RmLiq(tank#,65),
           RmLiq(tank#,66),RmLiq(tank#,67),RmLiq(tank#,68),RmLiq(tank#,69),RmLiq(tank#,70),
           RmLiq(tank#,71),RmLiq(tank#,72),RmLiq(tank#,73),RmLiq(tank#,74),RmLiq(tank#,75),
           RmLiq(tank#,76),RmLiq(tank#,77),RmLiq(tank#,78),RmLiq(tank#,79),RmLiq(tank#,80),
           RmLiq(tank#,81),RmLiq(tank#,82),RmLiq(tank#,83),RmLiq(tank#,84),RmLiq(tank#,85),
           RmLiq(tank#,86),RmLiq(tank#,87),RmLiq(tank#,88);
          assign: im=74;
          while:im.le.88;
            assign: RmLiq(tank#,im) = RmLiq(tank#,im)/(Cipergram(im-73)*1000.0);
                    mLiq(tank#,im)  = RmLiq(tank#,im);
                    im=im+1;
          endwhile;
          assign: im=1;
          while:im.le.73;
            assign: RmLiq(tank#,Ntot) = RmLiq(tank#,Ntot) + RmLiq(tank#,im);
                    mLiq(tank#,im) = RmLiq(tank#,im);
                    im=im+1;
          endwhile;
          assign: mLiq(tank#,Ntot) = RmLiq(tank#,Ntot);
          write,inventoryEcheck,"(a5,89e10.2)": str(variables,tank#),
```



```
           RmLiq(tank#,1),RmLiq(tank#,2),RmLiq(tank#,3),RmLiq(tank#,4),RmLiq(tank#,5),
           RmLiq(tank#,6),RmLiq(tank#,7),RmLiq(tank#,8),RmLiq(tank#,9),RmLiq(tank#,10),
           RmLiq(tank#,11),RmLiq(tank#,12),RmLiq(tank#,13),RmLiq(tank#,14),RmLiq(tank#,15),
           RmLiq(tank#,16),RmLiq(tank#,17),RmLiq(tank#,18),RmLiq(tank#,19),RmLiq(tank#,20),
           RmLiq(tank#,21),RmLiq(tank#,22),RmLiq(tank#,23),RmLiq(tank#,24),RmLiq(tank#,25),
           RmLiq(tank#,26),RmLiq(tank#,27),RmLiq(tank#,28),RmLiq(tank#,29),RmLiq(tank#,30),
           RmLiq(tank#,31),RmLiq(tank#,32),RmLiq(tank#,33),RmLiq(tank#,34),RmLiq(tank#,35),
           RmLiq(tank#,36),RmLiq(tank#,37),RmLiq(tank#,38),RmLiq(tank#,39),RmLiq(tank#,40),
           RmLiq(tank#,41),RmLiq(tank#,42),RmLiq(tank#,43),RmLiq(tank#,44),RmLiq(tank#,45),
           RmLiq(tank#,46),RmLiq(tank#,47),RmLiq(tank#,48),RmLiq(tank#,49),RmLiq(tank#,50),
           RmLiq(tank#,51),RmLiq(tank#,52),RmLiq(tank#,53),RmLiq(tank#,54),RmLiq(tank#,55),
           RmLiq(tank#,56),RmLiq(tank#,57),RmLiq(tank#,58),RmLiq(tank#,59),RmLiq(tank#,60),
           RmLiq(tank#,61),RmLiq(tank#,62),RmLiq(tank#,63),RmLiq(tank#,64),RmLiq(tank#,65),
           RmLiq(tank#,66),RmLiq(tank#,67),RmLiq(tank#,68),RmLiq(tank#,69),RmLiq(tank#,70),
           RmLiq(tank#,71),RmLiq(tank#,72),RmLiq(tank#,73),RmLiq(tank#,74),RmLiq(tank#,75),
           RmLiq(tank#,76),RmLiq(tank#,77),RmLiq(tank#,78),RmLiq(tank#,79),RmLiq(tank#,80),
           RmLiq(tank#,81),RmLiq(tank#,82),RmLiq(tank#,83),RmLiq(tank#,84),RmLiq(tank#,85),
           RmLiq(tank#,86),RmLiq(tank#,87),RmLiq(tank#,88);RmLiq(tank#,89);
          assign: tank#=tank#+1;
        endwhile;
        assign: tank#=1;
        while: tank#.le.177;
          read,inventoryE,"(5x,88e10.2)":
           RmSol(tank#,1),RmSol(tank#,2),RmSol(tank#,3),RmSol(tank#,4),RmSol(tank#,5),
           RmSol(tank#,6),RmSol(tank#,7),RmSol(tank#,8),RmSol(tank#,9),RmSol(tank#,10),
           RmSol(tank#,11),RmSol(tank#,12),RmSol(tank#,13),RmSol(tank#,14),RmSol(tank#,15),
           RmSol(tank#,16),RmSol(tank#,17),RmSol(tank#,18),RmSol(tank#,19),RmSol(tank#,20),
           RmSol(tank#,21),RmSol(tank#,22),RmSol(tank#,23),RmSol(tank#,24),RmSol(tank#,25),
           RmSol(tank#,26),RmSol(tank#,27),RmSol(tank#,28),RmSol(tank#,29),RmSol(tank#,30),
           RmSol(tank#,31),RmSol(tank#,32),RmSol(tank#,33),RmSol(tank#,34),RmSol(tank#,35),
           RmSol(tank#,36),RmSol(tank#,37),RmSol(tank#,38),RmSol(tank#,39),RmSol(tank#,40),
           RmSol(tank#,41),RmSol(tank#,42),RmSol(tank#,43),RmSol(tank#,44),RmSol(tank#,45),
           RmSol(tank#,46),RmSol(tank#,47),RmSol(tank#,48),RmSol(tank#,49),RmSol(tank#,50),
           RmSol(tank#,51),RmSol(tank#,52),RmSol(tank#,53),RmSol(tank#,54),RmSol(tank#,55),
           RmSol(tank#,56),RmSol(tank#,57),RmSol(tank#,58),RmSol(tank#,59),RmSol(tank#,60),
           RmSol(tank#,61),RmSol(tank#,62),RmSol(tank#,63),RmSol(tank#,64),RmSol(tank#,65),
           RmSol(tank#,66),RmSol(tank#,67),RmSol(tank#,68),RmSol(tank#,69),RmSol(tank#,70),
           RmSol(tank#,71),RmSol(tank#,72),RmSol(tank#,73),RmSol(tank#,74),RmSol(tank#,75),
           RmSol(tank#,76),RmSol(tank#,77),RmSol(tank#,78),RmSol(tank#,79),RmSol(tank#,80),
           RmSol(tank#,81),RmSol(tank#,82),RmSol(tank#,83),RmSol(tank#,84),RmSol(tank#,85),
           RmSol(tank#,86),RmSol(tank#,87),RmSol(tank#,88);
          assign: im=74;
          while:im.le.88;
            assign: RmSol(tank#,im) = RmSol(tank#,im)/(Cipergram(im-73)*1000.0);
                    mSol(tank#,im)  = RmSol(tank#,im);
                    im=im+1;
          endwhile;
          assign: im=1;
          while:im.le.88;
            if: im.le.73;
              assign: RmSol(tank#,Ntot) = RmSol(tank#,Ntot) + RmSol(tank#,im);
            endif;
```

```
        assign: Rmass(tank#,im) = RmLiq(tank#,im) + RmSol(tank#,im):
                mSol(tank#,im) = RmSol(tank#,im):
                mass(tank#,im) = mLiq(tank#,im) + mSol(tank#,im):
                im=im+1;
      endwhile;
      assign: mSol(tank#,Ntot) = RmSol(tank#,Ntot):
              mass(tank#,Ntot) = mLiq(tank#,Ntot) + mSol(tank#,Ntot):
              Rmass(tank#,Ntot) = RmLiq(tank#,Ntot) + RmSol(tank#,Ntot);
      write,InventoryEcheck,"(a5,89e10.2)": str(variables,tank#),
       RmSol(tank#,1),RmSol(tank#,2),RmSol(tank#,3),RmSol(tank#,4),RmSol(tank#,5),
       RmSol(tank#,6),RmSol(tank#,7),RmSol(tank#,8),RmSol(tank#,9),RmSol(tank#,10),
       RmSol(tank#,11),RmSol(tank#,12),RmSol(tank#,13),RmSol(tank#,14),RmSol(tank#,15),
       RmSol(tank#,16),RmSol(tank#,17),RmSol(tank#,18),RmSol(tank#,19),RmSol(tank#,20),
       RmSol(tank#,21),RmSol(tank#,22),RmSol(tank#,23),RmSol(tank#,24),RmSol(tank#,25),
       RmSol(tank#,26),RmSol(tank#,27),RmSol(tank#,28),RmSol(tank#,29),RmSol(tank#,30),
       RmSol(tank#,31),RmSol(tank#,32),RmSol(tank#,33),RmSol(tank#,34),RmSol(tank#,35),
       RmSol(tank#,36),RmSol(tank#,37),RmSol(tank#,38),RmSol(tank#,39),RmSol(tank#,40),
       RmSol(tank#,41),RmSol(tank#,42),RmSol(tank#,43),RmSol(tank#,44),RmSol(tank#,45),
       RmSol(tank#,46),RmSol(tank#,47),RmSol(tank#,48),RmSol(tank#,49),RmSol(tank#,50),
       RmSol(tank#,51),RmSol(tank#,52),RmSol(tank#,53),RmSol(tank#,54),RmSol(tank#,55),
       RmSol(tank#,56),RmSol(tank#,57),RmSol(tank#,58),RmSol(tank#,59),RmSol(tank#,60),
       RmSol(tank#,61),RmSol(tank#,62),RmSol(tank#,63),RmSol(tank#,64),RmSol(tank#,65),
       RmSol(tank#,66),RmSol(tank#,67),RmSol(tank#,68),RmSol(tank#,69),RmSol(tank#,70),
       RmSol(tank#,71),RmSol(tank#,72),RmSol(tank#,73),RmSol(tank#,74),RmSol(tank#,75),
       RmSol(tank#,76),RmSol(tank#,77),RmSol(tank#,78),RmSol(tank#,79),RmSol(tank#,80),
       RmSol(tank#,81),RmSol(tank#,82),RmSol(tank#,83),RmSol(tank#,84),RmSol(tank#,85),
       RmSol(tank#,86),RmSol(tank#,87),RmSol(tank#,88),RmSol(tank#,89);
      assign: tank#=tank#+1;
    endwhile;
    assign: tank#=1;
    while: tank#.le.177;
      read,tinitalv,"(3i5,6f10.1,e11.3)":
                tank#,rvar(1),rvar(2),rvar(3),rvar(4),
                      rvar(5),rvar(6),rvar(7),rvar(8),rvar(9);
      if: tank#.le.149;
      assign:   RmLiq(tank#,NH2O) = RmLiq(tank#,NH2O) + m5MLiquid - RmLiq(tank#,Ntot):
                RmLiq(tank#,Ntot) = m5MLiquid:
                Rmass(tank#,NH2O) = RmLiq(tank#,NH2O) + RmSol(tank#,NH2O):
                Rmass(tank#,Ntot) = RmLiq(tank#,Ntot) + RmSol(tank#,Ntot);
      endif;
      assign: farm#(tank#)        = rvar(1):
              wrf#(farm#(tank#))  = rvar(2):
              capacity(tank#)     = rvar(3):
              RvLiq(tank#)        =   RmLiq(tank#,Ntot)/(rhoLiquid*3785.0 + eps):
              RvSol(tank#)        = RmSol(tank#,Ntot)/(rhoSol*3785.0 + eps):
              Rvolume(tank#)      =   RvLiq(tank#) + RvSol(tank#):
              vSC(tank#)          = rvar(7):
              vPumpL(tank#)       = rvar(8):
              washf(tank#)        = rvar(9);
      if: tank#.le.149;
        assign: mLiq(tank#,NH2O) = mLiq(tank#,NH2O) - RmLiq(tank#,Ntot)*3.0/4.0:
                mLiq(tank#,Ntot) = RmLiq(tank#,Ntot)/4.0:
```



```
                mass(tank#,NH2O) = mLiq(tank#,NH2O)+mSol(tank#,NH2O):
                mass(tank#,Ntot) = mLiq(tank#,Ntot)+mSol(tank#,Ntot):
                vLiq(tank#)     = RmLiq(tank#,Ntot)/(4.0*rhoLiquid*3785.0 + eps):
                vSol(tank#)     = RmSol(tank#,Ntot)/(rhoSol*3785.0 + eps):
                volume(tank#)   = RvLiq(tank#)/4.0 + RvSol(tank#);
      else;
        assign: mLiq(tank#,NH2O) = mLiq(tank#,NH2O):
                mLiq(tank#,Ntot) = RmLiq(tank#,Ntot):
                mass(tank#,NH2O) = mLiq(tank#,NH2O)+mSol(tank#,NH2O):
                mass(tank#,Ntot) = mLiq(tank#,Ntot)+mSol(tank#,Ntot):
                vLiq(tank#)     = RmLiq(tank#,Ntot)/(rhoLiquid*3785.0 + eps):
                vSol(tank#)     = RmSol(tank#,Ntot)/(rhoSol*3785.0 + eps):
                volume(tank#)   = RvLiq(tank#) + RvSol(tank#);
      endif;
      write,check,"(3i5,5f10.2,4x,a5,e11.3)":
                tank#,rvar(1),rvar(2),rvar(3),volume(tank#),
                      vLiq(tank#),vSol(tank#),rhoLiquid,str(variables,tank#),SourceRNHeat;
      assign: tank#=tank# + 1;
    endwhile;
    assign: tank#=178;
    while: tank#.le.224;
      read,tinitalv,"(3i5,6f10.1,e11.3)":
                tank#,rvar(1),rvar(2),rvar(3),rvar(4),
                      rvar(5),rvar(6),rvar(7),rvar(8),rvar(9);
      assign: farm#(tank#)        = rvar(1):
              wrf#(farm#(tank#))  = rvar(2):
              capacity(tank#)     = rvar(3);
      write,check,"(3i5,4f10.2,4x)":
                tank#,rvar(1),rvar(2),rvar(3),volume(tank#),
                      vLiq(tank#),vSol(tank#);
      assign: tank#=tank#+1;
    endwhile;
    dispose;
    create;
;     assign: MR(wrf(4)) = 4;
;     assign: MR(wrf(1)) = 4;
      delay:4015;
      assign: MR(wrf(1)) = 4:
              MR(wrf(2)) = 4:
              MR(wrf(3)) = 4:
              MR(wrf(4)) = 4;
      dispose;
;
;*********************************
;**  DST tank retreivals
;**  The retreival schedule for DST
;*********************************
      create;
RSchedst read,rdst,"(f9.1)":rdayDST0;
      assign: gindex1 = 0;
rloopDST read,rdst,"(f9.1,i5,6f8.14)":rdayDST,tank#1,itassign;
      assign: rdayDST = rdayDST + 0.001*gindex1:
```

```
                gindex1 = gindex1 + 1;
          assign: rtimeDST = rdayDST - rdayDST0;
          delay:  rtimeDST - tnow;
          branch,2:
                always,rloopDST;
                always,rstartDST;

;
rstartDST if: itassign.ge.100;
                assign: itassign = itassign - 100;
;***
;***  Phase 1 DST Staging ---> LLV Feed Staging
;***
;** Look for waiting 2nd Stage S/D Tanks
          queue, tank_Q(tank#1);
          seize: tank(tank#1):next(LookStg);
LookStgF branch,2:
                always,SampL1:
                always,LookStg;
SampL1    delay:88;
          release: tank(tank#2);
          signal: tank#2;
          signal: WhatsupSig;
          signal:  DecrSig;
          dispose;
LookStg   if:NDecant.eq.0;
            assign: j = 0;
          else;
          if:Tindex.ne.0;
            assign:  dTvol(Tindex) = dvol;
          endif;
             findj,1,NDecant:(DecantE(j).eq.1).and.
                (NR(tank(Decant(j))).eq.0).and.
                ( (fworking*capacity(Decant(j)) -
                   volume(Decant(j))).ge.0.001 );
;                (DecantE(j).ne.2);
          endif;
          branch,1:
                if:j.eq.0,LookStgW:
               else,PickStg;
LookStgW queue,LookStgQ;
          wait: DecSig0,1:next(LookStg);
PickStg   assign: gindex2 = j;
                  tank#2 = Decant(gindex2);
                  DecantE(gindex2) = 1;
          queue, tank_Q(tank#2);
          seize: tank(tank#2);
;** Prepare for Transfer
          if:Tindex.eq.0;
            findj,1,100:Tindused(j).eq.0;
            assign: Tindex = j;
                    Tindused(Tindex) = 1;
                    Tvolume(Tindex) =  ( mLiq(tank#1,Ntot) -
```



```
                      mSol(tank#1,Ntot)*(1.0-0.25)/0.25 )/(rhoLiquid*3785.0);
                    Tvolume(Tindex) =  max(0.0,Tvolume(Tindex) - vheel);
                    dTvol(Tindex) = dvol;
                    dTrate(Tindex) = rSDfill;
          if:rhoLiquid.gt.rho5MNa;
            assign: CAddedH2O  = (mLiq(tank#1,NNa)*rho5MNa/(5.0*wNa) - mLiq(tank#1,Ntot))
                                                          /vLiq(tank#1);
                    dilfactor = ( mLiq(tank#1,NNa)*rho5MNa/(5.0*wNa) )
                                          /(vLiq(tank#1)*rho5MNa*3785.0);
          else;
            if:Tvolume(Tindex).ne.0.0;
              assign: dilfactor = 1.0;
                      CAddedH2O  = 0.0/Tvolume(Tindex);
            else;
              assign: dilfactor = 1.0;
                      CAddedH2O  = 0.0;
            endif;
          endif;
          write,check,"(' dilfactor',i5,2e12.3)":tank#1,dilfactor,CAddedH2O;
;** Transfer Decant --> LLV Feed Staging
          branch,1:
               if,Tvolume(Tindex).lt.0.001,FiledStg;
               if,(fworking*capacity(tank#2) - volume(tank#2)).lt.0.001,LookStgF;
               else,Tr2Stgi;
;** Initalize Concentrations Prior to Transfer
Tr2Stgi   assign: TcvLiq(Tindex) =  1.0;
                  TcvSol(Tindex) =  0.0;
          assign: im=1;
          while:im.le.177;
          assign: TcFrac(Tindex,im) = fTank(tank#1,im)/volume(tank#1);
                  im=im+1;
          endwhile;
          assign:  im = 0;
Tr2Stgim assign:  im = im + 1;
          assign: TcmLiq(Tindex,im) = mLiq(tank#1,im)*TcvLiq(Tindex)/vLiq(tank#1);
          assign: TcmSol(Tindex,im) = 0.0;
          assign: Tcmass(Tindex,im) = TcmLiq(Tindex,im);
            branch,1:
               if,im.lt.Nmcomp,Tr2Stgim;
               else,Look2Stg;
;** Begin Transfer to LLV Feed Staging
          endif;
Look2Stg branch,1:
               if,Tvolume(Tindex).lt.0.001,FiledStg;
               if,(fworking*capacity(tank#2) - volume(tank#2)).lt.0.001,LookStgF;
               else,Tr2Stg;
Tr2Stg    assign:  dTvol(Tindex) = min(Tvolume(Tindex),dTvol(Tindex),
                       (fworking*capacity(tank#2) - volume(tank#2))/dilfactor );
                   volume(tank#1) = volume(tank#1) - dTvol(Tindex);
                   volume(tank#2) = volume(tank#2) + dTvol(Tindex)*dilfactor;
                   vLiq(tank#1)   = vLiq(tank#1)   - dTvol(Tindex)*TcvLiq(Tindex);
                   vLiq(tank#2)   = vLiq(tank#2)   + dTvol(Tindex)*TcvLiq(Tindex)*dilfactor;
```

```
                vSol(tank#1)      vSol(tank#1)    - dTvol(Tindex)*TcvSol(Tindex):
                vSol(tank#2)    = vSol(tank#2)    + dTvol(Tindex)*TcvSol(Tindex):
              mass(tank#2,NH2O) = mass(tank#2,NH2O) + dTvol(Tindex)*CAddedH2O:
              mass(tank#2,Ntot) = mass(tank#2,Ntot) + dTvol(Tindex)*CAddedH2O:
              mLiq(tank#2,NH2O) = mLiq(tank#2,NH2O) + dTvol(Tindex)*CAddedH2O:
              mLiq(tank#2,Ntot) = mLiq(tank#2,Ntot) + dTvol(Tindex)*CAddedH2O;
; --------   Tank Fractions
        assign: im=1;
        while:im.le.177;
        assign: fTank(tank#2,im)  = fTank(tank#2,im) + TcFrac(Tindex,im)*dTvol(Tindex):
                fTank(tank#1,im)  = fTank(tank#1,im) - TcFrac(Tindex,im)*dTvol(Tindex):
                    im=im+1;
        endwhile:
; ---------
        assign:  im = 0;
Tr2Stgm assign:  im = im + 1;
        assign: mass(tank#1,im)  = mass(tank#1,im)  - dTvol(Tindex)*Tcmass(Tindex,im):
                mass(tank#2,im)  = mass(tank#2,im)  + dTvol(Tindex)*Tcmass(Tindex,im):
                mLiq(tank#1,im)  = mLiq(tank#1,im)  - dTvol(Tindex)*TcmLiq(Tindex,im):
                mLiq(tank#2,im)  = mLiq(tank#2,im)  + dTvol(Tindex)*TcmLiq(Tindex,im):
                mSol(tank#1,im)  = mSol(tank#1,im)  - dTvol(Tindex)*TcmSol(Tindex,im):
                mSol(tank#2,im)  = mSol(tank#2,im)  + dTvol(Tindex)*TcmSol(Tindex,im);
        branch,1:
             if,im.lt.Nmcomp,Tr2Stgm:
             else,Tr2Stgd:
Tr2Stgd delay:dTvol(Tindex)/dTrate(Tindex);
        write,FillDec3,"(2i5,10e11.3)":
          tank#1,tank#2,tnow,mLiq(tank#1,Ntot),mSol(tank#1,Ntot),volume(tank#1),
                     mLiq(tank#2,Ntot),mSol(tank#2,Ntot),volume(tank#2),
                     dTvol(Tindex),dTvol(Tindex)*TcmLiq(Tindex,Ntot),
                                   dTvol(Tindex)*TcmSol(Tindex,Ntot);
        assign:  Tvolume(Tindex)  = Tvolume(Tindex) - dTvol(Tindex):
                 next(Look2Stg);
FiledStg   release: tank(tank#1);
           signal: tank#1;
           assign: TinUsed(Tindex) = 0;
           release: tank(tank#2);
           signal: tank#2;
           signal: DecSig0;
           signal: WhatsupSig;
           signal: DecFSig;
; Continue to make reassignments of DSTs
          endif;
            if: itassign.eq.0;
              assign: NWRFDirect(1) = NWRFDirect(1) + 1;
                      WRFDirect(1,NWRFDirect(1)) = tank#1:
                      WRFDirectR(1,NWRFDirect(1)) = 1;
              assign: NWRFDirect(2) = NWRFDirect(2) + 1:
                      WRFDirect(2,NWRFDirect(2)) = tank#1:
                      WRFDirectR(2,NWRFDirect(2)) = 1;
              assign: NRWStorage = 2:
                      RWStorage(2) = tank#1:
```



```
                      RWStorageR(2) = 1;
              write,checkassign,"(i5,f7.1,' DST  ',a5,' has been assigned as East SST Receiver')":
                          gindex1,tnow,str(variables,tank#1):
            elseif: itassign.eq.1;
              assign: NRWStorage   2:
                      RWStorage(1) = tank#1:
                      RWStorageR(1) = 1;
              write,checkassign,"(i5,f7.1,' DST  ',a5,' has been assigned as X Site Receiver')":
                          gindex1,tnow,str(variables,tank#1);
            elseif: itassign.eq.2;
              assign: NSD1st = NSD1st + 1:
                      SD1st(NSD1st) = tank#1:
                      SD1stR(NSD1st) = 1;
                      SD1stOP(NSD1st) = 1;
              write,checkassign,"(i5,f7.1,' DST  ',a5,' has been assigned as Sludge Wash')":
                          gindex1,tnow,str(variables,tank#1);
            elseif: itassign.eq.3;
              assign: NSD2nd = NSD2nd + 1:
                      SD2nd(NSD2nd)   tank#1:
                      SD2ndR(NSD2nd) = 1:
                      SD2ndOP(NSD2nd) = 1;
              write,checkassign,"(i5,f7.1,' DST  ',a5,' has been assigned as Settling')":
                          gindex1,tnow,str(variables,tank#1);
            elseif: itassign.eq.4;
              assign: NDecant = NDecant + 1:
                      Decant(NDecant) = tank#1:
                      DecantR(NDecant) = 1;
              write,checkassign,"(i5,f7.1,' DST  ',a5,' has been assigned as LLV Feed Staging')":
                          gindex1,tnow,str(variables,tank#1);
            elseif: itassign.eq.5;
              assign: NLVFEED = NLVFEED + 1:
                      LVFEED(NLVFEED) = tank#1:
              write,checkassign,"(i5,f7.1,' DST  ',a5,' has been assigned as LLV Contractor Feed Tank')":
                          gindex1,tnow,str(variables,tank#1):
            elseif: itassign.eq.6;
              assign: NSol = NSol + 1:
                      Sol(NSol) = tank#1:
                      SolR(NSol) = 1;
              write,checkassign,"(i5,f7.1,' DST  ',a5,' has been assigned as Washed Sludge')":
                          gindex1,tnow,str(variables,tank#1):
            elseif: itassign.eq.7;
              assign: NWRFDirect(3) = NWRFDirect(3) + 1:
                      WRFDirect(3,NWRFDirect(3)) = tank#1:
                      WRFDirectR(3,NWRFDirect(3)) = 1;
              assign: NWRFDirect(4) = NWRFDirect(4) + 1:
                      WRFDirect(4,NWRFDirect(4)) = tank#1:
                      WRFDirectR(4,NWRFDirect(4)) = 1;
              assign: NWRFDirect(5) = NWRFDirect(5) + 1:
                      WRFDirect(5,NWRFDirect(5)) = tank#1:
                      WRFDirectR(5,NWRFDirect(5)) = 1;
              assign: NStoreWest = NStoreWest + 1:
                      StoreWest(NStoreWest) = tank#1:
```

```
                    StoreWestR(NStoreWest) = 1;
            write,checkassign,"(i5,f7.1,' DST  ',a5,' has been assigned as X-Site Staging/W-Area Receiver')":
                              gindex1,tnow,str(variables,tank#1);
          elseif: itassign.eq.8;
            assign: NSDlst = NSDlst + 1;
                    SDlst(NSDlst) = tank#1;
                    SDlstR(NSDlst) = 1;
                    SDlstOF(NSDlst)  2;
            write,checkassign,"(i5,f7.1,' DST  ',a5,' has been assigned as X-Flow Filter')":
                              gindex1,tnow,str(variables,tank#1);
          elseif: itassign.eq.9;
            assign: NRWStorage = NRWStorage + 1;
                    RWStorage(NRWStorage) = tank#1;
                    RWStorageR(NRWStorage) = 1;
            write,checkassign,"(i5,f7.1,' DST  ',a5,' has been assigned as East SST Receiver')":
                              gindex1,tnow,str(variables,tank#1);
;           elseif: itassign.eq.10;
;           elseif: itassign.eq.99;
          endif;
;         endif;
              signal: RWfillSig;
              signal: SD1Sig0;
              signal: SD1Sig3;
              signal: SD2Sig0;
              signal: SD2Sig3;
              signal: SDSig5;
              signal: SDSig7;
              signal: DecSig0;
              signal: WasSig0;
              signal: SolSig0;
              signal: DecPSig;
              signal: SolFSig;
              signal: FeedPTSig;
              signal: FeedHLSig;
              signal: StWSig;
              signal: WhatsupSig;
              signal: LVSig;
              signal: LV1Sig;
              signal: LVFeedSig;
        dispose;
        create;
         assign: im=1;
         while:im.le.9000;
         assign: im=im+1;
             delay: 2;
             signal: RWfillSig;
       signal: WRFDirEmptSig(1);
       signal: WRFDirEmptSig(2);
       signal: WRFDirEmptSig(3);
       signal: WRFDirEmptSig(4);
;              signal: SD1Sig0;
;              signal: SD1Sig3;
```



```
;              signal: SD2Sig0;
;              signal: SD2Sig3;
;              signal: SDSig5;
;              signal: SDSig7;
;              signal: DecSig0;
;              signal: WasSig0;
;              signal: SolSig0;
;              signal: DecPSig;
;              signal: SolFSig;
;              signal: FeedPTSig;
;              signal: FeedHLSig;
;              signal: StWSig;
;              signal: WhatsupSig;
;              signal: LVSig;
;              signal: LV1Sig;
;              signal: LVFeedSig;
        endwhile;
        dispose;

;*********************************
;**  SST tank retreivals
;**  The retreival schedule for sst s is read and tanks will be retrieved
;**  with sluicing process as soon as possible
;*********************************
        create;
        branch,2:
          always, LookStW:
          always, RSched;
RSched  read,retrschd:tank#1,rday0;
        assign: gindex1 = 0;
rloop   read,retrschd:tank#1,rday;
        assign:  rday = rday + 0.0*365.0 ;
        assign: rday = rday + 0.001*gindex1;
                gindex1 = gindex1 + 1;
        assign: rtime = rday - rday0;
        delay:  rtime - tnow;
        branch,2:
;             if,tank#1.lt.149,rloop;
            always,rloop;
            always,rstart;
;
;*********************************
;**  Generalized Retrieval Modual for SST's
;** (enough info should be passed to handle SST all cases)
;*********************************
rstart  queue,tank_Q(tank#1);
        seize: tank(tank#1);
        assign: wrf_num = wrf#(farm#(tank#1));
        queue,wrf_Q(wrf_num);
        seize: wrf(wrf_num);
        assign: RTIcnt = RTIcnt + 1;
        write,rinitiate:tnow,RTIcnt,tank#1,farmTcnt(farm#(tank#1)),wrf#(farm#(tank#1));
```

```
        branch,1:
            if,((wrf_num.eq.1).or.(wrf_num.eq.4)).and.nasouth.LookRSQ:
            else,rannex;
;** Prepare for Transfer
rannex   findj,1,100:Tindused(j).eq.0;
         assign: Rindex = j;
                 Tindused(Rindex) = 1;
         findj,1,100:Tindused(j).eq.0;
         assign: Tindex = j;
                 Tindused(Tindex) = 1;
                 Tvolume(Tindex) = max(0.0,Rvolume(tank#1)-vheel);
                 dTvol(Tindex) = dvol;
                 dTrate(Tindex) = rrate;
                 WRFtank#2(wrf_num) = WRFTind(wrf_num) + WRFind(wrf_num);
;         queue,tank_Q(tank#2);
;         seize: tank(tank#2);
;** Check to see if there is anything to transfer
         branch,1:
            if,Tvolume(Tindex).ge.0.001,retr_i;
            else,rdone;
;** Initalize Concentrations Prior to Transfer
retr_i   assign:  TcvLiq(Tindex) = vLiq(tank#1)/Rvolume(tank#1);
                  TcvSol(Tindex) = vSol(tank#1)/Rvolume(tank#1);
                  TcvSC(Tindex)  = vSC(tank#1)/Rvolume(tank#1);
                  TcvLiq(Rindex) = RvLiq(tank#1)/Rvolume(tank#1);
                  TcvSol(Rindex) = RvSol(tank#1)/Rvolume(tank#1);
                  im = 1;
         while:im.le.177;
         assign: TcFrac(Rindex,im) = fTank(tank#1,im)/Rvolume(tank#1);
                 im=im+1;
         endwhile;
         assign: im=0;
retr_im assign:  im = im + 1;
         assign: Tcmass(Tindex,im) = mass(tank#1,im)/Rvolume(tank#1);
                 TcmLiq(Tindex,im) = mLiq(tank#1,im)/Rvolume(tank#1);
                 TcmSol(Tindex,im) = mSol(tank#1,im)/Rvolume(tank#1);
                 TcmSC(Tindex,im)  = mSC(tank#1,im)/Rvolume(tank#1);
                 Tcmass(Rindex,im) = Rmass(tank#1,im)/Rvolume(tank#1);
                 TcmLiq(Rindex,im) = RmLiq(tank#1,im)/Rvolume(tank#1);
                 TcmSol(Rindex,im) = RmSol(tank#1,im)/Rvolume(tank#1);
         branch,1:
              if,im.lt.Nmcomp,retr_im;
              else,retriev0;
;** Begin retrieval of Tank
retriev0 if: fulllstflag(wrf_num).eq.1;
            queue,fullWRFT;
            wait: WRF_Q_Sig + wrf_num,1;
         endif;
         branch,1:
            if,Tvolume(Tindex).lt.0.001,rdone;
            if,(fworking*capacity(WRFtank#2(wrf_num)) - volume(WRFtank#2(wrf_num))).lt.0.001,nextWRFT;
            if,(fworking*capacity(WRFtank#2(wrf_num)) - volume(WRFtank#2(wrf_num))).lt.0.001,nextWRFT;
```



```
            else,retriev1;
retriev1 assign:  dTvol(Tindex) = min(Tvolume(Tindex),dvol,
                        (fworking*capacity(WRFtank#2(wrf_num)) - volume(WRFtank#2(wrf_num))) );
                  volume(WRFtank#2(wrf_num)) = volume(WRFtank#2(wrf_num)) + dTvol(Tindex);
                  vLiq(tank#1)    = vLiq(tank#1)    - dTvol(Tindex)*TcvLiq(Tindex);
                  vLiq(WRFtank#2(wrf_num))    = vLiq(WRFtank#2(wrf_num))    + dTvol(Tindex)*TcvLiq(Rindex);
                  vLiqRetrieved   = vLiqRetrieved   + dTvol(Tindex)*TcvLiq(Rindex);
                  vSol(tank#1)    = vSol(tank#1)    - dTvol(Tindex)*TcvSol(Tindex);
                  vSol(WRFtank#2(wrf_num))    = vSol(WRFtank#2(wrf_num))    + dTvol(Tindex)*TcvSol(Rindex);
                  vSolRetrieved   = vSolRetrieved   + dTvol(Tindex)*TcvSol(Rindex);
                  vSC(tank#1)     = vSC(tank#1)     - dTvol(Tindex)*TcvSC(Tindex);
                  volume(tank#1) = vLiq(tank#1) + vSol(tank#1) + vSC(tank#1);
;  -------- Tank Fractions
         assign: im=1;
         while:im.le.177;
         assign: fTank(WRFtank#2(wrf_num),im) = fTank(WRFtank#2(wrf_num),im) + TcFrac(Rindex,im)*dTvol(Tindex);
                 fTank(tank#1,im) = fTank(tank#1,im) - TcFrac(Rindex,im)*dTvol(Tindex);
                    im=im+1;
         endwhile;
;  ------
         assign:  im = 0;
retr_m   assign:  im = im + 1;
         assign: mass(tank#1,im) = mass(tank#1,im)    dTvol(Tindex)*Tcmass(Tindex,im);
                 mass(WRFtank#2(wrf_num),im) = mass(WRFtank#2(wrf_num),im) + dTvol(Tindex)*Tcmass(Rindex,im);
                 mLiq(tank#1,im) = mLiq(tank#1,im) - dTvol(Tindex)*TcmLiq(Tindex,im);
                 mLiq(WRFtank#2(wrf_num),im) = mLiq(WRFtank#2(wrf_num),im) + dTvol(Tindex)*TcmLiq(Rindex,im);
                 mSol(tank#1,im) = mSol(tank#1,im)    dTvol(Tindex)*TcmSol(Tindex,im);
                 mSol(WRFtank#2(wrf_num),im) = mSol(WRFtank#2(wrf_num),im) + dTvol(Tindex)*TcmSol(Rindex,im);
                 mSC(tank#1,im)  = mSC(tank#1,im)     dTvol(Tindex)*TcmSC(Tindex,im);
         branch,1:
              if,im.lt.Nmcomp,retr_m;
             else,retr_d;
retr_d   delay: dTvol(Tindex)/dTrate(Tindex);
         assign:  Tvolume(Tindex)  = Tvolume(Tindex) - dTvol(Tindex);
                  next(retriev0);
nextWRFT assign: WRFTind(wrf_num) =
                                 mod(WRFTind(wrf_num)+1,4);
;         release: Tank(tank#2);
         assign: WRFtank#2(wrf_num) = WRFTind(wrf_num) +
                                          WRFind(wrf_num);
                 WRFTful(wrf_num) = WRFTful(wrf_num) + 1;
;         queue,tank_Q(tank#2);
;         seize: tank(tank#2);
         branch,2:
              if,WRFTful(wrf_num).eq.3,eWRFT0;
              if,WRFTful(wrf_num).le.3,retriev0;
              if,WRFTful(wrf_num).eq.4,trWRFTq;
trWRFTq  assign:  fulllstflag(wrf_num) = 1;
         queue,trWRFT;
         wait: WRF_Q_Sig + wrf_num,1;
         assign:  fulllstflag(wrf_num) = 0;
         next(retriev0);
```

```
eWRFT1   assign: eWRFTind = WRFTind(wrf_num);
                 eWRFTcnt = 1;
         next(eWRFT1);
eWRFT0   assign: eWRFTind = WRFTind(wrf_num);
                 eWRFTcnt = 0;
eWRFT1   assign: eWRFTcnt = eWRFTcnt + 1;
         branch,1:
              if,eWRFTcnt.eq.4,erdone;
              else,eWRFT2;
eWRFT2   assign: eWRFTind = mod(eWRFTind+1,4) ;
                 tank#1 = eWRFTind + WRFind(wrf_num);
         queue,tank_Q(tank#1);
         seize: tank(tank#1);
         next(LookSRW);
;******
; Look to Store Retrieved Waste
;******
LookSRW  if:wrf_num.eq.4;
            if:mSol(tank#1,Ntot).ne.0.0;
              assign: CrConc = mSol(tank#1,5)*1.46/
    ( mSol(tank#1,1)*1.35+mSol(tank#1,3)*1.00+mSol(tank#1,4)*1.89
     +mSol(tank#1,5)*1.46+mSol(tank#1,6)*1.43+mSol(tank#1,7)*1.00
     +mSol(tank#1,8)*1.00+mSol(tank#1,9) );
            else;
              assign: CrConc = 0.0;
            endif;
         endif;
         if:NWRPDirect(wrf_num).eq.0;
            assign: j = 0;
         else;
         findj,1,NWRPDirect(wrf_num):(WRPDirectR(wrf_num,j).eq.1).and.
                (NR(tank(WRPDirect(wrf_num,j))).eq.0).and.
                ( (fworking*capacity(WRPDirect(wrf_num,j))
                  volume(WRPDirect(wrf_num,j))).ge.75.0 ).and.
   ((WRPDirect(wrf_num,j).ne.tank#2rem).or.(wrf_num.ne.4).or.(CrConc.le.1.e10));
         endif;
         branch,1:
              if,j.eq.0,LookSRWW;
              else,PickSRW;
LookSRWW queue,LookSRWQ(wrf_num);
         wait: WRPDirEmptSig(wrf_num),1:next(LookSRW);
PickSRW  assign: tank#2 = WRPDirect(wrf_num,j);
         if:wrf_num.eq.4;
           assign: tank#2rem = tank#2;
           write,blend,"(f10.2,2i6,e15.5)":
                    tnow,tank#1,tank#2,CrConc;
         endif;
         queue, tank_Q(tank#2);
         seize: tank(tank#2);
;** Prepare for Transfer
            findj,1,100:Tindused(j).eq.0;
            assign: Tindex = j;
```



```
                    Tindused(Tindex) = 1;
                    Tvolume(Tindex) =  max(0.0,volume(tank#1)-vheel);
                    dTvol(Tindex) = dvol;
                    dTrate(Tindex) = rSDfill;
;** Transfer Decant  -> Decant Storage
            branch,1:
                if,Tvolume(Tindex).lt.0.001,FiledSRW;
                else,Tr2SRWi;
;** Initalize Concentrations Prior to Transfer
Tr2SRWi  assign:  TcvLiq(Tindex) = vLiq(tank#1)/volume(tank#1);
                  TcvSol(Tindex) = vSol(tank#1)/volume(tank#1);
                  im = 1;
         while:im.le.177;
         assign: TcFrac(Tindex,im) = fTank(tank#1,im)/volume(tank#1);
                 im=im+1;
         endwhile;
         assign: im=0;
Tr2SRWim assign:  im = im + 1;
         assign: Tcmass(Tindex,im) = mass(tank#1,im)/volume(tank#1);
                 TcmLiq(Tindex,im) = mLiq(tank#1,im)/volume(tank#1);
                 TcmSol(Tindex,im) = mSol(tank#1,im)/volume(tank#1);
         branch,1:
              if,im.lt.Nmcomp,Tr2SRWim;
              else,Look2SRW;
Look2SRW branch,1:
            if,Tvolume(Tindex).ge.0.001,Tr2SRW;
            else,FiledSRW;
Tr2SRW   assign:  dTvol(Tindex) = min(Tvolume(Tindex),dTvol(Tindex));
                  volume(tank#1) = volume(tank#1) - dTvol(Tindex);
                  volume(tank#2) = volume(tank#2) + dTvol(Tindex);
                  vLiq(tank#1)   = vLiq(tank#1)     dTvol(Tindex)*TcvLiq(Tindex);
                  vLiq(tank#2)   = vLiq(tank#2)    + dTvol(Tindex)*TcvLiq(Tindex);
                  vSol(tank#1)   = vSol(tank#1)    - dTvol(Tindex)*TcvSol(Tindex);
                  vSol(tank#2)   = vSol(tank#2)    + dTvol(Tindex)*TcvSol(Tindex);
;---------- Tank Fractions
         assign: im=1;
         while:im.le.177;
         assign: fTank(tank#2,im) = fTank(tank#2,im) + TcFrac(Tindex,im)*dTvol(Tindex);
                 fTank(tank#1,im) = fTank(tank#1,im) - TcFrac(Tindex,im)*dTvol(Tindex);
                    im=im+1;
         endwhile;
;  -------
         assign:  im = 0;
Tr2SRWm  assign:  im = im + 1;
         assign: mass(tank#1,im) = mass(tank#1,im) - dTvol(Tindex)*Tcmass(Tindex,im);
                 mass(tank#2,im) = mass(tank#2,im) + dTvol(Tindex)*Tcmass(Tindex,im);
                 mLiq(tank#1,im) = mLiq(tank#1,im) - dTvol(Tindex)*TcmLiq(Tindex,im);
                 mLiq(tank#2,im) = mLiq(tank#2,im) + dTvol(Tindex)*TcmLiq(Tindex,im);
                 mSol(tank#1,im) = mSol(tank#1,im) - dTvol(Tindex)*TcmSol(Tindex,im);
                 mSol(tank#2,im) = mSol(tank#2,im) + dTvol(Tindex)*TcmSol(Tindex,im);
         branch,1:
              if,im.lt.Nmcomp,Tr2SRWm;
```

```
                else,Tr2SRWdA;
Tr2SRWdA branch,2:
                always,Tr2SRWd;
                if,aflag.eq.1,AnmWRF;
Tr2SRWd  delay: dTvol(Tindex)/dTrate(Tindex);
         write,File1RWS,"(2i5,10e11.3)",
           tank#1,tank#2,tnow,mLiq(tank#1,Ntot),mSol(tank#1,Ntot),volume(tank#1),
                          mLiq(tank#2,Ntot),mSol(tank#2,Ntot),volume(tank#2),
                          dTvol(Tindex),dTvol(Tindex)*TcmLiq(Tindex,Ntot),
                                        dTvol(Tindex)*TcmSol(Tindex,Ntot);
         assign:  Tvolume(Tindex)  = Tvolume(Tindex) - dTvol(Tindex);
                  next(Look2SRW);
FiledSRW release: tank(tank#1);
         signal: tank#1;
         release: tank(tank#2);
         signal: tank#2;
         signal: WRFDirEmptSig(wrf_num);
               signal: RWfillSig;
               signal: StWSig;
         assign: Tindused(Tindex) = 0;
         next(eWRFT1);
;*********************************************
; Animation for Retrieval Transfers *************
AnmWRF   branch,2:
                always,AnmWRF1;
                always,AnmWRF2;
AnmWRF1  delay: 0.5*dTvol(Tindex)/dTrate(Tindex);
AnmWRF2  assign:  M=wrf_ST(wrf_num);
         assign: picture = 1;
         route:arfactor(wrf_num)*dTvol(Tindex)/dTrate(Tindex),wrf_DST(wrf_num);
         station,1-12;
         dispose;
erdone   assign: WRFTful(wrf_num) = max(WRFTful(wrf_num)
                  - eWRFTcnt + 1,0);
         signal: WRF_Q_Sig + wrf_num;
         signal: WRFDirEmptSig(wrf_num);
         signal: WRFDirFullSig(wrf_num);
         assign: Tindused(Tindex) = 0;
         dispose;

rdone    assign: farmTcnt(farm#(tank#)) = farmTcnt(farm#(tank#)) + 1;
                 WRFTcnt(wrf#(farm#(tank#))) = WRFTcnt(wrf#(farm#(tank#))) + 1;
                 RTcnt = RTcnt + 1;
         write,rcomplete:tnow,RTcnt,tank#,farmTcnt(farm#(tank#)),wrf#(farm#(tank#));
         branch,2:
            if,(WRFTcnt(wrf#(farm#(tank#))).eq.WRFTtot(wrf#(farm#(tank#)))).and.
   ((wrf#(farm#(tank#)).eq.2).or.(wrf#(farm#(tank#)).eq.3).or.(nasouth.eq.0)),eWRFTf;
            always,rdonec;
;;;;;((wrf#(farm#(tank#)).eq.2).or.(wrf#(farm#(tank#)).eq.3))
rdonec   release: tank(tank#1);
         signal: tank#1;
         signal: StWSig;
```



```
         signal: RWfillSig;
         signal: WRFDirEmptSig(wrf_num);
;         signal: WRFDirEmptSig(wrf_num);
;         release: tank(tank#2);
         release: wrf(wrf_num);
         assign: Tindused(Tindex) = 0;
                 Tindused(Mindex) = 0;
;         if:AllSSTcnt.eq.AllSSTtot;
         assign: im = 0;
            while:im.lt.10;
               assign: im = im + 1;
                signal: RWfillSig;
                signal: SD1Sig0;
                signal: SD1Sig3;
                signal: SD2Sig0;
                signal: SD2Sig3;
                signal: SDSig5;
                signal: SDSig7;
                signal: DecSig0;
                signal: WasSig0;
                signal: SolSig0;
                signal: DecPSig;
                signal: SolPSig;
                signal: FeedPTSig;
                signal: FeedHLSig;
                signal: StWSig;
                signal: WhatsupSig;
                signal: LVSig;
                signal: LVTSig;
                signal: LVFeedSig;
               delay: 100.0;
            endwhile;
;         endif;
         dispose;
;
;**************
;*********************************
;***
;***  InTank S/D   Sol Wash Operation
;***
         create;
;** Wait for Threshold Number of DSTs before S/D - Sol Wash
;SWwait   queue,SWwaitQ;
;         scan: (NSD1stR.ge.NSD1stRmin).and.
;               (NSD2ndR.ge.NSD2ndRmin).and.
;               (NDecantR.ge.NDecantRmin).and.
;               (NSolR.ge.NSolRmin);
         branch,8:
              always,LookRW;
              always,Loo3SD1;
              always,Loo4SD2;
              always,Loo5SD2;
```

```
                always,Loo7SD2;
                always,LookDWd;
                always,LookDWWd;
                always,LookSSd;
;***
;***  Retrieved Waste  --> 1st Stage S/D Tank
;***
;** Look to fill 1st Stage S/D Tanks
LookRW    if:NRWStorage.eq.0;
            assign: j = 0;
          else;
             findj,1,NRWStorage:(RWStorageR(j).eq.1).and.
          ( (RWStorage(j).eq.171).or.( volume(RWStorage(j)).ge.(900.0/(1.0+1.1*(tnow.ge.4288.0))) )
          .or.((AllSSTcnt.eq.AllSSTtot).and.(volume(RWStorage(j)).gt.0.001))).and.
                            (NR(tank(RWStorage(j))).eq.0);
          endif;
          branch,1:
               if,(j.eq.0).and.(AllSSTcnt.eq.AllSSTtot),LookSD1E:
               if,j.eq.0,LookRWW:
               else,PickRW;
LookSD1E if:NSD1st.eq.0;
            assign: j = 0;
          else;
          findj,1,NSD1st:(SD1stR(j).eq.1).and.(SD1stC(j).eq.0).and.
                      (NR(tank(SD1st(j))).eq.0).and.(volume(SD1st(j)).gt.(0.001*vheel));
          endif;
          if: (j.ne.0);
            assign:   gindex2 = j;
                      SD1stC(gindex2) = 5;
                      signal: SDSig5;
          endif;
LookRWW   queue,LookRWQ;
          wait: RWfillSig,1:next(LookRW);
PickRW    assign:  gindex1 = j;
                   tank#1 = RWStorage(gindex1);
          queue, tank_Q(tank#1);
          seize: tank(tank#1);
          branch,2:
               if,mSol(tank#1,TotMassInd)/mass(tank#1,TotMassInd).le.Scutoff,LookDeR:
               if,mSol(tank#1,TotMassInd)/mass(tank#1,TotMassInd).gt.Scutoff,LookSD1:
;               always,LookSD1:
          always,LookRW;
LookSD1   if:NSD1st.eq.0;
            assign: j = 0;
          else;
          findj,1,NSD1st:(SD1stR(j).eq.1).and.(SD1stC(j).eq.0).and.
                      (NR(tank(SD1st(j))).eq.0);
          endif;
          branch,1:
               if,j.eq.0,LookSD1W:
               else,PickSD1;
LookSD1W queue,LookSD1Q;
```



```
          wait: SD1Sig0,1:next(LookSD1);
PickSD1   assign:   gindex2 = j;
                    SD1stC(gindex2) = 1;
                    tank#2 = SD1st(gindex2);
          queue, tank_Q(tank#2);
          seize: tank(tank#2);
;** Prepare for Transfer
          assign: gindex4 = SourceRNHeat;
          findj,1,100:Tindused(j).eq.0;
;*************************************
;  Estimate Volume of Settled Solids
           if: mass(tank#2,TotMassInd).gt.0.0;
        assign: fentsol = min(fentsol0(1),mSol(tank#2,TotMassInd)/mass(tank#2,TotMassInd));
                SD1stSol(gindex2) = 0.0;
          endif;
          if: mLiq(tank#2,TotMassInd).gt.0.0;
            assign:  SD1stSol(gindex2) = SD1stSol(gindex2) + vLiq(tank#2)*
            ( (1.0-fentsol)*mass(tank#2,TotMassInd)/mLiq(tank#2,TotMassInd) - 1.0 )*
              (1.0-ffluffy(SD1stOP(gindex2)))/(ffluffy(SD1stOP(gindex2))-fentsol) ;
          endif;
          if: mSol(tank#2,TotMassInd).gt.0.0;
            assign:  SD1stSol(gindex2) = SD1stSol(gindex2) + vSol(tank#2)*
            ( 1.0   fentsol*mass(tank#2,TotMassInd)/mSol(tank#2,TotMassInd) )*
            ffluffy(SD1stOP(gindex2))/(ffluffy(SD1stOP(gindex2))-fentsol) ;
          endif;
;*************************************
;  Estimate increase in Volume of Settled Solids
        assign: fentsol = min(fentsol0(1),mSol(tank#1,TotMassInd)/mass(tank#1,TotMassInd));
                SD1stAdd(gindex2) = 0.0;
        if: mLiq(tank#1,TotMassInd).gt.0.0;
          assign:  SD1stAdd(gindex2) = SD1stAdd(gindex2) + vLiq(tank#1)*
          ( (1.0-fentsol)*mass(tank#1,TotMassInd)/mLiq(tank#1,TotMassInd) - 1.0 )*
            (1.0-ffluffy(SD1stOP(gindex2)))/(ffluffy(SD1stOP(gindex2))-fentsol) ;
        endif;
        if: mSol(tank#1,TotMassInd).gt.0.0;
          assign:  SD1stAdd(gindex2) = SD1stAdd(gindex2) + vSol(tank#1)*
          ( 1.0   fentsol*mass(tank#1,TotMassInd)/mSol(tank#1,TotMassInd) )*
          ffluffy(SD1stOP(gindex2))/(ffluffy(SD1stOP(gindex2))-fentsol) ;
        endif;
        assign: Tindex = j;
                Tindused(Tindex) = 1;
        if: SD1stAdd(gindex2).gt.0.0;
          assign: Tvolume(Tindex) = min(fworking*capacity(tank#2) -
                          volume(tank#2),volume(tank#1),volume(tank#1)*max(0.0,
            (kgalperfoot*SPheight(SD1stOP(gindex2))*1.1 - SD1stSol(gindex2))/SD1stAdd(gindex2)) );
        else;
          assign: Tvolume(Tindex) = min(fworking*capacity(tank#2)
                          volume(tank#2),volume(tank#1));
        endif;
        assign: dTvol(Tindex) = dvol;
                dTrate(Tindex) = ISDfill;
;** Check to see if there is anthing to transfer
```

```
            branch,1:
                if,Tvolume(Tindex).ge.0.001,Tr2SD1i:
                else,FiledSD1;
;** Initalize Concentrations Prior to Transfer
Tr2SD1i  assign:  TcvLiq(Tindex) = vLiq(tank#1)/volume(tank#1):
                  TcvSol(Tindex) = vSol(tank#1)/volume(tank#1):
                  im = 1;
            while:im.le.177;
            assign: TcFrac(Tindex,im) = fTank(tank#1,im)/volume(tank#1):
                    im=im+1;
            endwhile;
            assign: im=0;
Tr2SD1im assign:  im = im + 1;
            assign: Tcmass(Tindex,im)  = mass(tank#1,im)/volume(tank#1):
                    TcmLiq(Tindex,im)  = mLiq(tank#1,im)/volume(tank#1):
                    TcmSol(Tindex,im)  = mSol(tank#1,im)/volume(tank#1);
            branch,1:
                 if,im.lt.Nmcomp,Tr2SD1im:
                 else,Look2SD1;
;** Begin to Transfer Stored Waste - > 1st Stage S/D Tank
Look2SD1 branch,1:
                if,Tvolume(Tindex).ge.0.001,Tr2SD1:
                else,FiledSD1;
Tr2SD1   assign:  dTvol(Tindex)  = min(Tvolume(Tindex),dTvol(Tindex)):
                  volume(tank#1)  = volume(tank#1)  - dTvol(Tindex):
                  volume(tank#2)  = volume(tank#2)  + dTvol(Tindex):
                  vLiq(tank#1)    = vLiq(tank#1)     dTvol(Tindex)*TcvLiq(Tindex):
                  vLiq(tank#2)    = vLiq(tank#2)     + dTvol(Tindex)*TcvLiq(Tindex):
                  vSol(tank#1)    = vSol(tank#1)     - dTvol(Tindex)*TcvSol(Tindex):
                  vSol(tank#2)    = vSol(tank#2)     + dTvol(Tindex)*TcvSol(Tindex);
;------- --- Tank Fractions
            assign: im=1;
            while:im.le.177;
            assign: fTank(tank#2,im)  = fTank(tank#2,im) + TcFrac(Tindex,im)*dTvol(Tindex):
                    fTank(tank#1,im)  = fTank(tank#1,im)  - TcFrac(Tindex,im)*dTvol(Tindex):
                      im=im+1;
            endwhile;
;---------- -
            assign:  im = 0;
Tr2SD1m  assign:  im = im + 1;
            assign: mass(tank#1,im)  = mass(tank#1,im)  - dTvol(Tindex)*Tcmass(Tindex,im):
                    mass(tank#2,im)  = mass(tank#2,im)  + dTvol(Tindex)*Tcmass(Tindex,im):
                    mLiq(tank#1,im)  = mLiq(tank#1,im)  - dTvol(Tindex)*TcmLiq(Tindex,im):
                    mLiq(tank#2,im)  = mLiq(tank#2,im)  + dTvol(Tindex)*TcmLiq(Tindex,im):
                    mSol(tank#1,im)  = mSol(tank#1,im)  - dTvol(Tindex)*TcmSol(Tindex,im):
                    mSol(tank#2,im)  = mSol(tank#2,im)  + dTvol(Tindex)*TcmSol(Tindex,im);
            branch,1:
                if,im.lt.Nmcomp,Tr2SD1m:
                else,Tr2SD1d;
Tr2SD1d  delay: dTvol(Tindex)/dTrate(Tindex);
            write,FillSWT,"(2i5,11e11.3)":
              tank#1,tank#2,tnow,mLiq(tank#1,Ntot),mSol(tank#1,Ntot),volume(tank#1),
```



```
                        mLiq(tank#2,Ntot),mSol(tank#2,Ntot),volume(tank#2),
                        dTvol(Tindex),dTvol(Tindex)*TcmLiq(Tindex,Ntot),
                                      dTvol(Tindex)*TcmSol(Tindex,Ntot),gindex4;
;           assign: im = 0;
;           while: im < 178;
;               write,FillSWT,"(i5,e11.3)":
;                     im,mSol(tank#2,im+12);
;           assign: im = im + 1;
;           endwhile;
            assign:  Tvolume(Tindex)  = Tvolume(Tindex) - dTvol(Tindex):
                     next(Look2SD1);
FiledSD1        if:(tank#1.eq.171).and.(volume(tank#1).le.0.001);
                    assign:  RWStorageK(gindex1) = 0;
;                    assign: NSD2nd = NSD2nd + 1;
;                         SD2nd(NSD2nd) = tank#1:
;                         SD2ndR(NSD2nd) = 1:
;                         SD2ndOP(NSD2nd) = 1;
                    write,checkassign,"(i5,f7.1,' DST  ',a5,' has been de-assigned')":
                                  gindex1,tnow,str(variables,tank#1);
                endif;
            release: tank(tank#1);
            signal: tank#1;
            signal: StWSig;
            signal: XSiteSig;
            signal: RWemptSig;
            signal: WRFDirEmptSig(1);
            signal: WRFDirEmptSig(2);
            signal: WRFDirEmptSig(3);
            signal: WRFDirEmptSig(4);
;            signal: WRFDirEmptSig(1);
;            signal: WRFDirEmptSig(2);
;            signal: WRFDirEmptSig(3);
;            signal: WRFDirEmptSig(4);
            signal: RWfillSig;
            signal: SD1Sig0;
            assign: Tinused(Tindex) = 0;
;** Tank may not be full ## might want to check ##
;***
;** Settle Solids in 1st Stage S/D Tank
            assign:  SD1stC(gindex2) = 2;
            delay: Stime/SWTiming(SD1stOP(gindex2));
;*****************************************
;  Estimate Volume of Settled Solids
            assign: fentsol = min(fentsol0(1),mSol(tank#2,TotMassInd)/mass(tank#2,TotMassInd)):
                    SD1stSol(gindex2) =  0.0;
            if: mLiq(tank#2,TotMassInd).gt.0.0;
              assign:  SD1stSol(gindex2) = SD1stSol(gindex2) + vLiq(tank#2)*
              ( (1.0-fentsol)*mass(tank#2,TotMassInd)/mLiq(tank#2,TotMassInd)  - 1.0 )*
              (1.0-ffluffy(SD1stOP(gindex2)))/(ffluffy(SD1stOP(gindex2)) fentsol) ;
            endif;
            if: mSol(tank#2,TotMassInd).gt.0.0;
              assign:  SD1stSol(gindex2) = SD1stSol(gindex2) + vSol(tank#2)*
```

```
            ( 1.0 - fentsol*mass(tank#2,TotMassInd)/mSol(tank#2,TotMassInd) )*
            ffluffy(SD1stOP(gindex2))/(ffluffy(SD1stOP(gindex2))-fentsol) ;
          endif;
;*********************************
          if: (mSol(tank#2,TotMassInd)/mass(tank#2,TotMassInd)).lt.ffluffy(SD1stOP(gindex2));
            assign:  SD1stC(gindex2) = 3;
            release: tank(tank#2);
            signal: tank#2;
            signal: SD1Sig3;
          else;
            assign:  SD1stC(gindex2) = 5;
            release: tank(tank#2);
            signal: tank#2;
            signal: SD5Sig5;
            signal: SD1Sig3;
            signal: SD2Sig0;
          endif;
          dispose;
;*********************************
LookDeRF release: tank(tank#2);
          signal: tank#2;
                signal: WhatsupSig;
          signal:  DecFSig;
          assign:  dTvol(Tindex) = dvol;
LookDeR   if:NDecant.eq.0;
            assign: j = 0;
          else;
          findj,1,NDecant:(DecantR(j).eq.1).and.
                (NR(tank(Decant(j))).eq.0).and.
                ( (fworking*capacity(Decant(j))
                  volume(Decant(j))).ge.0.001 );
;                 (DecantE(j).ne.2);
          endif;
          branch,1:
               if,j.eq.0,LookDeRW:
               else,PickDeR;
LookDeRW queue,LookDeRQ;
          wait: DecSig0,1:next(LookDeR);
PickDeR   assign: gindex2 = j;
                  tank#2 = Decant(gindex2);
                  DecantE(gindex2) = 1;
          queue, tank_Q(tank#2);
          seize: tank(tank#2);
;** Prepare for Transfer
          if:Tindex.eq.0;
            findj,1,100:Tindused(j).eq.0;
            assign: Tindex = j;
                    Tindused(Tindex) = 1;
                    Tvolume(Tindex) =  max(0.0,volume(tank#1)-vheel);
                    dTvol(Tindex) = dvol;
                    dTrate(Tindex) = rSDfill;
;** Transfer Decant --> Decant Storage
```



```
          branch,1:
               if,Tvolume(Tindex).lt.0.001,FiledDeR;
               if,(fworking*capacity(tank#2) - volume(tank#2)).lt.0.001,LookDeRF;
               else,Tr2DeRi;
;** Initalize Concentrations Prior to Transfer
Tr2DeRi   assign: TcvLiq(Tindex) =  vLiq(tank#1)/volume(tank#1);
                  TcvSol(Tindex) =  vSol(tank#1)/volume(tank#1);
          assign:  im = 1;
          while:im.le.177;
          assign: TcFrac(Tindex,im) = fTank(tank#1,im)/volume(tank#1);
                  im=im+1;
          endwhile;
          assign: im=0;
Tr2DeRim assign:  im = im + 1;
          assign: TcmLiq(Tindex,im) = 0.0;
                  TcmSol(Tindex,im) = 0.0;
          if: vLiq(tank#1).gt.0.0;
            assign: TcmLiq(Tindex,im) = mLiq(tank#1,im)*TcvLiq(Tindex)/vLiq(tank#1);
          endif;
          if: vSol(tank#1).gt.0.0;
            assign: TcmSol(Tindex,im) = mSol(tank#1,im)*TcvSol(Tindex)/vSol(tank#1);
          endif;
          assign: Tcmass(Tindex,im) = TcmLiq(Tindex,im)+TcmSol(Tindex,im);
            branch,1:
                 if,im.lt.Nmcomp,Tr2DeRim;
                 else,Look2DeR;
;** Begin Transfer to 1st Stage S/D Tank
          endif;
Look2DeR branch,1:
               if,Tvolume(Tindex).lt.0.001,FiledDeR;
               if,(fworking*capacity(tank#2) - volume(tank#2)).lt.0.001,LookDeRF;
               else,Tr2DeR;
Tr2DeR    assign:  dTvol(Tindex) = min(Tvolume(Tindex),dTvol(Tindex),
                        (fworking*capacity(tank#2) - volume(tank#2)) );
                   volume(tank#1) = volume(tank#1) - dTvol(Tindex);
                   volume(tank#2) = volume(tank#2) + dTvol(Tindex);
                   vLiq(tank#1)   = vLiq(tank#1)   - dTvol(Tindex)*TcvLiq(Tindex);
                   vLiq(tank#2)   = vLiq(tank#2)   + dTvol(Tindex)*TcvLiq(Tindex);
                   vSol(tank#1)   = vSol(tank#1)   - dTvol(Tindex)*TcvSol(Tindex);
                   vSol(tank#2)   = vSol(tank#2)   + dTvol(Tindex)*TcvSol(Tindex);
;- --- ----- Tank Fractions
          assign: im=1;
          while:im.le.177;
          assign: fTank(tank#2,im) = fTank(tank#2,im) + TcFrac(Tindex,im)*dTvol(Tindex);
                  fTank(tank#1,im) = fTank(tank#1,im) - TcFrac(Tindex,im)*dTvol(Tindex);
                     im=im+1;
          endwhile;
;- --- ----- -
          assign:  im = 0;
Tr2DeRm   assign:  im = im + 1;
          assign: mass(tank#1,im) = mass(tank#1,im) - dTvol(Tindex)*Tcmass(Tindex,im);
                  mass(tank#2,im) = mass(tank#2,im) + dTvol(Tindex)*Tcmass(Tindex,im);
```

```
                    mLiq(tank#1,im) = mLiq(tank#1,im) - dTvol(Tindex)*TcmLiq(Tindex,im);
                    mLiq(tank#2,im) = mLiq(tank#2,im) + dTvol(Tindex)*TcmLiq(Tindex,im);
                    mSol(tank#1,im) = mSol(tank#1,im) - dTvol(Tindex)*TcmSol(Tindex,im);
                    mSol(tank#2,im) = mSol(tank#2,im) + dTvol(Tindex)*TcmSol(Tindex,im);
          branch,1:
                if.im.lt.Nmcomp,Tr2DeRm;
                else,Tr2DeRd;
Tr2DeRd   delay: dTvol(Tindex)/dTrate(Tindex);
          write,FillDec1,"(2i5,10e11.3)":
            tank#1,tank#2,tnow,mLiq(tank#1,Ntot),mSol(tank#1,Ntot),volume(tank#1),
                          mLiq(tank#2,Ntot),mSol(tank#2,Ntot),volume(tank#2),
                          dTvol(Tindex),dTvol(Tindex)*TcmLiq(Tindex,Ntot),
                                        dTvol(Tindex)*TcmSol(Tindex,Ntot);
          assign:  Tvolume(Tindex)  = Tvolume(Tindex) - dTvol(Tindex);
                   next(Look2DeR);
FiledDeR  release: tank(tank#1);
          signal: tank#1;
          signal: XSiteSig;
          signal: RWemptSig;
          assign: Tindused(Tindex) = 0;
;** Tank may not be full ## might want to check ##
;***
;**
          release: tank(tank#2);
          signal: tank#2;
          signal: DecSig0;
          signal: WasSig0;
                signal: WhatsupSig;
          signal: DecFSig;
          dispose;
;***
;***  1st Stage S/D Tank ----> 2nd Stage S/D Tank
;***
;** Look to fill 2nd Stage S/D Tanks
Loo3SD1   if:NSD1st.eq.0;
             assign: j = 0;
          else;
          findj,1,NSD1st:(SD1stR(j).eq.1).and.(SD1stC(j).eq.3).and.
                         (NR(tank(SD1st(j))).eq.0);
          endif;
          branch,1:
               if,j.eq.0,Loo3SD1W;
               else,Pic3SD1;
Loo3SD1W queue,Loo3SD1Q;
          wait: SD1Sig3,1:next(Loo3SD1);
Pic3SD1   assign:   gindex1 = j;
                    SD1stC(gindex1) = 4;
                    tank#1 = SD1st(gindex1);
          queue, tank_Q(tank#1);
          seize: tank(tank#1);
          branch,2:
               always,LookSD2;
```



```
               always,Loo3SD1;
LookSD2   if:NSD2nd.eq.0;
             assign: j = 0;
          else;
             findj,1,NSD2nd:(SD2ndR(j).eq.1).and.(SD2ndC(j).eq.0).and.
                            (NR(tank(SD2nd(j))).eq.0);
          endif;
          branch,1:
               if,j.eq.0,LookSD2W;
               else,PickSD2;
LookSD2W queue,LookSD2Q;
          wait: SD2Sig0,1:next(LookSD2);
PickSD2   assign:   gindex2 = j;
                    SD2ndC(gindex2) = 1;
                    tank#2 = SD2nd(gindex2);
          queue, tank_Q(tank#2);
          seize: tank(tank#2);
;** Prepare for Transfer
          findj,1,100:Tindused(j).eq.0;
          assign: Tindex = j;
                  Tindused(Tindex) = 1;
                  Tvolume(Tindex) = volume(tank#1) - SD1stSol(gindex1);
                  dTvol(Tindex) = dvol;
                  dTrate(Tindex) = rSDfill;
          assign: im 1;
          while:im.le.177;
          assign: TcFrac(Tindex,im) = fTank(tank#1,im)/volume(tank#1);
                  im im+1;
          endwhile;
;** Check to see if there is anthing to transfer
          branch,1:
               if,Tvolume(Tindex).ge.0.001,Tr2SD2i;
               else,FiledSD2;
;** Initalize Concentrations Prior to Transfer
Tr2SD2i   assign: fentsol = min(fentsol0(t),mSol(tank#1,TotMassInd)/mass(tank#1,TotMassInd));
                  TcvLiq(Tindex) =  0.0;
                  TcvSol(Tindex) =  0.0;
          if: mLiq(tank#1,TotMassInd).gt.0.0;
            assign:  TcvLiq(Tindex) = vLiq(tank#1)*
            ( 1.0 - (1.0-fluffy(SD1stOP(gindex1)))*mass(tank#1,TotMassInd)/mLiq(tank#1,TotMassInd) )*
                (1.0 fentsol)/(Tvolume(Tindex)*(fluffy(SD1stOP(gindex1))-fentsol)) ;
          endif;
          if: mSol(tank#1,TotMassInd).gt.0.0;
            assign:  TcvSol(Tindex) = vSol(tank#1)*
            ( fluffy(SD1stOP(gindex1))*mass(tank#1,TotMassInd)/mSol(tank#1,TotMassInd) - 1.0 )*
                fentsol/(Tvolume(Tindex)*(fluffy(SD1stOP(gindex1))-fentsol)) ;
          endif;
          assign:  im = 0;
Tr2SD2im assign:  im = im + 1;
          assign: TcmLiq(Tindex,im) = 0.0;
                  TcmSol(Tindex,im) = 0.0;
          if: vLiq(tank#1).gt.0.0;
```

```
            assign: TcmLiq(Tindex,im)  = mLiq(tank#1,im)*TcvLiq(Tindex)/vLiq(tank#1);
          endif;
          if: vSol(tank#1).gt.0.0;
            assign: TcmSol(Tindex,im)  = mSol(tank#1,im)*TcvSol(Tindex)/vSol(tank#1);
          endif;
          assign: Tcmass(Tindex,im)   = TcmLiq(Tindex,im)+TcmSol(Tindex,im);
          branch,1:
               if,im.lt.Nmcomp,Tr2SD2im;
               else,Look2SD2;
;** Begin Transfer of Decant --> 2nd Stage S/D Tank
Look2SD2 branch,1:
               if,Tvolume(Tindex).ge.0.001,Tr2SD2;
               else,FiledSD2;
Tr2SD2    assign:  dTvol(Tindex)  = min(Tvolume(Tindex),dTvol(Tindex));
                   volume(tank#1)  = volume(tank#1)   - dTvol(Tindex);
                   volume(tank#2)  = volume(tank#2)   + dTvol(Tindex);
                   vLiq(tank#1)    = vLiq(tank#1)     - dTvol(Tindex)*TcvLiq(Tindex);
                   vLiq(tank#2)    = vLiq(tank#2)     + dTvol(Tindex)*TcvLiq(Tindex);
                   vSol(tank#1)    = vSol(tank#1)     - dTvol(Tindex)*TcvSol(Tindex);
                   vSol(tank#2)    = vSol(tank#2)     + dTvol(Tindex)*TcvSol(Tindex);
;----- ----  Tank Fractions
          assign: im=1;
          while:im.le.177;
          assign: fTank(tank#2,im) = fTank(tank#2,im)  + TcFrac(Tindex,im)*dTvol(Tindex);
                  fTank(tank#1,im) = fTank(tank#1,im)  - TcFrac(Tindex,im)*dTvol(Tindex);
                     im=im+1;
          endwhile;
;- ---- ---
          assign:  im = 0;
Tr2SD2m   assign:  im = im + 1;
          assign: mass(tank#1,im)  = mass(tank#1,im)  - dTvol(Tindex)*Tcmass(Tindex,im);
                  mass(tank#2,im)  = mass(tank#2,im)  + dTvol(Tindex)*Tcmass(Tindex,im);
                  mLiq(tank#1,im)  = mLiq(tank#1,im)  - dTvol(Tindex)*TcmLiq(Tindex,im);
                  mLiq(tank#2,im)  = mLiq(tank#2,im)  + dTvol(Tindex)*TcmLiq(Tindex,im);
                  mSol(tank#1,im)  = mSol(tank#1,im)  - dTvol(Tindex)*TcmSol(Tindex,im);
                  mSol(tank#2,im)  = mSol(tank#2,im)  + dTvol(Tindex)*TcmSol(Tindex,im);
          branch,1:
               if,im.lt.Nmcomp,Tr2SD2m;
               else,Tr2SD2d;
Tr2SD2d   delay: dTvol(Tindex)/dTrate(Tindex);
          write,FillDec2,"(2i5,10e11.3)":
            tank#1,tank#2,tnow,mLiq(tank#1,Ntot),mSol(tank#1,Ntot),volume(tank#1),
                       mLiq(tank#2,Ntot),mSol(tank#2,Ntot),volume(tank#2),
                       dTvol(Tindex),dTvol(Tindex)*TcmLiq(Tindex,Ntot),
                                     dTvol(Tindex)*TcmSol(Tindex,Ntot);
          assign:  Tvolume(Tindex)  = Tvolume(Tindex)   dTvol(Tindex);
                   next(Look2SD2);
FiledSD2 if:(SD1stSol(gindex1)/kgalperfoot.lt.SPheight(SD1stOP(gindex1))).and.(AllSSTcnt.ne.AllSSTtot);
            assign:  SD1stC(gindex1) = 0;
            release: tank(tank#1);
            signal: tank#1;
            signal: SD1Sig0;
```



```
            signal: RWfillSig;
          else;
            assign:  SD1stC(gindex1) = 5;
            release: tank(tank#1);
            signal: tank#1;
            signal: SD5Sig5;
            signal: SD1Sig3;
            signal: SD2Sig0;
          endif;
          assign: Tindused(Tindex) = 0;
;** Tank may not be full ## might want to check ##
;** Settle Solids in 2nd Stage S/D Tank
;          assign:  SD2ndC(gindex2) = 2;
;          delay: Stime;          SD2 tanks are functioning as decant storage only
;*********************************
;  Estimate Volume of Settled Solids
          assign: fentsol = min(fentsol0(2),mSol(tank#2,TotMassInd)/mass(tank#2,TotMassInd));
                  SD2ndSol(gindex2) =  0.0;
          if: mLiq(tank#2,TotMassInd).gt.0.0;
            assign:  SD2ndSol(gindex2) = SD2ndSol(gindex2)  + vLiq(tank#2)*
            ( (1.0-fentsol)*mass(tank#2,TotMassInd)/mLiq(tank#2,TotMassInd)  - 1.0 )*
              (1.0-ffluffy(SD2ndOP(gindex2)))/(ffluffy(SD2ndOP(gindex2))-fentsol)  ;
          endif;
          if: mSol(tank#2,TotMassInd).gt.0.0;
            assign:  SD2ndSol(gindex2) = SD2ndSol(gindex2)  + vSol(tank#2)*
            ( 1.0  - fentsol*mass(tank#2,TotMassInd)/mSol(tank#2,TotMassInd)  )*
            ffluffy(SD2ndOP(gindex2))/(ffluffy(SD2ndOP(gindex2))-fentsol)  ;
          endif;
;*********************************
          assign:  SD2ndC(gindex2) = 0;
          release: tank(tank#2);
          signal: SD2Sig3;
          dispose;
;***
;***   2nd Stage S/D Tank --- > Decant Storage Tanks
;***
;** Look for waiting 2nd Stage S/D Tanks
Loo3SD2  if:NSD2nd.eq.0;
            assign: j = 0;
         else;
             find,j,1,NSD2nd,(SD2ndR(j).eq.1).and.( (volume(SD2nd(j)).ge.800.0).or.(AllSSTcnt.eq.AllSSTtot) ).and.
                        ( NR(tank(SD2nd(j))).eq.0 ).and.( volume(SD2nd(j)).ge.0.001 );
          endif;
          branch,1:
               if,j.eq.0,Loo3SD2W;
               else,Pic3SD2;
Loo3SD2W queue,Loo3SD2Q;
          wait: SD2Sig3,1:next(Loo3SD2);
Pic3SD2  assign:   gindex1 = j;
                   SD2ndC(gindex1) = 1;
                   tank#1 = SD2nd(gindex1);
         queue, tank_Q(tank#1);
```

```
          seize: tank(tank#1);
          branch,2:
              always,Loo3SD2:
              always,LookDec;
LookDecF releas-- tank(tank#2);
          signal: tank#2;
              signal: WhatsupSig;
          signal:  DecFSig;
          assign:  dTvol(Tindex) = dvol;
LookDec  if:NDecant.eq.0;
             assign: j = 0;
          else;
             findj,1,NDecant:(DecantR(j).eq.1).and.
                 (NR(tank(Decant(j))).eq.0).and.
                 ( (fworking*capacity(Decant(j)) -
                    volume(Decant(j))).ge.0.001 );
;                (DecantE(j).ne.2);
          endif;
          branch,1:
              if,j.eq.0,LookDecW:
              else,PickDec;
LookDecW queue,LookDecQ;
          wait: DecSig0,1:next(LookDec);
PickDec  assign: gindex2 = j;
                 tank#2 = Decant(gindex2):
                 DecantE(gindex2) = 1;
          queue, tank_Q(tank#2);
          seize: tank(tank#2);
;** Prepare for Transfer
           if:Tindex.eq.0;
            findj,1,100:Tindused(j).eq.0;
            assign: Tindex = j;
                    Tindused(Tindex) = 1;
                    Tvolume(Tindex) = volume(tank#1) - SD2ndSol(gindex1):
                    dTvol(Tindex) = dvol:
                    dTrate(Tindex) = rSDfill;
          assign: im=1;
          while:im.le.177;
          assign: TcFrac(Tindex,im) = fTank(tank#1,im)/volume(tank#1):
                  im=im+1;
          endwhile;
;** Transfer Decant --> Decant Storage
           branch,1;
               if,Tvolume(Tindex).lt.0.001,FiledDec:
               if,(fworking*capacity(tank#2) - volume(tank#2)).lt.0.001,LookDecF:
               else,Tr2Deci;
;** Initalize Concentrations Prior to Transfer
Tr2Deci  assign: fentsol = min(fentsol0(2),mSol(tank#1,TotMassInd)/mass(tank#1,TotMassInd)):
                 TcvLiq(Tindex) = 0.0;
                 TcvSol(Tindex) = 0.0;
          if: mLiq(tank#1,TotMassInd).gt.0.0;
           assign:  TcvLiq(Tindex) = vLiq(tank#1)*
```



```
            ( 1.0 - (1.0-ffluffy(SD2ndOP(gindex1)))*mass(tank#1,TotMassInd)/mLiq(tank#1,TotMassInd) )*
              (1.0 fentsol)/(Tvolume(Tindex)*(ffluffy(SD2ndOP(gindex1))-fentsol)) ;
          endif;
          if: mSol(tank#1,TotMassInd).gt.0.0;
           assign:  TcvSol(Tindex) = vSol(tank#1)*
           ( ffluffy(SD2ndOP(gindex1))*mass(tank#1,TotMassInd)/mSol(tank#1,TotMassInd) - 1.0 )*
             fentsol/(Tvolume(Tindex)*(ffluffy(SD2ndOP(gindex1))-fentsol)) ;
          endif;
          assign:  im = 0;
Tr2Decim assign:  im = im + 1;
          assign: TcmLiq(Tindex,im) = 0.0;
                  TcmSol(Tindex,im) = 0.0;
          if: vLiq(tank#1).gt.0.0;
           assign: TcmLiq(Tindex,im) = mLiq(tank#1,im)*TcvLiq(Tindex)/vLiq(tank#1);
          endif;
          if: vSol(tank#1).gt.0.0;
           assign: TcmSol(Tindex,im) = mSol(tank#1,im)*TcvSol(Tindex)/vSol(tank#1);
          endif;
          assign: Tcmass(Tindex,im) = TcmLiq(Tindex,im)+TcmSol(Tindex,im);
           branch,1:
                if,im.lt.Nmcomp,Tr2Decim:
                else,Look2Dec;
;** Begin Transfer to 1st Stage S/D Tank
          endif;
Look2Dec branch,1:
             if,Tvolume(Tindex).lt.0.001,FiledDec:
             if,(fworking*capacity(tank#2) - volume(tank#2)).lt.0.001,LookDecF:
             else,Tr2Dec;
Tr2Dec   assign:  dTvol(Tindex) = min(Tvolume(Tindex),dTvol(Tindex),
                        (fworking*capacity(tank#2) - volume(tank#2)) ):
                  volume(tank#1) = volume(tank#1) - dTvol(Tindex):
                  volume(tank#2) = volume(tank#2) + dTvol(Tindex):
                  vLiq(tank#1)   = vLiq(tank#1)   - dTvol(Tindex)*TcvLiq(Tindex):
                  vLiq(tank#2)   = vLiq(tank#2)   + dTvol(Tindex)*TcvLiq(Tindex):
                  vSol(tank#1)   = vSol(tank#1)   - dTvol(Tindex)*TcvSol(Tindex):
                  vSol(tank#2)   = vSol(tank#2)   + dTvol(Tindex)*TcvSol(Tindex);
;------------ Tank Fractions
          assign: im=1;
          while:im.le.177;
          assign: fTank(tank#2,im) = fTank(tank#2,im) + TcFrac(Tindex,im)*dTvol(Tindex):
                  fTank(tank#1,im) = fTank(tank#1,im) - TcFrac(Tindex,im)*dTvol(Tindex):
                      im=im+1;
          endwhile;
;------------
          assign:  im = 0;
Tr2Decm  assign:  im = im + 1;
          assign: mass(tank#1,im) = mass(tank#1,im) - dTvol(Tindex)*Tcmass(Tindex,im):
                  mass(tank#2,im) = mass(tank#2,im) + dTvol(Tindex)*Tcmass(Tindex,im):
                  mLiq(tank#1,im) = mLiq(tank#1,im) - dTvol(Tindex)*TcmLiq(Tindex,im):
                  mLiq(tank#2,im) = mLiq(tank#2,im) + dTvol(Tindex)*TcmLiq(Tindex,im):
                  mSol(tank#1,im) = mSol(tank#1,im) - dTvol(Tindex)*TcmSol(Tindex,im):
                  mSol(tank#2,im) = mSol(tank#2,im) + dTvol(Tindex)*TcmSol(Tindex,im);
```

```
          branch,1:
               if,im.lt.Nmcomp,Tr2Decm:
               else,Tr2Decd;
Tr2Decd   delay: dTvol(Tindex)/dTrate(Tindex);
          write,Fil1Dec3,"(2i5,10e11.3)":
            tank#1,tank#2,tnow,mLiq(tank#1,Ntot),mSol(tank#1,Ntot),volume(tank#1),
                           mLiq(tank#2,Ntot),mSol(tank#2,Ntot),volume(tank#2),
                           dTvol(Tindex),dTvol(Tindex)*TcmLiq(Tindex,Ntot),
                                         dTvol(Tindex)*TcmSol(Tindex,Ntot);
          assign:  Tvolume(Tindex)  = Tvolume(Tindex) - dTvol(Tindex):
                   next(Look2Dec);
;FiledDec if:(SD2ndSol(gindex1)/kgalperfoot.lt.SPheight(SD2ndOP(gindex1))).and.(AllSSTcnt.ne.AllSSTtot);
 FiledDec   assign:  SD2ndC(gindex1) = 0;
            release: tank(tank#1);
            signal:  tank#1;
            signal:  SD2Sig0;
           else;
;            assign:  SD2ndC(gindex1) = 5;
;            release: tank(tank#1);
;            signal: tank#1;
;            signal: SDSig5;
           endif;
          assign: Tindused(Tindex) = 0;
;** Tank may not be full ## might want to check ##
;***
;** Settle Solids in 1st Stage S/D Tank
          release: tank(tank#2);
          signal: tank#2;
          signal: DecSig0;
            signal: WhatsupSig;
          signal: DecFSig;
;          dispose;
;
;           assign: im = 0;
;checkm    assign: im = im + 1;
;           branch,1:
;                if,im.lt.Nmcomp,checkm:
;                else,checkd;
checkd    dispose;
;
;***
;***  Wash Solids 1st & 2nd Stage S/D Tank ----> Decant Storage Tanks
;***
;** Look for waiting 2nd Stage S/D Tanks
Loo5SD2   if:NSD2nd.eq.0;
            assign: j = 0;
          else;
            findj,1,NSD2nd:(SD2ndR(j).eq.1).and.
                           (SD2ndC(j).eq.5).and.
                            (NR(tank(SD2nd(j))).eq.0);
          endif;
          branch,1:
```



```
               if,j.eq.0,Loo5SD1:
               else,Pic5SD2;
Pic5SD2   assign:   gindex1 = j:
                    SD2ndC(gindex1) = 6:
                    tank#1 = SD2nd(gindex1):
                    Which1st2nd = 2:
                    SD2ndW(gindex1) = SD2ndW(gindex1) + 1;
          queue, tank_Q(tank#1);
          seize: tank(tank#1);
          branch,2:
               always,Loo5SD2:
               always,LoAdWas;
Loo5SD1   if:NSD1st.eq.0;
            assign: j = 0;
          else;
            findj,1,NSD1st:(SD1stR(j).eq.1).and.(SD1stC(j).eq.5).and.
                           (NR(tank(SD1st(j))).eq.0);
          endif;
          branch,1:
               if,j.eq.0,Loo5SDW:
               else,Pic5SD1;
Loo5SDW   queue,Loo5SDQ:
          wait: SDSig5,1:next(Loo5SD2);
Pic5SD1   assign:   gindex1 = j:
                    SD1stC(gindex1) = 6;
                    tank#1 = SD1st(gindex1);
                    Which1st2nd = 1:
                    SD1stW(gindex1) = SD1stW(gindex1) + 1;
          queue, tank_Q(tank#1);
          seize: tank(tank#1);
          branch,2:
               always,Loo5SD2:
               always,LoAdWas;

;** Prepare Add Wash Solution
LoAdWas   if:Which1st2nd.eq.1;
            if:SD1stW(gindex1).eq.1;
              if:estimateWF.le.WFcutoff;
                assign: SD1stW(gindex1) = Nwash:
                        SD1stC(gindex1) = 7:
                        SD1stW(gindex1) = 0;
               release: tank(tank#1);
               signal: tank#1;
               signal: SDSig7;
               dispose;
              endif;
            endif;
          else;
            if:SD2ndW(gindex1).eq.1;
              if:estimateWF.le.WFcutoff;
                assign: SD2ndW(gindex1) = Nwash:
                        SD2ndC(gindex1) = 7:
```

```
                    SD2ndW(gindex1)) - 0;
            release: tank(tank#1);
            signal: tank#1;
            signal: SDSig7;
            dispose:
           endif;
      endif;
    endif;
    findj,1,100:Tindused(j).eq.0;
    assign: Tindex = j;
            Tindused(Tindex) = 1;
            Tvolume(Tindex) =  min(vLiq(tank#1)*
                  ( 2.0-((Which1st2nd.eq.1).and.(SD1stW(gindex1).eq.1))-
                        ((Which1st2nd.eq.2).and.(SD2ndW(gindex1).eq.1)) ),
                 (fworking*capacity(tank#1)    volume(tank#1))):
            dTvol(Tindex) = dvol:
            dTrate(Tindex) = rSDfill;
;** Initalize Concentrations Prior to Addition
Ad2Wasi  assign:  TcvLiq(Tindex) = WcvLiq(2-((Which1st2nd.eq.1).and.(SD1stW(gindex1).eq.1))-
                                   ((Which1st2nd.eq.2).and.(SD2ndW(gindex1).eq.1))):
                  TcvSol(Tindex) = WcvSol(2-((Which1st2nd.eq.1).and.(SD1stW(gindex1).eq.1))-
                                   ((Which1st2nd.eq.2).and.(SD2ndW(gindex1).eq.1))):
                  im = 0;
Ad2Wasim assign:  im = im + 1;
         assign: TcmLiq(Tindex,im) = WcmLiq(im,2-((Which1st2nd.eq.1).and.(SD1stW(gindex1).eq.1))-
                                   ((Which1st2nd.eq.2).and.(SD2ndW(gindex1).eq.1))):
                 TcmSol(Tindex,im) = WcmSol(im,2-((Which1st2nd.eq.1).and.(SD1stW(gindex1).eq.1))-
                                   ((Which1st2nd.eq.2).and.(SD2ndW(gindex1).eq.1))):
                 Tcmass(Tindex,im) = Wcmass(im,2-((Which1st2nd.eq.1).and.(SD1stW(gindex1).eq.1))-
                                   ((Which1st2nd.eq.2).and.(SD2ndW(gindex1).eq.1))):
          branch,1:
               if,im.lt.Nmcomp,Ad2Wasim:
               else,LoAd2Was;
;** Begin Transfer to 1st or 2nd Stage S/D Tank
LoAd2Was branch,1:
            if,Tvolume(Tindex).lt.0.001,FilAdWas:
            else,Ad2Was;
Ad2Was   assign:  dTvol(Tindex) = min(Tvolume(Tindex),dTvol(Tindex)):
                  Wvolume        = Wvolume        + dTvol(Tindex):
                  volume(tank#1) = volume(tank#1) + dTvol(Tindex):
                  vLiq(tank#1)   = vLiq(tank#1)   + dTvol(Tindex)*TcvLiq(Tindex):
                  vSol(tank#1)   = vSol(tank#1)   + dTvol(Tindex)*TcvSol(Tindex):
                  im = 0;
Ad2Wasm  assign:  im = im + 1;
         assign: mass(tank#1,im) = mass(tank#1,im) + dTvol(Tindex)*Tcmass(Tindex,im):
                 mLiq(tank#1,im) = mLiq(tank#1,im) + dTvol(Tindex)*TcmLiq(Tindex,im):
                 mSol(tank#1,im) = mSol(tank#1,im) + dTvol(Tindex)*TcmSol(Tindex,im):
         branch,1:
              if,im.lt.Nmcomp,Ad2Wasm:
             else,Ad2Wasd;
Ad2Wasd  delay: dTvol(Tindex)/dTrate(Tindex);
         assign:  Tvolume(Tindex)  = Tvolume(Tindex) - dTvol(Tindex):
```



```
                  next(LoAd2Was);
FilAdWas assign: Tindused(Tindex) = 0:
                 Tindex = 0;
         if:Which1st2nd.eq.1;
            if:SD1stW(gindex1).eq.1;
            write,check,"(' Caustic Wash Begins    in Tank: ',a5,' on day ',f9.2)":
                      str(variables,tank#),tnow;
               delay: Wtime(1)/SWTiming(SD1stOP(gindex1));
            write,check,"(' Caustic Wash Completes in Tank: ',a5,' on day ',f9.2)":
                      str(variables,tank#),tnow;
;                assign: gindex4 = 0.34;
;                im = 0;
;                while: im < 177;
;                  assign: im = im + 1;
;                  gindex4 = gindex4 + KmSol(im,Ntot)*mSol(tank#1,im+12)*washf(im);
;                endwhile;
;                if: mSol(tank#1,12).ne.0.0;
;                  assign: gindex4 = gindex4/mSol(tank#1,12);
;                endif;
         write,debug,"(6i6)":tank#1,NPO4,NOH,NNO3,NNO2,NCO3; ! PO4 to switch with OH-
         write,debug,"(5e14.6)":mSol(tank#1,NPO4),mSol(tank#1,NOH),
                                mSol(tank#1,NNO3),mSol(tank#1,NNO2),mSol(tank#1,NCO3);
                assign:
                 gindex4 = mSol(tank#1,NPO4)*fPO4/wPO4:
                 mLiq(tank#1,NPO4) = mLiq(tank#1,NPO4)     + wPO4*gindex4:
                 mLiq(tank#1,NOH) = mLiq(tank#1,NOH)         3.0*wOH*gindex4:

                 mLiq(tank#1,Ntot) = mLiq(tank#1,Ntot)     + (wPO4   3.0*wOH)*gindex4:
                 vLiq(tank#1)    = vLiq(tank#1)            + (wPO4 - 3.0*wOH)*gindex4/(rhoSol*3785.0):
                 vSol(tank#1)    = vSol(tank#1)            - (wPO4 - 3.0*wOH)*gindex4/(rhoSol*3785.0):
                 mSol(tank#1,Ntot) = mSol(tank#1,Ntot)     - (wPO4 - 3.0*wOH)*gindex4:
         write,debug,"(5e14.6)":gindex4*wPO4,MoleOH*wOH,MoleNO3*wNO3,MoleNO2*wNO2,MoleCO3*wCO3;
         assign:
                 mSol(tank#1,NOH)  = mSol(tank#1,NOH)   + 3.0*wOH*gindex4:
                 mSol(tank#1,NPO4) = mSol(tank#1,NPO4)      wPO4*gindex4:
         write,debug,"(6i6)":tank#1,NAl,NOH,NNO3,NNO2,NCO3;
         write,debug,"(5e14.6)":mSol(tank#1,NAl),mSol(tank#1,NOH),
                                mSol(tank#1,NNO3),mSol(tank#1,NNO2),mSol(tank#1,NCO3);
         assign: gindex4 = mSol(tank#1,NAl)*fAl/wAl:
                 mLiq(tank#1,NAlOH4) = mLiq(tank#1,NAlOH4) + wAlOH4*gindex4:
                 mLiq(tank#1,NOH) = mLiq(tank#1,NOH)       - 4.0*wOH*gindex4:
                 mLiq(tank#1,NOH) = mLiq(tank#1,NOH)       + wOH*MoleOH:
                 mLiq(tank#1,NNO3) = mLiq(tank#1,NNO3)     + wNO3*MoleNO3:
                 mLiq(tank#1,NNO2) = mLiq(tank#1,NNO2)     + wNO2*MoleNO2:
                 mLiq(tank#1,NCO3) = mLiq(tank#1,NCO3)     + wCO3*MoleCO3:
                 mLiq(tank#1,Ntot) = mLiq(tank#1,Ntot) + (wAl*gindex4 + wOH*MoleOH +
                           wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3):
                 vLiq(tank#1)    = vLiq(tank#1) + (wAl*gindex4 + wOH*MoleOH +
                           wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3)/(rhoSol*3785.0):
                 vSol(tank#1)    = vSol(tank#1) - (wAl*gindex4 + wOH*MoleOH +
                           wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3)/(rhoSol*3785.0):
                 mSol(tank#1,Ntot) = mSol(tank#1,Ntot)   (wAl*gindex4 + wOH*MoleOH +
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                    wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3);
      write,debug,"(5e14.6)":gindex4*wAl,MoleOH*wOH,MoleNO3*wNO3,MoleNO2*wNO2,MoleCO3*wCO3;
      assign:
              mSol(tank#1,NCO3)  = mSol(tank#1,NCO3)     - wCO3*MoleCO3:
              mSol(tank#1,NNO2)  = mSol(tank#1,NNO2)     - wNO2*MoleNO2:
              mSol(tank#1,NNO3)  = mSol(tank#1,NNO3)     - wNO3*MoleNO3:
              mSol(tank#1,NOH)   = mSol(tank#1,NOH)      - wOH*MoleOH:
              mSol(tank#1,NAl)   = mSol(tank#1,NAl)      - wAl*gindex4;
      write,debug,"(6i6)":tank#1,NNa,NOH,NNO3,NNO2,NCO3:
      write,debug,"(5e14.6)":mSol(tank#1,NNa),mSol(tank#1,NOH),
                              mSol(tank#1,NNO3),mSol(tank#1,NNO2),mSol(tank#1,NCO3);
      assign: gindex4 = mSol(tank#1,NNa)*fNa/wNa:
              mLiq(tank#1,NNa)  = mLiq(tank#1,NNa)  + wNa*gindex4:
              mLiq(tank#1,NOH)  = mLiq(tank#1,NOH)      + wOH*MoleOHc1:
              mLiq(tank#1,NNO3) = mLiq(tank#1,NNO3)     + wNO3*MoleNO3c1:
              mLiq(tank#1,NNO2) = mLiq(tank#1,NNO2)     + wNO2*MoleNO2c1:
              mLiq(tank#1,NCO3) = mLiq(tank#1,NCO3)     + wCO3*MoleCO3c1:
              mLiq(tank#1,Ntot) = mLiq(tank#1,Ntot) + (wNa*gindex4 + wOH*MoleOHc1 +
                      wNO3*MoleNO3c1 + wNO2*MoleNO2c1 + wCO3*MoleCO3c1):
              vLiq(tank#1)    = vLiq(tank#1) + (wNa*gindex4 + wOH*MoleOHc1 +
                      wNO3*MoleNO3c1 + wNO2*MoleNO2c1 + wCO3*MoleCO3c1)/(rhoSol*3785.0):
              vSol(tank#1)    = vSol(tank#1) - (wNa*gindex4 + wOH*MoleOHc1 +
                      wNO3*MoleNO3c1 + wNO2*MoleNO2c1 + wCO3*MoleCO3c1)/(rhoSol*3785.0):
              mSol(tank#1,Ntot) = mSol(tank#1,Ntot)  - (wNa*gindex4 + wOH*MoleOHc1 +
                      wNO3*MoleNO3c1 + wNO2*MoleNO2c1 + wCO3*MoleCO3c1):
      write,debug,"(5e14.6)":gindex4*wNa,MoleOHc1*wOH,MoleNO3c1*wNO3,MoleNO2c1*wNO2,MoleCO3c1*wCO3;
      assign:
              mSol(tank#1,NCO3)  = mSol(tank#1,NCO3)     - wCO3*MoleCO3c1:
              mSol(tank#1,NNO2)  = mSol(tank#1,NNO2)     - wNO2*MoleNO2c1:
              mSol(tank#1,NNO3)  = mSol(tank#1,NNO3)     - wNO3*MoleNO3c1:
              mSol(tank#1,NOH)   = mSol(tank#1,NOH)      - wOH*MoleOHc1:
              mSol(tank#1,NNa)   = mSol(tank#1,NNa)      - wNa*gindex4;
      write,debug,"(6i6)":tank#1,NCr,NOH,NNO3,NNO2,NCO3;
      write,debug,"(5e14.6)":mSol(tank#1,NCr),mSol(tank#1,NOH),
                              mSol(tank#1,NNO3),mSol(tank#1,NNO2),mSol(tank#1,NCO3);
      assign: gindex4 = mSol(tank#1,NCr)*fCr/wCr:
              mLiq(tank#1,NCrOH4) = mLiq(tank#1,NCrOH4)  + wCrOH4*gindex4:
              mLiq(tank#1,NOH)  = mLiq(tank#1,NOH)       - 4.0*wOH*gindex4:
              mLiq(tank#1,NOH)  = mLiq(tank#1,NOH)       + wOH*MoleOH:
              mLiq(tank#1,NNO3) = mLiq(tank#1,NNO3)      + wNO3*MoleNO3:
              mLiq(tank#1,NNO2) = mLiq(tank#1,NNO2)      + wNO2*MoleNO2:
              mLiq(tank#1,NCO3) = mLiq(tank#1,NCO3)      + wCO3*MoleCO3:
              mLiq(tank#1,Ntot) = mLiq(tank#1,Ntot) + (wCr*gindex4 + wOH*MoleOH +
                      wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3):
              vLiq(tank#1)    = vLiq(tank#1) + (wCr*gindex4 + wOH*MoleOH +
                      wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3)/(rhoSol*3785.0):
              vSol(tank#1)    - vSol(tank#1) - (wCr*gindex4 + wOH*MoleOH +
                      wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3)/(rhoSol*3785.0):
              mSol(tank#1,Ntot) = mSol(tank#1,Ntot) - (wCr*gindex4 + wOH*MoleOH +
                      wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3):
      write,debug,"(5e14.6)":gindex4*wCr,MoleOH*wOH,MoleNO3*wNO3,MoleNO2*wNO2,MoleCO3*wCO3;
      assign:
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              mSol(tank#1,NCO3)  = mSol(tank#1,NCO3)     - wCO3*MoleCO3:
              mSol(tank#1,NNO2)  = mSol(tank#1,NNO2)     - wNO2*MoleNO2:
              mSol(tank#1,NNO3)  = mSol(tank#1,NNO3)     - wNO3*MoleNO3:
              mSol(tank#1,NOH)   = mSol(tank#1,NOH)      - wOH*MoleOH:
              mSol(tank#1,NCr)   = mSol(tank#1,NCr)      - wCr*gindex4:
              mass(tank#1,NAl)   = mSol(tank#1,NAl)   +  mLiq(tank#1,NAl) :
              mass(tank#1,NAlOH4)= mSol(tank#1,NAlOH4)+  mLiq(tank#1,NAlOH4) :
              mass(tank#1,NPO4)  = mSol(tank#1,NPO4)  +  mLiq(tank#1,NPO4) :
              mass(tank#1,NCr)   = mSol(tank#1,NCr)   +  mLiq(tank#1,NCr) :
              mass(tank#1,NCrOH4)= mSol(tank#1,NCrOH4)+  mLiq(tank#1,NCrOH4) :
              mass(tank#1,NNa)   = mSol(tank#1,NNa)   +  mLiq(tank#1,NNa) :
              mass(tank#1,NOH)   = mSol(tank#1,NOH)   +  mLiq(tank#1,NOH) :
              mass(tank#1,NNO3)  = mSol(tank#1,NNO3)  +  mLiq(tank#1,NNO3) :
              mass(tank#1,NNO2)  = mSol(tank#1,NNO2)  +  mLiq(tank#1,NNO2) :
              mass(tank#1,NCO3)  = mSol(tank#1,NCO3)  +  mLiq(tank#1,NCO3) :
              SDlstUPT(gindex1)  = SDlstUPT(gindex1) + Wtime(1)/SWTiming(SDlstOP(gindex1));
       else:
      write,check,"(' Water   Wash Begins    in Tank: ',a5,' on day ',f9.2)":
                  str(variables,tank#),tnow;
         delay: Wtime(2)/SWTiming(SDlstOP(gindex1));
      write,check,"(' Water   Wash Completes in Tank: ',a5,' on day ',f9.2)":
                  str(variables,tank#),tnow;
         assign: SDlstUPT(gindex1)   SDlstUPT(gindex1) + Wtime(2)/SWTiming(SDlstOP(gindex1));
      endif;
    assign:  NwashT = NwashT + 1;
    delay: Stime/SWTiming(SDlstOP(gindex1));
    elseif:Whichlst2nd.eq.2;
      if:SD2ndOP(gindex1).eq.1;
      write,check,"(' Caustic Wash Begins    in Tank: ',a5,' on day ',f9.2)":
                  str(variables,tank#),tnow;
         delay: Wtime(1)/SWTiming(SD2ndOP(gindex1));
      write,check,"(' Caustic Wash Completes in Tank: ',a5,' on day ',f9.2)":
                  str(variables,tank#),tnow;
;        assign: gindex4  = 0.34;
;        im = 0;
;        while: im < 177;
;          assign: im   im + 1:
;          gindex4 = gindex4 + BmSol(im,12)*mSol(tank#1,im+12)*washf(im);
;        endwhile;
;        if: mSol(tank#1,12).ne.0.0;
;          assign: gindex4 = gindex4/mSol(tank#1,12);
;        endif;
      write,debug,"(6i6)":tank#1,NPO4,NOH,NNO3,NNO2,NCO3; ! PO4 to switch with OH-
      write,debug,"(5e14.6)":mSol(tank#1,NPO4),mSol(tank#1,NOH),
                              mSol(tank#1,NNO3),mSol(tank#1,NNO2),mSol(tank#1,NCO3);
        assign:
         gindex4 = mSol(tank#1,NPO4)*fPO4/wPO4:
         mLiq(tank#1,NPO4)  = mLiq(tank#1,NPO4)     + wPO4*gindex4:
         mLiq(tank#1,NOH)   = mLiq(tank#1,NOH)      - 3.0*wOH*gindex4:

         mLiq(tank#1,Ntot) = mLiq(tank#1,Ntot)     + (wPO4   3.0*wOH)*gindex4:
         vLiq(tank#1)    = vLiq(tank#1)            + (wPO4  - 3.0*wOH)*gindex4/(rhoSol*3785.0):
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            vSol(tank#1)    = vSol(tank#1)                    - (wPO4 - 3.0*wOH)*gindex4/(rhoSol*3785.0);
            mSol(tank#1,Ntot) = mSol(tank#1,Ntot)             - (wPO4 - 3.0*wOH)*gindex4;
      write,debug,"(6i6)":tank#1,NAl,NOH,NNO3,NNO2,NCO3;
      write,debug,"(5e14.6)":mSol(tank#1,NAl),mSol(tank#1,NOH),
                                 mSol(tank#1,NNO3),mSol(tank#1,NNO2),mSol(tank#1,NCO3);
      assign: gindex4 = mSol(tank#1,NAl)*fAl/wAl;
            mLiq(tank#1,NAlOH4) = mLiq(tank#1,NAlOH4) + wAlOH4*gindex4;
            mLiq(tank#1,NOH)  = mLiq(tank#1,NOH)        - 4.0*wOH*gindex4;
            mLiq(tank#1,NOH)  = mLiq(tank#1,NOH)        + wOH*MoleOH;
            mLiq(tank#1,NNO3) = mLiq(tank#1,NNO3)       + wNO3*MoleNO3;
            mLiq(tank#1,NNO2) = mLiq(tank#1,NNO2)       + wNO2*MoleNO2;
            mLiq(tank#1,NCO3) = mLiq(tank#1,NCO3)       + wCO3*MoleCO3;
            mLiq(tank#1,Ntot) = mLiq(tank#1,Ntot) + (wAl*gindex4 + wOH*MoleOH +
                    wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3);
            vLiq(tank#1)    = vLiq(tank#1) + (wAl*gindex4 + wOH*MoleOH +
                    wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3)/(rhoSol*3785.0);
            vSol(tank#1)    = vSol(tank#1)  - (wAl*gindex4 + wOH*MoleOH +
                    wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3)/(rhoSol*3785.0);
            mSol(tank#1,Ntot) = mSol(tank#1,Ntot) - (wAl*gindex4 + wOH*MoleOH +
                    wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3);
      write,debug,"(5e14.6)":gindex4*wAl,MoleOH*wOH,MoleNO3*wNO3,MoleNO2*wNO2,MoleCO3*wCO3;
      assign:
            mSol(tank#1,NCO3) = mSol(tank#1,NCO3)       - wCO3*MoleCO3;
            mSol(tank#1,NNO2) = mSol(tank#1,NNO2)       - wNO2*MoleNO2;
            mSol(tank#1,NNO3) = mSol(tank#1,NNO3)       - wNO3*MoleNO3;
            mSol(tank#1,NOH)  = mSol(tank#1,NOH)        - wOH*MoleOH;
            mSol(tank#1,NAl)  = mSol(tank#1,NAl)        - wAl*gindex4;
      write,debug,"(6i6)":tank#1,NNa,NOH,NNO3,NNO2,NCO3;
      write,debug,"(5e14.6)":mSol(tank#1,NNa),mSol(tank#1,NOH),
                                 mSol(tank#1,NNO3),mSol(tank#1,NNO2),mSol(tank#1,NCO3);
      assign: gindex4 = mSol(tank#1,NNa)*fNa/wNa;
            mLiq(tank#1,NNa)  = mLiq(tank#1,NNa)  + wNa*gindex4;
            mLiq(tank#1,NOH)  = mLiq(tank#1,NOH)        + wOH*MoleOHc1;
            mLiq(tank#1,NNO3) = mLiq(tank#1,NNO3)       + wNO3*MoleNO3c1;
            mLiq(tank#1,NNO2) = mLiq(tank#1,NNO2)       + wNO2*MoleNO2c1;
            mLiq(tank#1,NCO3) = mLiq(tank#1,NCO3)       + wCO3*MoleCO3c1;
            mLiq(tank#1,Ntot) = mLiq(tank#1,Ntot) + (wNa*gindex4 + wOH*MoleOHc1 +
                    wNO3*MoleNO3c1 + wNO2*MoleNO2c1 + wCO3*MoleCO3c1);
            vLiq(tank#1)    = vLiq(tank#1) + (wNa*gindex4 + wOH*MoleOHc1 +
                    wNO3*MoleNO3c1 + wNO2*MoleNO2c1 + wCO3*MoleCO3c1)/(rhoSol*3785.0);
            vSol(tank#1)    = vSol(tank#1) - (wNa*gindex4 + wOH*MoleOHc1 +
                    wNO3*MoleNO3c1 + wNO2*MoleNO2c1 + wCO3*MoleCO3c1)/(rhoSol*3785.0);
            mSol(tank#1,Ntot) = mSol(tank#1,Ntot)   (wNa*gindex4 + wOH*MoleOHc1 +
                    wNO3*MoleNO3c1 + wNO2*MoleNO2c1 + wCO3*MoleCO3c1);
      write,debug,"(5e14.6)":gindex4*wNa,MoleOHc1*wOH,MoleNO3c1*wNO3,MoleNO2c1*wNO2,MoleCO3c1*wCO3;
      assign:
            mSol(tank#1,NCO3) = mSol(tank#1,NCO3)       - wCO3*MoleCO3c1;
            mSol(tank#1,NNO2) = mSol(tank#1,NNO2)       - wNO2*MoleNO2c1;
            mSol(tank#1,NNO3) = mSol(tank#1,NNO3)       - wNO3*MoleNO3c1;
            mSol(tank#1,NOH)  = mSol(tank#1,NOH)        - wOH*MoleOHc1;
            mSol(tank#1,NNa)  = mSol(tank#1,NNa)        - wNa*gindex4;
      write,debug,"(6i6)":tank#1,NCr,NOH,NNO3,NNO2,NCO3;
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      write,debug,"(5e14.6)":mSol(tank#1,NCr),mSol(tank#1,NOH),
                                 mSol(tank#1,NNO3),mSol(tank#1,NNO2),mSol(tank#1,NCO3);
      assign: gindex4 = mSol(tank#1,NCr)*fCr/wCr;
            mLiq(tank#1,NCrOH4) = mLiq(tank#1,NCrOH4) + wCrOH4*gindex4;
            mLiq(tank#1,NOH)  = mLiq(tank#1,NOH)        - 4.0*wOH*gindex4;
            mLiq(tank#1,NOH)  = mLiq(tank#1,NOH)        + wOH*MoleOH;
            mLiq(tank#1,NNO3) = mLiq(tank#1,NNO3)       + wNO3*MoleNO3;
            mLiq(tank#1,NNO2) = mLiq(tank#1,NNO2)       + wNO2*MoleNO2;
            mLiq(tank#1,NCO3) = mLiq(tank#1,NCO3)       + wCO3*MoleCO3;
            mLiq(tank#1,Ntot) = mLiq(tank#1,Ntot) + (wCr*gindex4 + wOH*MoleOH +
                    wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3);
            vLiq(tank#1)    = vLiq(tank#1) + (wCr*gindex4 + wOH*MoleOH +
                    wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3)/(rhoSol*3785.0);
            vSol(tank#1)    = vSol(tank#1) - (wCr*gindex4 + wOH*MoleOH +
                    wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3)/(rhoSol*3785.0);
            mSol(tank#1,Ntot) = mSol(tank#1,Ntot) - (wCr*gindex4 + wOH*MoleOH +
                    wNO3*MoleNO3 + wNO2*MoleNO2 + wCO3*MoleCO3);
      write,debug,"(5e14.6)":gindex4*wCr,MoleOH*wOH,MoleNO3*wNO3,MoleNO2*wNO2,MoleCO3*wCO3;
      assign:
            mSol(tank#1,NCO3) = mSol(tank#1,NCO3)       - wCO3*MoleCO3;
            mSol(tank#1,NNO2) = mSol(tank#1,NNO2)       - wNO2*MoleNO2;
            mSol(tank#1,NNO3) = mSol(tank#1,NNO3)       - wNO3*MoleNO3;
            mSol(tank#1,NOH)  = mSol(tank#1,NOH)        - wOH*MoleOH;
            mSol(tank#1,NCr)  = mSol(tank#1,NCr)        - wCr*gindex4;
            mass(tank#1,NAl)  = mSol(tank#1,NAl)    +   mLiq(tank#1,NAl)  ;
            mass(tank#1,NAlOH4)= mSol(tank#1,NAlOH4)+   mLiq(tank#1,NAlOH4)  ;
            mass(tank#1,NPO4) = mSol(tank#1,NPO4)   +   mLiq(tank#1,NPO4)  ;
            mass(tank#1,NCr)  = mSol(tank#1,NCr)    +   mLiq(tank#1,NCr)  ;
            mass(tank#1,NCrOH4)= mSol(tank#1,NCrOH4)+   mLiq(tank#1,NCrOH4)  ;
            mass(tank#1,NNa)  = mSol(tank#1,NNa)    +   mLiq(tank#1,NNa)  ;
            mass(tank#1,NOH)  = mSol(tank#1,NOH)    +   mLiq(tank#1,NOH)  ;
            mass(tank#1,NNO3) = mSol(tank#1,NNO3)   +   mLiq(tank#1,NNO3)  ;
            mass(tank#1,NNO2) = mSol(tank#1,NNO2)   +   mLiq(tank#1,NNO2)  ;
            mass(tank#1,NCO3) = mSol(tank#1,NCO3)   +   mLiq(tank#1,NCO3)  ;
            SD2ndUPT(gindex1) = SD2ndUPT(gindex1) + Wtime(1)/SWTiming(SD2ndOP(gindex1));
      else;
      write,check,"(' Water   Wash Begins    in Tank: ',a5,' on day ',f9.2)":
                str(variables,tank#),tnow;
         delay: Wtime(2)/SWTiming(SD2ndOP(gindex1));
      write,check,"(' Water   Wash Completes in Tank: ',a5,' on day ',f9.2)":
                str(variables,tank#),tnow;
         assign: SD2ndUPT(gindex1) = SD2ndUPT(gindex1) + Wtime(2)/SWTiming(SD2ndOP(gindex1));
      endif;
   assign:  NwashT = NwashT + 1;
   delay: Stime/SWTiming(SD2ndOP(gindex1));
   endif;
;*********************************
;  Estimate Volume of Settled Solids
   if:Which1st2nd.eq.1;
      assign: fentsol = min(fentsol0(1),mSol(tank#1,TotMassInd)/mass(tank#1,TotMassInd));
            SDlstSol(gindex1) =  0.0;
      if: mLiq(tank#1,TotMassInd).gt.0.0;
```

```
            assign:  SD1stSol(gindex1) = SD1stSol(gindex1) + vLiq(tank#1)*
            ( (1.0-fentsol)*mass(tank#1,TotMassInd)/mLiq(tank#1,TotMassInd)   1.0 )*
              (1.0 ffluffy(SD1stOP(gindex1)))/(ffluffy(SD1stOP(gindex1))-fentsol) ;
          endif;
          if: mSol(tank#1,TotMassInd).gt.0.0;
            assign:  SD1stSol(gindex1) = SD1stSol(gindex1) + vSol(tank#1)*
            ( 1.0 - fentsol*mass(tank#1,TotMassInd)/mSol(tank#1,TotMassInd) )*
            ffluffy(SD1stOP(gindex1))/(ffluffy(SD1stOP(gindex1))-fentsol) ;
          endif;
        elseif:Whichlst2nd.eq.2;
          assign: fentsol = min(fentsol0(1),mSol(tank#1,TotMassInd)/mass(tank#1,TotMassInd)):
                  SD2ndSol(gindex1) = 0.0;
          if: mLiq(tank#1,TotMassInd).gt.0.0;
            assign:  SD2ndSol(gindex1) = SD2ndSol(gindex1) + vLiq(tank#1)*
            ( (1.0-fentsol)*mass(tank#1,TotMassInd)/mLiq(tank#1,TotMassInd) - 1.0 )*
              (1.0-ffluffy(SD2ndOP(gindex1)))/(ffluffy(SD2ndOP(gindex1))-fentsol) ;
          endif;
          if: mSol(tank#1,TotMassInd).gt.0.0;
            assign:  SD2ndSol(gindex1) = SD2ndSol(gindex1) + vSol(tank#1)*
            ( 1.0 - fentsol*mass(tank#1,TotMassInd)/mSol(tank#1,TotMassInd) )*
            ffluffy(SD2ndOP(gindex1))/(ffluffy(SD2ndOP(gindex1))-fentsol) ;
          endif;
        endif;
;*********************************
        next(LookWas);
LookWasF assign: SD2ndC(gindex2) = 0;
        release: tank(tank#2);
        signal: tank#2;
        signal: SD2Sig1;
              signal: WhatsupSig;
        signal:  DecFSig;
        assign:  dTvol(Tindex) = dvol;
LookWas  if:NSD2nd.eq.0;
            assign: j = 0;
        else;
           findj,1,NSD2nd:(SD2ndR(j).eq.1).and.
               (NR(tank(SD2nd(j))).eq.0).and.(SD2ndC(j).eq.0).and.
               ( (tworking*capacity(SD2nd(j)) -
                 volume(SD2nd(j)))).ge.0.001 );
;               (DecantR(j).eq.2);
        endif;
        branch,1:
            if,j.eq.0,LookWasW:
            else,PickWas;
LookWasW queue,LookWasQ:
        wait: WasSig0,1:next(LookWas);
PickWas  assign: gindex2 = j:
                 tank#2 = SD2nd(gindex2);
;                 DecantR(gindex2) = 2;
        queue, tank Q(tank#2);
        seize: tank(tank#2);
;** Prepare for Transfer
```



```
        if:Tindex.eq.0;
          findj,1,100:Tindused(j).eq.0;
          assign: Tindex = j:
                  Tindused(Tindex) = 1:
                  dTvol(Tindex) = dvol:
                  dMTrate(Tindex) = rSOfill;
        assign: im=1:
        while:im.le.177;
        assign: TcFrac(Tindex,im) = (Tank(tank#1,im)/volume(tank#1):
                im=im+1;
        endwhile;
          if:Whichlst2nd.eq.1;
            assign:  Tvolume(Tindex) =  volume(tank#1)  - SD1stSol(gindex1);
          elseif:Whichlst2nd.eq.2;
            assign:  Tvolume(Tindex) =  volume(tank#1)  - SD2ndSol(gindex1);
          endif;
;** Transfer Decant    > Decant Storage
        branch,1:
            if,Tvolume(Tindex).lt.0.001,FiledWas:
            if,(fworking*capacity(tank#2) - volume(tank#2)).lt.0.001,LookWasF:
            else,Tr2Wasi;
;** Initalize Concentrations Prior to Transfer
Tr2Wasi     if:Whichlst2nd.eq.1;
        assign: fentsol = min(fentsol0(1),mSol(tank#1,TotMassInd)/mass(tank#1,TotMassInd)):
                TcvLiq(Tindex) =  0.0;
                TcvSol(Tindex) =  0.0;
        if: mLiq(tank#1,TotMassInd) .gt.0.0;
          assign:  TcvLiq(Tindex) = vLiq(tank#1)*
          ( 1.0 - (1.0 ffluffy(SD1stOP(gindex1)))*mass(tank#1,TotMassInd)/mLiq(tank#1,TotMassInd) )*
            (1.0-fentsol)/(Tvolume(Tindex)*(ffluffy(SD1stOP(gindex1))-fentsol)) ;
        endif;
        if: mSol(tank#1,TotMassInd) .gt.0.0;
          assign:  TcvSol(Tindex) = vSol(tank#1)*
          ( ffluffy(SD1stOP(gindex1))*mass(tank#1,TotMassInd)/mSol(tank#1,TotMassInd) - 1.0 )*
            fentsol/(Tvolume(Tindex)*(ffluffy(SD1stOP(gindex1))-fentsol)) ;
        endif;
        elseif:Whichlst2nd.eq.2;
        assign: fentsol = min(fentsol0(1),mSol(tank#1,TotMassInd)/mass(tank#1,TotMassInd)):
                TcvLiq(Tindex) =  0.0;
                TcvSol(Tindex) =  0.0;
        if: mLiq(tank#1,TotMassInd).gt.0.0;
          assign:  TcvLiq(Tindex) = vLiq(tank#1)*
          ( 1.0   (1.0-ffluffy(SD2ndOP(gindex1)))*mass(tank#1,TotMassInd)/mLiq(tank#1,TotMassInd) )*
            (1.0-fentsol)/(Tvolume(Tindex)*(ffluffy(SD2ndOP(gindex1))-fentsol)) ;
        endif;
        if: mSol(tank#1,TotMassInd).gt.0.0;
          assign:  TcvSol(Tindex) = vSol(tank#1)*
          ( ffluffy(SD2ndOP(gindex1))*mass(tank#1,TotMassInd)/mSol(tank#1,TotMassInd) - 1.0 )*
            fentsol/(Tvolume(Tindex)*(ffluffy(SD2ndOP(gindex1))-fentsol)) ;
        endif;
        endif;
        assign:  im = 0;
```

```
Tr2Wasim    assign:  im = im + 1;
            assign: TcmLiq(Tindex,im)  = 0.0;
                    TcmSol(Tindex,im)  = 0.0;
            if: vLiq(tank#1).gt.0.0;
              assign: TcmLiq(Tindex,im)  = mLiq(tank#1,im)*TcvLiq(Tindex)/vLiq(tank#1);
            endif;
            if: vSol(tank#1).gt.0.0;
              assign: TcmSol(Tindex,im)  = mSol(tank#1,im)*TcvSol(Tindex)/vSol(tank#1);
            endif;
            assign: Tcmass(Tindex,im)  = TcmLiq(Tindex,im)+TcmSol(Tindex,im);
            branch,1:
                if,im.lt.Nmcomp,Tr2Wasim;
               else,Look2Was;
;** Begin Transfer to 1st Stage S/D Tank
            endif;
Look2Was branch,1:
            if,Tvolume(Tindex).lt.0.001,FiledWas:
            if,(fworking*capacity(tank#2) - volume(tank#2)).lt.0.001,LookWasF:
            else,Tr2Was;
Tr2Was      assign:  dTvol(Tindex)  = min(Tvolume(Tindex),dTvol(Tindex),
                         (fworking*capacity(tank#2) - volume(tank#2)) );
                     volume(tank#1)  = volume(tank#1)  - dTvol(Tindex);
                     volume(tank#2)  = volume(tank#2)  + dTvol(Tindex);
                     vLiq(tank#1)    = vLiq(tank#1)    - dTvol(Tindex)*TcvLiq(Tindex);
                     vLiq(tank#2)    = vLiq(tank#2)    + dTvol(Tindex)*TcvLiq(Tindex);
                     vSol(tank#1)    = vSol(tank#1)    - dTvol(Tindex)*TcvSol(Tindex);
                     vSol(tank#2)    = vSol(tank#2)    + dTvol(Tindex)*TcvSol(Tindex);
; ---------- Tank Fractions
            assign: im=1;
            while:im.le.177;
            assign: fTank(tank#2,im)  = fTank(tank#2,im)  + TcFrac(Tindex,im)*dTvol(Tindex);
                    fTank(tank#1,im)  = fTank(tank#1,im)  - TcFrac(Tindex,im)*dTvol(Tindex);
                        im=im+1;
            endwhile;
;  -    ------
            assign:  im = 0;
Tr2Wasm     assign:  im = im + 1;
            assign: mass(tank#1,im)  = mass(tank#1,im)  - dTvol(Tindex)*Tcmass(Tindex,im);
                    mass(tank#2,im)  = mass(tank#2,im)  + dTvol(Tindex)*Tcmass(Tindex,im);
                    mLiq(tank#1,im)  = mLiq(tank#1,im)  - dTvol(Tindex)*TcmLiq(Tindex,im);
                    mLiq(tank#2,im)  = mLiq(tank#2,im)  + dTvol(Tindex)*TcmLiq(Tindex,im);
                    mSol(tank#1,im)  = mSol(tank#1,im)  - dTvol(Tindex)*TcmSol(Tindex,im);
                    mSol(tank#2,im)  = mSol(tank#2,im)  + dTvol(Tindex)*TcmSol(Tindex,im);
            branch,1:
                if,im.lt.Nmcomp,Tr2Wasm:
               else,Tr2Wasd;
Tr2Wasd     delay: dTvol(Tindex)/dTrate(Tindex);
            assign:  Tvolume(Tindex)  = Tvolume(Tindex)  - dTvol(Tindex);
                     next(Look2Was);
;FiledWas release: tank(tank#2);
FiledWas assign:  SD2ndC(gindex2) = 0;
            release: tank(tank#2);
```



```
            signal: tank#2;
            signal: SD2Sig3;
            signal: WasSig0;
            signal: DecSig0;
            signal: WhatsupSig;
            signal: DecFSig;
            signal: SolSig0;
            if:Which1st2nd.eq.2;
              if:SD2ndUPT(gindex1).gt.uptime_tank;
               write,check,"(' Pump Repl Op Begins     in Tank: ',a5,' on day ',f9.2)":
                        str(variables,tank#1),tnow;
                 delay: downtime_tank;
               write,check,"(' Pump Repl Op Completes in Tank: ',a5,' on day ',f9.2)":
                        str(variables,tank#1),tnow;
                 assign: SD2ndUPT(gindex1) = 0.0;
              endif;
              if:SD2ndW(gindex1).ge.Nwash;
                assign:  SD2ndC(gindex1) = 7;
                         SD2ndW(gindex1) = 0;
                release: tank(tank#1);
                signal: tank#1;
                signal: SDSig7;
              else;
                assign:  SD2ndC(gindex1) = 5;
                release: tank(tank#1);
                signal: tank#1;
                signal: SDSig5;
              endif;
            elseif:Which1st2nd.eq.1;
              if:SD1stUPT(gindex1).gt.uptime_tank;
               write,check,"(' Pump Repl Op Begins     in Tank: ',a5,' on day ',f9.2)":
                        str(variables,tank#1),tnow;
                 delay: downtime_tank;
               write,check,"(' Pump Repl Op Completes in Tank: ',a5,' on day ',f9.2)":
                        str(variables,tank#1),tnow;
                 assign: SD1stUPT(gindex1) = 0.0;
              endif;
              if:SD1stW(gindex1).ge.Nwash;
                assign:  SD1stC(gindex1) = 7;
                         SD1stW(gindex1) = 0;
                release: tank(tank#1);
                signal: tank#1;
                signal: SDSig7;
              else;
                assign:  SD1stC(gindex1) = 5;
                release: tank(tank#1);
                signal: tank#1;
                signal: SDSig5;
              endif;
            endif;
            signal: WasSig0;
            signal: DecSig0;
```

```
          signal: WhatsupSig;
          signal: DecFSig;
          signal: SolSig0;
          assign: Tindused(Tindex) = 0;
          dispose;


;
;** Transfer Solids in 1st or 2nd Stage S/D Tank
;***
;***  Washed Solids 1st & 2nd Stage S/D Tank ----> Solids Storage Tanks
;***
;** Look for waiting 2nd Stage S/D Tanks
Loo7SD2  if:NSD2nd.eq.0;
            assign: j = 0;
          else;
             findj,1,NSD2nd:(SD2ndR(j).eq.1).and.(SD2ndC(j).eq.7).and.
                          (NR(tank(SD2nd(j))).eq.0);
          endif;
          branch,1:
               if,j.eq.0,Loo7SD1;
               else,Pic7SD2;
Pic7SD2  assign:   gindex1 = j;
                   SD2ndC(gindex1) = 8;
                   gindex5 = SD2ndOP(gindex1);
                   tank#1 = SD2nd(gindex1);
                   Which1st2nd = 2;
          queue, tank_Q(tank#1);
          seize: tank(tank#1);
          branch,2:
               always,Loo7SD2;
               always,LookSol;
Loo7SD1  if:NSD1st.eq.0;
            assign: j = 0;
          else;
             findj,1,NSD1st:(SD1stR(j).eq.1).and.(SD1stC(j).eq.7).and.
                          (NR(tank(SD1st(j))).eq.0);
          endif;
          branch,1:
               if,j.eq.0,Loo7SDW;
               else,Pic7SD1;
Loo7SDW  queue,Loo7SDQ;
          wait: SDSig7,1:next(Loo7SD2);
Pic7SD1  assign:   gindex1 = j;
                   SD1stC(gindex1) = 8;
                   gindex5 = SD1stOP(gindex1);
                   tank#1 = SD1st(gindex1);
                   Which1st2nd = 1;
          queue, tank_Q(tank#1);
          seize: tank(tank#1);
          branch,2:
               always,Loo7SD2;
               always,LoAdSol;
```



```
;
;** Prepare Add Transfer Solution
LoAdSol  findj,1,100:Tindused(j).eq.0;
          assign: Tindex = j;
                  Tindused(Tindex) = 1;
                  Tvolume(Tindex) =  min((fworking*capacity(tank#1) - volume(tank#1)),
             ( ( gindex5.eq.2 )*1.1 + 1.0 )*volume(tank#1));
                  dTvol(Tindex) = dvol;
                  dTrate(Tindex) = rSDfill;
;** Initalize Concentrations Prior to Addition
Ad2Soli  assign:  TcvLiq(Tindex) = WcvLiq(2);
                  TcvSol(Tindex) = WcvSol(2);
                  im = 0;
Ad2Solim assign:  im = im + 1;
          assign: TcmLiq(Tindex,im)  = WcmLiq(im,2);
                  TcmSol(Tindex,im)  = WcmSol(im,2);
                  TcmMass(Tindex,im) = WcmMass(im,2);
            branch,1:
                 if,im.lt.Nmcomp,Ad2Solim;
                 else,LoAd2Sol;
;** Begin Add Transfer to 1st or 2nd Stage S/D Tank
LoAd2Sol branch,1:
               if,Tvolume(Tindex).lt.0.001,FilAdSol;
               else,Ad2Sol;
Ad2Sol   assign:  dTvol(Tindex) = min(Tvolume(Tindex),dTvol(Tindex));
                  volume(tank#1) = volume(tank#1) + dTvol(Tindex);
                  vLiq(tank#1)   = vLiq(tank#1)   + dTvol(Tindex)*TcvLiq(Tindex);
                  vSol(tank#1)   = vSol(tank#1)   + dTvol(Tindex)*TcvSol(Tindex);
                  im = 0;
Ad2Solm  assign:  im = im + 1;
          assign: mass(tank#1,im) = mass(tank#1,im) + dTvol(Tindex)*TcmMass(Tindex,im);
                  mLiq(tank#1,im) = mLiq(tank#1,im) + dTvol(Tindex)*TcmLiq(Tindex,im);
                  mSol(tank#1,im) = mSol(tank#1,im) + dTvol(Tindex)*TcmSol(Tindex,im);
          branch,1:
               if,im.lt.Nmcomp,Ad2Solm;
               else,Ad2Sold;
Ad2Sold  delay: dTvol(Tindex)/dTrate(Tindex);
          assign:  Tvolume(Tindex)     Tvolume(Tindex) - dTvol(Tindex);
                   next(LoAd2Sol);
FilAdSol assign: Tindused(Tindex) = 0;
                 Tindex = 0;
          next(LookSol);
LookSolF release: tank(tank#2);
          signal: tank#2;
          signal:  SolFSig;
          assign:  dTvol(Tindex) = dvol;
LookSol  if:NSol.eq.0;
            assign: j   0;
          else;
             findj,1,NSol:(SolR(j).eq.1).and.
                 (NR(tank(Sol(j))).eq.0).and.
                 ( (fworking*capacity(Sol(j)) -
```

```
                    volume(Sol(j))).ge.0.001 );
          endif;
          branch,1:
               if.j.eq.0.LookSolW:
               else.PickSol:
LookSolW queue.LookSolQ;
          wait: SolSig0.1:next(LookSol);
PickSol   assign: gindex2 = j;
                  tank#2 = Sol(gindex2);
;                   SolC(gindex2)   SolC(gindex2) + 1;
          queue. tank_Q(tank#2);
          seize: tank(tank#2);
;** Prepare for Transfer
          assign: gindex4 = SourceRNHeat;
          if:Tindex.eq.0;
            findj,1,100:Tindused(j).eq.0;
            assign: Tindex = j;
                    Tindused(Tindex) = 1;
                    Tvolume(Tindex) =  max(0.0,volume(tank#1)-vheel);
                    dTvol(Tindex) = dvol;
                    dTrate(Tindex) = rSDfill;
;** Transfer Decant  -> Decant Storage
            branch,1:
                if,Tvolume(Tindex).lt.0.001,FiledSol:
                if,(fworking*capacity(tank#2) - volume(tank#2)).lt.0.001,LookSolF:
                else.Tr2Soli:
;** Initalize Concentrations Prior to Transfer
Tr2Soli   assign:  TcvLiq(Tindex) = vLiq(tank#1)/volume(tank#1);
                   TcvSol(Tindex) = vSol(tank#1)/volume(tank#1);
          assign: im=1;
          while:im.le.177;
          assign: TcFrac(Tindex,im) = fTank(tank#1,im)/volume(tank#1);
                  im=im+1;
          endwhile;
          assign: im = 0;
Tr2Solim assign:  im   im + 1;
          assign: Tcmass(Tindex,im) = mass(tank#1,im)/volume(tank#1);
                  TcmLiq(Tindex,im) = mLiq(tank#1,im)/volume(tank#1);
                  TcmSol(Tindex,im) = mSol(tank#1,im)/volume(tank#1);
            branch,1:
                if.im.lt.Nmcomp,Tr2Solim:
                else,Look2Sol;
;** Begin Transfer to 1st Stage S/D Tank
          endif;
Look2Sol branch,1:
            if.Tvolume(Tindex).lt.0.001,FiledSol:
            if,(fworking*capacity(tank#2) - volume(tank#2)).lt.0.001,LookSolF:
            else.Tr2Sol;
Tr2Sol    assign:  dTvol(Tindex) = min(Tvolume(Tindex),dTvol(Tindex),
                        (fworking*capacity(tank#2) - volume(tank#2)) );
                   volume(tank#1) = volume(tank#1) - dTvol(Tindex):
                   volume(tank#2) = volume(tank#2) + dTvol(Tindex):
```



```
                   vLiq(tank#1)    = vLiq(tank#1)    - dTvol(Tindex)*TcvLiq(Tindex):
                   vLiq(tank#2)    = vLiq(tank#2)    + dTvol(Tindex)*TcvLiq(Tindex):
                   vSol(tank#1)    = vSol(tank#1)    - dTvol(Tindex)*TcvSol(Tindex):
                   vSol(tank#2)    = vSol(tank#2)    + dTvol(Tindex)*TcvSol(Tindex);
;------------ Tank Fractions
          assign: im=1;
          while:im.le.177;
          assign: fTank(tank#2,im) = fTank(tank#2,im) + TcFrac(Tindex,im)*dTvol(Tindex):
                  fTank(tank#1,im) = fTank(tank#1,im) - TcFrac(Tindex,im)*dTvol(Tindex):
                     im=im+1;
          endwhile;
; --------
          assign:  im = 0;
Tr2Solm   assign:  im   im + 1;
          assign: mass(tank#1,im)   mass(tank#1,im) - dTvol(Tindex)*Tcmass(Tindex,im):
                  mass(tank#2,im)   mass(tank#2,im) + dTvol(Tindex)*Tcmass(Tindex,im):
                  mLiq(tank#1,im)   mLiq(tank#1,im) - dTvol(Tindex)*TcmLiq(Tindex,im):
                  mLiq(tank#2,im)   mLiq(tank#2,im) + dTvol(Tindex)*TcmLiq(Tindex,im):
                  mSol(tank#1,im)   mSol(tank#1,im) - dTvol(Tindex)*TcmSol(Tindex,im):
                  mSol(tank#2,im)   mSol(tank#2,im) + dTvol(Tindex)*TcmSol(Tindex,im);
          branch,1:
               if.im.lt.Nmcomp,Tr2Solm:
               else,Tr2Sold;
Tr2Sold   delay: dTvol(Tindex)/dTrate(Tindex);
          write,PillWST,"(2i5,11e11.3)":
            tank#1,tank#2,tnow,mLiq(tank#1,Ntot),mSol(tank#1,Ntot),volume(tank#1),
                       mLiq(tank#2,Ntot),mSol(tank#2,Ntot),volume(tank#2),
                       dTvol(Tindex),dTvol(Tindex)*TcmLiq(Tindex,Ntot),
                                     dTvol(Tindex)*TcmSol(Tindex,Ntot),gindex4;
;           assign: im = 0;
;           while: im < 178;
;              write,PillWST,"(i5,e11.3)":
;                     im,mSol(tank#2,im+12);
;           assign: im = im + 1;
;           endwhile;
          assign:  Tvolume(Tindex)  = Tvolume(Tindex) - dTvol(Tindex):
                   next(Look2Sol);
FiledSol if:Which1st2nd.eq.2;
            assign:  SD2ndSol(gindex1)   volume(tank#1)/2.0 :
                     SD2ndC(gindex1) = 0;
            release: tank(tank#1);
            signal: tank#1;
            signal: SD2Sig0;
            signal: RWfill1Sig;
        elseif:Which1st2nd.eq.1;
            assign:  SD1stSol(gindex1) = volume(tank#1)/2.0 :
                     SD1stC(gindex1)   0;
            if:(tank#1.eq.171).or.(tank#1.eq.151).or.(tank#1.eq.156).or.(tank#1.eq.167);
               assign:  SD1stR(gindex1)   0;
            endif;
            if:tnow.ge.4288.0;
              if:(tank#1.eq.152).or.(tank#1.eq.155).or.(tank#1.eq.166).or.(tank#1.eq.170);
```

```
                    assign:  SD1sTR(gindex1) = 0;
                    assign: NSD2nd = NSD2nd + 1;
                        SD2nd(NSD2nd) = tank#1;
                        SD2ndR(NSD2nd) = 1;
                        SD2ndOP(NSD2nd) = 1;
                    write,checkassign,"(i5,f7.1,' DST  ',a5,' has been re-assigned as Settling')":
                                    gindex1,tnow,str(variables,tank#1);
                 endif;
                 if:(tank#1.eq.169).or.(tank#1.eq.165).or.(tank#1.eq.153);
                    assign:  SD1sTR(gindex1) = 0;
                    assign: NSol = NSol + 1;
                        Sol(NSol) = tank#1;
                        SolR(NSol) = 1;
                    write,checkassign,"(i5,f7.1,' DST  ',a5,' has been re-assigned as Washed Sludge')":
                                    gindex1,tnow,str(variables,tank#1);
                 endif;
              endif;
              release: tank(tank#1);
              signal: tank#1;
              signal: SD1Sig0;
              signal: RWfillSig;
           endif;
;**
           release: tank(tank#2);
           signal: tank#2;
           signal: SolSig0;
           signal: SolFSig;
           assign: Tindused(Tindex) = 0;
           dispose;
;***
;*****************************************************************************************
;pt_feed.mod
;*****************************************************************************************
;***
;***  Stored Decant & Wash ----> Pretreatment
;***
;** Look for Stored Decant & Wash

LookDWd  delay: 882.0;

LookLVVfeed  if:NLVFEED.eq.0;
              assign: j = 0;
           else;
              findj, 1, NLVFEED;
              (NR(tank(LVFEED((3/2*(1-flag)+(flag*j))))) .eq.0 .and. ((fworking*
              capacity(LVFEED((3/2*(1-flag)+(flag*j))))) - volume(LVFEED((3/2*(1-flag)+(flag*j))))))).ge.0.001);
           endif;
              branch,1:
              if,j.eq.0,LookLVVfeedW;
              else,PickLVVfeed;
LookLVVfeedW  queue,LookLVVfeedQ;
              wait: WhatsupSig,1:next(LookLVVfeed);
```



```
PickLVVfeed    assign: gindex2 = ((3/2*(1-flag)+(flag*j)));
               tank#2 = LVFEED(gindex2);
               flag = - flag;
               queue, tank_Q(tank#2);
               seize: tank(tank#2);
           branch,2:
               always,LookLVVfeed;
               always,LookD2W;
LookD2W  if:NDecant.eq.0;
              assign: j = 0;
           else;
              findj,1,NDecant:(DecantR(j).eq.1).and.
                              (NR(tank(Decant(j))).eq.0).and.
            ((fworking*capacity(Decant(j)) - volume(Decant(j))).lt.0.001);
           endif;
           branch,1:
               if,j.eq.0,LookD2WA;
               else,PickD2W;
LookD2WA if:NDecant.eq.0;
              assign: j = 0;
           else;
              findj,1,NDecant:(DecantR(j).eq.1).and.
                              ( (volume(Decant(j)).ge.1000.0)
           .or.((AllSSTcnt.eq.AllSSTtot).and.(volume(Decant(j)).gt.(0.001+vheel))) )
           .and.(NR(tank(Decant(j))).eq.0 );
           endif;
           branch,1:
               if,j.eq.0,LookD3W;
               else,PickD2W;
LookD3W  queue,LookDWQ;
           wait: DecFSig,1:next(LookD2W);
PickD2W    assign: gindex1 = j;
                   tank#1 = Decant(gindex1);
           queue, tank_Q(tank#1);
           seize: tank(tank#1);
;          branch,2:
;               always,LookLVVF;
;               always,LookD2W;
LookLVVF  findj, 1, 100: Tindused(j) .eq. 0;
              assign:
              Tindex = j;
              Tindused(Tindex) = 1;
              Tvolume(Tindex) = min(fworking*capacity(tank#2) - volume(tank#2),
               max(0.0,volume(tank#1)-vheel));
              dTvol(Tindex) = dvol;
              dTrate(Tindex) = LVfeedFil;
              write, ckLV, "(2i5,10o11.3)":
               tank#1,tank#2,tnow, capacityLVfeed, volume(tank#1), volume(tank#2);

Tr2LVVfeedf    branch, 1:
              if, Tvolume(Tindex) .ge. 0.001, Tr2LVVfeedfi;
              else, FilledLVVf;
```

```
Tr2LVVfeedfi assign:
              TcvLiq(Tindex)  = vLiq(tank#1)/volume(tank#1):
              TcvSol(Tindex)  = vSol(tank#1)/volume(tank#1);
         assign: im=1;
         while:im.le.177;
         assign: TcFrac(Tindex,im)  = fTank(tank#1,im)/volume(tank#1):
                 im=im+1;
         endwhile;
       assign: im = 0;
            while: im < Nmcomp;
             assign:
             im   im + 1:
             Tcmass(Tindex, im)  - mLiq(tank#1,im)  / volume(tank#1):
             TcmLiq(Tindex, im)  = mLiq(tank#1,im)  / volume(tank#1):
             TcmSol(Tindex, im)  = 0.0 / volume(tank#1);
            endwhile;
           branch, 1:
             if, Tvolume(Tindex)  .ge. 0.001, Tr2LVVf:
             else, FiledLVVf;
Tr2LVVf    assign:  dTvol(Tindex)  = min(Tvolume(Tindex), dTvol(Tindex)):
                    volume(tank#1)  = volume(tank#1)  - dTvol(Tindex):
                    volume(tank#2)  = volume(tank#2)  + dTvol(Tindex):
                    vLiq(tank#1)    = vLiq(tank#1)    - dTvol(Tindex)*TcvLiq(Tindex):
                    vLiq(tank#2)    = vLiq(tank#2)    + dTvol(Tindex)*TcvLiq(Tindex):
                    vSol(tank#1)    = vSol(tank#1)    - dTvol(Tindex)*TcvSol(Tindex):
                    vSol(tank#2)    = vSol(tank#2)    + dTvol(Tindex)*TcvSol(Tindex);
;---------- Tank Fractions
         assign: im=1:
         while:im.le.177:
         assign: fTank(tank#2,im)  = fTank(tank#2,im)  + TcFrac(Tindex,im)*dTvol(Tindex):
                 fTank(tank#1,im)  = fTank(tank#1,im)  - TcFrac(Tindex,im)*dTvol(Tindex):
                    im=im+1;
         endwhile;
;----------
         assign:   im = 0;
         while: im < Nmcomp;
         assign:  im   im + 1;
         assign: mass(tank#1,im)  = mass(tank#1,im)  - dTvol(Tindex)*Tcmass(Tindex,im):
                 mass(tank#2,im)  = mass(tank#2,im)  + dTvol(Tindex)*Tcmass(Tindex,im):
                 mLiq(tank#1,im)  = mLiq(tank#1,im)  - dTvol(Tindex)*TcmLiq(Tindex,im):
                 mLiq(tank#2,im)  = mLiq(tank#2,im)  + dTvol(Tindex)*TcmLiq(Tindex,im):
                 mSol(tank#1,im)  = mSol(tank#1,im)  - dTvol(Tindex)*TcmSol(Tindex,im):
                 mSol(tank#2,im)  = mSol(tank#2,im)  + dTvol(Tindex)*TcmSol(Tindex,im);
         endwhile;
         branch, 2:
              always, Tr2LVfd:
              if, aflag .eq. 1, AnmLVVf;

Tr2LVfd  delay:   dTvol(Tindex)/dTrate(Tindex);
           write,FillLV,"(2i5,10e11.3)":
           tank#1,tank#2,tnow,mLiq(tank#1,Ntot),mSol(tank#1,Ntot),volume(tank#1),
```



```
                        mLiq(tank#2,Ntot),mSol(tank#2,Ntot),volume(tank#2),
                        dTvol(Tindex),dTvol(Tindex)*TcmLiq(Tindex,Ntot),
                                   dTvol(Tindex)*TcmSol(Tindex,Ntot);
         assign:  Tvolume(Tindex)   = Tvolume(Tindex)  - dTvol(Tindex):
                  next(Tr2LVVfeedf);
FiledLVVf  release: tank(tank#1);
         release: tank(tank#2);
         assign: DecantE(gindex1) = 0.0;
         signal: tank#1;
         signal: DecSig0;
         signal: DecFSig;
         signal: WhatSupSig;
         signal: WasSig0;
         signal: LVSig;
         signal: LV1Sig;
         signal: LV2Sig;
         signal: NLVSig;
         assign: TindusedTindex)  = 0;
         dispose;


AnmLVVf  dispose;

;*****************************************************
         create;
            delay: 4288.0;
            signal: PhaseIISig;
            assign: PhaseIIflag = 1;
         dispose;
LookDWWD    delay: 882.0;


LookLMfeed  if:NLVFEED.eq.0;
            assign: j = 0;
         else;
            find, 1, NLVFEED:
                (NR(tank(LVFEED((j)))).eq.0).and. ((fworking*
                capacity(LVFeed((j))) - volume(LVFeed((j)))).lt.0.001);
         endif;
           branch,1:
              if,j.eq.0,LookDD2WA:
              else,PickLMFeed;
LookDD2WA  if:NLVFEED.eq.0;
            assign: j = 0;
         else;
            find,1,NLVFEED:(LVFEED(j).eq.1).and.
                        ((volume(LVFEED(j)).ge.800.0))
           .or.((AllSSTcnt.eq.AllSSTtot).and.(volume(LVFEED(j)).gt.(0.001+vheel)))
           .and.(NR(LVFEED(j)).eq.0);
         endif;
           branch,1:
                if,j.eq.0,LookLMfeedW:
```

```
                else,PickLMfeed;
LookLMfeedW  queue,LookLMfeedQ;
                wait: LVlSig,1:next(LookLMfeed);
PickLMfeed   assign: gindex1 = j;
                tank#1 = LVfeed(gindex1);
                flag2 = 1 - flag2;
                quque, tank_Q(tank#1);
                seize: tank(tank#1);
         branch,2:
              always,LookPT;
              always,LookLMFeed;

LookPT   queue, FeedPT_Q;
         seize: FeedPT;
         assign: ptbatch = ptbatch+1;
                 gindex5 = ptbatch;
          branch,1:
              always,SetTr;

;** Prepare for Transfer

SetTr    findj,1,100:Tindused(j).eq.0;
         assign: Tindex = j;
                 Tindused(Tindex) = 1;
                 Tvolume(Tindex) = max(0.0,volume(tank#1)-vheel);
                 dTvol(Tindex) = Tvolume(Tindex);
         if: ((massPT(NNa).ge.10254000.0).or.(tnow.ge.3650.0)).and.(PhaseIIflag.eq.0);
             queue,waitPhaseII;
             wait: PhaseIISig,2;
             assign: PhaseIIflag = 1;
         endif;
         assign: dTrate(Tindex) = 2025.0*vLiq(tank#1)*(1.0+6.15*(tnow.gt.4288.0))/mLiq(tank#1,NNa);


;** Check to see if there is anthing to transfer

         branch,1:
             if,Tvolume(Tindex).ge.0.001,Tr2PTi;
             else,FiledPT;

;** Initalize Concentrations Prior to Transfer

Tr2PTi    assign:  TcvLiq(Tindex) = vLiq(tank#1)/volume(tank#1);
                TcvSol(Tindex) = 0.0/volume(tank#1);  ! 0 Entrained Sol Assumed
                im = 1;
         while:im.le.177;
         assign: TcFrac(Tindex,im) = fTank(tank#1,im)/volume(tank#1);
                 im=im+1;
         endwhile;
         assign: im=0;
Tr2PTii                  branch, 1:
                if, (LVFEED(gindex1) .eq. LVFEED(1)), Tr2LM1;
```



```
                else, Tr2LM2;

Tr2LM1    while: im < Nmcomp;
                assign:
                im = im + 1;
                tank#2 = LLWM(gindex1);
                Tcmass(Tindex,im) = mLiq(tank#1,im)/volume(tank#1);
                TcmLiq(Tindex,im) = mLiq(tank#1,im)/volume(tank#1);
                TcmSol(Tindex,im) = 0.0/volume(tank#1);
          endwhile;
              write, ckPT, "(2i5,10e11.3)";
              tank#1,tank#2,tnow, capacityPT, volume(tank#1), volume(tank#2);

Tr2LMMMi       branch,1:
               if,Tvolume(Tindex).ge.0.001,Tr2PT;
              else,FiledPT;

Tr2PT     assign:  dTvol(Tindex) = min(Tvolume(Tindex),dTvol(Tindex));
                   volume(tank#1) = volume(tank#1) - dTvol(Tindex);
                  volume(tank#2) = volume(tank#2) + dTvol(Tindex);
                  volumePT = volumePT + dTvol(Tindex);
                  volumePTb(gindex5) = volumePTb(gindex5) + dTvol(Tindex);

                  vLiq(tank#1)    = vLiq(tank#1)    - dTvol(Tindex)*TcvLiq(Tindex);
                  vLiq(tank#2)    = vLiq(tank#2)    + dTvol(Tindex)*TcvLiq(Tindex);
                  vLiqPT    = vLiqPT    + dTvol(Tindex)*TcvLiq(Tindex);
                  vLiqPTb(gindex5) = vLiqPTb(gindex5) + dTvol(Tindex)*TcvLiq(Tindex);

                  vSol(tank#1)    = vSol(tank#1)    - dTvol(Tindex)*TcvSol(Tindex);
                  vSol(tank#2)    = vSol(tank#2)    + dTvol(Tindex)*TcvSol(Tindex);
                  vSolPT    = vSolPT    + dTvol(Tindex)*TcvSol(Tindex);
                  vSolPTb(gindex5) = vSolPTb(gindex5) + dTvol(Tindex)*TcvSol(Tindex);
;------------ Tank Fractions
         assign: im=1;
         while:im.le.177;
         assign: fTank(tank#2,im) = fTank(tank#2,im) + TcFrac(Tindex,im)*dTvol(Tindex);
                 frPT(gindex5,im) = frPT(gindex5,im) + TcFrac(Tindex,im)*dTvol(Tindex);
                 fTank(tank#1,im) = fTank(tank#1,im) - TcFrac(Tindex,im)*dTvol(Tindex);
                     im im+1;
         endwhile;
;------------
                 assign:  im = 0;

         while: im < Nmcomp;
                 assign:
                 im = im + 1;
                 mass(tank#1,im) = mass(tank#1,im)    dTvol(Tindex)*Tcmass(Tindex,im);
                 mass(tank#2,im) = mass(tank#2,im) + dTvol(Tindex)*Tcmass(Tindex,im);
                 massPT(im)      = massPT(im)      + dTvol(Tindex)*Tcmass(Tindex,im);
                 massPTb(gindex5,im)      = massPTb(gindex5,im)      + dTvol(Tindex)*Tcmass(Tindex,im);

                 mLiq(tank#1,im) = mLiq(tank#1,im) - dTvol(Tindex)*TcmLiq(Tindex,im);
```

```
                mLiq(tank#2,im) = mLiq(tank#2,im) + dTvol(Tindex)*TcmLiq(Tindex,im):
                mLiqPT(im)      = mLiqPT(im)      + dTvol(Tindex)*TcmLiq(Tindex,im):
                mLiqPTb(gindex5,im)       = mLiqPTb(gindex5,im)       + dTvol(Tindex)*TcmLiq(Tindex,im):

                mSol(tank#1,im) = mSol(tank#1,im) - dTvol(Tindex)*TcmSol(Tindex,im):
                mSol(tank#2,im) = mSol(tank#2,im) + dTvol(Tindex)*TcmSol(Tindex,im):
                mSolPT(im)      = mSolPT(im)      + dTvol(Tindex)*TcmSol(Tindex,im):
                mSolPTb(gindex5,im)       = mSolPTb(gindex5,im)       +  dTvol(Tindex)*TcmSol(Tindex,im);
        endwhile;

            branch, 2:
            always, Tr2PTTd:
            if, aflag .eq. 1, AnmLLVf;

Tr2LM2     while: im < Nmcomp;
                assign:
                im = im + 1;
                tank#2 =  LLWM(gindex1):
                Tcmass(Tindex,im) = mLiq(tank#1,im)/volume(tank#1):
                TcmLiq(Tindex,im) = mLiq(tank#1,im)/volume(tank#1):
                TcmSol(Tindex,im) = 0.0/volume(tank#1);
         endwhile;

Tr2LMMi      branch,1:
              if,Tvolume(Tindex),ge,0.001,Tr2PTT:
              else,FiledPT;

Tr2PTT     assign:  dTvol(Tindex) = min(Tvolume(Tindex),dTvol(Tindex)):
                volume(tank#1) = volume(tank#1) - dTvol(Tindex):
                volume(tank#2) = volume(tank#2) + dTvol(Tindex):
                volumePT = volumePT + dTvol(Tindex):
                volumePTb(gindex5) = volumePTb(gindex5) + dTvol(Tindex):

                vLiq(tank#1)    = vLiq(tank#1)    - dTvol(Tindex)*TcvLiq(Tindex):
                vLiq(tank#2)    = vLiq(tank#2)    + dTvol(Tindex)*TcvLiq(Tindex):
                vLiqPT    = vLiqPT    + dTvol(Tindex)*TcvLiq(Tindex):
                vLiqPTb(gindex5) = vLiqPTb(gindex5) + dTvol(Tindex)*TcvLiq(Tindex):

                vSol(tank#1)    = vSol(tank#1)    - dTvol(Tindex)*TcvSol(Tindex):
                vSol(tank#2)    = vSol(tank#2)    + dTvol(Tindex)*TcvSol(Tindex):
                vSolPT    = vSolPT    + dTvol(Tindex)*TcvSol(Tindex):
                vSolPTb(gindex5) = vSolPTb(gindex5) + dTvol(Tindex)*TcvSol(Tindex);
: ---------- Tank Fractions
        assign: im=1;
        while:im.le.177;
        assign: fTank(tank#2,im) = fTank(tank#2,im) + TcFrac(Tindex,im)*dTvol(Tindex):
                frPT(gindex5,im) = frPT(gindex5,im) + TcFrac(Tindex,im)*dTvol(Tindex):
                fTank(tank#1,im) = fTank(tank#1,im) - TcFrac(Tindex,im)*dTvol(Tindex):
                     im=im+1;
        endwhile;
;-----------
                assign:  im = 0;
```



```
        while: im < Nmcomp;
                assign:
                im = im + 1:
                mass(tank#1,im) = mass(tank#1,im) - dTvol(Tindex)*Tcmass(Tindex,im):
                mass(tank#2,im) = mass(tank#2,im) + dTvol(Tindex)*Tcmass(Tindex,im):
                massPT(im)      = massPT(im)      + dTvol(Tindex)*Tcmass(Tindex,im):
                massPTb(gindex5,im)       = massPTb(gindex5,im)       + dTvol(Tindex)*Tcmass(Tindex,im):

                mLiq(tank#1,im) = mLiq(tank#1,im) - dTvol(Tindex)*TcmLiq(Tindex,im):
                mLiq(tank#2,im) = mLiq(tank#2,im) + dTvol(Tindex)*TcmLiq(Tindex,im):
                mLiqPT(im)      = mLiqPT(im)      + dTvol(Tindex)*TcmLiq(Tindex,im):
                mLiqPTb(gindex5,im)       = mLiqPTb(gindex5,im)       + dTvol(Tindex)*TcmLiq(Tindex,im):

                mSol(tank#1,im) = mSol(tank#1,im) - dTvol(Tindex)*TcmSol(Tindex,im):
                mSol(tank#2,im) = mSol(tank#2,im) + dTvol(Tindex)*TcmSol(Tindex,im):
                mSolPT(im)      = mSolPT(im)      + dTvol(Tindex)*TcmSol(Tindex,im):
                mSolPTb(gindex5,im)       = mSolPTb(gindex5,im)       +  dTvol(Tindex)*TcmSol(Tindex,im);
        endwhile;

            branch, 2:
             always, Tr2PTTd:
             if, aflag .eq. 1, AnmLVVVf;

Tr2PTTd    delay: dTvol(Tindex)/dTrate(Tindex);
;-----------
        write,PTWbatch,"(' Batch     Time (days)  Vliq (kgal)  Vinsol (kgal) Vtot (kgal)')";
        write,PTWbatch,"(i5,4(e13.3))":
                gindex5,tnow,vLiqPTb(gindex5),vSolPTb(gindex5),volumePTb(gindex5);
        write,PTWbatch,"('  Chem     Mliq (kg)              Minsol (kg)            Mtot(kg)')";
        assign: im = 1;
        while:im.le.Nmcomp;
          write,PTWbatch,"(i5,3e21.12)":
              im,mLiqPTb(gindex5,im),mSolPTb(gindex5,im)
              ,massPTb(gindex5,im);
          assign: im = im + 1;
        endwhile;
          write,PTWbatch,"('    Tot',3e21.12)":
              mLiqPTb(gindex5,Ntot),mSolPTb(gindex5,Ntot),massPTb(gindex5,Ntot);
        assign: im = 1;
        while:im.le.177;
        if: abs(frPT(gindex5,im)).lt.1.e-8;
            assign: frPT(gindex5,im) = 0.0;
        endif;
          write,PTWbatch,"(2i5,e21.12,5x,a5)":
              gindex5,im,frPT(gindex5,im),str(variables,im);
          assign: im = im + 1;
        endwhile;
;-----------
        write,FillPT,"(2i5,10e11.3)":
          tank#1,tank#2,tnow,mLiq(tank#2,Ntot),mSol(tank#2,Ntot),volume(tank#2),
                     mLiq(tank#2,Ntot),mSol(tank#2,Ntot),volume(tank#2),
```

```
                    dTvol(Tindex),dTvol(Tindex)*TcmLiq(Tindex,Ntot),
                                  dTvol(Tindex)*TcmSol(Tindex,Ntot);
        assign:  Tvolume(Tindex)  = Tvolume(Tindex) - dTvol(Tindex);
                 next(Tr2LMMi);

Tr2PTTd   delay: dTvol(Tindex)/dTrate(Tindex);
;-----------------------
        write,PTWbatch,"(' Batch     Time (days)  Vliq (kgal)  Vinsol (kgal) Vtot (kgal)')";
        write,PTWbatch,"(i5,4(el3.3))";
              gindex5,tnow,vLiqPTb(gindex5),vSolPTb(gindex5),volumePTb(gindex5);
        write,PTWbatch,"('  Chem    Mliq (kg)            Minsol (kg)           Mtot(kg)')";
        assign: im = 1;
         while:im.le.Nmcomp;
          write,PTWbatch,"(i5,3e21.12)";
              im,mLiqPTb(gindex5,im),mSolPTb(gindex5,im)
                ,massPTb(gindex5,im);
          assign: im = im + 1;
        endwhile;
         write,PTWbatch,"('   Tot',3e21.12)";
              mLiqPTb(gindex5,Ntot),mSolPTb(gindex5,Ntot),massPTb(gindex5,Ntot);
        assign: im = 1;
        while:im.le.177;
        if: abs(frPT(gindex5,im)).lt.1.e-8;
            assign: frPT(gindex5,im) = 0.0;
        endif;
          write,PTWbatch,"(2i5,e21.12,5x,a5)";
              gindex5,im,frPT(gindex5,im),str(variables,im);
          assign: im = im + 1;
        endwhile;
;-----------------------
        write,FillPT1,"(2i5,10e11.3)";
          tank#1,tank#2,tnow,mLiq(tank#1,Ntot),mSol(tank#1,Ntot),volume(tank#1),
                        mLiqPT(Ntot),mSolPT(Ntot),volumePT,
                        dTvol(Tindex),dTvol(Tindex)*TcmLiq(Tindex,Ntot),
                                  dTvol(Tindex)*TcmSol(Tindex,Ntot);
        assign:  Tvolume(Tindex)  = Tvolume(Tindex) - dTvol(Tindex);
                 next(Tr2LMMMi);

FiledPT release: tank(tank#1);
        release: FeedPT;
;         assign: LVFEED(gindex1) = 0.0;
;                 LLWM(gindex2) = 0.0;
        signal: FeedPTSig;
        signal: WhatsupSig;
        signal: LVSig;
        signal: LVISig;
        signal: DecFSig;
        signal: LVFeedSig;
        assign: Tindused(Tindex) = 0;
        dispose;
AnmLVVVf   dispose;
AnmLLVf dispose;
```



```
;
;***
;***  Stored Solids ----> HLW Feed *** Batch ***
;***
;** Look for Stored Solids
        create;
           delay: 5019.0;
           signal: PhaseIISigSol;
           assign: PhaseIIflagSol = 1;
        dispose;
LookSS1  delay: 882;
LookSS   if:NSol.eq.0;
           assign: j = 0;
        else;
           findj,1,NSol:(SolR(j).eq.1).and.
                        (NR(tank(Sol(j))).eq.0).and.
         ( (  (fworking*capacity(Sol(j)) - volume(Sol(j))).lt.0.001 ).or.
                  ( (volume(Sol(j)).gt.0.001).and.(tnow.lt.3650.0).and.
                 ((Sol(j).eq.172).or.(Sol(j).eq.173).or.(Sol(j).eq.174)) ) );
        endif;
        branch,1:
             if,(j.eq.0).and.(AllSSTcnt.eq.AllSSTtot),LookSSA;
             if,j.eq.0,LookSSW;
             else,PickSS;
LookSSA  if:NSol.eq.0;
           assign: j = 0;
        else;
           findj,1,NSol:(SolR(j).eq.1).and.
                        (volume(Sol(j)).ge.(0.001+vheel)).and.
                        (NR(tank(Sol(j))).eq.0);
        endif;
        branch,1:
             if,j.eq.0,LookSSW;
             else,PickSS;
LookSSW  queue,LookSSQ;
        wait: SolFSig,1:next(LookSS);
PickSS   assign: gindex1 = j;
                 tank#1 = Sol(gindex1);
        queue, tank_Q(tank#1);
        seize: tank(tank#1);
        branch,2:
             always,LookHL;
             always,LookSS;
LookHL   delay: 0.0;
        queue, FeedHL_Q;
        seize: FeedHL;
        assign: ibatch = ibatch+1;
;** Prepare for Transfer
        findj,1,100:Tindused(j).eq.0;
        assign: Tindex = j;
                Tindused(Tindex) = 1;
                Tvolume(Tindex) = min(fworking*capacityHL -
```

```
                                    volumeHL,max(0.0,volume(tank#1)-vheel));
            dTvol(Tindex) = dvol;
        if: ((TOxides.ge.464999.0).or.(tnow.ge.3650.0)).and.(PhaseIIflagSol.eq.0);
            queue,waitPhaseIISol;
            wait: PhaseIISigSol,2;
            assign: PhaseIIflagSol = 1;
        endif;
        assign:  Oxides  -
                                    mass(tank#1,35) * 1.58   +
                                    mass(tank#1,36) * 1.58   +
                                    mass(tank#1,37) * 1.00   +
                                    mass(tank#1, 2) * 0.537  +
                                    mass(tank#1, 3) * 1.89   +
                                    mass(tank#1, 6) * 3.22   +
                                    mass(tank#1, 9) * 1.11   +
                                    mass(tank#1,10) * 1.40   +
                                    mass(tank#1,13) * 1.17   +
                                    mass(tank#1,18) * 0.633  +
                                    mass(tank#1,19) * 1.46   +
                                    mass(tank#1,24) * 1.43   +
                                    mass(tank#1,25) * 1.43   +
                                    mass(tank#1,26) * 0.377  +
                                    mass(tank#1,29) * 1.08   +
                                    mass(tank#1,31) * 1.21   +
                                    mass(tank#1,32) * 1.17   +
                                    mass(tank#1,33) * 2.16   +
                                    mass(tank#1,34) * 1.66   +
;                                    mass(tank#1,39) * 1.35   +
                                    mass(tank#1,41) * 1.41   +
                                    mass(tank#1,42) * 0.502  +
                                    mass(tank#1,48) * 1.15   +
;                                    mass(tank#1,57) * 2.14   +
                                    mass(tank#1,61) * 1.28   +
                                    mass(tank#1,68) * 1.06   +
                                    mass(tank#1,72) * 1.35   +
                                    mass(tank#1,73) * 0.774 ;
        if: (tnow.lt.3650.0);
           assign: Tvolume(Tindex) = Tvolume(Tindex)*min(((465000.0-TOxides)/Oxides),1.0);
                   TOxides  = TOxides + Oxides*min(((465000.0-TOxides)/Oxides),1.0);
        else;
           assign:  TOxides  = TOxides + Oxides;
        endif;
        assign:  dTrate(Tindex) = volume(tank#1)*3000.0*0.75/Oxides;
;** Check to see if there is anthing to transfer
        branch,1:
           if,Tvolume(Tindex).ge.0.001,Tr2HLi;
           else,FiledHL;
;** initalize Concentrations Prior to Transfer
Tr2HLi  assign:  TcvLiq(Tindex) = vLiq(tank#1)/volume(tank#1);
                 TcvSol(Tindex) = vSol(tank#1)/volume(tank#1);
                 im = 1;
        while:im.le.177;
```



```
        assign: TcFrac(Tindex,im) = fTank(tank#1,im)/volume(tank#1);
                im=im+1;
        endwhile;
        assign: im=0;
Tr2HLim assign:  im = im + 1;
        assign: Tcmass(Tindex,im) = mass(tank#1,im)/volume(tank#1);
                TcmLiq(Tindex,im) = mLiq(tank#1,im)/volume(tank#1);
                TcmSol(Tindex,im) = mSol(tank#1,im)/volume(tank#1);
        branch,1:
             if,im.lt.Nmcomp,Tr2HLim;
             else,Look2HL;
;** Begin to Transfer Stored Waste --> 1st Stage S/D Tank
Look2HL  branch,1:
            if,Tvolume(Tindex).ge.0.001,Tr2HL;
            else,FiledHL;
Tr2HL   assign:  dTvol(Tindex) = min(Tvolume(Tindex),dTvol(Tindex));
                 volume(tank#1) = volume(tank#1) - dTvol(Tindex);
                 volumeHL = volumeHL + dTvol(Tindex);
                 volumeHLb(ibatch) = volumeHLb(ibatch) + dTvol(Tindex);
                 vLiq(tank#1)   = vLiq(tank#1)   - dTvol(Tindex)*TcvLiq(Tindex);
                 vLiqHL   = vLiqHL   + dTvol(Tindex)*TcvLiq(Tindex);
                 vLiqHLb(ibatch) = vLiqHLb(ibatch) + dTvol(Tindex)*TcvLiq(Tindex);
                 vSol(tank#1)   = vSol(tank#1)   - dTvol(Tindex)*TcvSol(Tindex);
                 vSolHL   = vSolHL   + dTvol(Tindex)*TcvSol(Tindex);
                 vSolHLb(ibatch) = vSolHLb(ibatch) + dTvol(Tindex)*TcvSol(Tindex);
;-------  - Tank Fractions
        assign: im=1;
        while:im.le.177;
        assign: fTank(181,im) = fTank(181,im)        + TcFrac(Tindex,im)*dTvol(Tindex);
                frHL(ibatch,im) = frHL(ibatch,im)    + TcFrac(Tindex,im)*dTvol(Tindex);
                fTank(tank#1,im) = fTank(tank#1,im)  - TcFrac(Tindex,im)*dTvol(Tindex);
                im=im+1;
        endwhile;
;-------  -
        assign:  im = 0;
Tr2HLm  assign:  im = im + 1;
        assign: mass(tank#1,im) = mass(tank#1,im) - dTvol(Tindex)*Tcmass(Tindex,im);
                massHL(im)      = massHL(im)      + dTvol(Tindex)*Tcmass(Tindex,im);
                massHLb(ibatch,im)      = massHLb(ibatch,im)      + dTvol(Tindex)*Tcmass(Tindex,im);
                mLiq(tank#1,im) = mLiq(tank#1,im) - dTvol(Tindex)*TcmLiq(Tindex,im);
                mLiqHL(im)      = mLiqHL(im)      + dTvol(Tindex)*TcmLiq(Tindex,im);
                mLiqHLb(ibatch,im)      = mLiqHLb(ibatch,im)      + dTvol(Tindex)*TcmLiq(Tindex,im);
                mSol(tank#1,im) = mSol(tank#1,im) - dTvol(Tindex)*TcmSol(Tindex,im);
                mSolHL(im)      = mSolHL(im)      + dTvol(Tindex)*TcmSol(Tindex,im);
                mSolHLb(ibatch,im)      = mSolHLb(ibatch,im)      +  dTvol(Tindex)*TcmSol(Tindex,im);
        branch,1:
             if,im.lt.Nmcomp,Tr2HLm;
             else,Tr2HLd;
Tr2HLd  assign:  tank#2 = 181;
        write,FilHL,"(2i5,11e11.3)":
          tank#1,tank#2,tnow,mLiq(tank#1,Ntot),mSol(tank#1,Ntot),volume(tank#1),
                     mLiqHL(Ntot),mSolHL(Ntot),volumeHL,
```

```
                    dTvol(Tindex),dTvol(Tindex)*TemLiq(Tindex,Ntot),
                                    dTvol(Tindex)*TemSol(Tindex,Ntot),mSol(tank#1,75)*3180.0;
          delay: dTvol(Tindex)/((1.0-0.91*(tnow.le.5019.0))*dTrate(Tindex));
          assign:  Tvolume(Tindex)  = Tvolume(Tindex) - dTvol(Tindex);
                   next(Look2HL);
FiledHL   release: tank(tank#1);
          signal: tank#1;
          signal: SolSig0;
          assign: Tindused(Tindex) = 0;
          SolC(gindex1) = 0;
;** Tank may not be full ## might want to check ##
;***
;** Release Feed Tanks
          write,HLWbatch,"(' Batch     Time (days)  Vliq (kgal)  Vinsol (kgal) Vtot (kgal)')";
          write,HLWbatch,"(i5,4(e13.3))";
                   ibatch,tnow,vLiqHLb(ibatch),vSolHLb(ibatch),volumeHLb(ibatch);
          write,HLWbatch,"('  Chem     Mliq (kg)            Minsol (kg)          Mtot(kg)')";
          assign: im = 1;
;HLWbat   while:im.le.NcAspen;
;           write,HLWbatch,"(i5,3e21.12)";
;                im,mLiqHLb(ibatch,iAspen(im)),mSolHLb(ibatch,iAspen(im))
;                     ,massHLb(ibatch,iAspen(im));
;           assign: im = im + 1;
;         endwhile;
 HLWbat   while:im.le.Nmcomp;
           write,HLWbatch,"(i5,3e21.12)";
               im,mLiqHLb(ibatch,im),mSolHLb(ibatch,im)
                     ,massHLb(ibatch,im);
           assign: im = im + 1;
          endwhile;
           write,HLWbatch,"('   Tot',3e21.12)";
               mLiqHLb(ibatch,Ntot),mSolHLb(ibatch,Ntot),massHLb(ibatch,Ntot);
          assign: im = 1;
          while:im.le.17;
          if: abs(frHL(ibatch,im)).lt.1.e-8;
             assign: frHL(ibatch,im) = 0.0;
          endif;
            write,HLWbatch,"(2i5,e21.12,5x,a5)";
                ibatch,im,frHL(ibatch,im),str(variables,im);
            assign: im = im + 1;
          endwhile;
HLWbatd     release: FeedHL;
            signal:  FeedHLSig;
            signal:  SolPSig;
          dispose;

;***
;***  Cross Site transfer of West Area Retrieved Waste
;***
;** Look for full West Area Storage Tanks
LookStW   if:NStoreWest.eq.0;
             assign: j = 0;
```



```
          else;
            findj,1,NStoreWest:(StoreWestR(j).eq.1).and.
              ( ( ((tnow.le.2500).and.(volume(StoreWest(j)).ge.0.15*capacity(StoreWest(j))*fworking))
              .or.(volume(StoreWest(j)).ge.0.65*capacity(StoreWest(j))*fworking))
              .or.((Westcnt.eq.Westtot).and.(volume(StoreWest(j)).gt.(0.001+vheel))).and.
                        (NR(tank(StoreWest(j))).eq.0);
          endif;
          branch,1:
               if,j.eq.0,LookStWW:
               else,PickStW;
LookStWW queue,LookStWQ;
          wait: StWSig,1:next(LookStW);
PickStW   assign:   gindex1 = j;
                    tank#1 = StoreWest(gindex1);
          queue, tank_Q(tank#1);
          seize: tank(tank#1);
          branch,2:
               always,LookStW;
               always,LookRE;
;** Look to fill East Area Tanks
LookRE    if:NRWStorage.eq.0;
             assign: j = 0;
          else;
            findj,1,1:(RWStorageR(j).eq.1).and.
                          (NR(tank(RWStorage(j))).eq.0);
;           ((capacity(RWStorage(j))*fworking-volume(RWStorage(j))).ge.volume(tank#1));
          endif;
          branch,1:
               if,j.eq.0,LookREW:
               else,PickRE;
LookREW   queue,LookREQ;
          wait: XSiteSig,1:next(LookRE);
PickRE    assign: tank#2 = RWStorage(j);
          queue, tank_Q(tank#2);
          seize: tank(tank#2);
;** Prepare for Transfer
          queue, XsiteTR_Q;
          seize: XsiteTR;
          findj,1,100:Tindused(j).eq.0;
          assign: Tindex = j;
                  Tindused(Tindex) = 1;
                  Tvolume(Tindex) = min(fworking*capacity(tank#2) -
                                  volume(tank#2),max(0.0,volume(tank#1)-vheel));
                  dTvol(Tindex) = dvol;
                  dTrate(Tindex) = r200gpm;
;** Check to see if there is anthing to transfer
          branch,1:
               if,Volume(Tindex).ge.0.001,Tr2StWi:
               else,FiledStW;
;** Initalize Concentrations Prior to Transfer
Tr2StWi   assign:  TcvLiq(Tindex) = vLiq(tank#1)/volume(tank#1);
                   TcvSol(Tindex) = vSol(tank#1)/volume(tank#1);
```

```
                im = 1;
        while:im.le.177;
        assign: TcFrac(Tindex,im) = fTank(tank#1,im)/volume(tank#1);
                im=im+1;
        endwhile;
        assign: im=0;
Tr2StWim assign:  im = im + 1;
        assign: Tcmass(Tindex,im) = mass(tank#1,im)/volume(tank#1);
                TcmLiq(Tindex,im) = mLiq(tank#1,im)/volume(tank#1);
                TcmSol(Tindex,im) = mSol(tank#1,im)/volume(tank#1);
        branch,1:
            if,im.lt.Nmcomp,Tr2StWim;
            else,Look2StW;
;** Begin to Transfer Stored Waste XSite
Look2StW branch,1:
            if,Tvolume(Tindex).ge.0.001,Tr2StW;
            else,FiledStW;
Tr2StW   assign:  dTvol(Tindex) = min(Tvolume(Tindex),dTvol(Tindex));
                volume(tank#1) = volume(tank#1) - dTvol(Tindex);
                volume(tank#2) = volume(tank#2) + dTvol(Tindex);
                vLiq(tank#1)   = vLiq(tank#1)   - dTvol(Tindex)*TcvLiq(Tindex);
                vLiq(tank#2)   = vLiq(tank#2)   + dTvol(Tindex)*TcvLiq(Tindex);
                vSol(tank#1)   = vSol(tank#1)   - dTvol(Tindex)*TcvSol(Tindex);
                vSol(tank#2)   = vSol(tank#2)   + dTvol(Tindex)*TcvSol(Tindex);
;---------- Tank Fractions
        assign: im=1;
        while:im.le.177;
        assign: fTank(tank#2,im) = fTank(tank#2,im) + TcFrac(Tindex,im)*dTvol(Tindex);
                fTank(tank#1,im) = fTank(tank#1,im) - TcFrac(Tindex,im)*dTvol(Tindex);
                    im=im+1;
        endwhile;
;----------
        assign:  im = 0;
Tr2StWm  assign:  im = im + 1;
        assign: mass(tank#1,im) = mass(tank#1,im) - dTvol(Tindex)*Tcmass(Tindex,im);
                mass(tank#2,im) = mass(tank#2,im) + dTvol(Tindex)*Tcmass(Tindex,im);
                mLiq(tank#1,im) = mLiq(tank#1,im) - dTvol(Tindex)*TcmLiq(Tindex,im);
                mLiq(tank#2,im) = mLiq(tank#2,im) + dTvol(Tindex)*TcmLiq(Tindex,im);
                mSol(tank#1,im) = mSol(tank#1,im) - dTvol(Tindex)*TcmSol(Tindex,im);
                mSol(tank#2,im) = mSol(tank#2,im) + dTvol(Tindex)*TcmSol(Tindex,im);
        branch,1:
            if,im.lt.Nmcomp,Tr2StWm;
            else,Tr2StWdA;
Tr2StWdA branch,2:
            always,Tr2StWd;
            if,aflag.eq.1,AnmXsite;
Tr2StWd  delay: dTvol(Tindex)/dTrate(Tindex);
        write,Fill2,*(2i5,10e11.3)*;
          tank#1,tank#2,tnow,mLiq(tank#1,Ntot),mSol(tank#1,Ntot),volume(tank#1),
                        mLiq(tank#2,Ntot),mSol(tank#2,Ntot),volume(tank#2),
                        dTvol(Tindex),dTvol(Tindex)*TcmLiq(Tindex,Ntot),
                                      dTvol(Tindex)*TcmSol(Tindex,Ntot);
```



```
        assign:  Tvolume(Tindex)  = Tvolume(Tindex) - dTvol(Tindex);
                 next(Look2StW);
FiledStW release: tank(tank#1);
        signal: tank#1;
        signal: StWSig;
        assign: Tindused(Tindex) = 0;
;*********************************
        release: tank(tank#2);
        release: XsiteTR;
        signal: tank#2;
        signal: RwFillSig;
        signal: SDiSig0;
        signal: WRFDirEmptSig(3);
        signal: WRFDirEmptSig(4);
        signal: WRFDirEmptSig(3);
        signal: WRFDirEmptSig(4);
        dispose;
;*********************************************
; Animation for X-Site Transfer      *************
AnmXsite branch,2:
            always,AnmXsi11;
            always,AnmXsi12;
AnmXsi11 delay: 0.5*dTvol(Tindex)/dTrate(Tindex);
AnmXsi12 assign:  M=XsiteW_ST;
        assign: picture = 1;
        route:arfactorX1*dTvol(Tindex)/dTrate(Tindex),EastW_ST;
        station,13-14;
        assign:  M=Xsite_ST;
        assign: picture = 1;
        route:arfactorX2*dTvol(Tindex)/dTrate(Tindex),East_ST;
        station,15-16;
        dispose;
;        dispose;
;
;*********************************
;
; THE END (MOD)
;******
; Look to Retrieved Waste from South Quadrant SSTs
;******
LookRSQ  if:NWRFDirect(wrf_num).eq.0;
            assign: j = 0;
        else;
           find,j,1,NWRFDirect(wrf_num):(WRFDirectR(wrf_num,j).eq.1).and.
               (NR(tank(WRFDirect(wrf_num,j))).eq.0).and.
               ( (fworking*capacity(WRFDirect(wrf_num,j)) -
                 volume(WRFDirect(wrf_num,j))).ge.75.0 );
        endif;
        branch,1:
            if,j.eq.0,LookRSQW;
            else,PickRSQ;
LookRSQW queue,LookSRWQ(wrf_num);
```

```
        wait: WRFDirEmptSig(wrf_num),1;next(LookRSQ);
PickRSQ assign: tank#2 = WRFDirect(wrf_num,j);
        queue, tank_Q(tank#2);
        seize: tank(tank#2);
;** Prepare for Transfer
          if: (Tindex.eq.0);
          find,1,100:Tindused(j).eq.0;
          assign: Rindex = j;
                  Tindused(Rindex) = 1;
          find,1,100:Tindused(j).eq.0;
          assign: Tindex = j;
                  Tindused(Tindex) = 1;
                  Tvolume(Tindex) =  max(0.0,Rvolume(tank#1)-vheel);
                  dTvol(Tindex) =  min(75.0,Rvolume(tank#1));    ! Fix Sluice Volume
                  dTrate(Tindex) =  rrate*(1.0 + 0.0*(tnow.gt.2190.0) );      ! Retrieval Rate
;** Transfer SST Waste --> DST Receivers
          branch,1:
              if,Tvolume(Tindex).lt.0.001,FiledRSQ;
             else,Tr2RSQi;
;** Initalize Concentrations Prior to Transfer
Tr2RSQi assign:  TcvLiq(Tindex) = vLiq(tank#1)/Rvolume(tank#1);
                 TcvSol(Tindex) = vSol(tank#1)/Rvolume(tank#1);
                 TcvSC(Tindex)  = vSC(tank#1)/Rvolume(tank#1);
                 TcvLiq(Rindex) = RvLiq(tank#1)/Rvolume(tank#1);
                 TcvSol(Rindex) = RvSol(tank#1)/Rvolume(tank#1);
                 im = 1;
        while:im.le.177;
        assign: TcFrac(Rindex,im) = fTank(tank#1,im)/Rvolume(tank#1);
                im=im+1;
        endwhile;
        assign: im=0;
Tr2RSQim assign:  im = im + 1;
        assign: Tcmass(Tindex,im) = mass(tank#1,im)/Rvolume(tank#1);
                TcmLiq(Tindex,im) = mLiq(tank#1,im)/Rvolume(tank#1);
                TcmSol(Tindex,im) = mSol(tank#1,im)/Rvolume(tank#1);
                TcmSC(Tindex,im)  = mSC(tank#1,im)/Rvolume(tank#1);
                Rcmass(Rindex,im) = Rmass(tank#1,im)/Rvolume(tank#1);
                RcmLiq(Rindex,im) = RmLiq(tank#1,im)/Rvolume(tank#1);
                RcmSol(Rindex,im) = RmSol(tank#1,im)/Rvolume(tank#1);
        branch,1:
            if,im.lt.Nmcomp,Tr2RSQim;
            else,Look2RSQ;
          else;
             assign:
             dTvol(Tindex) =  min(75.0,Tvolume(Tindex));    ! Fix Sluice Volume
          endif;
Look2RSQ branch,1:
            if,Tvolume(Tindex).ge.0.001,Tr2RSQ;
            else,FiledRSQ;
Tr2RSQ  assign:  dTvol(Tindex) = min(Tvolume(Tindex),dTvol(Tindex));
                 volume(tank#2) = volume(tank#2) + dTvol(Tindex);
                 vLiq(tank#1)   = vLiq(tank#1)   - dTvol(Tindex)*TcvLiq(Tindex);
```



```
                 vLiq(tank#2)   = vLiq(tank#2)   + dTvol(Tindex)*TcvLiq(Rindex);
                 vLiqRetrieved   = vLiqRetrieved   + dTvol(Tindex)*TcvLiq(Rindex);
                 vSol(tank#1)   = vSol(tank#1)   - dTvol(Tindex)*TcvSol(Tindex);
                 vSol(tank#2)   = vSol(tank#2)   + dTvol(Tindex)*TcvSol(Rindex);
                 vSolRetrieved   = vSolRetrieved   + dTvol(Tindex)*TcvSol(Rindex);
                 vSC(tank#1)    = vSC(tank#1)    - dTvol(Tindex)*TcvSC(Tindex);
                 volume(tank#1) = vLiq(tank#1) + vSol(tank#1) + vSC(tank#1);
;  -------- Tank Fractions
        assign: im=1;
        while:im.le.177;
        assign: fTank(tank#2,im) = fTank(tank#2,im) + TcFrac(Rindex,im)*dTvol(Tindex);
                fTank(tank#1,im) = fTank(tank#1,im) - TcFrac(Rindex,im)*dTvol(Tindex);
                im=im+1;
        endwhile;
;  --------
        assign:  im   0;
Tr2RSQm assign:  im   im + 1;
        assign: mass(tank#1,im)  = mass(tank#1,im)  - dTvol(Tindex)*Tcmass(Tindex,im);
                mass(tank#2,im)  = mass(tank#2,im)  + dTvol(Tindex)*Tcmass(Rindex,im);
                mLiq(tank#1,im)  = mLiq(tank#1,im)    dTvol(Tindex)*TcmLiq(Tindex,im);
                mLiq(tank#2,im)  = mLiq(tank#2,im)  + dTvol(Tindex)*TcmLiq(Rindex,im);
                mSol(tank#1,im)  = mSol(tank#1,im)  - dTvol(Tindex)*TcmSol(Tindex,im);
                mSol(tank#2,im)  = mSol(tank#2,im)  + dTvol(Tindex)*TcmSol(Rindex,im);
                mSC(tank#1,im)   = mSC(tank#1,im)   - dTvol(Tindex)*TcmSC(Tindex,im);
        branch,1:
            if,im.lt.Nmcomp,Tr2RSQm;
            else,Tr2RSQd;
Tr2RSQd  delay: dTvol(Tindex)/(( (Tvolume(Tindex).ge.100.0)*NR(wrf(wrf_num)) + (Tvolume(Tindex).lt.100.0) )*dTrate(Tindex));
        write,FillRWS,"(2i5,10e11.3)";
          tank#1,tank#2,tnow,mLiq(tank#1,Ntot),mSol(tank#1,Ntot),volume(tank#1),
                         mLiq(tank#2,Ntot),mSol(tank#2,Ntot),volume(tank#2),
                         dTvol(Tindex),dTvol(Tindex)*TcmLiq(Tindex,Ntot),
                                       dTvol(Tindex)*TcmSol(Tindex,Ntot);
        assign:  Tvolume(Tindex)   Tvolume(Tindex)  - dTvol(Tindex);
;                 next(Look2RSQ);
FiledRSQ release: tank(tank#2);
        signal: tank#2;
        signal: WRFDirEmptSig(wrf_num);
;        signal: WRFDirEmptSig(wrf_num);
        signal: RWfillSig;
        branch,1:
            if,Tvolume(Tindex).lt.0.001,RSQdone;
            if,Tvolume(Tindex).ge.0.001,LookRSQW;
;            if,NQ(LookRSWQ(wrf_num)).eq.0,RSQsig;
RSQdone assign: Tindused(Tindex) = 0;
                Tindused(Rindex) = 0;next(rdone);
;RSQsig  signal: WRFDirEmptSig(wrf_num);
        dispose;
;
```

```
      files: tinitalv,"tinitalv.txt",SEQ,"(3i5,6f10.1,1pe11.3)",DIS,";":
             RNinfo,"rn-info.txt",SEQ,"(9x,2e12.3)",DIS,";":
             tinitalm,"tinitalm.txt",SEQ,"(25x,4e11.2)",DIS,";":
             check,"check.txt",SEQ,"(25x,4e11.2)",DIS,";":
             solid,"solid.txt",SEQ,"(25x,4e11.2)",DIS,";":
             rdst,"dst.txt",SEQ,"(f9.1,i5,67x,i4)",DIS,";":
             checkassign,"datcheck.txt",SEQ,"(a5)",DIS,";":
             retrschd,"retrschd.txt",SEQ,"(i5,f12.2)",DIS,";":
             HLWbatch,"HLWbatch.txt",SEQ,"i5,(4(e12.2))",DIS,";":
             PTWbatch,"PTWbatch.txt",SEQ,"i5,(4(e12.2))",DIS,";":
             rcomplete,"rcomp.txt",SEQ,"(f12.3,4i5)",DIS,";":
             debug,"debug.txt",SEQ,"(2e14.3)",DIS,";":
             blend,"blend.txt",SEQ,"(2e14.3)",DIS,";":
             FillSWT,"FillSWT.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             FillRWS,"FillRWS.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             FillRRWS,"FillRRWS.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             FillWST,"FillWST.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             FillDec1,"FillDec1.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             FillDec2,"FillDec2.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             FillDec3,"FillDec3.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             FillPT,"FillPT.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             ckLV,"ckLV.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             ckLVV,"ckLVV.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             ckPT,"ckPT.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             FillPT1,"FillPT1.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             FillLVV,"FillLVV.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             FillLV,"FillLV.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             FillHL,"FillHL.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             FillX,"FillX.txt",SEQ,"(2i5,9(e12.3))",DIS,";":
             InventoryE,"inv1998.txt",SEQ,"(5x,75(e7.2))",DIS,";":
             InventoryEcheck,"inve-check.txt",SEQ,"(5x,75(e7.2))",DIS,";":
             rinitiate,"rinit.txt",SEQ,"(f12.3,4i5)",DIS,";":
;
      attributes:  tank#1;              ! Tank 1 index
                   tank#2;              ! Tank 2 index
                   Tindex,0;            ! Transfer index
                   im,0;                ! Mass component index
                   gindex1;             ! General index 1
                   gindex2;             ! General index 2
                   gindex3;             ! General index 3
                   gindex4;             ! General index 4
                   gindex5;             ! General index 5
;
      nicknames: tank#,tank#1;
                 Rindex,gindex1;
                 cWRFTcnt,gindex1;
                 cWRFTind,gindex2;
                 Which1st2nd,gindex3;
                 itassign,gindex3;
                 CAddedH2O,gindex4;
                 dilfactor,gindex5;
                 wrf_num,gindex3;
```



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;
      stations:  wrf_ST1;
                 wrf_ST2;
                 wrf_ST3;
                 wrf_ST4;
                 wrf_ST5;
                 wrf_ST6;
                 wrf_DST1;
                 wrf_DST2;
                 wrf_DST3;
                 wrf_DST4;
                 wrf_DST5;
                 wrf_DST6;
                 XsiteW_ST;
                 EastW_ST;
                 Xsite_ST;
                 East_ST;
;
      variables:
A101, 1;
A102, 2;
A103, 3;
A104, 4;
A105, 5;
A106, 6;
AX101,   7;
AX102,   8;
AX103,   9;
AX104,  10;
B101, 11;
B102, 12;
B103, 13;
B104, 14;
B105, 15;
B106, 16;
B107, 17;
B108, 18;
B109, 19;
B110, 20;
B111, 21;
B112, 22;
B201, 23;
B202, 24;
B203, 25;
B204, 26;
BX101,  27;
BX102,  28;
BX103,  29;
BX104,  30;
BX105,  31;
BX106,  32;
BX107,  33;
```

```
BX108,   34:
BX109,   35:
BX110,   36:
BX111,   37:
BX112,   38:
BY101,   39:
BY102,   40:
BY103,   41:
BY104,   42:
BY105,   43:
BY106,   44:
BY107,   45:
BY108,   46:
BY109,   47:
BY110,   48:
BY111,   49:
BY112,   50:
C101, 51:
C102, 52:
C103, 53:
C104, 54:
C105, 55:
C106, 56:
C107, 57:
C108, 58:
C109, 59:
C110, 60:
C111, 61:
C112, 62:
C201, 63:
C202, 64:
C203, 65:
C204, 66:
S101, 67:
S102, 68:
S103, 69:
S104, 70:
S105, 71:
S106, 72:
S107, 73:
S108, 74:
S109, 75:
S110, 76:
S111, 77:
S112, 78:
SX101,   79:
SX102,   80:
SX104,   81:
SX104,   82:
SX105,   83:
SX106,   84:
SX107,   85:
```



```
SX108,   86:
SX109,   87:
SX110,   88:
SX111,   89:
SX112,   90:
SX113,   91:
SX114,   92:
SX115 93:
T101, 94:
T102, 95:
T103, 96:
T104, 97:
T105, 98:
T106, 99:
T107, 100:
T108, 101:
T109, 102:
T110, 103:
T111, 104:
T112, 105:
T201, 106:
T202, 107:
T203, 108:
T204, 109:
TX101,   110:
TX102,   111:
TX103,   112:
TX104,   113:
TX105,   114:
TX106,   115:
TX107,   116:
TX108,   117:
TX109,   118:
TX110,   119:
TX111,   120:
TX112,   121:
TX113,   122:
TX114,   123:
TX115,   124:
TX116,   125:
TX117,   126:
TX118,   127:
TY101,   128:
TY102,   129:
TY103,   130:
TY104,   131:
TY105,   132:
TY106,   133:
U101, 134:
U102, 135:
U103, 136:
U104, 137:
```

```
U105, 138:
U106, 139:
U107, 140:
U108, 141:
U109, 142:
U110, 143:
U111, 144:
U112, 145:
U201, 146:
U202, 147:
U203, 148:
U204, 149:
AN101,   150:
AN102,   151:
AN103,   152:
AN104,   153:
AN105,   154:
AN106,   155:
AN107,   156:
AP101,   157:
AP102,   158:
AP103,   159:
AP104,   160:
AP105,   161:
AP106,   162:
AP107,   163:
AP108,   164:
AW101,   165:
AW102,   166:
AW103,   167:
AW104,   168:
AW105,   169:
AW106,   170:
AY101,   171:
AY102,   172:
AZ101,   173:
AZ102,   174:
SY101,   175:
SY102,   176:
SY103,   177:
XX178,   178:
XX179,   179:
XX180,   180:
XX181,   181:
XX182,   182:
XX183,   183:
XX184,   184:
XX185,   185:
XX186,   186:
XX187,   187:
XX188,   188:
XX189,   189:
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XX190,   190:
XX191,   191:
XX192,   192:
XX193,   193:
XX194,   194:
XX195,   195:
XX196,   196:
XX197,   197:
XX198,   198:
XX199,   199:
XX200,   200:
;**
;****** General Tank Farm Related Variables
;**
                    rvar(20),0:
                    tank#2rem,0:
                    CrConc,0.0:
                    washl(300),0.0:
                    volume(300),0.0:      ! Total volume of material in tank (kgal)
                    vLiq(300),0.0:        ! Liquid Volume (kgal)
                    vSol(300),0.0:        ! Slugde and Solid Particulate Volume (kgal)
                    vSC(300),0.0:         ! Salt-Cake Volume (dissolved on Retrieval) (kgal)
                    vPumpL(300),0.0:      ! Interstitial Liquid (not used) (kgal)
                    capacity(300):        ! Capacity of tank (kgal)
                    fworking,0.95:        ! frac of working vol
                    mass(300,100),0.0:     ! Total Mass of component ind2 in tank ind1 (gm)
                    mLiq(300,100),0.0:     ! Liquid Mass of component ind2 in tank ind1 (gm)
                    mSol(300,100),0.0:     ! Solids Mass of component ind2 in tank ind1 (gm)
                    mSC(300,100),0.0:      ! Salt Cake Mass of component ind2 in tank ind1 (gm)
                    fTank(300,177),0.0:
                    NcAspen,205:
;                                1   2   3   4   5   6   7   8   9  10  11  12  13  14  15  16  17  18  19  20
                    iAspen(220),100,  1,100,100,100,  3,  2,100, 87, 87,100,  5,100,100,100,100,  7,100,   8,100
;                                 21  22  23  24  25  26  27  28  29  30  31  32  33  34  35  36  37  38  39  40
                                ,  9,100,100,  6, 74,100, 11,100, 10,100, 12,100,100, 13,100, 14,100, 88,100,100
;                                 41  42  43  44  45  46  47  48  49  50  51  52  53  54  55  56  57  58  59  60
                                ,100,100,100, 17, 16,100,100, 19, 18,100,100, 78, 78,100,100,100, 22,100,100,100
;                                 61  62  63  64  65  66  67  68  69  70  71  72  73  74  75  76  77  78  79  80
                                ,100,100,100, 26,100, 24, 25,100,100, 23,100,100, 28,100,100,100,100,100,100, 29
;                                 81  82  83  84  85  86  87  88  89  90  91  92  93  94  95  96  97  98  99 100
                                , 27,100, 30,100,100, 31,100, 32,100,100, 33,100, 34,100, 37, 35, 36,100, 38,100
;                                101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120
                                ,100,100,100, 39,100, 40,100,100,100,100, 42,100,100, 41,100,100, 43, 44,100, 82
;                                121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140
                                ,100, 46,100,100, 47,100, 48,100,100, 49,100,100,100,100,100,100,100, 84, 85, 86
;                                141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160
                                ,100,100, 51,100,100,100,100,100,100,100, 52,100, 53,100, 54,100,100, 55,100, 56,100
;                                161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180
                                ,100, 57,100, 58,100, 59,100,100, 60,100,100,100, 61, 75,100,100,100, 62,100, 63
;                                181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200
                                ,100, 64,100, 65,100, 66, 67,100, 68,100,100,100, 80, 81,100,100, 69,100,100, 70
;                                201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220
```

```
                                 ,100, 71,100, 73, 72,100,100,100,100,100,100,100,100,100,100,100,100,100,100,100:
                  Cipergram(20),0.0:
                  BTUperhrCi(20),0.0:
;       Retrieval Variables
                  TaddedH2O(300),0.0:     !
                  RTcnt,0:
                  RTIcnt,0.0:
                  RTotH2O,0.0:
                  vLiqRetrieved,0.0:
                  vSolRetrieved,0.0:
                  Rvolume(300),0.0:       ! Total volume of material in tank (kgal)
                  RvLiq(300),0.0:         ! Liquid Volume (kgal)
                  RvSol(300),0.0:         ! Slugde and Solid Particulate Volume (kgal)
                  Rmass(300,100),0.0:      ! Total Mass of component ind2 in tank ind1 (gm)
                  RmLiq(300,100),0.0:      ! Liquid Mass of component ind2 in tank ind1 (gm)
                  RmSol(300,100),0.0:      ! Solids Mass of component ind2 in tank ind1 (gm)
;       Transfer Variables
                  Tindused(100),0:
                  dTrate(100),0.0:        ! Total volume of material in tank (kgal)
                  Tvolume(100),0.0:        ! Total volume of material in tank (kgal)
                  dTvol(100),0.0:         ! Total volume of material in tank (kgal)
                  TcvLiq(100),0.0:
                  TcvSol(100),0.0:
                  TcvSC(100),0.0:
                  TcFrac(100,177),0.0:
                  Tcmass(100,100),0.0:
                  TcmLiq(100,100),0.0:
                  TcmSol(100,100),0.0:
                  TcmSC(100,100),0.0:
                  Wvolume,0.0:            ! Wash Solution 7M Na & Water
                  WcvLiq(2),1.0,1.0:
                  WcvSol(2),0.0,0.0:
                  Wcmass(200,2),0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,3.255e3,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,6.095e2,0.0,
                               0.0,0.0,0.0,0.0,0.0,4.505e2,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,4.315e3,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
```



```
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,3.785e3,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0 0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,3.785e3,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0:
                  WcmLiq(200,2),0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,3.255e3,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,6.095e2,0.0,
                               0.0,0.0,0.0,0.0,0.0,4.505e2,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,4.315e3,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,3.785e3,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,3.785e3,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                               0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
```

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                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0:
          WcmSol(200,2),0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0:
;          Wcmass(20,2),0.0,0.0,0.0,0.0,3.785e6,0.0,3.785e6,0.0,0.0,0.0,0.0,0.0,
;                    0.0,0.0,0.0,0.0,3.785e6,0.0,3.785e6,0.0,0.0,0.0,0.0,0.0:
;          WcmLiq(20,2),0.0,0.0,0.0,0.0,3.785e6,0.0,3.785e6,0.0,0.0,0.0,0.0,0.0,
;                    0.0,0.0,0.0,0.0,3.785e6,0.0,3.785e6,0.0,0.0,0.0,0.0,0.0:
;          WcmSol(20,2),0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,
;                    0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0,0.0:
;**
;****** Check on Total Inventory Before Retrieval
```



```
;**
          volumeBR,0.0:          !BR Total volume of material in tank (kgal)
          vLiqBR,0.0:            !BR Liquid Volume (kgal)
          vSolBR,0.0:          !BR Slugde and Solid Particulate Volume (kgal)
          vSCBR,0.0:             !BR Salt-Cake Volume (dissolved on Retrieval) (kgal)
          massBR(100),0.0:       !BR Mass of component ind2 in tank ind1 (gm)
          mLiqBR(100),0.0:       !BR Liquid Mass of component ind2 in tank ind1 (gm)
          mSolBR(100),0.0:     !BR Solids Mass of component ind2 in tank ind1 (gm)
          mSCBR(100),0.0:        !BR Salt Cake Mass of component ind2 in tank ind1 (gm)
;**
;****** Check on Total Inventory After Retrieval
;**
          volumeAR,0.0:          !AR Total volume of material in tank (kgal)
          vLiqAR,0.0:            !AR Liquid Volume (kgal)
          vSolAR,0.0:          !AR Slugde and Solid Particulate Volume (kgal)
          vSCAR,0.0:             !AR Salt-Cake Volume (dissolved on Retrieval) (kgal)
          dvolumeAR,0.0:         !AR Total dVolume of material in tank (kgal)
          dvSolAR,0.0:         !AR Slugde and Solid Particulate dVolume (kgal)
          massAR(100),0.0:       !AR Mass of component ind2 in tank ind1 (gm)
          mLiqAR(100),0.0:       !AR Liquid Mass of component ind2 in tank ind1 (gm)
          mSolAR(100),0.0:       !AR Solids Mass of component ind2 in tank ind1 (gm)
          mSCAR(100),0.0:        !AR Salt Cake Mass of component ind2 in tank ind1 (gm)
;**
;****** Tank use/function indexing
;**
          Ntanks,224:          ! Number of tank
          NmcompR,89:          ! Number of distigiushable mass components to READ
          Nmcomp,89:           ! Number of distigiushable mass components
          wrf#(20):            ! Waste Receiver Facility index assigned to Tank Farm
          farm#(300):          ! Tank Farm index assigned to Tank
          SSTind,1:            ! Inialize a few Inicies for *find*ing Tanks
          DSTind(2),150,178:   !    *      *
          WRFtank#2(6),0:
          fullsttflag(6),0:
          WRFind(6),201,205,209,213,217,221: ! Absolute index  for  WRF Tanks
          WRFtind(6),0:                      ! Relative index  for  WRF Tanks
          WRFtful(6),0:                      ! Index flag for  full WRF Tanks
           WRFTtot(6),25,40,40,43,0,0:       ! Total SSTs with each WRF without C106
;           WRFTtot(6),25,40,40,16,27,0:       ! Total SSTs with each WRF without C106
;           WRFTtot(6),26,40,40,16,27,0:       ! Total SSTs with each WRF
;           WRFTtot(6),0,0,18,0,0,0:       ! Total SSTs with each WRF
          WHRTcnt(6),0:
          NWRFDirect(6),     0,   0,   0,   0,   0,   0:  !  WRF to DST Storage
          WRFDirect(6,7),    0,   0,   0,   0,   0,   0,  !  Indexing
                             0,   0,   0,   0,   0,   0,
                             0,   0,   0,   0,   0,   0,
                             0,   0,   0,   0,   0,   0,
                             0,   0,   0,   0,   0,   0,
                             0,   0,   0,   0,   0,   0,
                             0,   0,   0,   0,   0,   0:
          WRFDirectR(6,7),   0,   0,   0,   0,   0,   0,  !  Indexing
                             0,   0,   0,   0,   0,   0,
```

```
                                        0,   0,   0,   0,   0,   0,
                                        0,   0,   0,   0,   0,   0,
                                        0,   0,   0,   0,   0,   0,
                                        0,   0,   0,   0,   0,   0,
                                        0,   0,   0,   0,   0,   0:
                rday0,0.0:
                rday,0.0:
                rdayDST0,0.0:
                rdayDST,0.0:
                rdaydumb,0.0:
                rtime,0.0:
                rtimeDST,0.0:
                farmTcnt(40),0:
                RWStorage(6),150,168,0.0,0,0:
                RWStorageR(6),0.0,0,0,0,0:
                NRWStorage,0:
                NRWStorageR,6:
                SD1st(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD1stR(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD1stC(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD1stOP(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD1stW(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD1stSol(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD1stAdd(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD1stUPT(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                NSD1st,0:
                NSD1stR,18:
                SD2nd(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD2ndR(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD2ndC(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD2ndOP(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD2ndW(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD2ndSol(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD2ndAdd(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                SD2ndUPT(18),0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0:
                NSD2nd,0:
                NSD2ndR,18:
                Decant(3),0,0,0:
                DecantR(3),0,0,0:
                DecantE(3),0,0,0:
                NDecant,0:
                NDecantR,0:
                StoreWest(5),0,0,0,0,0:
                StoreWestR(5),0,0,0,0,0:
                NStoreWest,0:
                NStoreWestR,5:
                Sol(6),0,0,0,0,0,0:
                SolC(6),2,2,2,2,2,2:
                SolR(6),0,0,0,0,0,0:
                NSol,0:
                NSolR,6:
                NSD1stRmin,1:
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                NSD2ndRmin,1:
                NDecantRmin,4:
                NSolRmin,1:
;**  Feed to PreTreatment
                NLVFEED,0:              ! number of LL storage Tanks available
                LVFEED(2),0,0:
                NLLWM,2:                ! number of LL melters
;                 LLWM(2),256,257:      ! Low Level Melter Feed Tanks assignments
                LLWM(2),223,224:
                LMfeeddelay, 0.0:
                 lag, 1.0:
                flag, 1.0:
                flag2, 1.0:
                chkt, 7.0:
                capacityLV     ,1.0e5:
;                capacityLV     ,5000:
                capacityLVfeed,1.0e10: ! Capacity of Low Level Feed Tank (kgal)
;                capacityLVfeed,5000:
                capacityLMfeed,1.0e10: ! Capacity of Low Level Vit Tanks (kgal)
;                capacityLMfeed,5000:
                LVfeedfill,1000.0:      ! Low Level Feed Vit. Tank fill rate (kgal)
                LMfeedfill,1000.0:      ! Low Level Feed Vit. Tank fill rate (kgal)
                capacityPT,1.e10:   ! Capacity of tank (kgal)
                volumePT,0.0:       ! Total volume of material in feed (kgal)
                vLiqPT,0.0:         ! Liquid Volume (kgal)
                vSolPT,0.0:          ! Slugde and Solid Particulate Volume (kgal)
                massPT(200),0.0:     ! Mass of component ind2 in feed (gm)
                mLiqPT(200),0.0:     ! Liquid Mass of component ind2 in feed (gm)
                mSolPT(200),0.0:     ! Solids Mass of component ind2 in feed (gm)
;**     BATCHES TO LL PT ** ***********************************************
                ptbatch,0.0:
                volumePTb(500),0.0:         ! Total volume of material in feed (kgal)
                vLiqPTb(500),0.0:           ! Liquid Volume (kgal)
                vSolPTb(500),0.0:           ! Slugde and Solid Particulate Volume (kgal)
                massPTb(500,200),0.0:       ! Mass of component ind2 in feed (gm)
                mLiqPTb(500,200),0.0:       ! Liquid Mass of component ind2 in feed (gm)
                mSolPTb(500,200),0.0:       ! Solids Mass of component ind2 in feed (gm)
                frPT(500,177),0.0:
;**  Feed to HL Vit
                capacityHL,1.e10:   ! Capacity of tank (kgal)
                volumeHL,0.0:       ! Total volume of material in feed (kgal)
                vLiqHL,0.0:         ! Liquid Volume (kgal)
                vSolHL,0.0:         ! Slugde and Solid Particulate Volume (kgal)
                massHL(200),0.0:     ! Mass of component ind2 in feed (gm)
                mLiqHL(200),0.0:     ! Liquid Mass of component ind2 in feed (gm)
                mSolHL(200),0.0:     ! Solids Mass of component ind2 in feed (gm)
                frHL(200,177),0.0:
;**     BATCHES TO HL Vit ** ***********************************************
                ibatch,0.0:
                volumeHLb(100),0.0:         ! Total volume of material in feed (kgal)
                vLiqHLb(100),0.0:           ! Liquid Volume (kgal)
                vSolHLb(100),0.0:           ! Slugde and Solid Particulate Volume (kgal)
```

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                    massHLb(100,200),0.0:      ! Mass of component ind2 in feed (gm)
                    mLigHLb(100,200),0.0:      ! Liquid Mass of component ind2 in feed (gm)
                    mSolHLb(100,200),0.0:      ! Solids Mass of component ind2 in feed (gm)
;**
;******  DST Retrieval Vars & parameters
;**
                    RDSTCond,0.:
;**
;****** Tank Availibity Parameters
;**
                    downtime_tank,0.0:
                    uptime_tank,208.33:    ! 5000 hr = 208.33 Days
                    PhaseIIflag, 0:
                    PhaseIIflagSol, 0:
;**
;****** Physical parameters
;**
                    rhoH2O,3785.0:    ! Density of Water (Kg/kgal)
                    spgISOL,3.0:        ! Density of Solids (spg)
                    rhoSol,3.0:
                    rho5MNa,1.27:
                    fISOL,0.10:
                    SWtiming(2),1.0,20.0:
                    Stime,30.0:          ! Time for Settling (d)
                    Wtime(2),30.0,7.0:   ! Time for Washing (d)
                    WPcutoff,0.0:
                    Nwash,4:             ! Number of washes
                    NwashT,0:            ! Total Number of washes performed
                    rSDfill,100.000:     ! 1000 kgal/10 days
                    rDecant,71.429:      ! 500 kgal/ 7 days
                    rrate,7.421:         !    29.7:          !  7.421 per slucer        !
;                    rrate,10.0:         !    29.7:          !  7.421 per slucer        !
                    r200gpm,288.0:       !  200 gpm in (kgal/day)
;                   vheel,33.048:          ! Vol of stat-behind tank heel
                    vheel,0.0:           ! Vol of stat-behind tank heel
                    kappaNa,0.054:
                    MolNaAR,5.0:
                    fNa,0.25:
                    NNa,39:              ! Sodium mass component
                    wNa,0.0230:            ! MolWt Na (Kg/mol)
                    NH2O,28:             ! Water mass component
                    wH2O,0.0180:             ! MolWt Na (Kg/mol)
                    fAl,0.68:
                    NAl,3:               ! Sodium mass component
                    wAl,0.0270:            ! MolWt Na (Kg/mol)
                    NAlOH4,2:              ! Sodium mass component
                    wAlOH4,0.0990:           ! MolWt Na (Kg/mol)
                    fCr,0.64:
                    NCr,19:              ! Sodium mass component
                    wCr,0.0520:            ! MolWt Na (Kg/mol)
                    NCrOH4,18:             ! Sodium mass component
                    wCrOH4,0.1240:           ! MolWt Na (Kg/mol)
```



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                    NOH,46:              ! Sodium mass component
                    wOH,0.0170:            ! MolWt Na (Kg/mol)
                    NNO3,44:             ! Sodium mass component
                    wNO3,0.0620:           ! MolWt Na (Kg/mol)
                    NNO2,43:             ! Sodium mass component
                    wNO2,0.0460:           ! MolWt Na (Kg/mol)
                    NCO3,17:             ! Sodium mass component
                    wCO3,0.0600:           ! MolWt Na (Kg/mol)
                    NPO4,49:
                    fPO4,0.74:
                    wPO4,0.0950:
                    Oxides,0.0:
                    TOxides,0.0:
                    eps,1.e-10:
                    Ntot,89:             ! Total mass component
                    fcntsol,0.00:
                    fcntsol0(2),0.0,0.0:     ! 7.78e-5,3.14e 7
                    ffluffy(2),0.20,0.275:
                    Scutoff,0.000:  ! it was 0.002
                    SPheight(2),10.0,1.0:
                    nasouth,1:     ! No Southern Annex Flag
                    arfactor(6),6.,30.,20.,10.,3.,10.:
                    arfactorX1,10.:
                    arfactorX2,30.:
                    aflag,0:
;**
;****** Physical constants
;**
                    lperkgal,3785.0:
                    kgalperfoot,33.048:
                    dvol,100.e0:           ! Transfer Event Volume (kgal)
;**
;****** Named Signals
;**
                    RWfillSig,1000001:
                    SD1Sig0,  1000002:
                    SD1Sig3,  1000003:
                    SD2Sig0,  1000005:
                    SD2Sig3,  1000006:
                    SDSig5,   1000007:
                    SDSig7,   1000004:
                    DecSig0,  1000008:
                    WasSig0,  1000009:
                    SolSig0,  1000010:
                    DecFSig,  1000011:
                    SolFSig,  1000012:
                    FeedFTSig,1000013:
                    FeedHTSig,1000015:
                    StWSig,   1000016:
                    XSiteSig, 1000017:
                    RWemptSig,1000018:
                    LVemptySig,1000019:
```

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                LVFSig,      1000020:
                LV1emptySig,1000021:
                LV1fullSig, 1000022:
                LMemptySig, 1000023:
                LVFeedSig,  1000024:
                FeedLVVSig, 1000025:
                FeedLVSig,  1000026:
                LMFeedSig,  1000027:
                WhatsupSig, 1000028:
                LVVFeedSig, 1000029:
                LVSig,      1000030:
                LV1Sig,     1000031:
                LV2Sig,     1000032:
                NLVSig,     1000033:
                NLVFeedSig, 1000034:
                PhaseIISig, 1000035:
                PhaseIISigSol, 1000036:
                WRFDirEmptSig(6),
                            1000018,
                            1000018,
                            1000016,
                            1000016,
                            1000016,
                            1000016:
                WRFDirFullSig(6),
                            1000001,
                            1000001,
                            1000016,
                            1000016,
                            1000016,
                            1000016:
                WRF_Q_Sig,2000000;
      expressions: TotMassInd,Ntot:
                   rhoLiquid, 1.0/(1.0 -
                RmLiq(tank#,NNa)*0.054/(eps + RmLiq(tank#,Ntot)*wNa)):
                   m5MLiquid,  max(RmLiq(tank#,NNa)*1.27/(5.0*wNa),
                                   RmSol(tank#,NLot)*(9.0)) :
                   MoleOH, min((3.0*gindex4),(mSol(tank#1,NOH)/wOH)):
                   MoleNO3,min((3.0*gindex4-MoleOH),(mSol(tank#1,NNO3)/wNO3)):
                   MoleNO2,min(3.0*gindex4-MoleOH-MoleNO3,mSol(tank#1,NNO2)/wNO2):
                   MoleCO3,min((3.0*gindex4-MoleOH-MoleNO3-MoleNO2)/2.0,mSol(tank#1,NCO3)/wCO3):
                   MoleOHc1, min(gindex4,(mSol(tank#1,NOH)/wOH)):
                   MoleNO3c1,min(gindex4-MoleOHc1,(mSol(tank#1,NNO3)/wNO3)):
                   MoleNO2c1,min(gindex4-MoleOHc1-MoleNO3c1,mSol(tank#1,NNO2)/wNO2):
                   MoleCO3c1,min((gindex4-MoleOHc1-MoleNO3c1-MoleNO2c1)/2.0,mSol(tank#1,NCO3)/wCO3):
                   estimateWF, ((fNA*msol(tank#1,NNa)*(1.0+wOH/wNA))
                               + (fAl*msol(tank#1,NAl)*(1.0+3.0*wOH/wAl))
                               + (fCR*msol(tank#1,NCR)*(1.0+3.0*wOH/wCR))
                               + (fPO4*msol(tank#1,NPO4)*(1.0-3.0*wOH/wPO4)))/mass(tank1,NTOT):
                   SourceRNHeat,  1000.0*(
                   Cipergram(1)*BTUperhrCi(1)*(mSol(tank#1,74)+mLiq(tank#1,74)) +
                   Cipergram(2)*BTUperhrCi(2)*(mSol(tank#1,75)+mLiq(tank#1,75)) +
```



```
                   Cipergram(3)*BTUperhrCi(3)*(mSol(tank#1,76)+mLiq(tank#1,76)) +
                   Cipergram(4)*BTUperhrCi(4)*(mSol(tank#1,77)+mLiq(tank#1,77)) +
                   Cipergram(5)*BTUperhrCi(5)*(mSol(tank#1,78)+mLiq(tank#1,78)) +
                   Cipergram(6)*BTUperhrCi(6)*(mSol(tank#1,79)+mLiq(tank#1,79)) +
                   Cipergram(7)*BTUperhrCi(7)*(mSol(tank#1,80)+mLiq(tank#1,80)) +
                   Cipergram(8)*BTUperhrCi(8)*(mSol(tank#1,81)+mLiq(tank#1,81)) +
                   Cipergram(9)*BTUperhrCi(9)*(mSol(tank#1,82)+mLiq(tank#1,82)) +
                   Cipergram(10)*BTUperhrCi(10)*(mSol(tank#1,83)+mLiq(tank#1,83)) +
                   Cipergram(11)*BTUperhrCi(11)*(mSol(tank#1,84)+mLiq(tank#1,84)) +
                   Cipergram(12)*BTUperhrCi(12)*(mSol(tank#1,85)+mLiq(tank#1,85)) +
                   Cipergram(13)*BTUperhrCi(13)*(mSol(tank#1,86)+mLiq(tank#1,86)) +
                   Cipergram(14)*BTUperhrCi(14)*(mSol(tank#1,87)+mLiq(tank#1,87)) +
                   Cipergram(15)*BTUperhrCi(15)*(mSol(tank#1,88)+mLiq(tank#1,88)) };
                   WestCnt,WRFTCnt(3)+WRFTCnt(4)+WRFTCnt(5):
                   WestTot,WRFTtot(3)+WRFTtot(4)+WRFTtot(5):
                   AllSSTCnt,WRFTCnt(1)+WRFTCnt(2)+WRFTCnt(3)+
                                WRFTCnt(4)+WRFTCnt(5):
                   AllSSTtot,WRFTtot(1)+WRFTtot(2)+WRFTtot(3)+
                                WRFTtot(4)+WRFTtot(5):
                   util,       (volume(150).gt.capacity(150)*0.05) +
;                               (volume(151).gt.capacity(151)*0.05) +
                               (volume(152).gt.capacity(152)*0.05) +
                               (volume(153).gt.capacity(153)*0.05) +
                               (volume(154).gt.capacity(154)*0.05) +
                               (volume(155).gt.capacity(155)*0.05) +
;                               (volume(156).gt.capacity(156)*0.05) +
                               (volume(157).gt.capacity(157)*0.05) +
                               (volume(158).gt.capacity(158)*0.05) +
                               (volume(159).gt.capacity(159)*0.05) +
                               (volume(160).gt.capacity(160)*0.05) +
                               (volume(161).gt.capacity(161)*0.05) +
                               (volume(162).gt.capacity(162)*0.05) +
;                               (volume(163).gt.capacity(163)*0.05) +
                               (volume(164).gt.capacity(164)*0.05) +
                               (volume(165).gt.capacity(165)*0.05) +
                               (volume(166).gt.capacity(166)*0.05) +
;                               (volume(167).gt.capacity(167)*0.05) +
                               (volume(168).gt.capacity(168)*0.05) +
                               (volume(169).gt.capacity(169)*0.05) +
                               (volume(170).gt.capacity(170)*0.05) +
                               (volume(171).gt.capacity(171)*0.05) +
                               (volume(172).gt.capacity(172)*0.05) +
                               (volume(173).gt.capacity(173)*0.05) +
                               (volume(174).gt.capacity(174)*0.05) +
                               (volume(175).gt.capacity(175)*0.05) +
                               (volume(176).gt.capacity(176)*0.05) +
                               (volume(177).gt.capacity(177)*0.05) + 4;
      queues: SWwaitQ:
              Look5DIQ:
              Loo3SDIQ:
              Loo5SDQ:
              Loo7SDQ:
```

```
        LookSD2Q:
        LookRWQ:
        LookDecQ:
        LookDeRQ:
        LookStgQ:
        LookWasQ:
        LookSolQ:
        LookSD2Q:
        LookDWQ:
        LookDWWQ:
        LookSSQ:
        LookSRWQ1: LookSRWQ2: LookSRWQ3: LookSRWQ4: LookSRWQ5: LookSRWQ6:
        FeedPT_Q:
        FeedHL_Q:
        LookStWQ:
        LookLVFeedswQ:
        LookPPTWQ:
        LookLMFeedQ:
        LookLMFeedswQ:
        LookLVFeedQ:
         LookLVVFeedQ:
         LookQQWQ:
        XsiteTR_Q:
        LookREQ:
        trWRFT:
        fullWRFT:
        waitPhaseII:
        waitPhaseIISol:
        wrf_Q1: wrf_Q2: wrf_Q3: wrf_Q4: wrf_Q5:     ! Queue for each Waste Receiver Facility
        wrf_Q6: wrf_Q7: wrf_Q8: wrf_Q9: wrf_Q10:
        wrf_Q11:wrf_Q12:wrf_Q13:wrf_Q14:wrf_Q15:
        wrf_Q16:wrf_Q17:wrf_Q18:wrf_Q19:wrf_Q20:
    tank_Q1,,SHARED:  tank_Q2,,SHARED:  tank_Q3,,SHARED:  tank_Q4,,SHARED:  tank_Q5,,SHARED:    ! Queue for each Tank
    tank_Q6,,SHARED:  tank_Q7,,SHARED:  tank_Q8,,SHARED:  tank_Q9,,SHARED:  tank_Q10,,SHARED:
    tank_Q11,,SHARED: tank_Q12,,SHARED: tank_Q13,,SHARED: tank_Q14,,SHARED: tank_Q15,,SHARED:
    tank_Q16,,SHARED: tank_Q17,,SHARED: tank_Q18,,SHARED: tank_Q19,,SHARED: tank_Q20,,SHARED:
    tank_Q21,,SHARED: tank_Q22,,SHARED: tank_Q23,,SHARED: tank_Q24,,SHARED: tank_Q25,,SHARED:
    tank_Q26,,SHARED: tank_Q27,,SHARED: tank_Q28,,SHARED: tank_Q29,,SHARED: tank_Q30,,SHARED:
    tank_Q31,,SHARED: tank_Q32,,SHARED: tank_Q33,,SHARED: tank_Q34,,SHARED: tank_Q35,,SHARED:
    tank_Q36,,SHARED: tank_Q37,,SHARED: tank_Q38,,SHARED: tank_Q39,,SHARED: tank_Q40,,SHARED:
    tank_Q41,,SHARED: tank_Q42,,SHARED: tank_Q43,,SHARED: tank_Q44,,SHARED: tank_Q45,,SHARED:
    tank_Q46,,SHARED: tank_Q47,,SHARED: tank_Q48,,SHARED: tank_Q49,,SHARED: tank_Q50,,SHARED:
    tank_Q51,,SHARED: tank_Q52,,SHARED: tank_Q53,,SHARED: tank_Q54,,SHARED: tank_Q55,,SHARED:
    tank_Q56,,SHARED: tank_Q57,,SHARED: tank_Q58,,SHARED: tank_Q59,,SHARED: tank_Q60,,SHARED:
    tank_Q61,,SHARED: tank_Q62,,SHARED: tank_Q63,,SHARED: tank_Q64,,SHARED: tank_Q65,,SHARED:
    tank_Q66,,SHARED: tank_Q67,,SHARED: tank_Q68,,SHARED: tank_Q69,,SHARED: tank_Q70,,SHARED:
    tank_Q71,,SHARED: tank_Q72,,SHARED: tank_Q73,,SHARED: tank_Q74,,SHARED: tank_Q75,,SHARED:
    tank_Q76,,SHARED: tank_Q77,,SHARED: tank_Q78,,SHARED: tank_Q79,,SHARED: tank_Q80,,SHARED:
    tank_Q81,,SHARED: tank_Q82,,SHARED: tank_Q83,,SHARED: tank_Q84,,SHARED: tank_Q85,,SHARED:
    tank_Q86,,SHARED: tank_Q87,,SHARED: tank_Q88,,SHARED: tank_Q89,,SHARED: tank_Q90,,SHARED:
    tank_Q91,,SHARED: tank_Q92,,SHARED: tank_Q93,,SHARED: tank_Q94,,SHARED: tank_Q95,,SHARED:
    tank_Q96,,SHARED: tank_Q97,,SHARED: tank_Q98,,SHARED: tank_Q99,,SHARED: tank_Q100,,SHARED:
```



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    tank_Q101,,SHARED:tank_Q102,,SHARED:tank_Q103,,SHARED:tank_Q104,,SHARED:tank_Q105,,SHARED:
    tank_Q106,,SHARED:tank_Q107,,SHARED:tank_Q108,,SHARED:tank_Q109,,SHARED:tank_Q110,,SHARED:
    tank_Q111,,SHARED:tank_Q112,,SHARED:tank_Q113,,SHARED:tank_Q114,,SHARED:tank_Q115,,SHARED:
    tank_Q116,,SHARED:tank_Q117,,SHARED:tank_Q118,,SHARED:tank_Q119,,SHARED:tank_Q120,,SHARED:
    tank_Q121,,SHARED:tank_Q122,,SHARED:tank_Q123,,SHARED:tank_Q124,,SHARED:tank_Q125,,SHARED:
    tank_Q126,,SHARED:tank_Q127,,SHARED:tank_Q128,,SHARED:tank_Q129,,SHARED:tank_Q130,,SHARED:
    tank_Q131,,SHARED:tank_Q132,,SHARED:tank_Q133,,SHARED:tank_Q134,,SHARED:tank_Q135,,SHARED:
    tank_Q136,,SHARED:tank_Q137,,SHARED:tank_Q138,,SHARED:tank_Q139,,SHARED:tank_Q140,,SHARED:
    tank_Q141,,SHARED:tank_Q142,,SHARED:tank_Q143,,SHARED:tank_Q144,,SHARED:tank_Q145,,SHARED:
    tank_Q146,,SHARED:tank_Q147,,SHARED:tank_Q148,,SHARED:tank_Q149,,SHARED:tank_Q150,,SHARED:
    tank_Q151,,SHARED:tank_Q152,,SHARED:tank_Q153,,SHARED:tank_Q154,,SHARED:tank_Q155,,SHARED:
    tank_Q156,,SHARED:tank_Q157,,SHARED:tank_Q158,,SHARED:tank_Q159,,SHARED:tank_Q160,,SHARED:
    tank_Q161,,SHARED:tank_Q162,,SHARED:tank_Q163,,SHARED:tank_Q164,,SHARED:tank_Q165,,SHARED:
    tank_Q166,,SHARED:tank_Q167,,SHARED:tank_Q168,,SHARED:tank_Q169,,SHARED:tank_Q170,,SHARED:
    tank_Q171,,SHARED:tank_Q172,,SHARED:tank_Q173,,SHARED:tank_Q174,,SHARED:tank_Q175,,SHARED:
    tank_Q176,,SHARED:tank_Q177,,SHARED:tank_Q178,,SHARED:tank_Q179,,SHARED:tank_Q180,,SHARED:
    tank_Q181,,SHARED:tank_Q182,,SHARED:tank_Q183,,SHARED:tank_Q184,,SHARED:tank_Q185,,SHARED:
    tank_Q186,,SHARED:tank_Q187,,SHARED:tank_Q188,,SHARED:tank_Q189,,SHARED:tank_Q190,,SHARED:
    tank_Q191,,SHARED:tank_Q192,,SHARED:tank_Q193,,SHARED:tank_Q194,,SHARED:tank_Q195,,SHARED:
    tank_Q196,,SHARED:tank_Q197,,SHARED:tank_Q198,,SHARED:tank_Q199,,SHARED:tank_Q200,,SHARED:
    tank_Q201,,SHARED:tank_Q202,,SHARED:tank_Q203,,SHARED:tank_Q204,,SHARED:tank_Q205,,SHARED:
    tank_Q206,,SHARED:tank_Q207,,SHARED:tank_Q208,,SHARED:tank_Q209,,SHARED:tank_Q210,,SHARED:
    tank_Q211,,SHARED:tank_Q212,,SHARED:tank_Q213,,SHARED:tank_Q214,,SHARED:tank_Q215,,SHARED:
    tank_Q216,,SHARED:tank_Q217,,SHARED:tank_Q218,,SHARED:tank_Q219,,SHARED:tank_Q220,,SHARED:
    tank_Q221,,SHARED:tank_Q222,,SHARED:tank_Q223,,SHARED:tank_Q224,,SHARED:tank_Q225,,SHARED:
    tank_Q226,,SHARED:tank_Q227,,SHARED:tank_Q228,,SHARED:tank_Q229,,SHARED:tank_Q230,,SHARED:
    tank_Q231,,SHARED:tank_Q232,,SHARED:tank_Q233,,SHARED:tank_Q234,,SHARED:tank_Q235,,SHARED:
    tank_Q236,,SHARED:tank_Q237,,SHARED:tank_Q238,,SHARED:tank_Q239,,SHARED:tank_Q240,,SHARED:
    tank_Q241,,SHARED:tank_Q242,,SHARED:tank_Q243,,SHARED:tank_Q244,,SHARED:tank_Q245,,SHARED:
    tank_Q246,,SHARED:tank_Q247,,SHARED:tank_Q248,,SHARED:tank_Q249,,SHARED:tank_Q250,,SHARED:
    tank_Q251,,SHARED:tank_Q252,,SHARED:tank_Q253,,SHARED:tank_Q254,,SHARED:tank_Q255,,SHARED:
    tank_Q256,,SHARED:tank_Q257,,SHARED:tank_Q258,,SHARED:tank_Q259,,SHARED:tank_Q260,,SHARED:
    tank_Q261,,SHARED:tank_Q262,,SHARED:tank_Q263,,SHARED:tank_Q264,,SHARED:tank_Q265,,SHARED:
    tank_Q266,,SHARED:tank_Q267,,SHARED:tank_Q268,,SHARED:tank_Q269,,SHARED:tank_Q270,,SHARED:
    tank_Q271,,SHARED:tank_Q272,,SHARED:tank_Q273,,SHARED:tank_Q274,,SHARED:tank_Q275,,SHARED:
    tank_Q276,,SHARED:tank_Q277,,SHARED:tank_Q278,,SHARED:tank_Q279,,SHARED:tank_Q280,,SHARED:
    tank_Q281,,SHARED:tank_Q282,,SHARED:tank_Q283,,SHARED:tank_Q284,,SHARED:tank_Q285,,SHARED:
    tank_Q286,,SHARED:tank_Q287,,SHARED:tank_Q288,,SHARED:tank_Q289,,SHARED:tank_Q290,,SHARED:
    tank_Q291,,SHARED:tank_Q292,,SHARED:tank_Q293,,SHARED:tank_Q294,,SHARED:tank_Q295,,SHARED:
    tank_Q296,,SHARED:tank_Q297,,SHARED:tank_Q298,,SHARED:tank_Q299,,SHARED:tank_Q300,,SHARED;
;
resources:
    repeat(wrf,20),2:    ! Resource var for each Waste Receiver Facility
     wrf1,2:  wrf2,4:  wrf3,4:  wrf4,2:
    tank1,1:  tank2,1:  tank3,1:  tank4,1:  tank5,1:    ! Resource var for each Tank
    tank6,1:  tank7,1:  tank8,1:  tank9,1:  tank10,1:
    tank11,1: tank12,1: tank13,1: tank14,1: tank15,1:
    tank16,1: tank17,1: tank18,1: tank19,1: tank20,1:
    tank21,1: tank22,1: tank23,1: tank24,1: tank25,1:
    tank26,1: tank27,1: tank28,1: tank29,1: tank30,1:
    tank31,1: tank32,1: tank33,1: tank34,1: tank35,1:
    tank36,1: tank37,1: tank38,1: tank39,1: tank40,1:
```

```
tank41,1: tank42,1: tank43,1: tank44,1: tank45,1:
tank46,1: tank47,1: tank48,1: tank49,1: tank50,1:
tank51,1: tank52,1: tank53,1: tank54,1: tank55,1:
tank56,1: tank57,1: tank58,1: tank59,1: tank60,1:
tank61,1: tank62,1: tank63,1: tank64,1: tank65,1:
tank66,1: tank67,1: tank68,1: tank69,1: tank70,1:
tank71,1: tank72,1: tank73,1: tank74,1: tank75,1:
tank76,1: tank77,1: tank78,1: tank79,1: tank80,1:
tank81,1: tank82,1: tank83,1: tank84,1: tank85,1:
tank86,1: tank87,1: tank88,1: tank89,1: tank90,1:
tank91,1: tank92,1: tank93,1: tank94,1: tank95,1:
tank96,1: tank97,1: tank98,1: tank99,1: tank100,1:
tank101,1:tank102,1:tank103,1:tank104,1:tank105,1:
tank106,1:tank107,1:tank108,1:tank109,1:tank110,1:
tank111,1:tank112,1:tank113,1:tank114,1:tank115,1:
tank116,1:tank117,1:tank118,1:tank119,1:tank120,1:
tank121,1:tank122,1:tank123,1:tank124,1:tank125,1:
tank126,1:tank127,1:tank128,1:tank129,1:tank130,1:
tank131,1:tank132,1:tank133,1:tank134,1:tank135,1:
tank136,1:tank137,1:tank138,1:tank139,1:tank140,1:
tank141,1:tank142,1:tank143,1:tank144,1:tank145,1:
tank146,1:tank147,1:tank148,1:tank149,1:tank150,1:
tank151,1:tank152,1:tank153,1:tank154,1:tank155,1:
tank156,1:tank157,1:tank158,1:tank159,1:tank160,1:
tank161,1:tank162,1:tank163,1:tank164,1:tank165,1:
tank166,1:tank167,1:tank168,1:tank169,1:tank170,1:
tank171,1:tank172,1:tank173,1:tank174,1:tank175,1:
tank176,1:tank177,1:tank178,1:tank179,1:tank180,1:
tank181,1:tank182,1:tank183,1:tank184,1:tank185,1:
tank186,1:tank187,1:tank188,1:tank189,1:tank190,1:
tank191,1:tank192,1:tank193,1:tank194,1:tank195,1:
tank196,1:tank197,1:tank198,1:tank199,1:tank200,1:
tank201,2:tank202,2:tank203,2:tank204,2:tank205,2:
tank206,2:tank207,2:tank208,2:tank209,2:tank210,2:
tank211,2:tank212,2:tank213,2:tank214,2:tank215,2:
tank216,2:tank217,2:tank218,2:tank219,2:tank220,2:
tank221,2:tank222,2:tank223,2:tank224,2:tank225,2:
tank226,2:tank227,2:tank228,2:tank229,2:tank230,2:
tank231,2:tank232,2:tank233,2:tank234,2:tank235,2:
tank236,2:tank237,2:tank238,2:tank239,2:tank240,2:
tank241,2:tank242,2:tank243,2:tank244,2:tank245,2:
tank246,2:tank247,2:tank248,2:tank249,2:tank250,2:
tank251,2:tank252,2:tank253,2:tank254,2:tank255,2:
tank256,2:tank257,2:tank258,2:tank259,2:tank260,2:
tank261,2:tank262,2:tank263,2:tank264,2:tank265,2:
tank266,2:tank267,2:tank268,2:tank269,2:tank270,2:
tank271,2:tank272,2:tank273,2:tank274,2:tank275,2:
tank276,2:tank277,2:tank278,2:tank279,2:tank280,2:
tank281,2:tank282,2:tank283,2:tank284,2:tank285,2:
tank286,2:tank287,2:tank288,2:tank289,2:tank290,2:
tank291,2:tank292,2:tank293,2:tank294,2:tank295,2:
tank296,2:tank297,2:tank298,2:tank299,2:tank300,2:
```



```
;                repeat(tank,300);   ! Resource var for each Tank
                 XsiteTR:
                 FeedPT,2:
                 FeedHL;
;
      sets:       wrf,wrf1..wrf20:
                  tank,tank1..tank300:
                  wrf_Q,wrf_Q1..wrf_Q20:
                  LookSRWQ,LookSRWQ1..LookSRWQ6:
                  wrf_ST,wrf_ST1..wrf_ST6:
                  wrf_DST,wrf_DST1..wrf_DST6:
                  tank_Q,tank_Q1..tank_Q100;
;
      dstats: volume(1),Volume in Tank 101A:
              volumePT,Volume to Pretreat kgal:
              massPT(NtotL),mass to PT kg:
              mSolPT(NtotL),Imass to PT kg:
              massPT(NNa)*(tnow.le.4000),mass Na kg Dum:
              massPT(NNa),mass Na PT kg,"NA-PT.dat":
              TOxides,Mass of Non Na Si Oxides,"TOxides.dat":
              massHL(NtotL),mass to HLG kg:
              mSolHL(NtotL),Imass to HLG kg,"Sol-HL.dat":
              massHL(NNa),mass Na HLG kg:
              Wvolume,Wash water kgal:
              NwashT,Tot no of Washes:
              vLiqRetrieved,Tot Liq Retr kgal,"vLiqRet.dat":
              vSolRetrieved,Tot Sol Retr kgal,"vSolRet.dat":
              vLiqRetrieved+vSolRetrieved,Tot Retr kgal,"vTotRet.dat":
              volume(169),Vol of 1,"volume1.dat":
              SD1stSol(1),Vol of Set Sol 1,"solid1.dat":
              SD1stSol(2),Vol of Set Sol 2,"solid2.dat":
              SD1stSol(3),Vol of Set Sol 3,"solid3.dat":
              SD1stSol(4),Vol of Set Sol 4,"solid4.dat":
              SD1stSol(5),Vol of Set Sol 5,"solid5.dat":
              SD1stSol(6),Vol of Set Sol 6,"solid6.dat":
              SD1stSol(7),Vol of Set Sol 7,"solid7.dat":
              SD1stSol(8),Vol of Set Sol 8:
              SD1stSol(9),Vol of Set Sol 9:
              SD1stSol(10),Vol of Set Sol 10:
              SD1stSol(11),Vol of Set Sol 11:
              SD1stSol(12),Vol of Set Sol 12:
              SD1stSol(13),Vol of Set Sol 13:
              SD1stSol(14),Vol of Set Sol 14:
              SD1stSol(15),Vol of Set Sol 15:
              SD1stSol(16),Vol of Set Sol 16:
              SD1stSol(17),Vol of Set Sol 17:
              SD1stSol(18),Vol of Set Sol 18:
              util,DST utilization,"uDST.dat":
              NR(FeedPT)*(tnow.le.4015),LLV Plants OP:
;              volume(150),Vol of 150,"AN101.dat":
;              volume(151),Vol of 151,"AN102.dat":
;              volume(152),Vol of 152,"AN103.dat":
```

```
;               volume(153),Vol of 153,"AN104.dat":
;               volume(154),Vol of 154,"AN105.dat":
;               volume(155),Vol of 155,"AN106.dat":
;               volume(156),Vol of 156,"AN107.dat":
;               volume(157),Vol of 157,"AP101.dat":
;               volume(158),Vol of 158,"AP102.dat":
;               volume(159),Vol of 159,"AP103.dat":
;               volume(160),Vol of 160,"AP104.dat":
;               volume(161),Vol of 161,"AP105.dat":
;               volume(162),Vol of 162,"AP106.dat":
;               volume(163),Vol of 163,"AP107.dat":
;               volume(164),Vol of 164,"AP108.dat":
;               volume(165),Vol of 165,"AW101.dat":
;               volume(166),Vol of 166,"AW102.dat":
;               volume(167),Vol of 167,"AW103.dat":
;               volume(168),Vol of 168,"AW104.dat":
;               volume(169),Vol of 169,"AW105.dat":
;               volume(170),Vol of 170,"AW106.dat":
;               volume(171),Vol of 171,"AY101.dat":
;               volume(172),Vol of 172,"AY102.dat":
;               volume(173),Vol of 173,"AZ101.dat":
;               volume(174),Vol of 174,"AZ102.dat":
;               volume(175),Vol of 175,"SY101.dat":
;               volume(176),Vol of 176,"SY102.dat":
;               volume(177),Vol of 177,"SY103.dat":
;
; THE END (EXP)
```

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