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7. Abstract

This document provides the initial functions and requirements for leakage detection and monitoring applicable to past and potential future leakage from the Hanford Site's 149 single-shell high-level waste tanks. This mission is a part of the overall mission of the Westinghouse Hanford Company Tank Waste Remediation System division to remediate the tank waste in a safe and acceptable manner. Systems engineering principles are being applied to this effort.

This document reflects the an initial step in the systems engineering approach to decompose the mission into primary functions and requirements. **The document is considered approximately 30% complete relative to the effort required to produce a final version that can be used to support demonstration and/or procurement of technologies.** The functions and requirements in this document apply to detection and monitoring of below ground leaks from SST containment boundaries and the resulting soil contamination. Leakage detection and monitoring is invoked in the TWRS Program in three fourth level functions: (1) Store Waste, (2) Retrieve Waste, and (3) Disposition Excess Facilities (as identified in DOE/RL-92-60 Rev. 1, *Tank Waste Remediation System Functions and Requirements*).

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LIST OF TERMS

ENRAF	Automatic Level Guage - Enraf-Nonius
FIC	Automatic Level Guage - Food Instrument Corp.
LOW	Liquid Observation Well
TWRS	Tank Waste Remediation System

1.0 INTRODUCTION

This document defines the functions and requirements for single-shell tank (SST) leakage detection and monitoring, by application of the Systems Engineering process. A function is a definition of what a system or subsystem must accomplish to meet the overall mission; a requirement is a qualitative or quantitative statement of how well a function must be performed. Within the Tank Waste Remediation System (TWRS), requirements may be one of two types: constraints and performance requirements. Constraints are imposed upon the function by the external environment (e.g., U.S. Congress, U.S. Environmental Protection Agency (EPA), Washington State Department of Ecology (Ecology), U.S. Department of Energy (DOE) Orders). Performance requirements are imposed upon the function by the TWRS Program itself and therefore may be traded with respect to other performance requirements to optimize overall performance. The document also identifies the interfaces between functions, and between the program and the external environment.

The functions and requirements will serve as a basis for the program technical baseline, as directed by DOE, Richland Operations Office (RL) (reference DOE-RL Letter 94-PRJ-018, R. W. Brown, RL, to President, Westinghouse Hanford Company (WHC), "Tank Waste Remediation System (TWRS) Project Documentation Methodology," dated March 17, 1994).

Conclusions

The analysis of functions and requirements and related work performed to-date supports the following conclusions regarding SST leakage detection and monitoring:

- The TWRS baseline approach to SST leakage detection and monitoring is likely acceptable to support continued waste *storage* activities. Interim stabilization has been completed on 109 of the 149 SSTs by means of saltwell pumping, supernate pumping or through administrative controls. Ongoing storage operations should have no measurable affect on the potential for leakage or on tank containment integrity.

- Enhancements to the TWRS baseline detection and monitoring capability may be appropriate to support waste *retrieval* activities. The required detection and monitoring capability will depend heavily on closure objectives and programmatic cost-benefit objectives for the SSTs.

- The TWRS Program will place very little emphasis on enhancements to unsaturated or ground-water zone SST leakage detection and monitoring technologies. The affects of transport time and lateral migration and the resultant mixing and/or superposition of contaminant plumes will render data obtained from the unsaturated and/or ground-water zones to be of very limited value.

- The preliminary risk-based SST leakage threshold values are provided in Appendix C and are intended only for use in initial technology evaluations. The values range from

1.02E+04 L (2703.0 gal.) to more than 26.0E+03 L (100,000 gal.) for some tanks. As the evaluation process proceeds, a more detailed evaluation of threshold leakage values will be required in order to establish final acceptance criteria for proposed technologies. Final leakage threshold values should be based on other considerations not addressed in the current evaluation:

1. Further analyses of drainable liquid samples to reduce uncertainty and conservatism. The sample data reported in Van Vleet (1993) was used as a primary source for this document; however, several values appeared uncharacteristically high. Upon further investigation, the given values were found to be incorrect and were corrected as noted in Appendix C. Also, more samples have been analyzed since the time of the document. Accordingly, the next phase of evaluation should include work to ensure the correctness and completeness of the sample data supporting the leakage thresholds.

2. The inventories of constituents of concern (COC) associated with other sources (e.g., residual waste in tanks following retrieval, waste that has advected into the SST concrete structure, and past leaks) to better establish the risk associated with individual tank farms.

3. The potential presence of overlapping contaminant plumes from other sources, including nearby tank farms, cribs, trenches, and ponds, to help establish the appropriate allocation of risk from each source.

4. The best-available technology for detection of leaks may not allow for detection at or below the threshold values for some tanks since their thresholds are very small. In these cases, the final leakage thresholds will need to be adjusted to be consistent with the available capability. This may invoke lowering of threshold values for other tanks to compensate for the additional risk impact.

The requirements for SST leakage detection and monitoring will have the goal of providing operators with early warning if threshold values are being approached.

- The tank closure strategy should include development of leakage thresholds based on a more comprehensive risk assessment and a decision logic to be implemented if/when the established thresholds are exceeded.

- Large variations in inventory exist between tanks and sample data is limited. The TWRS remediation strategy should be adaptable to the changes that will occur as new tanks or groups of tanks are remediated.

1.1 MISSION

The mission of the TWRS Program is "to store, treat, and immobilize highly radioactive Hanford waste in an environmentally sound, safe, and cost-effective manner" (RL 1993a). The scope of the TWRS Program includes project and program activities for receiving, storing, maintaining, treating, and disposing onsite, or packaging for offsite disposal, all Hanford tank waste. Hanford tank waste includes the contents of 149 SSTs and 28 double-shell tanks (DST), plus any new waste added to these facilities, and all encapsulated cesium and strontium stored onsite and returned from offsite users. A key element of the TWRS Program is retrieval of the waste in the SSTs. The waste stored in these underground tanks must be removed in order to minimize environmental, safety, and health risks associated with continuing waste storage.

Hydraulic sluicing is the primary approach currently envisioned for retrieval of the SST waste. The sluicing operations will typically add some level of working liquid to the tank to mobilize the solidified saltcakes and sludges. The design life of the tanks has expired and the integrity of the tank containment boundaries is in question. Historically, tank wastes have been released to the ground from leaks from SSTs and associated transfer lines, and other miscellaneous spills. Sixty-seven SSTs are assumed to have leaked a total volume of approximately 2,271 to 3,407 m^3 (600,000 to 900,000 gal) (Hanlon 1994). Several studies (Lowe 1993, Schmittroth 1993) have indicated that the contaminants present in this volume of leakage could cause violation of groundwater quality standards, once the contaminants migrate through the vadose zone to the groundwater.

The Hanford SST tank farms were constructed during the period from 1943 to 1964. Retrieval of waste from the SSTs currently is scheduled for a 15-year processing campaign beginning in 2003 and ending in 2018, except tank C-106, which is planned for retrieval in 1997 to provide a demonstration of retrieval technology. Accordingly, the SSTs will be as old as 60 to 75 years at the initiation of retrieval, depending on the sequence for individual tanks.

Detection and monitoring of SST leakage is currently conducted in the tank farms using several methods. The primary method is typically a probe that measures the surface level of the waste (e.g., FIC, ENRAF, Manual Tape, neutron probes in LOW, or Zip Cord). The readings are compared with established baselines to provide indication of any lost inventory from the tanks. The backup method is typically use of gamma-radiation level sensors deployed in drywells (vertical boreholes) that are currently installed in the around the circumference of the tanks. Fifteen tanks in the 241-A and 241-S farms are equipped with laterals (horizontal boreholes). These systems afford the ability to measure changes in radiation level in the soil immediately below the tank. Four tanks in the 241-AX farm are equipped with leak detection pits, providing the capability to detect contaminants in liquid beneath the tank.

Detection capability of the current primary methods is heavily dependant on the characteristics of the waste surface in the tank. For tanks with a liquid surface, specification

levels are typically set at 2.54 cm (1.0 in.) change in level; this detection level would indicate the potential for a leak of **10.4E+03 L (2700 gal.)** for a tank with a diameter of 23 m (75 ft.). However, the inventory of many tanks is such that there is no consistently measurable liquid surface or no liquid surface at all (e.g., interim stabilized). The detection level in these situations is much less sensitive.

Concerns exist regarding the ability of these systems to adequately detect and monitor leakage during sluicing retrieval operations. While some ability would exist during operations (e.g., monitor level in receiving tank), achieving detection levels consistent with the current capability would require sluicing to be stopped for enough time to allow the waste surface level to stabilize plus the time duration needed to detect any level change. Accordingly, the TWRS program is investigating alternate approaches with the goal of improving detection capability during retrieval, while reducing worker risk and cost.

This document reflects the next step in the systems engineering approach to decompose the mission into primary functions and requirements.

1.2 SCOPE

The functions and requirements in this document apply to detection and monitoring of below-ground leaks from SST containment boundaries and the resulting soil contamination. Leakage detection and monitoring is invoked in the TWRS Program in three fourth-level functions: (1) Store Waste, (2) Retrieve Waste, and (3) Disposition Excess Facilities (as identified in *Tank Waste Remediation System Functions and Requirements*, RL, 1994).

SST leakage detection and monitoring activities generally apply to three zones of influence in the environment surrounding a given tank farm: (1) near-field, (2) unsaturated, and (3) ground water. The following provide definition of the three zones:

- **Near-Field Zone.** The near-field zone is a cylindrical volume with a vertical centerline corresponding to the tank vertical centerline. This zone includes the internal tank volume, the liner, the concrete shell, and extends from the exterior surfaces of the tank and/or ancillary equipment structures radially outward to include the existing drywells. The top of the cylinder is at grade level and the bottom extending downward to include any backfilled soil, lateral drywells, or leak detection pits. The tank bottoms are typically about 15 m (50 ft.) below grade. Allowing another 8 m (25 ft.) to encompass any laterals or leak detection pits gives a value of 23 m (75 ft.) below grade for the bottom of the near-field zone. The diameter of the cylinder formed by the tank plus the volume needed to encompass the nearest drywells is typically 30 m (90 ft.).

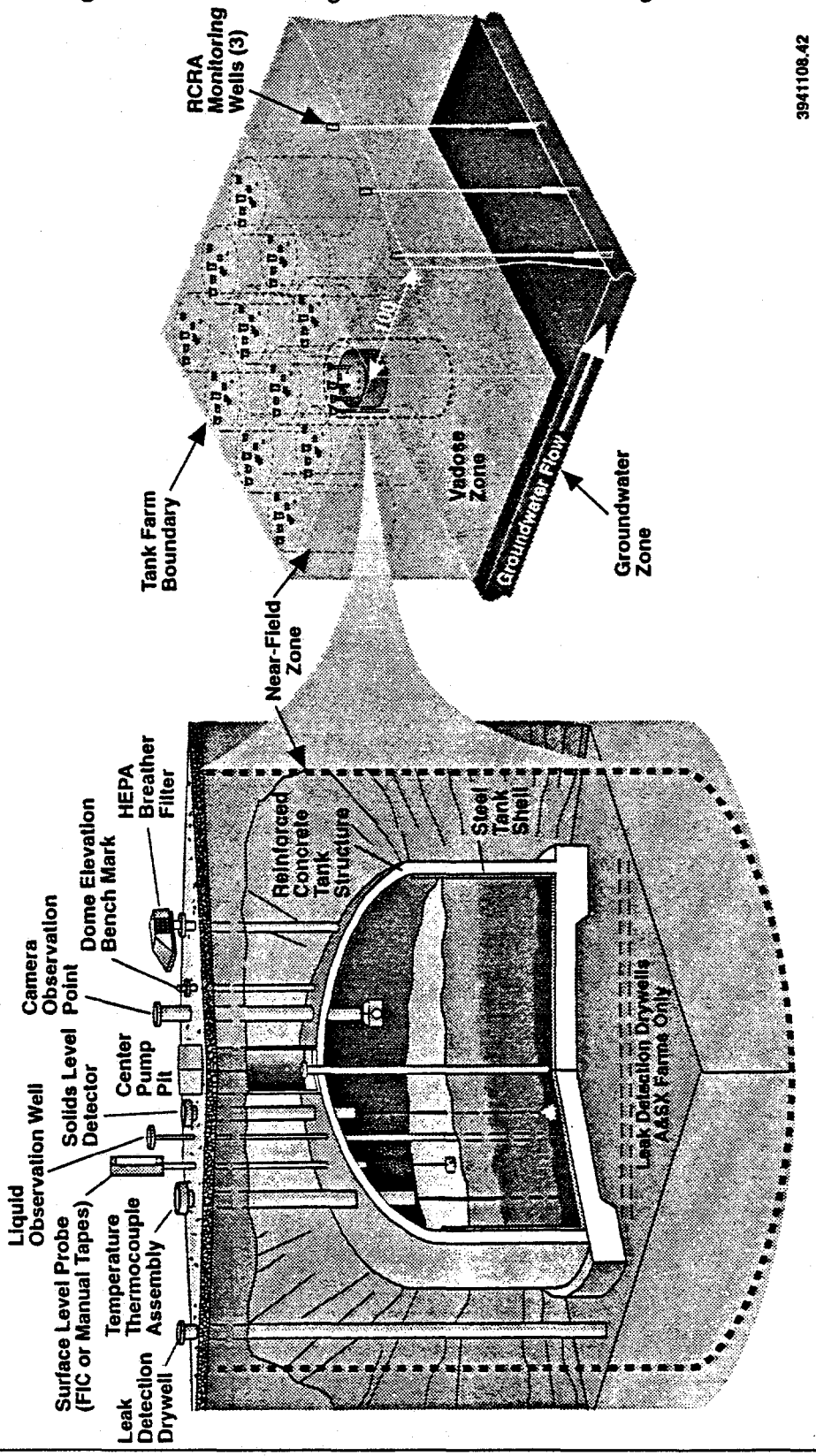
- **Unsaturated Zone.** The unsaturated zone is a soil volume formed by projecting the tank farm boundary from grade level downward to the unconfined aquifer, excluding the near-field zone as defined in 4.2.i.j.k-L1.1.

The distance from the tank bottoms to the ground water is typically 80 m (240 ft.).

- **Ground-Water Zone.** The ground-water zone is any portion of the ground water below the tank farm and/or down gradient potentially impacted by leakage from the tanks within the tank farm. The RCRA ground-water monitoring wells are installed downgradient from the major tank farm groups and are located a minimum of 33 m (100 ft.) from the nearest tank farm boundary.

Figure 1.1 provides a pictorial description of the three zones.

Figure 1-1. SST Leakage Detection and Monitoring Zones.



1.3 BACKGROUND INFORMATION

The official inventory for the waste stored in underground tanks on the Hanford Site is provided in *Tank Farm Surveillance and Waste Status Summary Report for November 1994*, WHC-EP-0182-80 (Hanlon 1994). This report is issued monthly and provides data on each of the underground waste storage tanks, and supplemental information regarding tank surveillance anomalies and ongoing investigations.

The geology of the Hanford Site is complex. Significant variations exist both locally and across the site as a whole. The most current description and interpretation of the Hanford Site geology is provided in Delaney et al. (1991), Lindsey et al. (1992a), Lindsey et al. (1992b), and Reidel et al. (1992).

1.3.1 Single-Shell Tank Physical Description

There are 149 SSTs and 28 DSTs on the Hanford Site that contain radioactive and hazardous waste from the reprocessing of irradiated fuel elements beginning in 1944. These underground storage tanks are grouped in 12 tank farms located in the 200 East and West Areas.

There are 133 SSTs classified as 100 series tanks. Tanks in this series are 75 ft in diameter with dome tops. Tank volumes are either 500,000 gal, 750,000 gal, or 1 Mgal. These tanks have a minimum of 6 ft of soil cover on the dome and a below-grade invert elevation of 37 ft to 51 ft. The 500,000 gal and 750,000 gal tanks were originally arranged in cascades of three, four, or six tanks such that when the first tank in a cascade filled it overflowed to the next tank, and so on. Tank farms with this arrangement include 241-B, 241-BX, 241-BY, 241-C, 241-S, 241-T, 241-TX, 241-TY, and 241-U. The 1 Mgal tanks are located in the 241-A, 241-AX, and 241-SX tank farms.

The other 16 SSTs are classified as 200 series tanks. These tanks are 20 ft in diameter with flat tops. Tank capacities are all 55,000 gal. The tanks all have a minimum of 12 ft of soil cover and a below grade invert elevation of 32 ft. The tanks are arranged in groups of four and located in the 241-B, 241-C, 241-T, and 241-U tank farms.

Many of the SSTs have leaked or are assumed to have leaked in the past for various reasons. An interim stabilization program to reduce the waste volumes and remove all SSTs from liquid storage service is ongoing. Free liquid is pumped out to the extent possible to minimize the potential environmental impact in the event of a tank leak. Status of each of the SSTs and estimates of the leaked volumes are provided in Hanlon (1994).

1.3.2 Single-Shell Tank Waste Description

A total of 37 Mgal of waste is stored in the SSTs. About 600,000 gal is supernatant, 23 Mgal is salt cake, and 12 Mgal is sludge (Hanlon 1994). The salt cake consists of the

various salts formed from the evaporation of alkaline waste and is approximately 93 wt% sodium nitrate ($NaNO_3$) and sodium nitrite ($NaNO_2$). The sludge consists of the solids (hydrous metal oxides) precipitated from the neutralization of acid waste before being transferred to the SSTs. On transfer of the evaporator slurry into the SSTs, some of the salt precipitated with the sludge. As a result, roughly 50% of the reported sludge volume is salt cake. The liquid solution exists as supernatant and interstitial liquid in the tanks. An estimated 6 Mgal of drainable interstitial liquid is present in the SST salt cake and sludge.

The SSTs contain primarily inorganic waste, although relatively small amounts of plant solvents were entrained during fuel reprocessing. Also, water-soluble complexing agents and carboxylic acids added in the 221-B Plant fractionation process are in some SST wastes. A listing of all nonradioactive chemicals known to have been used at production plants and support facilities that transferred waste to the SSTs is documented in *Inventory of Chemicals Used at Hanford Production Plants and Support Operations (1944-1980)*, WHC-EP-0172 (Klem 1990). Specific chemicals that may have been transferred to the SSTs and that appear on the "Dangerous Waste Sources List," WAC 173-303-9904, include carbon tetrachloride, methylene chloride, hexone, acetone, and ethyl ether. Chemical reactions (e.g., oxidation-reduction, neutralization, precipitation) and radiolysis may have converted many of these chemicals into other compounds with different physical and chemical properties.

Core samples have been taken from relatively few of the 149 SSTs to date. Additional information is needed about the waste properties and composition to evaluate the applicability of the different barrier concepts being considered. The transport of contaminants in the soil column to the groundwater is also dependent on the soil chemistry. The mobility of key waste components varies greatly under different conditions (e.g., alkaline, acidic, or organic). Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) (ecology et. al. 1992) milestones have been established for characterizing the contents of the SSTs. Future funding plans give priority to waste characterization efforts.

1.3.3 Hanford Site Geology

The geology of the vadose zone beneath the tank farms is highly variable. In the 200 East Area the most important suprabasalt stratigraphic unit underlying the tank farms is the Hanford formation. Hanford formation strata also form an important part of the vadose zone beneath the tank farms in the 200 West Area. However, a significant part of the vadose zone in the 200 West Area also consists of units underlying the Hanford formation, the Plio-Pleistocene/early Palouse (PP/EP) interval and the Ringold Formation.

Throughout the 200 East and West Areas the Hanford formation is the uppermost stratigraphic unit underlying the tank farms. Hanford formation strata consist of uncemented gravel, sand, and silt deposited by Pleistocene cataclysmic flood waters. The Hanford formation varies from 200- to 300-ft-thick in the 200 East Area to 100- to 150-ft-thick in the 200 West Area. Hanford deposits are divided into three facies that are gradational with each other and summarized as follows:

- Gravel-dominated facies: Generally consists of cross stratified, coarse-grained sand and granule to boulder gravel that contain minor intercalated silt-rich horizons. This facies generally is uncemented and matrix-poor, displays an open-framework texture, and has high saturated hydraulic conductivities.

- Sand-dominated facies: Well stratified, fine- to coarse-grained sand and granule to pebble gravel dominate. Silt content is variable, but where it is low an open-framework texture is common. Lenticular pebble gravel and silt interbeds may be present. Hydraulic conductivity values for this facies are dependant on silt content and as such are variable.

- Silt-dominated facies: Interbedded silt and fine- to coarse-grained sand forming well stratified fining upwards beds are characteristic. Perched water is common where this facies occurs because of the abundance of low hydraulic conductivity silt horizons.

In addition to the three facies, clastic dikes are also commonly found in the Hanford formation as well as locally in other sedimentary units in the Pasco Basin. These clastic dikes are structures that generally cross-cut bedding, although they do locally parallel bedding. The dikes usually consist of thin, alternating vertical to subvertical layers of silt, sand, and granules that can combine to form a dike several feet across. Where the dikes intersect the ground surface a feature known as patterned ground may be observed. Clastic dikes may act as both barriers to lateral flow as well as conduits for vertical flow depending on their composition.

Strata comprising the PP/EP interval and the Ringold Formation form the lower half of the vadose zone in the 200/West Area. In addition, Ringold Formation deposits locally comprise the lowermost few tens of feet of the vadose zone in the 200 East Area. The PP/EP interval underlies the Hanford formation beneath most of the 200 West Area. It is up to approximately 40-ft-thick and consists of (1) lenticular beds of uncemented silt, sand, and gravel, (2) calcium carbonate lenses and concretions, and (3) calcium carbonate and silica cemented sands and gravels. Perched water can occur locally on silt-rich and cemented zones within the PP/EP interval.

Ringold Formation strata in the 200 East and West Areas are dominated by partially consolidated to cemented, clast to matrix supported, pebble to cobble gravels with a fine- to coarse-grained sand matrix. Localized sand-rich intervals also occur in the Ringold Formation. Silt content in Ringold gravels and sands generally is low (<5%), although the presence of cementation and local silt-rich zones may produce perched water conditions. About 50 to 90 ft of Ringold strata occur in the vadose zone in the 200 West Area.

1.4 SYSTEMS ENGINEERING APPROACH

The functions and requirements for the TWRS Program are provided in the *Tank Waste Remediation System Functions and Requirements*, DOE/RL-92-60 (RL 1994). This document was prepared in a manner consistent with DOE/RL-92-60. Appendix A is provided as a convenience for readers who are unfamiliar with the TWRS systems engineering methodology.

1.5 FUNCTIONS AND REQUIREMENTS DOCUMENT

Functions are specific actions or processes that achieve or support the achievement of objectives (i.e., what must be done). Requirements are criteria that set acceptable limits on functions and their products (i.e., how well a function must be performed).

A mission analysis defines the function that a system as a whole must perform. This top-level function can be decomposed into subfunctions that are both necessary and sufficient to accomplish the mission. Requirements may be general in nature and apply to an entire system, or they may themselves be decomposed and allocated to subfunctions at a lower level.

This document describes the functions to be performed by SST Leakage Detection and Monitoring Systems based on their role in supporting remediation of the SSTs, and to identify the requirements that constrain their application. These functions and requirements together define the functional baseline for SST Mitigation Systems.

2.0 FUNCTIONS AND REQUIREMENTS

The functions described herein were decomposed from fourth-level functions as identified in DOE/RL-92-60 Rev. 1, *Tank Waste Remediation System Functions and Requirements* and assumed fifth-level functions. The primary sixth-level function establishes general requirements applicable to SST Leakage Detection and Monitoring. The seventh- and eighth-level subfunctions were established to define the baseline and alternative methods in greater detail. The functions, requirements, and interfaces identified below will be used to facilitate further development of alternative design concepts. The functions, requirements, and interfaces will then be further refined as needed to provide a basis for further evaluation.

The TWRS Systems Engineering process will continue as described in DOE/RL-93-0106, Annex 2. As each step in the process is completed, the functions and requirements identified will be evaluated, and revised if necessary, to maintain continuity with the TWRS functions and requirements.

The functions and requirements defined below are intended to focus on function specific items. The items address requirements for safe conduct of operations, as low as reasonably achievable (ALARA)/radiation protection, environmental & regulatory compliance, design of systems, and other items applicable to SST Leakage Detection and Monitoring operations in the Hanford Tank Farms. General requirements regarding development and implementation of new systems (i.e., regardless of function) in the tank farms are not included to avoid unnecessary repetition. Appendix B to this document provides a summary of the applicable general requirements.

2.1 FUNCTION HIERARCHY

Each function identified for SST Leakage Detection and Monitoring is given a number of the format 4.2.i.j.k-Lx or -Lx.y. The first part of the number, 4.2.i.j.k, is the number of the assumed TWRS fifth-level function from which the project-level function was decomposed. The "-L" indicates that it is a function allocated to SST Leakage Detection and Monitoring. The "x" or "x.y" completes the unique number within each "4.2.i.j.k" group. For example, 4.2.1.1.2-L1 indicates a function decomposed from TWRS function 4.2.1.1.2 and allocated to the SST Leakage Detection and Monitoring system; and 4.2.1.1.2-L1.1 indicates a subfunction of 4.2.1.1.2-L1.

Figure 2-1 illustrates the hierarchy of the SST Leakage Detection and Monitoring functions, as decomposed from the TWRS higher level functions. Figure A-2 in Appendix A of this document shows the hierarchy of the TWRS functions to the fourth level. Table 2-1 provides the requirements allocation and is arranged by requirement.

Figure 2-1. SST Leakage Detection and Monitoring Function Hierarchy.

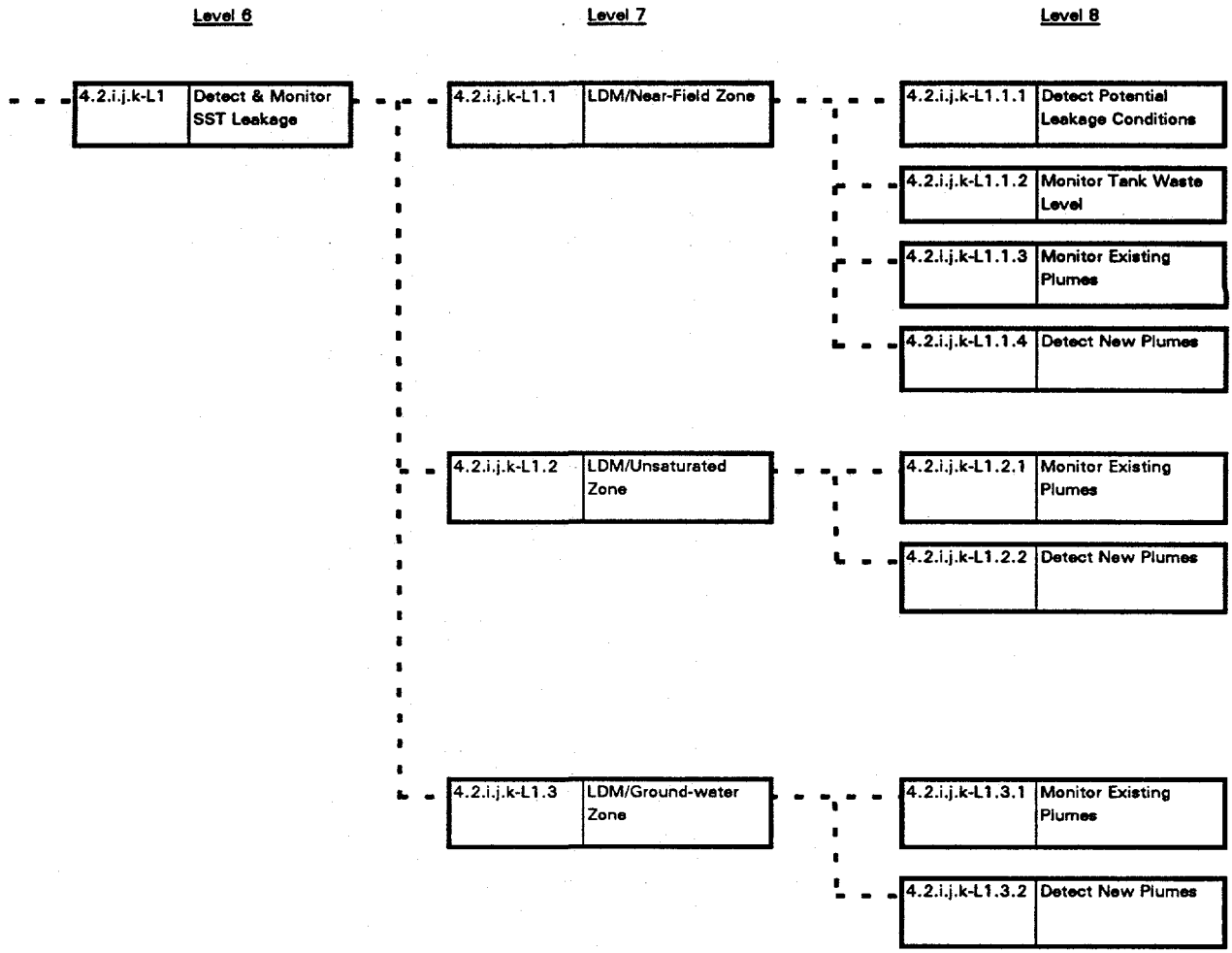


Table 2-1. SST Leakage Detection and Monitoring Requirements Allocation.

Requirement	Subject	Function	Interface
40CFR141	Drinking Water Rad. Limits	4.2.i.j.k-L1.3	TBD
40CFR264.97	Ground-water monitoring	4.2.i.j.k-L1.3	TBD
40CFR265, Subpart F	Ground-water Monitoring	4.2.i.j.k-L1.3	TBD
40CFR265.111	Closure performance standard	4.2.i.j.k-L1	TBD
40CFR265.117(a)	Post-closure care	4.2.i.j.k-L1	TBD
40CFR265.195(a)(3)	Inspections; monitoring, leak detection	4.2.i.j.k-L1	TBD
40CFR265.196(d)	Response to Leaks	4.2.i.j.k-L1	TBD
40CFR265.197	Closure & Post-closure Care	4.2.i.j.k-L1	TBD
40CFR265.310(b)	Closure & Post-closure Care	4.2.i.j.k-L1	TBD
40CFR302	Release Notification	4.2.i.j.k-L1	TBD
DOE5400.1, Chapter IV, 5.b	Environmental Monitoring	4.2.i.j.k-L1	TBD
DOE5400.5, Chapter II, 1.d.(3)	Rad. Limits in Groundwater	4.2.i.j.k-L1.3	TBD
DOE5400.5, Chapter II, 3.c.(2)	Migration of Leaks	4.2.i.j.k-L1	TBD
DOE5820.2A, Chapter I, 3.c.(3)(a)	Monitoring & Surveillance	4.2.i.j.k-L1	TBD
DOE5820.2A, Chapter I, 3.c.(3)(b)	Integrity Assessment	4.2.i.j.k-L1	TBD
DOE5820.2A, Chapter I, 3.c.(3)(c)	Emergency Power	4.2.i.j.k-L1	TBD
DOE5820.2A, Chapter I, 3.c.(3)(d)	Monitoring Wells	4.2.i.j.k-L1, -1.3	TBD
DOE5820.2A, Chapter I, 3.c.(4)(b)	Leakage Mitigation	4.2.i.j.k-L1	TBD
DOE5820.2A, Chapter III, 3.k	Environmental Monitoring	4.2.i.j.k-L1	TBD
PL 101-510, Section 3137, a	Id. & Monitoring	4.2.i.j.k-L1	TBD
PL 101-510, Section 3137, b	Action Plans	4.2.i.j.k-L1	TBD
PL 101-510, Section 3137, d	Safety Measures	4.2.i.j.k-L1	TBD
PL 101-510, Section 3137, (1-2)	Id. & Monitoring	4.2.i.j.k-L1	TBD
TPA Change Control Form M-24-00	Groundwater Monitoring Wells	4.2.i.j.k-L1.3	TBD
TPA Change Control Form M-40-00	Watch List Tanks	4.2.i.j.k-L1	TBD
TPA Change Control Form M-45-05	SST Retrieval	4.2.i.j.k-L1	TBD
TPA Change Control Form M-45-06	SST Closure	4.2.i.j.k-L1	TBD
WAC 173-160	Well Drilling	4.2.i.j.k-L1	TBD
WAC 173-303-283 (3)(a)	Groundwater Protection	4.2.i.j.k-L1	TBD
WAC 173-303-610(2)(a)	Closure Performance Standard	4.2.i.j.k-L1	TBD
WAC 173-303-610 (7)(a)	Post-closure care	4.2.i.j.k-L1	TBD
WAC 173-303-640 (6)(a)	Inspections	4.2.i.j.k-L1	TBD
WAC 173-303-640 (7)(d)	Response to leaks	4.2.i.j.k-L1	TBD
WAC 173-303-640 (8)	Tank System Closure	4.2.i.j.k-L1	TBD
WAC 173-303-645	Groundwater Protection	4.2.i.j.k-L1.3	TBD
WAC 173-303-665(6)(b)	Closure and Postclosure care	4.2.i.j.k-L1	TBD
WAC 173-340	Groundwater Protection	4.2.i.j.k-L1.3	TBD

2.2 FUNCTION DESCRIPTION SHEETS

A Function Description Sheet is provided for each of the functions identified for SST Leakage Detection and Monitoring. The Function Description Sheets provide the function definitions, enabling assumptions, interfaces, function requirements, and interface requirements. The sheets were prepared according to the format used in DOE/RL-92-60, as shown in Appendix A.

The SST Leakage Detection and Monitoring functions and requirements include discussion of the TWRS Program baseline approach as well as alternatives that are under evaluation. The function description sheets provide discussion of performance requirements for alternatives to establish a basis for evaluation.

I. FUNCTION ID NUMBER: 4.2.i.j.k-L1

II. FUNCTION TITLE: Detect and Monitor SST Leakage

III. FUNCTION DEFINITION:

Detect new SST leakage and monitor existing contaminant plumes as required to support Storage, Retrieval and Disposition Excess Facilities functions. Applicable to contaminant plumes and leaks in the subsurface soil from the tank structure or from near-field ancillary equipment.

SST Leakage Detection and Monitoring activities are underway and will continue with enhancements as required to support the other functions and associated regulatory requirements until all of the SSTs are transferred for closure to the sitewide Deactivate Facilities function.

IV. ENABLING ASSUMPTIONS:

SST Waste Storage - storage activities will continue per the current TWRS Program baseline with continued interim stabilization and related actions.

SST Waste Retrieval - retrieval of SST waste will be conducted per the current TWRS Program baseline using traditional sluicing as the primary approach.

SST Closure - the SST tank farms will be closed as landfills with appropriate closure and post-closure supporting activities. It is further assumed that the basic closure methodology will consist of structurally stabilizing the tanks (residual remaining in place) followed by installation of a protective surface barrier.

V. INTERFACES

A. INPUTS

4.2.i.j.k-L1 I1 Single-Shell Tank Farms From: External

SST farms - including the tanks, ancillary systems (e.g., transfer lines, dry wells, groundwater monitoring wells, other above or below ground hardware), soil contamination plumes resulting from past or new leaks.

4.2.i.j.k-L1 I2 SST Leakage Characterization Data

From: 4.2.1.2

Information about SST leakage and soil contamination plumes.

4.2.i.j.k-L1 I3 SST Waste Characterization Data

From: 4.2.1.2

Information about the constituents of the waste in each tank.

4.2.i.j.k-L1 I4 SST Integrity Data From: 4.2.1.1

Information about the structural integrity of SSTs, including maximum and minimum allowable loads and temperatures.

4.2.i.j.k-L1 I5 Tank Farm Geological Data From: 4.2.1.2

Information about the tank farm geology, including soil properties, lithology, history, and hydrology.

4.2.i.j.k-L1 I6 Store Waste Characterization Requirements
From: 4.2.1.1

Characterization information needs of the Store Waste function that can be transformed into data quality objectives with requirements for analytical measurements and precision and accuracy requirements.

4.2.i.j.k-L1 I7 Retrieve Waste Characterization Requirements
From: 4.2.1.3

Characterization information needs of the Retrieve Waste function that can be transformed into data quality objectives with requirements for analytical measurements and precision and accuracy requirements.

4.2.i.j.k-L1 I8 MSGW & EF Tank Characterization Requirements
From: 4.2.3
4.2.3.5

The characterization information needs of the Manage System Generated Waste and Excess Facility function that are delivered to it from the Manage Tank Waste Function. The characterization requirements will be transformed into data quality objectives with requirements for analytical measurements and precision and accuracy requirements. These requirements may include requirements for a contamination survey of MTW facilities to support decontamination plans.

4.2.i.j.k-L1 I9 Raw Materials From: 2

Same as F4.2.1.2.

4.2.i.j.k-L1 I10 Reusable Materials From: 4.2.3
4.2.3.6

Same as F4.2.1.2.

B. OUTPUTS

4.2.i.j.k-L1 O1 Liquid Effluent To: 4.2.3.3

Liquid effluent streams resulting from SST leakage detection and monitoring operations for treatment and disposal.

4.2.i.j.k-L1 O2 Solid Waste To: 4.2.3.4

Solid waste generated from SST leakage detection and monitoring system operations.

4.2.i.j.k-L1 O3 Gaseous Effluent To: 4.2.3.2

Offgas streams resulting from SST leakage detection and monitoring system operations for treatment and disposal.

4.2.i.j.k-L1 O4 Excess Equipment/Facilities To: 4.2.3.5

SST leakage detection and monitoring system components, once they are no longer needed in fulfillment of the TWRS mission.

4.2.i.j.k-L1 O5 Reusable Materials To: 4.2.3.6

Materials economically suitable for reuse by TWRS or other programs.

4.2.i.j.k-L1 O6 Detection and Monitoring Information To: 4.2.1.1
4.2.1.3
4.2.3.5

Detection and monitoring information consists of plans, data and other information gathered by the SST Leakage Detection and Monitoring function and provided to other functions. The information may be in paper or electronic form.

VI. FUNCTION REQUIREMENTS

A. Performance Requirements

4.2.i.j.k-L1 P1 Detection/Detection Level The TWRS baseline approach will basically use the capability of existing technologies subject to changes in operational philosophy (e.g., measurement frequency) as needed. The TWRS Program will evaluate alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost. In general, actions to detect new leakage will be focused to the near-field zone. See subordinate function and architecture descriptions for a detailed description of the baseline and rationale for evaluation of alternatives.

4.2.i.j.k-L1 P2 Monitoring The TWRS baseline approach will basically use the existing technologies subject to changes in operational philosophy (e.g., measurement frequency) as needed. The TWRS Program will evaluate alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost. Actions to monitor SST leakage plumes will occur in all three zones. See subordinate function and architecture descriptions for a detailed description of the baseline and rationale for evaluation of alternatives.

4.2.i.j.k-L1 P3 Worker Safety/ALARA General requirements for worker safety requirements applicable to tank farm operations are included in Appendix B to this document. The TWRS Program is committed to continuing improvement in worker safety performance. Accordingly, worker safety will be a key consideration in evaluating proposed enhancements or alternatives to the baseline SST leakage detection and monitoring systems.

4.2.i.j.k-L1 P4 Environmental General environmental protection requirements applicable to tank farm operations are included in Appendix B to this document. The overall objective of the TWRS Program is to remediate the tank waste in a safe and cost-effective manner. Accordingly, proposed alternatives to the baseline SST leakage detection and monitoring systems will be required to demonstrate that their implementation will result in no significant environmental impact before they can be further considered.

4.2.i.j.k-L1 P5 Impact on Other TWRS Functions Relative to the TWRS baseline, any enhancements or alternatives proposed for SST leakage detection and monitoring will be required to be supportive of and not impede SST waste tank safety, storage, retrieval, and closure readiness activities. This includes, but is not limited to the following:

- No degradation to tank structure or supporting equipment. Static dome loading (soil cover): 200 series tanks (20 ft. dia.) - minimum 5 ft./maximum 12 ft., 100 series tanks (75 ft. dia.) - minimum 5 ft./maximum 10 ft. Dynamic dome loading (live loads): 200 series tanks - maximum 50 tons (over 10 foot radius), 100 series tanks - maximum 100 tons (over 10 foot radius).
[WHC-SD-WM-ISB-001, Vol. 1]

- Compliance with Operating, Design & Safety Analysis Limits. Concrete dome temperature - 250 F (max.). Concrete base temperature - 380 F (max.). Waste specific gravity - 2.0 (max.). Waste temperature - 300 F (max.). Waste temperature rate of change - 20 F/day (max.).
[WHC-SD-WM-ISB-001, Vol. 1]

B. Constraints

4.2.i.j.k-L1 C1 Closure performance standard. The owner or operator must close the facility in a manner that:
(a) Minimizes the need for further maintenance, and
(b) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, postclosure escape of hazardous waste, hazardous constituents, leachate, contaminated run-off, or hazardous waste decomposition products to the ground, surface water, ground water, or the atmosphere, and
(c) Complies with the closure requirements of this subpart . . .
[40 CFR 265.111]

4.2.i.j.k-L1 C2 Post-closure care and use of property. (a)(1) Post-closure care for each hazardous waste management unit subject to the requirements of 265.117 through 265.120 must begin after completion of closure of the unit and continue for thirty years after that date. It must consist of at least the following:
(i) Monitoring and reporting in accordance with the requirements of subparts F, K, L, M, and N of this part, and
(ii) Maintenance and monitoring of waste containment systems in accordance with the requirements of subparts F, K, L, M, and N of this part. etc.
[40 CFR 265.117(a)]

4.2.i.j.k-L1 C3 Inspections. (a) The owner or operator must inspect, where present, at least once each operating day:
(3) Data gathered from monitoring equipment and leak-detection equipment, (e.g., pressure and temperature gauges, monitoring wells) to ensure that the tank systems being operated according to its design; and . . .
[40 CFR 265.195(a)(3)]

4.2.i.j.k-L1 C4 (d) Notifications, reports. (1) Any release to the environment, except as provided in paragraph (d)(2) of this section, must be reported to the Regional Administrator within twenty-four hours of detection. If the release has been reported 40 CFR Part 302, that report will satisfy this requirement.
(2) A leak or spill of hazardous waste that is:
(i) Less than or equal to a quantity of one (1) pound, and
(ii) Immediately contained and cleaned-up is exempted from the requirements of this paragraph.
(3) Within thirty days of detection of a release to the environment, a report containing the following information must be submitted to the Regional Administrator:
(i) Likely route of migration of the release;
(ii) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);
(iii) Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within thirty days, these data must be submitted to the Regional Administrator as soon as they become available;
(iv) Proximity to downgradient drinking water, surface water, and populated areas; and
(v) Description of response actions taken or planned.

[40 CFR 265.196(d)]

4.2.i.j.k-L1 C5 Closure and Post-closure Care - [reserved]

[40 CFR 265.197 & .310]

4.2.i.j.k-L1 C6 Designation, Reportable Quantities, and Notification - [reserved]

[40 CFR 302 - multiple entries]

4.2.i.j.k-L1 C7 Environmental Surveillance. (1) Environmental surveillance shall be conducted to monitor the effects, if any, of DOE activities on onsite and offsite environmental and natural resources. An environmental surveillance screening program shall be undertaken at DOE sites to determine the need for a permanent surveillance program. Environmental surveillance shall be designed to satisfy one or more of the following program objectives:

(a) Verify compliance with applicable environmental laws and regulations;

(b) Verify compliance with environmental commitments made in Environmental Impact Statements, Environmental Assessments, Safety Analysis Reports, or other official DOE documents;

(c) Characterize and define trends in the physical, chemical and biological condition of environmental media;

(d) Establish baselines of environmental quality;

(e) Provide a continuing assessment of pollution abatement programs;

(f) Identify and quantify new or existing environmental quality problems.

(2) Environmental surveillance programs and components should be determined on a site-specific basis by the field organization. Programs should reflect facility characteristics, applicable regulations, hazard potential, quantities and concentrations of materials released, the extent and use of affected air, land, and water, and specific local public interest or concern. Surveillance programs are likely to include one or more of the following:

(a) Monitoring stations;

(b) Sampling and analysis; and

(c) Monitoring data record keeping.

[DOE5400.1, Chapter IV, 5.b]

4.2.i.j.k-L1 C8 Discharge of Other Liquids. Liquid discharges, even though uncontaminated, are prohibited in inactive release areas to prevent the further spread of radionuclides previously deposited.

[DOE5400.5, Chapter II, 3.c(2)]

4.2.i.j.k-L1 C9 (a) Monitoring and surveillance capability shall exist to provide liquid volume, waste inventory data, and identification of failed containment.

[DOE5820.2A, Chapter I, 3.c.(3)(a)]

4.2.i.j.k-L1 C10 (b) A method for periodically assessing waste storage tank integrity (e.g., coupons, photographic inspections, leak detectors, liquid level devices) shall be established and documented.

[DOE5820.2A, Chapter I, 3.c.(3)(b)]

4.2.i.j.k-L1 C11 (c) Emergency power - Electrical monitoring and leak detection devices essential to safe operations shall be provided with backup power, as appropriate, to ensure operability under emergency conditions.

[DOE5820.2A, Chapter I, 3.c.(3)(c)]

4.2.i.j.k-L1 C12 (d) Monitoring wells - A system of ground water or vadose zone monitoring wells meeting the Resource Conservation and Recovery Act requirements

per 40 CFR 264 shall be installed, as a minimum, around clusters of liquid waste storage tanks.

[DOE5820.2A, Chapter I, 3.c.(3)(d)]

4.2.i.j.k-L1 C13 (b) Upon detection of released radioactive materials, steps shall be taken to prevent further migration of the release to soil or surface water. Major contamination in the soil shall be removed or stabilized unless compliance with this requirement would cause greater harm to human health or the environment.

[DOE5820.2A, Chapter I, 3.c.(4)(b)]

4.2.i.j.k-L1 C14 Environmental Monitoring. (1) Each operational or non-operational low-level waste treatment, storage, and disposal facility shall be monitored by an environmental monitoring program that conforms with DOE 5484.1 *[DOE5400.1, Chapter IV, 5.b]* and, at a minimum, meet the requirements of paragraph 3K(2) through 3K(4).

(2) The environmental monitoring program shall be designed to measure: (a) operational effluent releases; (b) migration of radionuclides; (c) disposal unit subsidence; and (d) changes in disposal facility and disposal site parameters which may affect long-term site performance.

(3) Based on the characteristics of the facility being monitored, the environmental monitoring program may include, but not necessarily be limited to, monitoring surface soil, air, surface water, and, in the subsurface, soil and water, both in the saturated and the unsaturated zones.

(4) The monitoring program shall be capable of detecting changing trends in performance sufficiently in advance to allow application of any necessary corrective action prior to exceeding performance objectives. The monitoring program shall be able to ascertain whether or not effluents from each treatment, storage, or disposal facility or disposal site meet the requirements of applicable EH Orders.

[DOE5820.2A, Chapter III, 3.k]

4.2.i.j.k-L1 C15 (a) Identification and Monitoring of Tanks. - Within 90 days after the date of the enactment of this Act, the Secretary of Energy shall identify which single-shelled high-level nuclear waste tanks at the Hanford Nuclear Reservation, Richland, Washington, may have a serious potential for release of high-level waste due to uncontrolled increases in temperature or pressure. After completing such identification, the Secretary shall determine whether continuous monitoring is being carried out to detect a release or excessive temperature or pressure at each tank so identified. If such monitoring is not being carried out, as soon as practicable the Secretary shall install such monitoring, but only if a type of monitoring that does not itself increase the danger of a release can be installed.

[P.L. 101-510 Sec 3137, (a)]

4.2.i.j.k-L1 C16 Safety Measures for Waste Tanks at Hanford Nuclear Reservation: Action Plans. - Within 120 days after the date of the enactment of this Act, the Secretary of Energy shall develop action plans to respond to excessive temperature or pressure or a release from any tank identified under subsection (a).

[P.L. 101-510 Sec 3137, (b)]

4.2.i.j.k-L1 C17 Safety Measures for Waste Tanks at Hanford Nuclear Reservation: Report. - Within six months after the date of the enactment of this Act, the Secretary shall submit to Congress a report on actions taken to promote tank safety, including actions taken pursuant to this section, and the Secretary's timetable for resolving outstanding issues on how to handle the waste in such tanks.

[P.L. 101-510 Sec 3137, (d)]

4.2.i.j.k-L1 C18 (1) Identify those tanks which may have potential for serious release of high level waste. (2) Determine whether continuous monitoring is being done to detect release or excessive temperature or pressure. No additional wastes added to tank. Report on actions taken or proposed actions.

[P.L. 101-510 Sec 3137, (1-2)]

4.2.i.j.k-L1 C19 M-40-00 September 2001 Mitigate/Resolve Tank Safety Issues for High Priority Watch List Tanks; High priority Watch List tanks are those single-shell and double-shell tanks identified, in accordance with Section 3137 of Public Law 101-510, which have a serious potential for release of high-level waste due to uncontrolled increases in temperature or pressure. These include flammable gas generating tanks, ferrocyanide containing tanks, organic/nitrate containing tanks, and a high heat producing tank. Corrective action strategies will be developed for these tanks. This milestone will be complete when mitigation activities, if required, have been implemented in all Watch List tanks to ensure safe storage of waste during the interim period until retrieval for treatment and/or disposal operations begin. For those safety issues mitigated pursuant to this milestone, safety resolution will be dependent upon final treatment of the waste. Mitigation will allow, however, the characterization retrieval, etc., of these wastes prior to final treatment. Some safety issues may also be resolved if (1) resolution out-of-tank is not required, or (2) resolution out-of-tank with or without treatment takes place within the time period of this milestone.

[TPA Change Control Form M-40-00]

4.2.i.j.k-L1 C20 M-45-05 (September 2018) Retrieve Waste from all Remaining Single-Shell Tanks; Complete waste retrieval from all remaining single-shell tanks. Retrieval standards and completion definitions are provided under the major milestone. The schedule reflects retrieval activities on a farm-by-farm basis. It also allows flexibility to retrieve tanks from various farms if desired to support safety issue resolution, pretreatment or disposal feed requirements, or other priorities.

[TPA Change Control Form M-45-05]

4.2.i.j.k-L1 C21 M-45-06 (September 2024) Complete Closure on All Single-Shell Tank Farms. The single-shell tank closure work plan will be prepared describing the work integration process for single-shell tank closures and status of work and integration process. Known issues will be identified and an explanation will be given on how these issues are being addressed. This work plan will be used as a roadmap for closure of the single-shell tanks. Because of the uncertainties in the closure process, the work plan will evolve as these uncertainties are resolved and eventually it will become the SST closure/post-closure plan(s) issued for ecology's approval under subsequent TPA interim milestones. Major work areas covered in the work plan will include waste retrieval, operable units characterization, technologies development to support closure, regulatory pathway and strategy for achieving closure.

M-45-06-T01 (November 2004) Submit Tank Closure/Post-Closure Plan for Selected Closure Demonstration Operable Unit or Tank Farm to Ecology for Approval.

M-45-06-T02 (September 2006) Ecology Will Issue Final Closure/Post Closure Plan For Selected Closure Demonstration Operable Unit or Tank Farm.

M-45-06-T03 (March 2012) Initiate Closure Actions on an Operable Unit or Tank Farm Basis. Closure Shall Follow Completion of The Retrieval Actions Under Proposed Milestone.

M-45-06-T04 (March 2014) Complete closure actions on one operable unit or tank farm.

[TPA Change Control Form M-45-06]

4.2.i.j.k-L1 C22 Well Drilling. Monitoring wells and other bore holes shall be appropriately sealed after use so as to not provide a pathway for contamination to the ground-water.

[WAC 173-160]

4.2.i.j.k-L1 C23 (2) Closure performance standard. The owner or operator must close the facility in a manner that: (a)(i) Minimizes the need for further maintenance; (ii) Controls, minimizes or eliminates to the extent necessary to protect human health and the environment, postclosure escape of dangerous waste, dangerous constituents, leachate, contaminated run-off, or dangerous waste decomposition products to the ground, surface water, ground water, or the atmosphere; and (iii) Returns the land to the appearance and use of surrounding land areas to the degree possible given the nature of the previous dangerous waste activity.

[WAC 173-303-610(2)(a)]

4.2.i.j.k-L1 C24 (7) Postclosure care and use of property. (a) Postclosure care for each dangerous waste management unit subject to postclosure requirements must begin after completion of closure of the unit and continue for thirty years after that date and must consist of at least the following:

(i) Ground water monitoring and reporting as applicable; and
(ii) Maintenance and monitoring of waste containment systems as applicable.

[WAC 173-303-610(7)(a)]

4.2.i.j.k-L1 C25 (6) Inspections. (a) The owner or operator must develop and follow a schedule and procedure for inspecting overfill controls. (b) The owner or operator must inspect at least once each operating day:
(i) Above ground portions of the tank system, if any, to detect corrosion or releases of waste;
(ii) Data gathered from monitoring any leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and
(iii) The construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g.,dikes) to detect erosion or signs of releases of dangerous waste (e.g., wet spots, dead vegetation).

[WAC 173-303-640(6)(a)]

4.2.i.j.k-L1 C26 (d) Notifications, reports. (i) Any release to the environment, except as provided in(d)(ii) of this subsection, must be reported to the department within twenty-four hours of its detection. Any release above the "reportable quantity" must also be reported to the National Response Center pursuant to 40 CFR Part 302.
(ii) A leak or spill of dangerous waste is exempted from the requirements of (d) of this subsection if it is: (A) Less than or equal to a quantity of one pound, or the "Reportable Quantity" (RQ) established in 40 CFR Part 302, whichever is less; and
(B) Immediately contained and cleaned-up.
(iii) Within thirty days of detection of a release to the environment, a report containing the following information must be submitted to the department:
(A) Likely route of migration of the release;
(B) Characteristics of the surrounding soil (soil composition, geology, hydrogeology, climate);
(C) Results of any monitoring or sampling conducted in connection with the release (if available). If sampling or monitoring data relating to the release are not available within thirty days, these data must be submitted to the department as soon as they become available;
(D) Proximity to down gradient drinking water, surface water, and populated areas; and
(E) Description of response actions taken or planned.

[WAC 173-303-640(7)(d)]

4.2.i.j.k-L1 C27 (8) Closure and post-closure care.
(a) At closure of a tank system, the owner or operator must remove or decontaminate all waste residues, contaminated containment system components (liners, etc.), contaminated soils, and structures and equipment contaminated with waste, and manage them as dangerous waste, unless WAC 173-303-070 (2)(a) applies. The

closure plan, closure activities, cost estimates for closure, and financial responsibility for tank systems must meet all of the requirements specified in WAC 173-303-610 and 173-303-620.

(b) If the owner or operator demonstrates that not all contaminated soils can be practicably removed or decontaminated as required in (a) of this subsection, then the owner or operator must close the tank system and perform post-closure care in accordance with the closure and post-closure care requirements that apply to landfills (see WAC 173-303-665(6)). In addition, for the purposes of closure, post-closure, and financial responsibility, such a tank system is then considered to be a landfill, and the owner or operator must meet all of the requirements for landfills specified in WAC 173-303-610 and 173-303-620.

(c) If an owner or operator has a tank system that does not have secondary containment that meets the requirements of subsection (4)(b) through (f) of this section and is not exempt from the secondary containment requirements in accordance with subsection (4)(g) of this subsection.

(i) The closure plan for the tank system must include both a plan for complying with (a) of this subsection and a contingent plan for complying with (b) of this subsection.

(ii) A contingent post-closure plan for complying with (b) of this subsection must be prepared and submitted as part of the permit application.

(iii) The cost estimates calculated for closure and post-closure care must reflect the costs of complying with the contingent closure plan and the contingent closure plan and the contingent post-closure plan, if those costs are greater than the costs of complying with the closure plan prepared for the expected closure under (a) of this subsection.

(iv) Financial assurance must be based on the cost estimates in (c)(iii) of this subsection.

(v) For the purposes of the contingent closure and post-closure plans, such a tank system is considered to be a landfill, and the contingent plans must meet all of the closure, post-closure and financial responsibility requirements for landfills under this chapter (WAC 173-303-610 and 173-303-620).

Etc.

[WAC 173-303-640(8)]

4.2.i.j.k-L1 C28 (6) Closure and postclosure care. (b) After final closure, the owner or operator must comply with all postclosure requirements contained in WAC 173-303-610 (7), (8), (9), and (10) including maintenance and monitoring throughout the postclosure care period. The owner or operator must:

(i) Maintain the integrity and effectiveness of the final cover, including making repairs to the cap as necessary to correct the effects of settling, subsidence, erosion, or other events;

(ii) Maintain and monitor the leak detection system in accordance with subsection (3) of this section, where such a system is present between double liner systems;

(iii) Continue to operate the leachate collection and removal system until leachate is no longer detected;

(iv) Maintain and monitor the ground water monitoring system and comply with all other applicable requirements of WAC 173-303-645;
(v) Prevent run-on and run-off from eroding or otherwise damaging the final cover; and
(vi) Protect and maintain surveyed benchmarks used in complying with subsection (5) of this section.

[WAC 173-303-665(6)]

VII. INTERFACE REQUIREMENTS

See Section 4.0 for requirements allocated to the interfaces of this function.

I. **FUNCTION ID NUMBER:** 4.2.i.j.k-L1.1

II. **FUNCTION TITLE:** LDM/Near-Field Zone

III. **FUNCTION DEFINITION:**

Detect and monitor SST leakage contaminant plumes in the near-field zone by acquiring and evaluating the following data:

- *potential leakage conditions within the SST structure*
- *tank waste level indication*
- *unanticipated changes in the properties of existing contaminant plumes*
- *appearance of new contaminant plumes*

Perform this function as required to support Storage, Retrieval and Disposition Excess Facilities functions. Applicable to contaminant plumes and leaks in the subsurface soil from the tank structure or from ancillary equipment.

SST leakage detection and monitoring activities are ongoing and will continue, with the necessary enhancements, until the SSTs are transferred for closure.

IV. **ENABLING ASSUMPTIONS:**

Same as 4.2.i.j.k-L1.

V. **INTERFACES**

A. **INPUTS**
Same as 4.2.i.j.k-L1.

B. **OUTPUTS**
Same as 4.2.i.j.k-L1.

VI. **FUNCTION REQUIREMENTS**

A. **Performance Requirements**

4.2.i.j.k-L1.1 P1 Detection/Detection Level (Near-Field Zone)

TWRS Baseline - Storage

Per Operating Specifications for Tank Farm Leak Detection, OSD-T-151-00031, (WHC, 1994). The document establishes specification limits for monitoring frequencies and permissible variations of readings from established baselines or previous readings. The specification limits define limits that when exceeded invoke more detailed investigation of potential leakage. Primary and backup leak detection

methods are identified by individual tank and are based on historical experience and the detection methods currently available in the SST tank farms. The primary method indicates changes in waste level within the tank with the backup method indicating gamma-radiation level changes in drywells or laterals outside the tank boundary. Under favorable conditions, given measurement precision and seasonal variations, a detection level of **2.54 cm (1.0 in.)** change in tank waste level is achievable with current systems. This would indicate potential leakage of **10.4E+03 L (2700 gal.)** for a tank with a diameter of 23 m (75 ft.). An ongoing upgrades program in the SST Tank farms is implementing upgrades to the existing detection equipment to ensure consistency in all tanks; however, the detection level capability will remain basically the same.

The TWRS Program considers the current baseline acceptable for continued storage activities. The ongoing interim stabilization program is removing liquid from the tanks, further reducing the threat of new leakage. The ongoing operations during the storage period should have no significant impact on tank integrity.

Notification and reporting are performed upon indications that specification limits have been exceeded via WHC Occurrence Notification procedures as described in WHC-IP-0842.

TWRS Baseline - Retrieval

Existing systems and technologies will be used, as described in OSD-T-151-00031 (WHC, 1994) and WHC-SD-WM-TI-573 (Schofield, 1994), with appropriate changes in specification levels and measurement frequencies. Specification levels and frequencies will be established for individual tanks based on the waste inventory and the potential impacts of leakage (e.g., public risk). During sluicing operations, measurements of system continuity will be used to detect leakage to the extent practicable. In addition, sluicing may be stopped periodically to allow the tank liquid level to stabilize and allow a more precise level measurement.

The baseline retrieval method of traditional sluicing for the SSTs will elevate the potential of leakage from the tanks. Accordingly, enhancements both in operational philosophy and technology may be appropriate. The TWRS Program will evaluate alternatives based on public risk, worker risk, effectiveness and cost. The currently envisioned TWRS baseline (above) is provided for the purpose of further evaluation and comparison with alternatives.

Preliminary threshold leakage values for the SSTs have been developed to facilitate further evaluation of technologies. The values are provided in Appendix C and range from 1.02E+04 L (2703.0 gal.) to more than 26.0E+03 L (100,000 gal.) for some tanks. The values are based on limiting the exposure of a postulated maximally exposed individual (MEI) to 1.0E-06 carcinogenic risk (R) or 1.0E-02 toxicological/hazard index risk (HI) during a 70-year lifetime. The values indicate the

TWRS baseline approach to SST leakage detection and monitoring is likely acceptable to support continued storage activities. However, enhancements to the baseline detection and monitoring capability may be appropriate to support retrieval activities. Enhancements in detection and monitoring capability will be evaluated subject to the closure strategy for the SSTs and programmatic cost-benefit objectives. The intent of the leakage thresholds is to establish an amount that if released from the tank, either cumulatively or as an acute release, operations are stopped and response actions are taken. Accordingly, the goal of leakage detection and monitoring will be to provide early warning to operators if a threshold is being approached.

Notification and reporting will be performed upon indications that specification limits have been exceeded via WHC Occurrence Notification procedures as described in WHC-IP-0842.

TWRS Baseline - Closure Readiness

Existing systems and technologies will be used, as defined in OSD-T-151-00031 (WHC, 1994) and WHC-SD-WM-TI-573 (WHC, 1994), with appropriate changes in specification levels and measurement frequencies. Specification levels and measurement frequencies will be established for individual tanks based on the residual waste inventory and the potential impacts of leakage (i.e., public risk).

The need for near-field leakage detection will likely diminish upon completion of retrieval; however, some actions will continue based on residual waste inventory and the results of the retrieval campaign. The currently envisioned TWRS baseline (above) is provided for the purpose of further evaluation and comparison with alternatives.

Notification and reporting will be performed upon indications that specification limits have been exceeded via WHC Occurrence Notification procedures as described in WHC-IP-0842.

Regulatory Considerations

RCRA - Interim Status Basis: 0.454 kg (1.0 lb.) per Operating Day. This amount of tank waste released to the soil invokes notification, reporting and response actions per 40 CFR 265.195(a)(3), 40 CFR 265.196(d), WAC 173-303-640(6)(a) and WAC 173-303-640(7)(d). In addition, if release of tank waste included a Reportable Quantity (RQ, see below) of a hazardous constituent, then the response actions are invoked based on that release even if the total mass released is less than 0.454 kg. However, detection at such a level is currently considered impractical by the TWRS Program on the basis of cost, risk and environmental impact. While detection of 0.454 kg during any 24 hr. period may not be achievable, any amount in excess of this level that is detected invokes the required notification, reporting and response actions as mentioned above.

CERCLA - Reportable Quantity Basis. The SST waste inventory includes more than 150 chemicals and radionuclides. Many SST waste constituents are considered hazardous substances and are subject to release reporting and notification requirements per 40 CFR 302. Detection of reportable quantities of SST waste on an individual constituent basis is considered neither practical nor cost-effective by the TWRS Program. However, the general framework of CERCLA allows a risk-based approach to response actions with appropriate focus on "treating waste that is liquid, highly toxic or highly mobile, . . ." The following table shows those constituents present in the SST inventory in sufficient quantity that are both sufficiently toxic and mobile that they could produce risks to the public via the groundwater pathway that would exceed EPA's general acceptance thresholds (1.0E-04 carcinogenic, 1.0 hazard index).

Table 2-2. Reportable Quantity Values for SST Constituents of Concern

Constituent	RQ Value		Assumed Solubility	Volume per RQ	
	Ci	Kg	g/L	KL	Gal.
Radionuclides:					
Am241	0.01	2.92E-06	4.39E-04	6.66E-03	1.8
Am242m	0.01	1.02E-06			
C14	10	2.27E-03	6.82E-07	3.33E+03	880434.5
Cm242	1	3.02E-07			
I129	0.001	5.65E-03	1.69E-03	3.34E+00	883.2
Nb93m	100	5.38E+06			
Np237	0.01	2.00E-02	2.80E-01	7.14E-02	18.9
Pu238	0.01	5.85E-07	5.85E-06	1.00E-01	26.4
Pu239	0.01	1.61E-04	1.61E-03	1.00E-01	26.5
Pu240	0.01	4.41E-05	4.41E-04	9.99E-02	26.4
Pu241	1	9.71E-06	9.71E-07	1.00E+01	2641.7
Tc99	10	5.88E-01	1.77E-02	3.32E+01	8780.4
U233	0.1	1.04E-02	2.68E+00	3.87E-03	1.0
U234	0.1	1.60E-02	2.68E+00	5.97E-03	1.6
U235	0.1	4.63E+01	2.68E+00	1.73E+01	4564.0
U238	0.1	2.98E+02	2.68E+00	1.11E+02	29340.0
Chemicals/Elements:					
As	n/a	0.454	3.45E-01	1.32E+00	347.7
Be	n/a	4.54	9.04E-01	5.02E+00	1326.8
CN	n/a	0.454	1.10E-03	4.13E+02	109042.9
Cr	n/a	4.54	1.42	3.20E+00	844.7
Cu	n/a	2270	3.45	6.58E+02	173836.5
EDTA	n/a	2270	2.81E-02	8.08E+04	21342911.0
F	n/a	0.454	3.55	1.28E-01	33.8
Hg	n/a	0.454	3.20E-04	1.42E+03	374834.9
Na	n/a	4.54	91.9	4.94E-02	13.1
NO2	n/a	4.54	60	7.57E-02	20.0
NO3	n/a	0.454	360	1.26E-03	0.3
Sb	n/a	2270	8.46	2.68E+02	70890.8
SO4	n/a	0.454	8.46	5.37E-02	14.2
V	n/a	0.454	8.46	5.37E-02	14.2

This table is provided for illustrative purposes only and shows the wide range in leakage volumes that would likely be required in order to result in release of a reportable quantity of a given constituent. The list of constituents and their properties is based on data from Droppo, 1991 and from Serne and Wood, 1990. Variations in individual tank inventories and system characteristics require the establishment of threshold leakage values to be established on a tank-by-tank basis (see Appendix C).

4.2.i.j.k-L1.1 P2 Monitoring (Near-Field Zone)

TWRS Baseline - Storage, Retrieval, Closure Readiness

Per Operating Specifications for Tank Farm Leak Detection, OSD-T-151-00031, (WHC, 1994). The document establishes specification limits for monitoring frequencies and permissible variations of readings from established baselines or previous readings. The specification limits define limits that when exceeded invoke more detailed investigation of potential leakage. Primary and backup leak detection methods are identified by individual tank and are based on historical experience and the detection methods currently available in the SST tank farms. The primary method indicates changes in waste level within the tank with the backup method indicating radiation level changes in drywells or laterals outside the tank boundary.

The baseline retrieval method of traditional sluicing for the SSTs will elevate the potential of leakage from the tanks. Accordingly, enhancements both in operational philosophy and technology may be appropriate. The TWRS Program will evaluate alternatives based on public risk, worker risk, and cost. The currently envisioned TWRS baseline (above) is provided for the purpose of further evaluation and comparison with alternatives.

Notification and reporting are performed upon indications that specification limits have been exceeded via WHC Occurrence Notification procedures as described in WHC-IP-0842.

B. Constraints

Same as 4.2.i.j.k-L1.

I. **FUNCTION ID NUMBER:** 4.2.i.j.k-L1.1.1

II. **FUNCTION TITLE:** LDM/Near-Field - Detect Potential Leakage Conditions

III. **FUNCTION DEFINITION:**

Detect potential leakage conditions within the SST shell and concrete structure and provide this information to the storage and/or retrieval functions for evaluation.

Potential leakage conditions will be detected and evaluated until SST retrieval activities are complete.

IV. **ENABLING ASSUMPTIONS:**

Same as 4.2.i.j.k-L1.

V. **INTERFACES**

A. **INPUTS**
Same as 4.2.i.j.k-L1.

B. **OUTPUTS**
Same as 4.2.i.j.k-L1.

VI. **FUNCTION REQUIREMENTS**

A. **Performance Requirements**

None identified at this time.

Performance of this function in any capacity would constitute an enhancement to the TWRS baseline.

B. **Constraints**

Same as 4.2.i.j.k-L1.

I. **FUNCTION ID NUMBER:** 4.2.i.j.k-L1.1.2

II. **FUNCTION TITLE:** LDM/Near-Field - Monitor SST Waste Level

III. **FUNCTION DEFINITION:**

Detect potential leakage as indicated by changes in the indicated tank waste level and provide this information to the SST waste storage and/or retrieval functions.

SST waste level monitoring is ongoing and will continue until retrieval is complete.

IV. **ENABLING ASSUMPTIONS:**

Same as 4.2.i.j.k-L1.

V. **INTERFACES**

A. **INPUTS**
Same as 4.2.i.j.k-L1.

B. **OUTPUTS**
Same as 4.2.i.j.k-L1.

VI. **FUNCTION REQUIREMENTS**

A. **Performance Requirements**

Same as 4.2.i.j.k-L1.1.

B. **Constraints**

Same as 4.2.i.j.k-L1.

I. **FUNCTION ID NUMBER:** 4.2.i.j.k-L1.1.3

II. **FUNCTION TITLE:** LDM/Near-Field - Monitor Existing Plumes

III. **FUNCTION DEFINITION:**

Detect/confirm potential SST leakage as indicated by unanticipated changes in the properties of existing SST leakage plumes.

Existing SST leakage plume monitoring is ongoing and will continue, with enhancements as required, until the SSTs are transferred for closure.

IV. **ENABLING ASSUMPTIONS:**

Same as 4.2.i.j.k-L1.

V. **INTERFACES**

A. **INPUTS**
Same as 4.2.i.j.k-L1.

B. **OUTPUTS**
Same as 4.2.i.j.k-L1.

VI. **FUNCTION REQUIREMENTS**

A. **Performance Requirements**

Same as 4.2.i.j.k-L1.1.

B. **Constraints**

Same as 4.2.i.j.k-L1.

I. **FUNCTION ID NUMBER:** 4.2.i.j.k-L1.1.4

II. **FUNCTION TITLE:** LDM/Near-Field - Detect New SST Leakage Plumes

III. **FUNCTION DEFINITION:**

Detect/confirm SST leakage as indicated by detection of any new leakage plumes that appear outside the tank or ancillary equipment structure.

Detection of new SST leakage plumes will be performed as required until the SSTs are transferred for closure.

IV. **ENABLING ASSUMPTIONS:**

Same as 4.2.i.j.k-L1.

V. **INTERFACES**

A. **INPUTS**
Same as 4.2.i.j.k-L1.

B. **OUTPUTS**
Same as 4.2.i.j.k-L1.

VI. **FUNCTION REQUIREMENTS**

A. **Performance Requirements**

Same as 4.2.i.j.k-L1.1.

B. **Constraints**

Same as 4.2.i.j.k-L1.

I. **FUNCTION ID NUMBER:** 4.2.i.j.k-L1.2

II. **FUNCTION TITLE:** LDM/Unsaturated Zone

III. **FUNCTION DEFINITION:**

Detect and monitor SST leakage contaminant plumes in the unsaturated zone by acquiring and evaluating the following data:

- *unanticipated changes in the properties of existing contaminant plumes*
- *appearance of new contaminant plumes*

Perform this function as required to support Storage, Retrieval and Disposition Excess Facilities functions. Applicable to contaminant plumes and leaks in the subsurface soil from the tank structure or from ancillary equipment.

SST leakage detection and monitoring activities are ongoing and will continue, with the necessary enhancements, until the SSTs are transferred for closure.

IV. **ENABLING ASSUMPTIONS:**

Same as 4.2.i.j.k-L1.

V. **INTERFACES**

A. **INPUTS**
Same as 4.2.i.j.k-L1.

B. **OUTPUTS**
Same as 4.2.i.j.k-L1.

VI. **FUNCTION REQUIREMENTS**

A. **Performance Requirements**

4.2.i.j.k-L1.2 P1 Monitoring (Unsaturated Zone)

TWRS Baseline - Storage, Retrieval, Closure Readiness

Per Operating Specifications for Tank Farm Leak Detection, OSD-T-151-00031, (WHC, 1994). The document establishes specification limits for monitoring frequencies and permissible variations of readings from established baselines or previous readings. The specification limits define limits that when exceeded invoke more detailed investigation of potential leakage. Primary and backup leak detection methods are identified by individual tank and are based on historical experience and the detection methods currently available in the SST tank farms. The primary method

indicates changes in waste level within the tank with the backup method indicating gamma-radiation level changes in drywells or laterals outside the tank boundary.

The baseline retrieval method of traditional sluicing for the SSTs will elevate the potential of leakage from the tanks. Accordingly, enhancements both in operational philosophy and technology may be appropriate. The TWRS Program will evaluate alternatives based on public risk, worker risk, and cost. The currently envisioned TWRS baseline (above) is provided for the purpose of further evaluation and comparison with alternatives.

Notification and reporting will be performed upon indications that specification limits have been exceeded via WHC Occurrence Notification procedures as described in WHC-IP-0842.

B. Constraints

Same as 4.2.i.j.k-L1.

I. **FUNCTION ID NUMBER:** 4.2.i.j.k-L1.2.1

II. **FUNCTION TITLE:** LDM/Unsaturated Zone - Monitor Existing Plumes

III. **FUNCTION DEFINITION:**

Detect/confirm potential leakage as indicated by unanticipated changes in the properties of existing SST leakage plumes.

Existing SST leakage plume monitoring is ongoing and will continue, with enhancements as required, until the SSTs are transferred for closure.

IV. **ENABLING ASSUMPTIONS:**

Same as 4.2.i.j.k-L1.

V. **INTERFACES**

A. **INPUTS**
Same as 4.2.i.j.k-L1.

B. **OUTPUTS**
Same as 4.2.i.j.k-L1.

VI. **FUNCTION REQUIREMENTS**

A. **Performance Requirements**

Same as 4.2.i.j.k-L1.2.

B. **Constraints**

Same as 4.2.i.j.k-L1.

I. **FUNCTION ID NUMBER:** 4.2.i.j.k-L1.2.2

II. **FUNCTION TITLE:** LDM/Unsaturated Zone - Detect New SST Leakage Plumes

III. **FUNCTION DEFINITION:**

Detect/confirm SST leakage as indicated by detection of any new leakage plumes that appear outside the tank or ancillary equipment structure.

Detection of new SST leakage plumes will be performed as required until the SSTs are transferred for closure.

IV. **ENABLING ASSUMPTIONS:**

Same as 4.2.i.j.k-L1.

V. **INTERFACES**

A. **INPUTS**
Same as 4.2.i.j.k-L1.

B. **OUTPUTS**
Same as 4.2.i.j.k-L1.

VI. **FUNCTION REQUIREMENTS**

A. **Performance Requirements**

Same as 4.2.i.j.k-L1.2.

B. **Constraints**

Same as 4.2.i.j.k-L1

I. **FUNCTION ID NUMBER:** 4.2.i.j.k-L1.3

II. **FUNCTION TITLE:** LDM/Ground-water Zone

III. **FUNCTION DEFINITION:**

Detect and monitor SST leakage contaminant plumes in the ground-water zone by acquiring and evaluating unanticipated changes in ground-water properties as required to support Storage, Retrieval and Disposition Excess Facilities functions. Applicable to contaminant plumes and leaks in the subsurface soil from the tank structure or from near-field ancillary equipment.

Detection and monitoring of ground-water impacts resulting from SST leakage is ongoing and will continue until the SSTs are transferred for closure.

IV. **ENABLING ASSUMPTIONS:**

Same as 4.2.i.j.k-L1.

V. **INTERFACES**

A. **INPUTS**
Same as 4.2.i.j.k-L1.

B. **OUTPUTS**
Same as 4.2.i.j.k-L1.

VI. **FUNCTION REQUIREMENTS**

A. **Performance Requirements**

[tbd]

B. Constraints

4.2.i.j.k-L1.3 C1 141.15 Maximum contaminant levels for radium-226, radium-228, and gross alpha particle radioactivity in community water systems. The following are the maximum contaminant levels for radium-226, radium-228, and gross alpha particle radioactivity: (a) Combined radium-226 and radium-228 - 5 pCi/l. (b) Gross alpha particle activity (including radium-226 but excluding radon and uranium) - 15 pCi/l.

141.16 Maximum contaminant levels for beta particle and photon radioactivity from man-made radionuclides in community water systems. (a) The average annual concentration of beta particle and photon radioactivity from man-made radionuclides in drinking water shall not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirem/year. Etc.

[40 CFR 141 - per DOE5400.5, Chapter II, 1.d(3)]

4.2.i.j.k-L1.3 C2 Ground-water monitoring - [reserved].

[40 CFR 264.97 - per DOE5400.5, Chapter I, 3.c(3)(d)]

4.2.i.j.k-L1.3 C3 Ground-water monitoring - [reserved].

[40 CFR 265, Subpart F]

4.2.i.j.k-L1.3 C4 Impact on Other Systems. The liquid effluents from DOE activities shall not cause private or public drinking water systems downstream of the facility discharge to exceed the drinking water radiological limits of 40 CFR 141.

[DOE5400.5, Chapter II, 1.d(3)]

4.2.i.j.k-L1.3 C5 (d) Monitoring wells - A system of ground water or vadose zone monitoring wells meeting the Resource Conservation and Recovery Act requirements per 40 CFR 264 shall be installed, as a minimum, around clusters of liquid waste storage tanks.

[DOE5820.2A, Chapter I, 3.c.(3)(d)]

4.2.i.j.k-L1.3 C6 M-24-00 December 1999 Install RCRA groundwater monitoring wells at the rate of 29-CY 1989, 30-CY 1990, and up to 50/year thereafter as specified by agreed interim milestones until all land disposal units and single-shell tanks are determined to have RCRA compliant monitoring systems. USDOE will install groundwater monitoring wells around RCRA land disposal units and the single-shell tanks at the rate described above until Ecology agrees that all such groundwater monitoring systems meet the requirements of WAC-173-303-645.

Installation of groundwater monitoring wells shall mean that wells have been drilled, adequately sealed, and screened over no more than 15 feet of the aquifer unless otherwise approved by Ecology, that all pumps and associated sampling equipment

have been installed, and that such wells have been developed sufficiently to provide satisfactory samples for all parameters to be analyzed.

Specific units to receive groundwater wells and the number of wells to be installed at each unit will be identified in Appendix D in two-year intervals (i.e., CY 1989 and CY 1990 now, CY 1990 and CY 1991 at the next annual update, etc.) Such schedules will be enforceable as interim milestones.

[TPA Change Control Form M-24-00]

4.2.i.j.k-L1.3 C7 (3) Performance standards. Unless authorized by state, local, or federal laws, or unless otherwise authorized in this regulation, the owner/operator shall design, construct, operate, or maintain a dangerous waste facility that to the maximum extent practical given the limits of technology prevents:
(a) Degradation of ground water quality;
etc.

[WAC 173-303-283(3)(a)]

4.2.i.j.k-L1.3 C8 Groundwater Protection. Groundwater protection standards applicable to the Hanford single and double shell radioactive waste storage tanks can be divided into two categories: those applicable during tank operations and the closure period, and those that must ultimately be met to achieve closure.

Under Chapter 173-303 of Washington Administrative Code (WAC) , concentrations of dangerous waste constituents regulated by Chapter 173-303 WAC in the groundwater beneath an active treatment, storage or disposal (TSD) facility, or a TSD facility undergoing closure, must not exceed local background levels or, for the toxicity characteristic (TC) metals and pesticides, a concentration 1/100 the toxicity characteristic concentration for designation as a dangerous waste listed in WAC 173-303-090 (these actual concentrations are tabulated in WAC 173-303-645). These limits could technically apply during the postclosure period for any unit where a clean closure is not achieved; however, it is more likely that any postclosure limits will be established consistent with the overall strategy for groundwater protection and remediation at the Hanford Site, as described below.

Due to the long travel times for contaminants to reach the aquifers underlying the Hanford Site, it is unlikely that a release from a tank TSD unit during the closure period (e.g., while wastes are being removed from the tank) would reach the water table and cause these "operational" groundwater limits to be exceeded. Furthermore, groundwater contamination at the Hanford Site is an extremely complex problem, with interactions between numerous contributing operable units that are undergoing remediation and closure under both the CERCLA and RCRA programs. It is likely that the Hanford Site will adopt a strategy of remediating all groundwater contamination to levels consistent with the goals of the CERCLA and RCRA programs, as well as related NRC guidance. Both Chapter 173-303 WAC and the

CERCLA ARARs process are likely to establish cleanup/closure levels based on the health-risk based concentrations established under Chapter 173-340 WAC, the Model Toxics Control Act (MTCA) implementing regulation. The MTCA Method B cleanup standards have been incorporated into Chapter 173-303 WAC by reference as the appropriate clean closure and corrective action standards for RCRA TSD units in Washington State. The MTCA standards are also explicitly called out as ARARs for the Hanford Site under the Tri Party Agreement. Therefore, it is likely that the ultimate groundwater protection standard established for the tank waste remediation program will be based on a demonstration that releases will not cause the MTCA standards to be exceeded at any time.

Under MTCA, groundwater cleanup levels are set so as to ensure that the total toxic constituents do not exceed a Hazard Index (HI) of 1, and that carcinogenic substance concentrations do not cause a carcinogenic risk greater than 10^{-6} (Method B) or 10^{-5} (Method C). Soil cleanup standards protective of groundwater are set at a level 100 times the groundwater protection standard as a default; this level may be adjusted through a site-specific evaluation of contaminant fate and transport. These health-risk based levels are consistent with the range of uniform cleanup standards under consideration by the NRC and EPA for sites containing radioactive contaminants.

The following table provides MTCA Method B and C standards for the eight compounds identified in ongoing evaluations as the risk drivers for waste tank remediation, due to their relatively high mobility in the Hanford Site environment. These concentrations assume that the only exposure pathway is through ingestion of contaminated groundwater; other exposure pathways (e.g., inhalation of contaminated groundwater through showering) are not considered. In instances where the maximum contaminant level (MCL) is lower than the calculated MTCA Method B and C levels, the MCL has been used. The calculations assume a 30 year exposure period over which 2 L/day of contaminated groundwater is ingested, and a 70 year lifetime, and an average body weight of 16 kg (non-carcinogens) or 70 kg (carcinogens). These standards also assume that each constituent is the only hazardous material present; for mixtures of constituents, a weighted contribution calculation must be performed (e.g., the sum of the concentrations for each non-carcinogenic constituent divided by the values for each of these constituents listed below must be less than 1).

Groundwater Protection Standards for Hanford Site Tank Waste Remediation.

Contaminant	MTCA Method B for Groundwater (mg/L)	MTCA Method C for Groundwater (mg/L)	MTCA Soils (based on Method B Groundwater) (mg/kg)	MTCA Soils (based on Method C Groundwater) (mg/kg)
EDTA (non-carcinogen)	0.021	0.046	2.1	4.6
Nitrate (non-carcinogen)	10*	-----	1000*	-----
Nitrite (non-carcinogen)	1*	-----	100*	-----
TBP (carcinogen)	0.011	0.11	1.1	11.0
	(pCi/L)	(pCi/L)	(pCi/kg)	(pCi/kg)
C-14 (carcinogen)	51	510	5100	51000
Tc-99 (carcinogen)	35	350	3500	35000
I-129 (carcinogen)	0.24	2.4	24	240
U-238 (carcinogen)	1.6	16.0	160	1600

* The standard is based on the nitrogen mass of the constituent.

[By interpretation of:
WAC 173-303-645 & WAC 173-340]

I. **FUNCTION ID NUMBER:** 4.2.i.j.k-L1.3.1

II. **FUNCTION TITLE:** LDM/Ground-water Zone - Monitor Existing Plumes

III. **FUNCTION DEFINITION:**

Detect/confirm potential SST leakage as indicated by unanticipated changes in ground-water properties related to existing SST leakage plumes.

Existing SST leakage plume monitoring is ongoing and will continue, with enhancements as required, until the SSTs are transferred for closure.

IV. **ENABLING ASSUMPTIONS:**

Same as 4.2.i.j.k-L1.

V. **INTERFACES**

A. **INPUTS**
Same as 4.2.i.j.k-L1.

B. **OUTPUTS**
Same as 4.2.i.j.k-L1.

VI. **FUNCTION REQUIREMENTS**

A. **Performance Requirements**

Same as 4.2.i.j.k-L1.3.

B. **Constraints**

Same as 4.2.i.j.k-L1.3.

I. **FUNCTION ID NUMBER:** 4.2.i.j.k-L1.3.2

II. **FUNCTION TITLE:** LDM/Ground-water Zone - Detect New SST Leakage Plumes

III. **FUNCTION DEFINITION:**

Detect/confirm SST leakage as indicated by appearance of any new leakage plumes that produce unanticipated changes in ground-water properties.

Detection of new SST leakage plumes will be performed as required until the SSTs are transferred for closure.

IV. **ENABLING ASSUMPTIONS:**

Same as 4.2.i.j.k-L1.

V. **INTERFACES**

A. **INPUTS**
Same as 4.2.i.j.k-L1.

B. **OUTPUTS**
Same as 4.2.i.j.k-L1.

VI. **FUNCTION REQUIREMENTS**

A. **Performance Requirements**

Same as 4.2.i.j.k-L1.3.

B. **Constraints**

Same as 4.2.i.j.k-L1.3.

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3.0 ARCHITECTURE

Architecture descriptions were developed for each of the SST Leakage Detection & Monitoring functions and are presented in this section. The architectures were decomposed in a manner consistent with the functions and requirements. The architectures described herein were decomposed from TWRS higher level architectures as identified in DOE/RL-92-60 Rev. 1, *Tank Waste Remediation System Functions and Requirements* and assumed fifth-level architectures. The primary sixth-level architecture establishes the general aspects of the SST Leakage Detection & Monitoring systems. The seventh- and eighth- level sub-architectures were established to define the baseline and alternative methods in greater detail.

The architecture descriptions were developed to facilitate better definition of potential system design concepts. As the concepts are further evaluated and decisions are made regarding implementation, the architecture descriptions will be revised as appropriate.

3.1 ARCHITECTURE HIERARCHY

Each architecture identified for SST Leakage Detection and Monitoring is given a number of the format A4.2.i.j.k-Lx or -Lx.y. The first part of the number, A4.2.i.j.k, is the number of the assumed TWRS fifth-level architecture from which the project-level architecture was decomposed. The "-L" indicates that it is an architecture allocated to SST Leakage Detection and Monitoring. The "x" or "x.y" completes the unique number within each "4.2.i.j.k" group. For example, A4.2.i.j.k-L1 indicates an architecture decomposed from TWRS architecture A4.2.i.j.k and allocated to the SST Leakage Detection and Monitoring system; and A4.2.i.j.k-L1.1 indicates a sub-architecture of A4.2.i.j.k-L1.

Figure 3-1 illustrates the hierarchy of the SST Leakage Detection and Monitoring architectures, as decomposed from the TWRS higher level architectures. Figure A-2 in Appendix A of this document shows the hierarchy of the TWRS architectures to the fourth level.

3.2 ARCHITECTURE DESCRIPTION SHEETS

An Architecture Description Sheet is provided for each of the architectures identified for SST Leakage Detection and Monitoring. The Architecture Description Sheets provide the architecture definitions, alternatives considered, rationale for selection, and other data. The sheets were prepared according to the format used in DOE/RL-92-60, as shown in Appendix A.

Figure 3-1. SST Leakage Detection and Monitoring Architecture Hierarchy.

[Reserved]

I. ARCHITECTURE ID NUMBER: A4.2.i.j.k-L1

II. ARCHITECTURE TITLE: SST Leakage Detection and Monitoring System

III. ARCHITECTURE DEFINITION:

SST leakage detection and monitoring is currently achieved in the near-field zone by means of several systems that measure the waste level from within the tank and sensors deployed in drywells to monitor changes in gamma-radiation level in the soil around the tank. In addition, several tanks are equipped with leak detection pits that collect any liquid that has escaped the tank boundary. Detection and monitoring in the unsaturated zone is achieved using sensors deployed in drywells to monitor changes in radiation level of the soil. Detection and monitoring in the groundwater zone is achieved by sampling of groundwater from a number of RCRA monitoring wells deployed upgradient and downgradient from the tank farm groups.

IV. ALTERNATIVES CONSIDERED:

TWRS Baseline - Existing systems and technologies will be used subject to changes in operational philosophy (e.g., measurement frequency) as needed. The baseline is described in the lower tier architectures. See subordinate architecture descriptions for a detailed description of the TWRS baseline.

Alternatives/Enhancements - The TWRS Program will evaluate enhancements and alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost.

V. RATIONALE FOR SELECTION:

SST Waste Storage

The current TWRS baseline approach for SST leakage detection and monitoring is considered acceptable during ongoing storage activities. The baseline is described in summary in the subordinate architecture descriptions. Interim stabilization has been completed on 109 of the 149 SSTs by means of saltwell pumping, supernate pumping or through administrative controls. The total amount pumped to-date from the SSTs is 15.1E+06 L (4.0 Mgal.) indicating only relatively small amounts of liquid in the tanks are present to create driving head for additional leakage. Ongoing storage operations should have no measureable affect on the potential for leakage or on tank containment integrity.

SST Waste Retrieval

The TWRS baseline retrieval method of traditional sluicing, if implemented, will create dynamic conditions in the tanks and therefore dramatically increase the

potential for leakage. Accordingly, enhancements both in operational philosophy and technology may be appropriate. The following items will constitute most of the rationale for evaluating and potentially selecting enhancements or alternatives relative to the TWRS baseline:

Public Risk Reduction - Improved detection capability of new SST leakage and improvements in monitoring can reduce public risk by allowing TWRS to take mitigative actions in a timely manner (e.g., avoiding further leakage/migration). The SST leakage or migration that would otherwise occur would eventually impact risk to the public primarily via the groundwater pathway. Accordingly, potential public risk reductions will be evaluated using a postulated maximally exposed individual (MEI) that is exposed via the ground-water pathway. Preliminary risk-based leakage thresholds have been developed for the purpose of ongoing evaluation of technologies (Appendix C).

Worker Risk Reduction - Improvements in worker risk can be achieved by enhancements or alternatives that require less maintenance or operational support in the field. The TWRS Program is committed to improving worker safety performance; accordingly, alternatives that reflect this will receive strong consideration.

Cost - The TWRS budget is limited. Enhancements or alternatives will be evaluated in terms of overall cost impact. The evaluation will involve a complete system and life cycle approach.

It is generally expected that the evaluations will favor alternatives that can achieve cost-effective improvements in capability to detect any new SST leakage in the near-field zone. Such capability would allow operations to respond more quickly if actions could be taken to prevent further leakage (e.g., suspend sluicing and remove liquid from the tank). Once leakage occurs and the constituents reach the soil, mitigative actions to prevent further migration become much more difficult and costly than if the leakage could have been prevented. Similarly, once contaminants reach the unsaturated zone or the ground-water zone, mitigative actions can become cost prohibitive. Therefore, the value of information regarding entrance of new contaminant plumes or further migration of plumes into the unsaturated or ground-water zones is limited.

Additional limiting factors on the potential benefit of enhanced technologies that are applicable to the unsaturated and ground-water zones are related to transport time and lateral migration. Assuming the TWRS baseline of sluicing retrieval and closure using a protective surface barrier, contaminants that leak during retrieval would not begin to reach the ground-water for about 2000 years with peak concentrations not occurring until about 19,000 years. During this transport time, the effects of decay and chemical interactions with the soil would make it difficult for detection or monitoring data to indicate any substantive conclusions regarding system performance.

In addition, it is currently recognized that the RCRA ground-water monitoring well data cannot provide any clear indication regarding the source of a specific analyte, given that multiple contaminant sources exist within the RCRA waste management areas.

Characterization of past SST leaks indicates that the resulting contaminant plumes migrate as much or more in the lateral direction than in the downward direction. Data presented in Boomer et al. (1993) Appendix J indicates the lateral dimension of a plume can be as much as three times the vertical dimension. Thus, lateral migration and the resultant mixing and superposition of contaminant plumes will render data obtained from the unsaturated and/or ground-water zones to be of very limited value. Notwithstanding the value of the data, the propensity for lateral migration is a positive aspect of the Hanford geology from a leakage detection and monitoring standpoint since a plume of any significance would likely intersect with one of the existing drywell boreholes before it migrates very far into the unsaturated zone.

Based on the discussion included above, the TWRS Program will place very little emphasis on enhancements to unsaturated or ground-water zone SST leakage detection and monitoring technologies.

STT Closure Readiness

[Reserved - see Section 5.0 for discussion regarding closure strategy and the need for resolution.]

VI. ENABLING ASSUMPTIONS:

SST Waste Storage - storage activities will continue per the current TWRS Program baseline with continued interim stabilization and related actions.

SST Waste Retrieval - retrieval of SST waste will be conducted per the current TWRS Program baseline using traditional sluicing as the primary approach.

SST Closure - the SST tank farms will be closed as landfills with appropriate closure and post-closure supporting activities. It is further assumed that the basic closure methodology will consist of structurally stabilizing the tanks (residual remaining in place) followed by installation of a protective surface barrier.

VII. REQUIRED ANALYSES:

SST Allowable Leakage Thresholds

The preliminary SST leakage threshold values provided in Appendix C are intended only for use in initial technology evaluations. As the evaluation process proceeds, a

more detailed evaluation of threshold leakage values will be required in order to establish final acceptance criteria for proposed technologies. Final leakage threshold values should be based on other considerations not addressed in the current evaluation:

1. Further analyses of drainable liquid samples to reduce uncertainty and conservatism. The sample data reported in Van Vleet (1993) was used as a primary source for this document; however, several values appeared uncharacteristically high. Upon further investigation, the given values were found to be incorrect and were corrected to support this document as noted in Appendix C. Also, more samples have been analyzed since the time of the document. Accordingly, the next phase of evaluation should include work to ensure the correctness and completeness of the sample data supporting the leakage thresholds.

2. The inventories of constituents of concern (COC) associated with other sources (e.g., residual waste in tanks following retrieval, waste that has advected into the SST concrete structure, and past leaks) to better establish the risk associated with individual tank farms.

3. The potential presence of overlapping contaminant plumes from other sources, including nearby tank farms, cribs, trenches, and ponds, to help establish the appropriate allocation of risk from each source.

4. The best-available technology for detection of leaks may not allow for detection at or below the threshold values for some tanks since their thresholds are very small. In these cases, the final leakage thresholds will need to be adjusted to be consistent with the available capability. This may invoke lowering of threshold values for other tanks to compensate for the additional risk impact.

The requirements for SST leakage detection and monitoring will have the goal of providing operators with early warning if threshold values are being approached. In addition, the tank closure strategy should include development of leakage thresholds based on a more comprehensive risk assessment and a decision logic to be implemented if/when the established thresholds are exceeded.

VIII. REQUIREMENTS SATISFIED:

A. Estimated System Performance:

B. Performance Requirements:

I. ARCHITECTURE ID NUMBER: A4.2.i.j.k-L1.1

II. ARCHITECTURE TITLE: SST Leakage Detection and Monitoring - Near-Field Zone System

III. ARCHITECTURE DEFINITION:

SST leakage detection and monitoring is currently achieved in the near-field zone by means of several systems that measure the waste level from within the tank and sensors deployed in drywells and/or laterals to monitor changes in gamma-radiation level in the soil around the tank. In addition, several tanks are equipped with leak detection pits that collect any liquid that has escaped the tank boundary.

IV. ALTERNATIVES CONSIDERED:

TWRS Baseline - Existing systems and technologies will be used subject to changes in operational philosophy (e.g., measurement frequency) as needed. See subordinate architecture descriptions for a detailed description of the TWRS baseline.

Alternatives/Enhancements - The TWRS Program will evaluate enhancements and alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost.

V. RATIONALE FOR SELECTION:

Same as A4.2.i.j.k-L1.

VI. ENABLING ASSUMPTIONS:

Same as A4.2.i.j.k-L1.

VII. REQUIRED ANALYSES:

Same as A4.2.i.j.k-L1.

VIII. REQUIREMENTS SATISFIED:

A. Estimated System Performance:

B. Performance Requirements:

I. ARCHITECTURE ID NUMBER: A4.2.i.j.k-L1.1.1

II. ARCHITECTURE TITLE: SST Leakage Detection and Monitoring - Potential Leakage Conditions Detection System

III. ARCHITECTURE DEFINITION:

No systems are currently in place or planned to detect potential leakage conditions in SSTs to support continued storage, retrieval, and closure readiness activities. The TWRS Program will evaluate alternatives as noted below.

IV. ALTERNATIVES CONSIDERED:

TWRS Baseline - No action.

Alternatives/Enhancements - The TWRS Program will evaluate enhancements and alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost.

V. RATIONALE FOR SELECTION:

Same as A4.2.i.j.k-L1.

The function for this architecture was added to encompass detection methods that could identify suspect conditions within SSTs to allow further actions to prevent leakage in subsequent operations.

VI. ENABLING ASSUMPTIONS:

Same as A4.2.i.j.k-L1.

VII. REQUIRED ANALYSES:

Same as A4.2.i.j.k-L1.

VIII. REQUIREMENTS SATISFIED:

A. Estimated System Performance:

B. Performance Requirements:

I. ARCHITECTURE ID NUMBER: A4.2.i.j.k-L1.1.2

II. ARCHITECTURE TITLE: SST Leakage Detection and Monitoring - Tank Waste Level Monitoring System

III. ARCHITECTURE DEFINITION:

The SST waste level monitoring system consists of surface level probes, neutron probes deployed in liquid observation wells and related devices that are deployed internal to the tank to measure changes in waste level.

IV. ALTERNATIVES CONSIDERED:

TWRS Baseline

The following paragraphs briefly describe the current systems. A more detailed discussion can be found in *Technical Bases for the Leak Detection Surveillance of Waste Storage Tanks*, WHC-SD-WM-TI-573 (Schofield 1994).

Manual Tape System. The manual tape consists of a reel-mounted, calibrated, steel tape with an electrically conductive plummet attached. The tape length is custom set for each tank. The tape, plummet, waste, tank wall, and a portable conductivity meter make up a simple resistance circuit. Contact with a liquid or moist surface as the plummet is lowered completes the circuit. The tape then directly 'reads' the depth of the waste in the tank. The reading is recorded on a datasheet. A special, 'slack tape' technique is employed to obtain measurements in tanks with a nonconductive solid surface. 'Pencil'-type plummets are used predominantly for measuring liquid surfaces. A 'doughnut' plummet is used for measuring sludge or moist salt cake levels.

Tape plummets are prone to salt buildup, which can provide readings that make the level in a tank appear higher than it actually is. Trending and photography are used to detect salt buildup. Flushing with water or chemicals removes the salt. A reading of $\pm 1/2$ inch, in tanks with a liquid surface, has been established as an action limit that would alert a potential problem. A reading of ± 1 inch is cause for a formal response or investigation. For SSTs with floating solids, a specification limit of ± 2 inches has been established. Greater variations in data are typical of SSTs with a solid, conductive (moist) surface suspended in liquid or in which liquid levels varied. The specification limit from these SSTs was set at ± 3 inches.

Automatic Gauges (FIC). Automatic FIC-type gauges use an electrically conductive plummet suspended on a calibrated steel tape, similar to the manual tape. This system, like the manual tape device, requires moisture to complete a circuit and obtain a reading. A control system automatically adjusts the plummet position to make contact at the air/waste interface every 60 to 90 seconds. Instead of taking

readings directly from a tape, the system increments are counter driven by a wheel that is cycled by the moving tape. The FIC gauge automatically records contact with the surface and is normally interfaced with the Computer Automated Surveillance System (CASS). Automatic gauges, like the manual versions, are prone to salt buildup.

Surface measurements from FICs, in tanks with a nonconductive surface, provide little useful leak detection information, but are still valuable in detecting intrusions. In the intrusion mode, the plummet is set above the waste level and an alarm is generated when liquid rises and makes contact with the plummet. Similar to the manual tape device, the FIC gauge can be used to obtain 'slack tape' readings from tanks with nonconductive waste surfaces.

In tanks with an entirely liquid surface, the specification limit for FIC readings is ± 0.5 inch. For SSTs with floating solids, the specification limit is ± 1 inch. The specification limit for readings from tanks with a solid, conductive surface is ± 3 inches.

Automatic Gauges (ENRAF). By June 1994, displacer (weighted wire) gauges [Enraf-Nonius 854 Advanced Technology Gauge (ATG)] were installed in two SSTs (241-S-103 and 241-S-107) as part of a planned upgrade project for the level detection equipment in tank farms.

The displacer gauge uses a weight suspended on a stainless-steel wire. The device detects the change in the apparent weight of the displacer by buoyancy or by contact with a solid. The device operates in an 'automatic' mode, using a stepper motor to pay out the wire that provides the depth measurement. The displacer stays partly submerged or in contact with the surface and can compensate for crystal growth on the weight. Electronics compensate for buoyancy differences caused by different waste densities.

The accuracy of the ATG device is still under development and will be assigned after a suitable period of testing. Accuracy is expected to be in the range of ± 0.1 inch.

Zip Cords. A zip cord is an insulated wire with an electrically conductive probe on one end. Zip cords are normally used for taking temporary level readings when other level measurement equipment is out of service, or when there is a question concerning the normal reading from other devices. The cord is prepared by measuring it against a tape measure and putting marks or small strips of tape around the cord at incremental distances along its length. The principle of operation is the same as with the manual tape device. The tank's reference elevation is used to obtain a comparative measurement of waste height. The difference between the reference elevation for the zip cord and that used for the installed tank level measurement

equipment is added or subtracted to the zip cord reading to obtain a waste level reading. Properly set up, deployed, and read, the zip cord can be expected to have similar specification limits to the manual tape device.

Visual Inspection. Visual inspection is provided by in-tank (still) photography and video inspection. In-tank photography has been used for many years, but only recently has video inspection been used to any extent. Single-frame photography is the preferred method for most tank inspections. However, video imaging is usually faster, provides the ability to observe the tank contents during inspection, and allows the viewer to focus in on items of interest as they are detected. Video imaging is also used for some general inspections. Photos are used largely to determine general surface conditions in a tank, to help troubleshoot problems with erratic level readings, to spot intrusions, or to provide backup information when investigating possible tank leaks.

In-tank, still photographs and video are obtained by lowering a camera with a lighting unit into the tank vapor/head space through a riser. For video photography, the image is displayed on a local screen or monitor and can also be recorded on tape for subsequent viewing and archiving.

The ability to determine a surface level change from photo or video image is based on the judgement of the viewer and the presence of reference points in the picture. Therefore, the accuracy of liquid level changes determined from photos or video images can range from less than 1 to 6 inches or more. In-tank photos and video scanning are used for information only. There are no precision-based specification limits for their use at this time.

Dip Tubes. Dip tube, weight factor/specific gravity (SpG) measurement systems have been used at the Hanford Site since the 1940's. They are reliable and accurate under normal conditions, but are not used as routine measurement systems in tank farms because the high SpG conditions in most of the waste tanks would result in frequent pluggage of the sensing tubes. Dip tube measurement systems are used in a limited number of cases where surface level measurements cannot be obtained, LOWs are not available, and dip tube systems have been installed for salt well jet pumping. In a typical dip tube arrangement, three dip tubes extend into the tank. One reaches almost to the bottom of the tank, one is positioned a set distance above the bottom (normally 10 inches), and a third is at the top of the vapor space. A differential pressure (DP) is obtained between the bottom and top tubes to give a weight factor indication for the tank. The DP is across the lower two tubes and is used to sense the SpG of the solution. The liquid level is calculated from these data (i.e., weight factor divided by SpG). An error range of ± 2.7 inches is generally applied to salt well dip tube readings.

Liquid Observation Wells. The LOWs are in-tank, closed-bottom drywells made of either steel, fiberglass, or fiberglass-reinforced plastic tubes, with a 3-inch ID. The

LOWs are inserted through tank risers to a position near the tank bottom, and are left there to provide permanent, dry 'observation' of the waste. The LOWs have been installed in 58 of the 149 SSTs.

Neutron Probe. Neutron probes are used for sensing tank liquid levels through the wall of a LOW. Neutron probes consist of a fast neutron source and a slow (or thermal) neutron detector. The source/detector (neutron probe) is attached to a cable and lowered into a LOW to obtain readings. The probe is connected, via wires, to electronics in a mobile van located on the surface. After going through a calibration procedure, the probe is withdrawn from the LOW at a controlled rate generating a data plot of count rate versus distance from the tank bottom. This profile is used to provide an indication of liquid level. The neutron count rate, obtained by this technique, is a relative value that is not used to directly measure liquid concentration. Trending of changes between current and previous readings provides a relative measurement that is used to estimate the distribution of liquid within the tank. At the present time (since mid-1993), all LOW neutron probe scans are read by computer and the interstitial liquid level (ILL) is determined by calculation. The primary feature of neutron probe data, used for leak detection, is consistency rather than deviation between individual readings. The newer methods of calculating ILL give a smaller standard deviation and thus permit a smaller specification limit, which can mean earlier spotting of tank leaks. Unofficial estimates place the calculated values within ± 1.0 inch, but this has not been formally demonstrated yet.

Gamma Probe. The gamma probe is a lead-shielded, highly collimated Geiger-Mueller (GM) detector. Gamma probe operation is similar to that of the neutron probe. The GM tube is lowered to the bottom of a LOW and a gross gamma count rate versus depth obtained as the probe is withdrawn. The major gamma-emitting radionuclide in the SST liquid phase is cesium-137. Cesium is very soluble in the aqueous (i.e., water) phase, so a plot of gamma count rate versus depth can indicate the distribution of liquid in a tank similar to a neutron probe. However, because of the greater penetration of gamma rays when compared to slow neutrons, their presence throughout the waste instead of being induced like the slow neutrons, and the somewhat less exact nature of the gross gamma method, the ILL usually appears less exact on gamma scans from LOWs than neutron probe scans. This normally makes gamma scans from LOWs less accurate than neutron probes in determining an ILL. Thus, gamma scans are normally used for information purposes only or to help back up LOW neutron readings.

Temperature Measurements. Safety requirements necessitate installation of thermocouple (TC) trees in all SSTs with a heat load of greater than 11.7 kW (40,000 Btu/hr.). Thermocouples are read by tank farm operators on a regular frequency or obtained automatically on the CASS. Data are also recorded from TCs installed in tanks with heat loads less than 11.7 kW (40,000 Btu/hr.), but the TCs are not replaced after failure. Temperature data are also used to provide additional information during investigations regarding possible leakage.

Psychrometrics. Psychrometric information is used as an investigative tool to assist in resolving measurement anomalies. Ventilation and air balance personnel take psychrometric surveys on all SST active ventilation systems on a schedule provided for ventilation and air balance by Tank Farm Process Engineering. These surveys provide information on waste tank cooling and evaporative losses. Availability of access ports for psychrometric measurements is limited.

Alternatives/Enhancements - The TWRS Program will evaluate enhancements and alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost.

V. RATIONALE FOR SELECTION:

Same as A4.2.i.j.k-L1.

VI. ENABLING ASSUMPTIONS:

Same as A4.2.i.j.k-L1.

VII. REQUIRED ANALYSES:

Same as A4.2.i.j.k-L1.

VIII. REQUIREMENTS SATISFIED:

A. Estimated System Performance:

B. Performance Requirements:

I. ARCHITECTURE ID NUMBER: A4.2.i.j.k-L1.1.3

II. ARCHITECTURE TITLE: SST Leakage Detection and Monitoring - Existing Plumes Monitoring System

III. ARCHITECTURE DEFINITION:

The SST existing leakage plume monitoring system (near-field zone) consists of drywells and laterals (for some tanks) and the associated sensors deployed to monitor changes in gamma-radiation level in the soil around the tank. In addition, several tanks are equipped with leak detection pits that collect any liquid that has escaped the tank boundary.

IV. ALTERNATIVES CONSIDERED:

TWRS Baseline - The following paragraphs briefly describe the current systems. A more detailed discussion can be found in *Technical Bases for the Leak Detection Surveillance of Waste Storage Tanks*, WHC-SD-WM-TI-573 (Schofield 1994).

Drywells. Drywells are vertical boreholes with 6- or 8-inch-diameter carbon steel casings, positioned radially around SSTs. A typical drywell installation will extend 50 to 250 feet below grade. Drywells do not penetrate to the water table. Monitoring in drywells is generally carried out at a depth of 50 to 150 feet. Drywells are used to deploy instruments that can detect changes, over time, in gamma-radiation levels and moisture content of the soil around the tanks. This information is used, together with primary sensor data, to aid in detecting potential leakage. The effectiveness of drywell-deployed devices depends, among other things, on the following:

- Proximity of the drywell to the leak
- Proximity of other leaking tanks to the drywell
- Gamma-radioactivity background or moisture level around the drywell
- Liquid migration behavior in the soil (i.e., soil characteristics)
- Radionuclide absorption in the soil
- Size of the leak
- Magnitude of the measured characteristic (i.e., the activity of the radionuclide in the leaked waste solution and the energy of its gamma emission)
- Sensitivity of the sensing device
- Total measurement precision
- Monitoring frequency.

Because of these limitations, drywells and laterals are no longer used as primary means of leak detection monitoring for a tank. Drywell and lateral data are used to provide information during tank investigations, and can also be used to provide

backup leak survey data when primary leak detection equipment on a tank is inoperable or not yet installed.

Periodic monitoring is performed using four gamma or neutron probes that are lowered into drywells. These instruments provide scan profiles of radiation and moisture in the soil. Tank leakage is revealed by trending data from successive scans. Probes are lowered to the bottom of the drywell and are withdrawn at a constant rate, while the probe sends a signal to a portable van containing electronics and a cable retrieval system. A profile scan is automatically generated from the data.

Leak Detection Laterals. The laterals are similar to drywells but provide a better means of monitoring for the presence of activity in the soil around a tank. Laterals are 4-inch-diameter horizontal steel pipes installed below the concrete tank base, into which 3-inch-diameter tubing is inserted. The tubes rise to instrument enclosures through vertical caissons adjacent to the tanks. The horizontal portions extend in a fan-like manner 8 to 10 feet beneath the tank (from common caissons) and reach beyond the far side perimeter of the tank. They have been installed under six tanks in the 241-A tank farm and under nine of the 241-S tank farm tanks. Geiger-Mueller radiation detectors are forced pneumatically from the caisson to the end of the tube, and then retracted by a cable drive mechanism. A radiation profile scan is obtained during withdrawal. Probes deployed into laterals monitor changes in radiation levels of the soil beneath the tanks. Data are gathered by operators in computer-equipped vans and are transmitted to a central computer via the CASS. Graphs of the monitoring data are visually compared to baseline data to determine if changes in radiation levels or profiles have taken place and to detect data trends.

Leak Detection Pits. Leak detection pits collect any liquid that might accumulate beneath a tank bottom. The only SSTs with leak detection pits are those in the AX tank farm. Liquid is collected from channels under the tank and is drained to a collection pit for each tank. These tanks are monitored for weight factor, SpG, and gamma activity. Either a liquid level rise, an SpG above 1.0, or an increase in gamma levels could indicate a possible tank leak. Data from leak detection pit devices are recorded manually and transmitted to the surveillance analysis organization for evaluation.

Alternatives/Enhancements - The TWRS Program will evaluate enhancements and alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost.

V. RATIONALE FOR SELECTION:

Same as A4.2.i.j.k-L1.

VI. ENABLING ASSUMPTIONS:

Same as A4.2.i.j.k-L1.

VII. REQUIRED ANALYSES:

Same as A4.2.i.j.k-L1.

VIII. REQUIREMENTS SATISFIED:

A. Estimated System Performance:

B. Performance Requirements:

I. ARCHITECTURE ID NUMBER: A4.2.i.j.k-L1.1.4

II. ARCHITECTURE TITLE: SST Leakage Detection and Monitoring - New Plumes Detection System

III. ARCHITECTURE DEFINITION:

The SST new leakage plume detection system (near-field zone) consists of drywells and laterals (for some tanks) and the associated sensors deployed to monitor changes in gamma-radiation level in the soil around the tank. In addition, several tanks are equipped with leak detection pits that collect any liquid that has escaped the tank boundary.

IV. ALTERNATIVES CONSIDERED:

TWRS Baseline - Same as A4.2.i.j.k-L1.1.3 above.

Alternatives/Enhancements - The TWRS Program will evaluate enhancements and alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost.

V. RATIONALE FOR SELECTION:

Same as A4.2.i.j.k-L1.

VI. ENABLING ASSUMPTIONS:

Same as A4.2.i.j.k-L1.

VII. REQUIRED ANALYSES:

Same as A4.2.i.j.k-L1.

VIII. REQUIREMENTS SATISFIED:

A. Estimated System Performance:

B. Performance Requirements:

I. ARCHITECTURE ID NUMBER: A4.2.i.j.k-L1.2

II. ARCHITECTURE TITLE: SST Leakage Detection and Monitoring - Unsaturated Zone System

III. ARCHITECTURE DEFINITION:

SST leakage detection and monitoring is currently achieved in the unsaturated zone using sensors deployed in drywells to monitor changes in gamma-radiation level of the soil.

IV. ALTERNATIVES CONSIDERED:

TWRS Baseline - Existing systems and technologies will be used subject to changes in operational philosophy (e.g., measurement frequency) as needed. See subordinate architecture descriptions for a detailed description of the TWRS baseline.

Alternatives/Enhancements - The TWRS Program will evaluate enhancements and alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost.

V. RATIONALE FOR SELECTION:

Same as A4.2.i.j.k-L1.

VI. ENABLING ASSUMPTIONS:

Same as A4.2.i.j.k-L1.

VII. REQUIRED ANALYSES:

Same as A4.2.i.j.k-L1.

VIII. REQUIREMENTS SATISFIED:

A. Estimated System Performance:

B. Performance Requirements:

I. ARCHITECTURE ID NUMBER: A4.2.i.j.k-L1.2.1

II. ARCHITECTURE TITLE: SST Leakage Detection and Monitoring - Existing Plumes Monitoring System

III. ARCHITECTURE DEFINITION:

The SST existing leakage plume (unsaturated zone) monitoring system consists of drywells and the associated sensors deployed to monitor changes in radiation level in the soil below the tank.

IV. ALTERNATIVES CONSIDERED:

TWRS Baseline - The following paragraphs briefly describe the current systems. A more detailed discussion can be found in *Technical Bases for the Leak Detection Surveillance of Waste Storage Tanks*, WHC-SD-WM-TI-573 (Schofield 1994).

Drywells. Drywells are vertical boreholes with 6- or 8-inch-diameter carbon steel casings, positioned radially around SSTs. A typical drywell installation will extend 50 to 250 feet below grade. Drywells do not penetrate to the water table. Monitoring in drywells is generally carried out at a depth of 50 to 150 feet. Drywells are used to deploy instruments that can detect changes, over time, in radiation levels and moisture content of the soil around the tanks. This information is used, together with primary sensor data, to aid in detecting potential leakage. The effectiveness of drywell-deployed devices depends, among other things, on the following:

- Proximity of the drywell to the leak
- Proximity of other leaking tanks to the drywell
- Gamma-ray background or moisture level around the drywell
- Liquid migration behavior in the soil (i.e., soil characteristics)
- Radionuclide adsorption in the soil
- Size of the leak
- Magnitude of the measured characteristic (i.e., the concentration of the radionuclide in the leaked waste solution and the energy level of its gamma emission)
- Probe sensitivity
- Total measurement precision

Because of these limitations, drywells and laterals are not used as primary means of leak detection monitoring for a tank. Drywell and lateral data are used to provide information during tank investigations, and can also be used to provide backup leak survey data when primary leak detection equipment on a tank is inoperable or not yet installed.

Periodic monitoring is performed using four gamma or neutron probes that are lowered into drywells. These instruments provide scan profiles of gamma-radiation and moisture in the soil. Tank leakage is revealed by trending data from successive scans. Probes are lowered to the bottom of the drywell and are withdrawn at a constant rate, while the probe sends a signal to a portable van containing electronics and a cable retrieval system. A profile scan is automatically generated from the data.

Alternatives/Enhancements - The TWRS Program will evaluate enhancements and alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost.

V. RATIONALE FOR SELECTION:

Same as A4.2.i.j.k-L1.

VI. ENABLING ASSUMPTIONS:

Same as A4.2.i.j.k-L1.

VII. REQUIRED ANALYSES:

Same as A4.2.i.j.k-L1.

VIII. REQUIREMENTS SATISFIED:

A. Estimated System Performance:

B. Performance Requirements:

I. ARCHITECTURE ID NUMBER: A4.2.i.j.k-L1.2.2

II. ARCHITECTURE TITLE: SST Leakage Detection and Monitoring - New Plumes Detection System

III. ARCHITECTURE DEFINITION:

The SST new leakage plume detection system (unsaturated zone) consists of drywells and the associated sensors deployed to monitor changes in gamma-radiation level in the soil below the tank.

IV. ALTERNATIVES CONSIDERED:

TWRS Baseline - Same as A4.2.i.j.k-L1.2.1 above.

Alternatives/Enhancements - The TWRS Program will evaluate enhancements and alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost.

V. RATIONALE FOR SELECTION:

Same as A4.2.i.j.k-L1.

VI. ENABLING ASSUMPTIONS:

Same as A4.2.i.j.k-L1.

VII. REQUIRED ANALYSES:

Same as A4.2.i.j.k-L1.

VIII. REQUIREMENTS SATISFIED:

A. Estimated System Performance:

B. Performance Requirements:

I. ARCHITECTURE ID NUMBER: A4.2.i.j.k-L1.3

II. ARCHITECTURE TITLE: SST Leakage Detection and Monitoring - Ground-water Zone System

III. ARCHITECTURE DEFINITION:

SST leakage detection and monitoring is currently achieved in the groundwater zone by sampling of groundwater from a number of RCRA monitoring wells deployed upgradient and downgradient from the tank farm groups.

IV. ALTERNATIVES CONSIDERED:

TWRS Baseline - Existing systems and technologies will be used subject to changes in operational philosophy (e.g., measurement frequency) as needed. See subordinate architecture descriptions for a detailed description of the TWRS baseline.

Alternatives/Enhancements - The TWRS Program will evaluate enhancements and alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost.

V. RATIONALE FOR SELECTION:

Same as A4.2.i.j.k-L1.

VI. ENABLING ASSUMPTIONS:

Same as A4.2.i.j.k-L1.

VII. REQUIRED ANALYSES:

Same as A4.2.i.j.k-L1.

VIII. REQUIREMENTS SATISFIED:

A. Estimated System Performance:

B. Performance Requirements:

I. ARCHITECTURE ID NUMBER: A4.2.i.j.k-L1.3.1

II. ARCHITECTURE TITLE: SST Leakage Detection and Monitoring - Existing Plumes Monitoring System

III. ARCHITECTURE DEFINITION:

The SST existing leakage plume (ground-water zone) monitoring system consists of the currently installed RCRA ground-water monitoring wells and the associated sampling and data acquisition deployed to monitor changes in ground water upgradient and downgradient from the tank farm groups.

IV. ALTERNATIVES CONSIDERED:

TWRS Baseline - [tbd]

Alternatives/Enhancements - The TWRS Program will evaluate enhancements and alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost.

V. RATIONALE FOR SELECTION:

Same as A4.2.i.j.k-L1.

VI. ENABLING ASSUMPTIONS:

Same as A4.2.i.j.k-L1.

VII. REQUIRED ANALYSES:

Same as A4.2.i.j.k-L1.

VIII. REQUIREMENTS SATISFIED:

A. Estimated System Performance:

B. Performance Requirements:

I. ARCHITECTURE ID NUMBER: A4.2.i.j.k-L1.3.2

II. ARCHITECTURE TITLE: SST Leakage Detection and Monitoring - New Plumes Detection System

III. ARCHITECTURE DEFINITION:

The SST new leakage plume detection system (ground-water zone) consists of the currently installed RCRA ground-water monitoring wells and the associated sampling and data acquisition deployed to monitor changes in ground water upgradient and downgradient from the tank farm groups.

IV. ALTERNATIVES CONSIDERED:

TWRS Baseline - Same as A4.2.i.j.k-L1.3.1 above.

Alternatives/Enhancements - The TWRS Program will evaluate enhancements and alternatives on an ongoing basis considering reduction in public and worker risk, effectiveness and cost.

V. RATIONALE FOR SELECTION:

Same as A4.2.i.j.k-L1.

VI. ENABLING ASSUMPTIONS:

Same as A4.2.i.j.k-L1.

VII. REQUIRED ANALYSES:

Same as A4.2.i.j.k-L1.

VIII. REQUIREMENTS SATISFIED:

A. Estimated System Performance:

B. Performance Requirements:

4.0 INTERFACES

[Reserved - to be provided later. This section was reserved at this time based on the following reasons: (1) the TWRS fifth-level functions and requirements are not yet formally defined; changes to them would affect interfaces with the functions described herein, (2) the baseline and alternate approaches described herein are under evaluation and may change - also affecting interfaces, and (3) the resolution key issues will have an affect on performance requirements and interfaces. Accordingly, it was considered impractical and inefficient to attempt interface definition and requirements allocation to support this draft document.]

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5.0 ITEMS NEEDING FURTHER RESOLUTION

The functional decomposition and analysis reflected in this document required a number of assumptions to be made; also, a number of issues were identified. The issues, assumptions, and required analyses are described in this section.

Section 5.0 of DOE/RL-92-60 Rev. 1, specifically, Tables 5-1, 5-2, and 5-3 identify the issues, assumptions, and required analyses for the TWRS functions and requirements through the fourth level of decomposition. Many of the items identified are applicable, directly or indirectly, to the functions and requirements presented herein. Items that were identified specific to the functions and requirements for leakage detection and monitoring are provided in the following table.

Requirement or Architecture	Issue or Enabling Assumption/Required Analyses
4.2.i.j.k-L1 PA1	**4.2.i.j.k-L1 PA1 Issue 1** The applicability and effectiveness of alternative SST leakage detection and monitoring systems will be greatly dependant on the general closure philosophy applied to the tank farms (i.e., landfill closure, vs. clean closure). **4.2.i.j.k-L1 PA1 Issue 1 Required Analysis** The designation of the 200 Area as a limited use area has not been accepted by all stakeholder groups and may be subject to challenge. In conjunction with the Hanford Site Systems Engineering Functions and Requirements analysis, develop interface requirements for these items. A preliminary closure strategy and preliminary performance assessment for SSTs/DSTs may be required to establish interface requirements for the residual waste remaining in the tanks.
4.2.i.j.k-L1 PA1	**4.2.i.j.k-L1 PA1 Issue 1** Requirements to meet the objective of "closure-ready SSTs" have not been defined (DOE/RL-92-60, Rev. 1, Table F4.2, Item 4.2 O3 Issue 1). **4.2.3.5.2-M1 P1 Issue 1 Required Analysis** In conjunction with the Hanford Site Systems Engineering Functions and Requirements analysis, develop interface requirements for these items. A preliminary closure strategy and preliminary performance assessment for SSTs/DSTs may be required to establish interface requirements for the residual waste remaining in the tanks.

Requirement or Architecture	Issue or Enabling Assumption/Required Analyses
A4.2.i.j.k-L1	**Enabling Assumptions** *SST Waste Storage* - storage activities will continue per the current TWRS Program baseline with continued interim stabilization and related actions. *SST Waste Retrieval* - retrieval of SST waste will be conducted per the current TWRS Program baseline using traditional sluicing as the primary approach. *SST Closure* - the SST tank farms will be closed as landfills with appropriate closure and post-closure supporting activities. It is further assumed that the basic closure methodology will consist of structurally stabilizing the tanks (residual remaining in place) followed by installation of a protective surface barrier. **Required Analysis (all architectures)** *SST Leakage Thresholds* - final SST leakage thresholds need to be developed for the purposes of operational decision making and response during retrieval and to support closure activities. The threshold values, if exceeded either cumulatively or through an acute release, would invoke stopping operations and initiating response actions. Options would include resuming operations (i.e., accepting additional leakage in trade for the benefit of additional waste removal), deploying alternate retrieval, stabilization or closure technologies, and/or removal of the tank and contaminated soil. The threshold values should be developed based on a more comprehensive risk analysis than as currently reflected in Appendix C of this document (preliminary values). The values and decision making strategy should be proposed for acceptance by stakeholders via the SST closure plan negotiation process.

6.0 REFERENCES

40 CFR 61, "National Emissions Standards for Hazardous Air Pollutants," *Code of Federal Regulations*, as amended.

40 CFR 141, "National Primary Drinking Water Regulations," *Code of Federal Regulations*, as amended.

40 CFR 265, "Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities," *Code of Federal Regulations*, as amended.

Anderson, G., 1993, "Tank Waste Barriers, M-06-00" (letter 9303063 to J. D. Bauer, U.S. Department of Energy - Richland Field Office, March 29, 1993), Washington State Department of Ecology, Olympia, Washington.

Anttonen, J. H., 1992, "TWRS National Technology Workshop, June 29, 30 and July 1, 1992" (letter 92-TRB-123 to addressees, August 17, 1992), U.S. Department of Energy - Richland Field Office, Richland, Washington.

ASME NQA-1, *Quality Assurance Program Requirements for Nuclear Facilities*, American Society of Mechanical Engineers, New York, New York.

Boomer et al., 1993, *Tank Waste Technical Options Report*, WHC-EP-0616, Westinghouse Hanford Company, Richland, Washington.

Clean Air Act of 1977, as amended, 42 USC 7401, et seq.

Defense Authorization Act, Public Law 101-510, "Safety Measures for Waste Tanks at Hanford Nuclear Reservation," Section 3137 (also known as the Wyden Amendments).

Delaney, C. D., K. A. Lindsey, and S. P. Reidel, 1991, *Geology and Hydrology of the Hanford Site: A Standardized Text for Use in Westinghouse Hanford Company Documents and Reports*, WHC-SD-ER-TI-003, Westinghouse Hanford Company, Richland, Washington.

DOE, RL, WHC, and PNL, 1993, "Tank Waste Remediation System Leadership Council Meeting, February 4-5, 1993," U.S. Department of Energy, U.S. Department of Energy - Richland Field Office, Westinghouse Hanford Company, Battelle Pacific Northwest Laboratories, Washington, D.C.

DOE Order 5400.5, *Radiation Protection of the Public and the Environment*, U.S. Department of Energy, Washington, D.C.

DOE Order 5480.19, *Conduct of Operations Requirements for DOE Facilities*, U.S. Department of Energy, Washington, D.C.

DOE Order 5820.2A, *Radioactive Waste Management*, U.S. Department of Energy, Washington, D.C.

DOE/EV/1830-T5, "A Guide to Reducing Radiation Exposure to As Low As Reasonably Achievable (ALARA)," April 1980, U.S. Department of Energy, Washington, D.C.

Droppo et al., June 1991, *Single-Shell Tank Constituent Rankings for Use in Preparing Waste Characterization Plans*, PNL-7572, Battelle Pacific Northwest Laboratories, Richland, Washington.

Ecology, EPA, and DOE, 1990, *Hanford Federal Facility Agreement and Consent Order*, Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy, Olympia, Washington.

Hanlon, B. J., 1994, *Tank Farm Surveillance and Waste Status Summary Report for November 1994*, WHC-EP-0182-80, Westinghouse Hanford Company, Richland, Washington.

Klem, M. J., 1990, *Inventory of Chemicals Used at Hanford Production Plants and Support Operations (1944-1980)*, WHC-EP-0172, Revision 1, Westinghouse Hanford Company, Richland, Washington.

Lindsey, K. A., B. N. Bjornstad, J. W. Lindberg, and K. M. Hoffman, 1992a, *Geologic Setting of the 200 East Area: An Update*, WHC-SD-EN-TI-012, Revision 0, Westinghouse Hanford Company, Richland, Washington.

Lindsey, K. A., M. P. Connelly, and B. N. Bjornstad, 1992b, *Geologic Setting of the 200 West Area: An Update*, WHC-SD-EN-TI-008, Revision 0, Westinghouse Hanford Company, Richland, Washington.

Lowe, S. S. et al., 1993, *Engineering Study of Tank Leaks Related to Hydraulic Retrieval of Sludge from Tank 241-C-106*, WHC-SD-WM-ES-218, Revision 1, Westinghouse Hanford Company, Richland, Washington.

National Environmental Policy Act of 1969, as amended, 42 USC 4321, et seq. Reidel, S. P., K. A. Lindsey, and K. R. Fecht, 1992, *Field Trip Guide to the Hanford Site*, WHC-MR-0391, Revision 0, Westinghouse Hanford Company, Richland, Washington.

Resource Conservation and Recovery Act of 1976, as amended, 42 USC 9601, et seq.

RL, 1993, *Hanford Mission Plan, Volume 1 - Site Guidance*, DOE/RL-93-08, U.S. Department of Energy - Richland Field Office, Richland, Washington.

RL, 1994, *Tank Waste Remediation System Functions and Requirements*, DOE/RL-92-60, Rev. 1, U.S. Department of Energy - Richland Field Office, Richland, Washington.

RL Order 6430.1C, *Hanford Plant Standards (HPS) Program*, U.S. Department of Energy - Richland Field Office, Richland, Washington.

Schofield, J. S., 1994, *Technical Bases for the Leak Detection Surveillance of Waste Storage Tanks*, WHC-SD-WM-TI-573, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

Serne, R. J. and M. I. Wood, May 1990, *Hanford Waste Form Releases and Sediment Interactions*, PNL 7297, Battelle Pacific Northwest Laboratories, Richland, Washington.

State Environmental Policy Act of 1971, Revised Code of Washington, RCW 43.21C, Olympia, Washington.

Treat, R. L. et al, 1994, *Feasibility Study of Tank Leakage Mitigation Using Subsurface Barriers*, WHC-SD-WM-ES-300, Rev. 0, Westinghouse Hanford Company, Richland, Washington.

Van Vleet, R. J., 1993, *Radionuclide and Chemical Inventories for the Single Shell Tanks*, WHC-SD-WM-TI-565, Westinghouse Hanford Company, Richland, Washington.

WAC 173-160, "Minimum Standards for Construction and Maintenance of Wells," *Washington Administrative Code*, as amended.

WAC 173-303, "Dangerous Waste Regulations," *Washington Administrative Code*, as amended.

WAC 173-460, "Controls for New Sources of Toxic Air Pollutants," *Washington Administrative Code*, as amended.

WAC 246-247, "Radiation Protection - Air Emissions," *Washington Administrative Code*, as amended.

Wagoner, J. D., 1992, "National Environmental Policy Act (NEPA) Categorical Exclusion (CX) Determination: Site Characterization and Environmental Monitoring, Hanford Site, Richland, Washington" (memorandum 9208799 to C. M. Borgstrom, U.S. Department of Energy, December 4, 1992), U.S. Department of Energy - Richland Field Office, Richland, Washington.

Washington Clean Air Act, Revised Code of Washington, RCW 70.94, Olympia, Washington.

WHC, 1991, *Hanford Site Solid Waste Acceptance Criteria*, WHC-EP-0063-3, Westinghouse Hanford Company, Richland, Washington.

WHC, 1992, *Operating Specifications for Single-Shell Waste Storage Tanks*, OSD-T-151-00013, Revision D-1, Westinghouse Hanford Company, Richland, Washington.

WHC, 1994, *Operating Specifications for Tank Farm Leak Detection*, OSD-T-151-00031, Revision A-1, Westinghouse Hanford Company, Richland, Washington.

WHC-CM-1-6, *WHC Radiological Control Manual*, Westinghouse Hanford Company, Richland, Washington.

WHC-CM-4-2, *Quality Assurance Manual*, Westinghouse Hanford Company, Richland, Washington.

WHC-CM-4-9, *Radiological Design*, Westinghouse Hanford Company, Richland, Washington.

WHC-CM-4-11, *ALARA Program Manual*, Westinghouse Hanford Company, Richland, Washington.

WHC-CM-4-40, *Industrial Hygiene Manual*, Westinghouse Hanford Company, Richland, Washington.

WHC-CM-7-5, *Environmental Compliance*, Westinghouse Hanford Company, Richland, Washington.

APPENDIX A

TWRS SYSTEMS ENGINEERING APPROACH

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APPENDIX A

1.0 SYSTEMS ENGINEERING APPROACH

Overview

In November, 1992 the TWRS Program Leadership Council directed that systems engineering be adopted as the paradigm for development and management of the TWRS program.

As defined in DOE Order 4700.1, the systems engineering process is a sequence of activities that transforms an identified mission need into a description of system performance parameters and a preferred system configuration. A sound requirements baseline must be established to provide the foundation upon which the systems engineering process can be carried out. Functional analysis, which is just one step within the implementation of the overall systems engineering process, establishes this foundation.

Functional Analysis

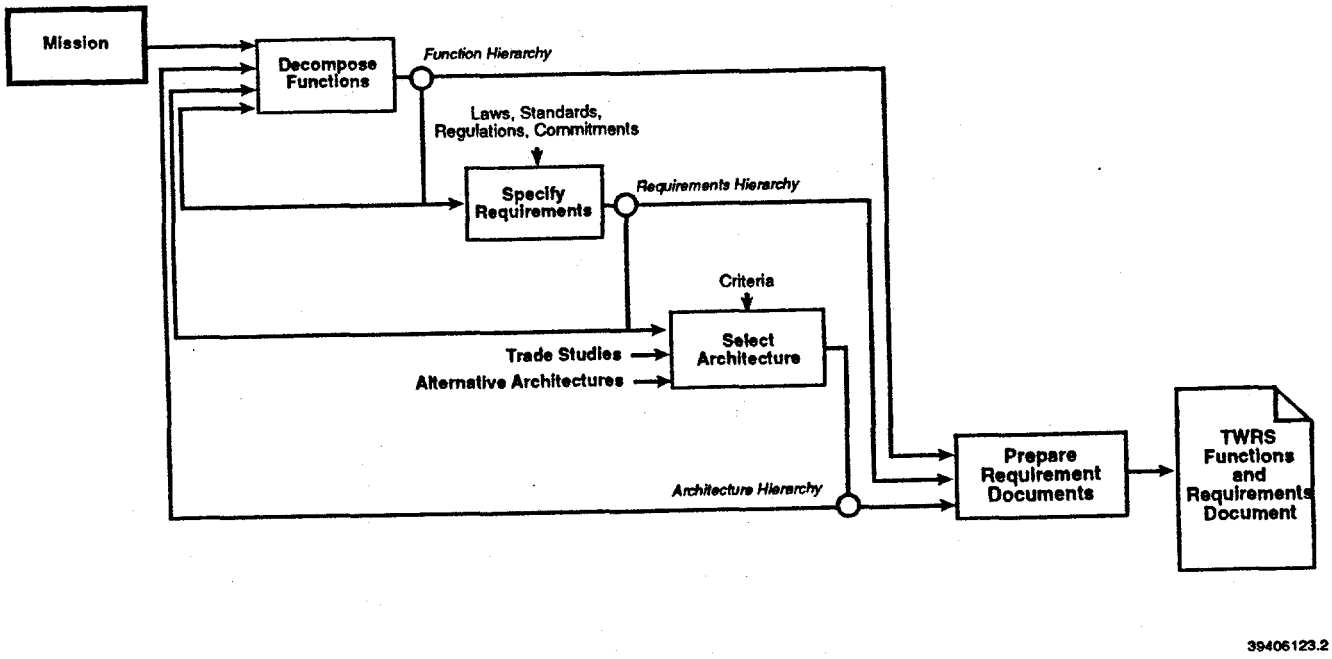
Functional analysis is based on the premise that, when describing a system, it is better to think in terms of the functions that must be performed than a collection of parts that comprise the system. A comprehensive functional analysis begins with a statement of the mission, from which all essential functions that the system must perform are derived. The functional analysis process is sequential and iterative. There are three distinct steps, each leading to three important pieces of information; functions, requirements, and architecture. Iterations to this sequential process lead to progressively increasing levels of detail.

Functions are statements of purpose, defining what the system must do; requirements indicate how well the function must be accomplished; and architecture represents a strategy, a process, or a piece of the actual physical system that satisfies a corresponding requirement. This triad of functions (F), requirements (R), and architectures (A) is needed to completely describe and understand the physical system at each level and to establish a basis for the next level of decomposition.

Figure A-1 illustrates the sequential F-R-A approach that was implemented in a series of workshops by a team of technical experts representing each of the TWRS programs. The technical experts decomposed the top level Remediate Tank Waste function, which is basically the TWRS mission statement, into a set of functions that are both necessary and sufficient to satisfy the parent.

Next, requirements were identified that specify how well each of the functions must be accomplished. Forty documents were selected to be reviewed for the initial set of requirements according to the following criteria:

Figure A-1.


Mission
Decompose Functions
Function Hierarchy
Laws, Standards, Regulations, Commitments
Specify Requirements
Requirements Hierarchy
Criteria
Select Architecture
Trade Studies
Alternative Architectures
Architecture Hierarchy
Prepare Requirement Documents
TWRS Functions and Requirements Document
39406123.2

1. Documents promulgated specifically for work at Hanford
2. Documents promulgated specifically for storing, treating, or disposing of radioactive and/or hazardous waste
3. Documents imposed on TWRS by interfacing DOE facilities

Finally, an architectural concept, not a design, that could satisfy the complete set of requirements was selected. This firmly established the basis for further functional decomposition.

In DOE/RL-92-60 Rev. 1, *Tank Waste Remediation System Functions and Requirements*, the F-R-A approach was applied through the fourth level of TWRS functional decomposition. Four levels of decomposition were deemed to be sufficient to establish the initial TWRS technical baseline -- the functional requirements baseline -- and to establish the foundation for preparing each of the three Technical Requirement Specifications. Although additional source documents will continue to be reviewed for applicable requirements and alternatives to selected architectural solutions will continue to be evaluated, the information contained in this document is sufficient to specify an initial functional requirements baseline. Follow-on efforts will extend the process to a level of detail that is sufficient to define the missions of individual TWRS projects.

FUNCTION HIERARCHY

The TWRS function hierarchy to the fourth level of decomposition is shown in Figure A-2. The numbering scheme that uniquely identifies TWRS function titles is based on assigning 4.2 to the Remediate Tank Waste function consistent with the Hanford Sitewide function hierarchy. The third level becomes 4.2.i and the fourth, 4.2.i.j. This scheme, which permits traceability between TWRS functions, their parents and children is used throughout the functional analysis.

FUNCTION DESCRIPTIONS AND REQUIREMENTS

Requirements allocated to functions or interfaces can be one of two types: **constraints**, which are requirements imposed on the function/interface by sources external to the TWRS Program (e.g., Congress, Ecology, DOE Orders); or **performance requirements**, which are imposed on the function/interface by the TWRS Program itself. The numbering convention used for the identification of requirements in these tables is as follows:

4.2.1 P1 is the first performance requirement (P) allocated to function 4.2.1;
4.2.1 C1 is the first constraint (C) allocated to function 4.2.1;
4.2.1 O1 P1 would be first performance requirement allocated to output number O1 from function 4.2.1; and
4.2.1. I3 C1 is the first constraint allocated to input number I3 to function 4.2.1.

Each requirement that has been extracted from a source document has the appropriate reference noted. Table A-1 presents a template of the Function Description Sheets describing each item.

Figure A-2. TWRS Function Hierarchy.

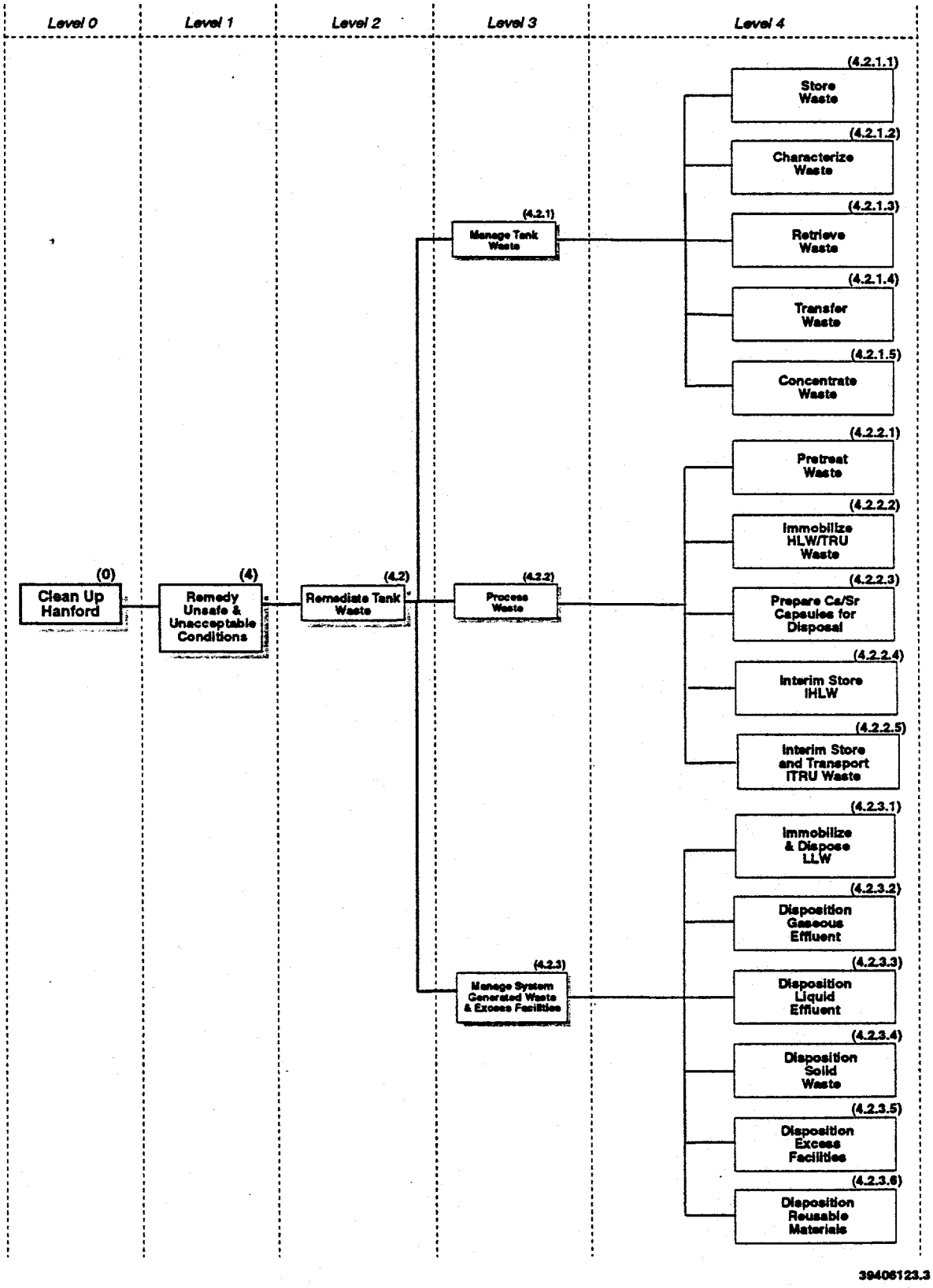


Table A-1.

FUNCTION DESCRIPTION SHEETS

A Function Description Sheet is provided for each of the functions identified. The Function Description Sheets provide the function definitions, enabling assumptions, interfaces, function requirements, and interface requirements. The sheets were prepared according to the format used in DOE/RL-92-60, as shown below.

I. FUNCTION ID NUMBER:

II. FUNCTION TITLE: Short description; verb followed by noun or noun phrase.

III. FUNCTION DEFINITION:

Primary statement of purpose. Brief description of what this function must accomplish to meet the overall mission, often including the scope of applicability.

IV. ENABLING ASSUMPTIONS:

Assumed interfaces, end states, and criteria that were made to further define the function, constrain the limits of applicability, or interpret system requirements. These assumptions necessitate additional analyses to determine impacts on the program.

V. INTERFACES

A. INPUTS

Anything that is acted upon by a function to produce desired outputs. Inputs can be classified as either internal or external, depending on whether they originate from within TWRS or from the outside environment, respectively.

B. OUTPUTS

Anything that leaves the function after it has been acted upon by that function.

VI. FUNCTION REQUIREMENTS

A qualitative or quantitative statement of how well a function must be performed. Function requirements may be one of two types: Constraints or Performance Requirements.

Constraints:

Requirements imposed upon the function by the external environment (e.g., U.S. Congress, Washington EPA, DOE Orders).

Performance Requirements:

Requirements imposed upon the function by the TWRS Program itself and, hence, may be traded with respect to other performance requirements to optimize overall performance.

The numbering convention used for the identification of requirements in these tables is as follows:

4.2.1 C1 is the first constraint (C) allocated to function 4.2.1;
4.2.1 P1 is the first performance requirement (P) allocated to function 4.2.1;
4.2.1 I3 C1 is the first constraint allocated to input number I3 to function 4.2.1; and
4.2.1. O1 P1 is the first performance requirement allocated to output number O1 from function 4.2.1.

VII. INTERFACE REQUIREMENTS

A requirement that applies to the inputs to, or outputs from, a function. Interface requirements are either constraints or performance requirements.

Requirements can also be either allocable (e.g., weight) or nonallocable (e.g., ALARA). In general, if a nonallocable requirement is applicable to all functions at a given level in the hierarchy, it is assigned to the common parent function to avoid unnecessary repetition. Specific required analyses have been identified for those allocable requirements that cannot yet be portioned among their lower level, child functions. To capture the full extent of all requirements applicable to a given function, it is necessary to trace back up through the top level function hierarchy. For inputs or outputs that do not change from level to level [e.g., Immobilized High-Level Waste (IHLW)], the requirements allocated to the interface are only listed at the highest level. Subsequent references to the requirements for these outputs contain a statement that the requirements are the same as the higher level input/output.

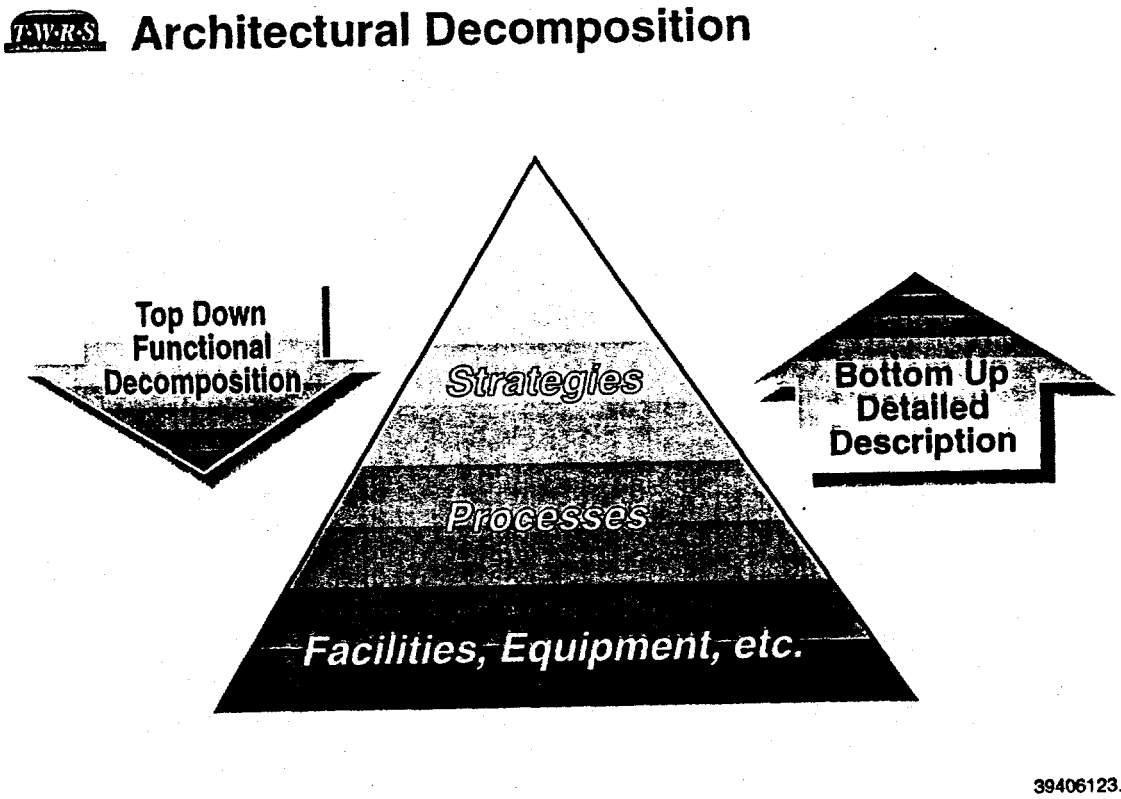
A number of strategies, processes, or physical systems could be conceived of that would satisfy the prescribed set of constraints and performance requirements. For the most part, firm decisions have not yet been made with regard to which particular alternatives will be selected to satisfy most of these requirements. Nevertheless, the TWRS Program is operating under the assumption that a planning basis does exist, as captured within the Tri-Party Agreement. Process flowsheets representative of this planning basis have been developed and the results (currently these are in the form of mass flow) are expressed in the function description tables as expected system performance.

Because the expected system performance values are the product of ongoing strategic design efforts, they are expected to change over time as the definition of the TWRS matures. As the system definition phase evolves into a more detailed design phase, and more defensible analyses are conducted and the results are reported in documents subject to configuration control, confidence in the expected system performance values will increase. Eventually the expected system performance values will be converted into performance requirements and allocated to the appropriate function and interfaces.

ARCHITECTURE HIERARCHY

Functional analysis proceeds in a top down fashion. At the higher levels it is not possible to provide a detailed description of the physical systems that will be required to satisfy the corresponding functions subject to their requirements. In general, only architectural concepts can be identified at these levels. Thus, the alternatives, considered for satisfying these high level functions often resemble alternative strategic concepts or alternative processes. Eventually, a level is reached where the alternatives can be expressed in terms of alternative facilities, equipment, software, etc. At this point the lowest level architectures can then be rolled up to provide a comprehensive description of a higher level architectural concept. Figure A-3 illustrates the process.

Figure A-3.


T·W·R·S
Architectural Decomposition
Top Down
Functional
Decomposition
Strategies
Processes
Facilities, Equipment, etc.
Bottom Up
Detailed
Description
39406123.1

Any time a selection is made from more than one alternative being considered, there is a corresponding enabling assumption unless there is a defensible basis (e.g., policy decision by DOE, approved document, etc.) for the selection. If there is a defensible basis, this is captured in the Rationale for Selection section of the architecture table and there is no need for an enabling assumption. Even if there is a document that provides a defensible basis for the selection of a specific strategy, process, or facility, all the alternatives considered in the reference document are listed in the architecture table. If an enabling assumption is made, there is at least one required analysis identified. Working from the top (i.e., 4.2) down, the alternatives considered are likely to first be alternative strategic concepts, then alternative process, and finally alternative facilities, equipment, etc.

The complete set of architectural selections comprises the current TWRS planning basis. It is not meant to be a point solution; but it does represent the current TWRS technical baseline. Alternatives will continue to be investigated and, if warranted, controlled changes to the baseline will be implemented.

The TWRS architecture hierarchy to the fourth level of decomposition is shown in Figure A-4. The numbering scheme that uniquely identifies TWRS architecture titles is based on assigning 4.2 to the TWRS consistent with the Hanford sitewide architecture hierarchy. The third level becomes 4.2.i and fourth, 4.2.i.j.

ARCHITECTURE DESCRIPTIONS

Table A-2 is a template describing the content of the comprehensive architecture description tables that have been prepared. In addition to descriptive information on the architectures, these tables contain a list of the alternatives that were considered, a brief description of the rationale for the chosen architecture, enabling assumptions that were made to allow further progress, the analyses required to resolve the assumptions, and a list of the requirements that have been allocated to the architectures.

Figure A-4.

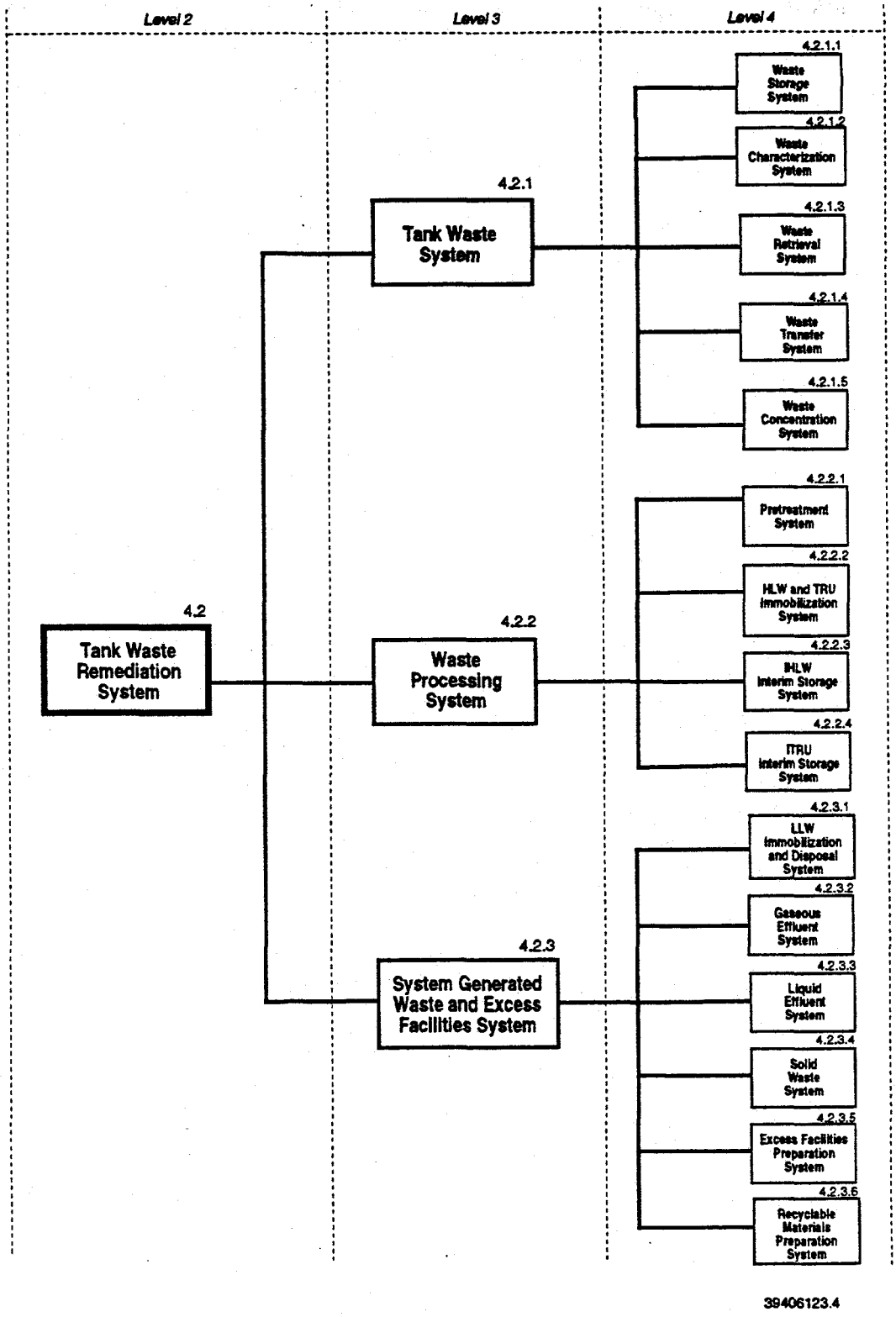

Level 2
Level 3
Level 4
4.2
Tank Waste Remediation System
4.2.1
Tank Waste System
4.2.2
Waste Processing System
4.2.3
System Generated Waste and Excess Facilities System
4.2.1.1
Waste Storage System
4.2.1.2
Waste Characterization System
4.2.1.3
Waste Retrieval System
4.2.1.4
Waste Transfer System
4.2.1.5
Waste Concentration System
4.2.2.1
Pretreatment System
4.2.2.2
HLW and TRU Immobilization System
4.2.2.3
IHLW Interim Storage System
4.2.2.4
ITRU Interim Storage System
4.2.3.1
LLW Immobilization and Disposal System
4.2.3.2
Gaseous Effluent System
4.2.3.3
Liquid Effluent System
4.2.3.4
Solid Waste System
4.2.3.5
Excess Facilities Preparation System
4.2.3.6
Recyclable Materials Preparation System
39406123.4

Table A-2.

I. ARCHITECTURE ID NUMBER

A unique identification number for each architecture of the TWRS architecture tree. As indicated, the numbering scheme is based on using a 4.2 at the top level of the TWRS tree, a 4.2.i at the second level, and a 4.2.i.j at the third level and so forth.

II. ARCHITECTURE TITLE

A short description used to identify the architecture.

III. ARCHITECTURE DEFINITION

A brief description of the architecture (system, element, or component) that will satisfy some or all of the TWRS requirements.

IV. Alternatives Considered

A list and short description of the alternative architectures that were considered to satisfy a set of TWRS requirements.

V. Rationale for Selection

A short description of the basis for selection a specific architecture.

VI. Enabling Assumptions

Assumed architectural solutions to enable further functional decomposition. These assumptions necessitate additional analyses to determine impacts on the program.

VII. Required Analyses

A list of analyses that need to be conducted in order to either further justify the selection of a specific architecture or to resolve outstanding questions and/or issues prior to further functional decomposition.

VIII. Requirements Satisfied

A list of the requirements satisfied by the selected architecture. Each requirement (constraint, performance or expected performance) allocated to a function or interface must be allocated to at least one architectural components.

APPENDIX B

GENERAL REQUIREMENTS APPLICABLE TO TANK FARMS

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APPENDIX B

1.0 GENERAL REQUIREMENTS

In addition to the requirements allocated to specific functions, as identified in the document, the following general requirements shall apply to SST leakage detection and monitoring. They are included here as general requirements since they would apply to design, development and deployment of any system within the Hanford tank farms, regardless of function. The following table shows the general requirements discussed in this Appendix.

Table B-1. SST Leakage Detection and Monitoring General Requirements.

Requirement	Subject		
10CFR835	Occupational Radiation Protection		
29CFR1910	Occupational Safety and Health Stds.		
ASME NQA-1	Quality Assurance		
DOE-RL RLID 5480.7	Fire Protection		
DOE-RL RLIP 5400.10	Environmental Protection		
DOE-RL RLIP 5480.10	Industrial Hygiene Program		
DOE-RL5480.1A	ES&H		
DOE-RL5480.4C	ES&H		
DOE-RL6430.1C	General Design		
DOE5400.1	Environmental Protection		
DOE5480.10	Industrial Hygiene Program		
DOE5480.28	Natural Phenomena Hazards Mitigation		
DOE5480.4	ES&H		
DOE5480.7A	Fire Protection		
DOE6430.1A	General Design		
PL 101-510	Safety Measures - Watch List Tanks		
WAC 246-247	Radiation Protection - Air Emissions		
WHC-CM-7-5	Environmental Compliance		
WHC-EP-0063	Solid Waste Acceptance Criteria		

1.1 DESIGN REQUIREMENTS

The design of systems, structures, and components shall be in accordance with DOE Order 6430.1A, *General Design Criteria*, except where formal criteria deviations are approved by the cognizant DOE authority. The requirements of the "-99" Sections and of Division 13 of that order, as applied to nonreactor nuclear facilities and radioactive liquid waste facilities, are applicable.

The design of systems, structures, and components shall comply with the requirements of RL Implementing Procedure (RLIP) 6430.1C, *Hanford Plant Standards (HPS) Program*, including but not limited to Standard Design Criteria specifically referenced in this document.

Systems, structures, and components important to safety shall be designed to withstand the effects of natural phenomena, including seismic, wind, and missile events. A graded approach to applying natural phenomena criteria shall be employed as described in DOE Order 5480.28, *Natural Phenomena Hazards Mitigation*, and Hanford Plant Standards, Standard Design Criteria HPS-SDC-4.1, Revision 11, *Design Loads for Facilities*.

Energy conservation shall be considered in the selection of components using the criteria given in DOE Order 6430.1A, with the objective to minimize consumption of nonrenewable energy sources and to encourage the use of renewable energy sources.

Systems, facilities, and services shall be designed for year-round operation.

Existing Site utilities shall be used to the maximum extent practicable.

1.2 SAFETY REQUIREMENTS

Structures, systems, and components are categorized into safety classes, as defined in WHC-CM-1-3, *Management Requirements and Procedures*, MRP 5.46, "Safety Classification of Systems, Components and Structures." The safety classes for systems, structures, and components will be determined during a Hazard Analysis and Preliminary Safety Evaluation.

The design of systems, structures, and components shall ensure that a single failure does not result in the loss of capability of a safety class system to accomplish its required safety functions. To protect against single failures, the design shall include appropriate redundancy and shall consider diversity to minimize the possibility of concurrent common-mode failures of redundant items.

Personnel exposure to radiation and hazardous substances shall be mitigated by employing the ALARA process, which incorporates shielding and design configuration. Shielding shall be provided in accordance with the exposure limits of DOE Orders 5400.5, *Radiation*

Protection of the Public and the Environment, and 5480.11, *Radiation Protection for Occupational Workers*.

Equipment and facilities shall be designed in accordance with the safety requirements of the following:

10 CFR 835, *Occupational Radiation Protection*

29 CFR 1910, *Occupational Safety and Health Standards*

RL Order 5480.1A, *Environmental, Safety, and Health Program for Department of Energy Operations for Richland Operations*

DOE Order 5480.4, *Environmental Protection, Safety, and Health Protection Standards*

RL Order 5480.4C, *Environmental Protection, Safety, and Health Protection Standards for RL*

DOE Order 5480.7A, *Fire Protection*

RL Implementing Directive (RLID) 5480.7, *Fire Protection*

DOE Order 5480.10, *Contractor Industrial Hygiene Program*

RLIP 5480.10, *Industrial Hygiene Program*

1.3 QUALITY ASSURANCE REQUIREMENTS

A project-specific Quality Assurance Program Plan (QAPP) shall be developed during Conceptual Design of any project implemented systems and approved/released prior to definitive design. The QAPP implements the quality criteria of DOE Order 5700.6C, *Quality Assurance*, through the selective and judicious use of ASME NQA-1, *Quality Assurance Program Requirements for Nuclear Facilities*. The quality program shall provide for a graded approach to the selective application of those active requirements. The basis for establishing that graded approach is the safety classification assigned to systems, structures, and components as described in Section 1.2 above.

Quality Assurance (QA)/Quality Control (QC) activities for all contractors involved in design, construction, inspection, testing and acceptance shall be executed in accordance with the QAPP. The QAPP shall be used by any design contractors to develop verification criteria in design documents, (drawings, specifications, test procedures), and to define QA interfaces for specific requirements and responsibilities on the project.

1.4 ENVIRONMENTAL REQUIREMENTS

The project shall comply with the requirements of DOE Order 5400.1, *General Environmental Protection Program*, as implemented by RLIP 5400.1, *General Environmental Protection Program*, and with the requirements of WHC-CM-7-5, *Environmental Compliance*.

The following paragraphs identify potential regulatory permits, approvals, and/or requirements applicable to installation and operation of leak detection and monitoring equipment within the SSTs or outside of the SSTs.

NEPA Documentation - Title 10, CFR 1021

A NEPA review will be required for all proposed actions at the Hanford Site. Documentation of the completed NEPA review process could include an EIS, an EA or a CX. The EIS is required for proposed actions that could significantly affect the quality of the human environment. In cases where the need for an EIS is uncertain, an EA is prepared. A CX is issued by RL if the proposed action clearly would have no significant impact on the quality of the human environment. However, any action determined categorically excludable must be documented.

State Environmental Policy Act (SEPA) - WAC 197-11

Any action requiring a permit or license approval will require a *State Environmental Policy Act* (SEPA) evaluation. SEPA applies to any project or proposal that meets the definition of an "action" in the SEPA rules. The SEPA rules define an "action" in WAC 197-11-704 as being either project or non-project actions. Project actions involve a decision on a specific project, such as a construction or management activity located in a defined geographic area. Projects are limited to Ecology's decision to license, fund, or undertake any action that will directly modify the environment.

SEPA requirements are triggered when a covered action is proposed that requires permit or license approval. For the purposes of constructing a leakage detection and monitoring system, Ecology will be the lead agency. The SEPA compliance must be completed before Ecology makes a decision on a permit or license, and a SEPA checklist must accompany the permit or license when transmitted to Ecology for approval. A permit or license may be conditioned or denied based upon information contained in the SEPA checklist or subsequent SEPA documentation. Compliance with SEPA is required for covered actions in addition to the normal permits or approvals that may be required for a given project. A standard SEPA checklist is provided in WAC 197-11-960.

Controls for New Sources of Toxic Air Pollutants (TAPs) - WAC 173-460

The WAC 173-460 limits emissions of approximately 690 toxic air pollutants (TAPs). An owner or operator of a facility that will be a new TAP source is required to submit a notice of construction to Ecology to allow for a new source review. This notice of construction and new source review will apply only to the new emissions unit and the TAPs emitted from that unit. These regulations require emissions of TAPs to be quantified in such detail as to determine compliance with the rule's provisions. After emissions have been quantified, a comparison of those TAP emissions that are either increased or where there were previously no emissions from the source is made against the small quantity emission rates. If the emission rate of the TAP is less than the small quantity emission rate a notice of construction is not required. However, a notice of construction is required when the emission rate is above the associated small quantity emission rate.

The WAC 173-460 regulations also specify the level of control technology that must be implemented, depending on whether the sources are modifications to exiting units or new sources. For existing sources, only reasonably available control technology for toxics (T-RACT) is required. However, best available control technology for toxics (T-BACT) is required for increases in emissions from specified new sources. The notice of construction, including the determination of T-BACT, must be approved by Ecology before beginning construction of the new source.

National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 61, Subpart H

Radionuclides were designated as hazardous air pollutants in Section 112 of the *Clean Air Act* (CAA) on December 27, 1979, and EPA promulgated standards for radionuclide emissions on February 6, 1985. Therefore, radionuclide air emissions associated with full scale construction or operation of an underground barrier system will be regulated under 40 CFR 61, Subpart H, "National Emission Standards for Hazardous Air Pollutants (NESHAPs) of Radionuclides Other Than Radon from Department of Energy Facilities. "Any new stationary source of radionuclide emissions is subject to a preconstruction review and approval by the EPA, Region 10. Also, any new physical or operational activity that will provide any increase in potential emissions of radionuclides is defined as a modification that also may require approval.

Radiation Protection--Air Emissions (RAEP), WAC 246-247

The State of Washington Department of Health (DOH), Air Emissions and Defense Waste Section is authorized to implement regulations regarding radionuclide emissions from DOE facilities. According to WAC 246-247-050, the owner or operator of each source of airborne radionuclide emissions, including DOE Facilities, shall register the source with the department. Upon a determination that registration of a particular source meets Ecology and DOH regulations, the DOH will issue a permit authorizing the emission source with such

appropriate terms and limitations. Permits are required by WAC 246-247-060 for the release of radionuclides to the ambient air.

According to WAC 246-247-070, construction shall not begin on any new source that is required to be registered, until a notice of construction has been approved. The construction, installation or establishment of a new regulated source of emissions shall utilize best available radionuclide control technology (BARCT).

Air Operating Permit - WAC 173-401

WAC 173-401 establishes the elements of a comprehensive Washington State air operating permit program consistent with the requirements of Title V of the Federal Clean Air Act. A sitewide permit is required for the Hanford facilities. This permit will address both radioactive and nonradioactive airborne emissions from all emission units that are above the listed threshold limits defined as significant under the Act. The airborne emissions include, but are not limited to, criteria pollutants and hazardous air pollutants (including radionuclides). In this regulation, Ecology also has established thresholds for regulated pollutants below which emissions would be considered insignificant for the purposes of the operating permit program. Ecology has proposed new sections to Chapter 173-401 to define IEUs and activities. Categorically exempt units/activities may be omitted from the permit. Other IEU items/activities must be listed on the permit, but are exempt from the administrative requirements of the permit.

The permit will establish emission limits and conditions of operation restrictions for major sources on the Hanford Site. If a new NOC is required and an emission unit becomes operational after the permit is issued by the state, a permit revision will be required within twelve months after commencing operation. This application for modification shall be prepared in accordance with WAC 173-401-725. The NOC and permit modification can be sought concurrently. Any NOC application and associated documentation should be retained for future use in the Air Emissions Inventory that will be supporting the preparation of the Title V Air Operating Permit application.

State Waste Discharge Permit (SWDP) Program, WAC 173-216

A SWDP is required before waste materials from industrial, commercial, and municipal operations are discharged into ground and surface waters of the state and into municipal sewerage systems. An SWDP is not required for discharges of pollutants into navigable waters covered by an NPDES permit program or for injection of fluids through wells, which is regulated by the Underground Injection Control Program.

Dangerous Waste Regulations - WAC 173-303; 40 CFR 264, 265, 270

The Hanford Site SSTs currently are operating under interim status. The U.S. Environmental Protection Agency (EPA) has determined that any unit that was in existence on the effective date of the RCRA regulations (November 19, 1980) and that filed a

RCRA Section 3010 notification would be treated as if it had been issued a permit. These types of facilities are referred to as interim status facilities. Because the SSTs do not meet current regulatory requirements for dangerous waste treatment and storage tanks, they will be closed under interim status and a Part B permit required by WAC 173-303-806 will not be developed.

The WAC 173-303 establishes the requirements applicable to generators, transporters, and owners or operators of treatment, storage, and disposal (TSD) units. The WAC 173-303-400(3)(a) specifies that the requirements for interim status TSD units shall be those requirements set forth by the EPA in 40 CFR 265, Subparts F through R in the *Code of Federal Regulations* (CFR). Additionally, interim status TSD units must comply with Washington State's land disposal restrictions established in WAC 173-303-140 and the facility requirements in WAC 173-303-280 through 173-303-440.

Listed waste contaminated environmental media that is excavated or generated during installation of a leakage detection and monitoring system will require management as a listed dangerous waste unless Ecology determines that the soil in question does not contain listed waste constituents above residential health-based standards. To get a contained-in determination, a sampling and analysis plan must be developed and approved by Ecology and samples of sufficient quantity and quality must be obtained to characterize the media in question. Ecology will use the data obtained from the sampling efforts to make a contained-in determination. The management of listed waste contaminated environmental media and any other secondary waste generated during installation of leak detection and monitoring equipment must be carefully considered prior to generation. It is anticipated that any type of leak detection and monitoring equipment selected will generate a certain amount of secondary waste, in the form of contaminated media and others, that will require management as a dangerous waste. Minimizing this waste generation will be vital from a cost and scheduling perspective.

Cultural Resource Review (CRR) - 36 CFR 800

A CRR shall be performed before initiating any potential surface-disturbing activities onsite, or if any modifications are planned for any facility with the potential for inclusion on the National Register of Historic Places.

Excavation Permit - 36 CFR 800

An excavation permit is required before initiating any potential surface-disturbing onsite activities.

Endangered Species Approval - 50 CFR 402.6

A site assessment should be made to determine whether any planned activities have the potential to disturb any critical habitat used by threatened and endangered species. The request form to perform this assessment is located on Jetforms.

Preoperational Monitoring of Facilities, Sites, and Operations - DOE Order 5400.1

Note: For more information see the Environmental Compliance Manual WHC-CM-7-5, Section 5.0, 5.4.2.1.g & h, Section 8.0, 8.5.1.7, and Section 9.0, 9.3.1.3.

An environmental study shall be conducted before startup of a site, facility, or process that has the potential for significant adverse environmental impact. This study should begin not less than one year and preferably two years before startup, so seasonal changes can be evaluated. This study precedes the conceptual design report and can include data acquired in the site selection process, excavation permit process, and NEPA/SEPA process. Mr. A. R. Johnson, 372-3056, of Near Field Monitoring coordinates this work for WHC.

Radiation Protection Standards - DOE Order 5400.5

This DOE Order establishes standards and requirements that must be followed to protect members of the public and environment against undue risk from radiation. The general environmental protection program requirements are established in DOE Order 5400.1. DOE Order 5400.1 requires that all DOE Sites prepare an environmental monitoring plan. DOE/RL 91-50, Environmental Monitoring Plan, includes DOE/EH-0173T, Environmental Regulatory Guide for Radiological Effluent Monitoring and Environmental Surveillance, which provides specific guidance regarding environmental monitoring activities.

1.5 DECONTAMINATION AND DECOMMISSIONING

Existing equipment that is being replaced shall be decommissioned as necessary after the new systems are operational. Abandonment of equipment in place is permissible when that option can be shown to be the best economic and technical approach. Equipment and facilities shall be designed to facilitate decontamination and ultimate decommissioning in accordance with DOE Order 6430.1A.

APPENDIX C

PRELIMINARY RISK-BASED LEAKAGE THRESHOLDS FOR HANFORD SINGLE-SHELL TANKS

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APPENDIX C

1.0 INTRODUCTION AND CONCLUSIONS

This Appendix provides preliminary SST threshold leakage values based on carcinogenic and toxicological risk. The values are considered a first approximation to be used for ongoing evaluation of SST leakage detection and monitoring technologies and will be used to indicate the needed detection level on a tank specific basis. As the evaluation process proceeds, a more detailed evaluation of threshold leakage values will be required in order to establish final acceptance criteria for proposed technologies. Table C1-1 provides a summary of the threshold values and their bases. Figures C1-1, -2 and -3 show the values in a convenient graphical format in ranges from the lowest value to the highest value.

The threshold leakage values were developed by first analyzing three different cases with varying assumptions - referred to herein as Case 1, Case 2 and Case 3. Case 3 was finally chosen as the basis for the values since its assumptions were considered most appropriate. The data from Cases 1 and 2 are included herein for information and comparison only. Section 2 of this appendix provides a detailed discussion of the analysis, selection of values and supporting rationale.

The data supports the following conclusions regarding SST leakage detection and monitoring technology:

- The TWRS baseline approach to SST leakage detection and monitoring is likely acceptable to support continued waste *storage* activities. Interim stabilization has been completed on 109 of the 149 SSTs by means of saltwell pumping, supernate pumping or through administrative controls. Ongoing storage operations should have no measurable affect on the potential for leakage or on tank containment integrity.

- Enhancements to the TWRS baseline detection and monitoring capability may be appropriate to support waste *retrieval* activities. The required detection and monitoring capability will depend heavily on closure objectives and programmatic cost-benefit objectives for the SSTs.

- The tank closure strategy should include development of leakage thresholds based on a more comprehensive risk assessment and a decision logic to be implemented if/when the established thresholds are exceeded.

- Large variations in inventory exist between tanks and sample data is limited. The TWRS remediation strategy should be adaptable to the changes that will occur as new tanks or groups of tanks are remediated.

- Final leakage threshold values should be based on other considerations not addressed in the current evaluation:

  1. Further analyses of drainable liquid samples to reduce uncertainty and conservatism.

  2. The inventories of constituents of concern (COC) associated with other sources (e.g., residual waste in tanks following retrieval, waste that has advected into the SST concrete structure, and past leaks) to better establish the risk associated with individual tank farms.

  3. The potential presence of overlapping contaminant plumes from other sources, including nearby tank farms, cribs, trenches, and ponds, to help establish the appropriate allocation of risk from each source.

Table C1-1. Summary of Preliminary SST Threshold Leakage Values

		Combined (Note 1)		Carcinogenic (R, Note 2)		Toxicant (HI, Note 3)	
	Total	Threshold Leakage		Threshold Leakage		Threshold Leakage	
Tank	Vol. (L)	L	Gal.	L	Gal.	L	Gal.
A-101	3.61E+06	3.83E+04	1.01E+04	5.23E+07	1.38E+07	3.83E+04	1.01E+04
A-102	1.55E+05	1.27E+04	3.35E+03	1.27E+04	3.35E+03	8.60E+04	2.27E+04
A-103	1.40E+06	2.19E+04	5.77E+03	2.19E+04	5.77E+03	5.86E+04	1.55E+04
A-104	1.06E+05	3.18E+04	8.39E+03	9.09E+05	2.40E+05	3.18E+04	8.39E+03
A-105	7.19E+04	3.31E+04	8.75E+03	3.31E+04	8.75E+03	1.28E+05	3.39E+04
A-106	4.73E+05	3.11E+04	8.22E+03	3.11E+04	8.22E+03	6.67E+04	1.76E+04
AX-101	2.83E+06	3.91E+04	1.03E+04	7.00E+07	1.85E+07	3.91E+04	1.03E+04
AX-102	1.48E+05	4.26E+04	1.13E+04	3.68E+08	9.71E+07	4.26E+04	1.13E+04
AX-103	4.24E+05	4.83E+04	1.28E+04	1.70E+05	4.49E+04	4.83E+04	1.28E+04
AX-104	2.65E+04	1.02E+04	2.71E+03	1.02E+04	2.71E+03	1.34E+04	3.54E+03
B-101	4.28E+05	3.18E+04	8.40E+03	9.29E+05	2.45E+05	3.18E+04	8.40E+03
B-102	1.21E+05	9.71E+04	2.57E+04	3.95E+05	1.04E+05	9.71E+04	2.57E+04
B-103	2.23E+05	1.27E+05	3.36E+04	1.71E+05	4.52E+04	1.27E+05	3.36E+04
B-104	1.40E+06	3.00E+05	7.94E+04	2.56E+06	6.77E+05	3.00E+05	7.94E+04
B-105	1.16E+06	7.64E+04	2.02E+04	3.66E+05	9.66E+04	7.64E+04	2.02E+04
B-106	4.43E+05	6.62E+04	1.75E+04	1.44E+06	3.80E+05	6.62E+04	1.75E+04
B-107	6.25E+05	3.06E+04	8.10E+03	2.32E+05	6.12E+04	3.06E+04	8.10E+03
B-108	3.56E+05	2.82E+04	7.44E+03	5.34E+04	1.41E+04	2.82E+04	7.44E+03
B-109	4.81E+05	6.01E+04	1.59E+04	2.06E+05	5.43E+04	6.01E+04	1.59E+04
B-110	9.31E+05	1.47E+04	3.87E+03	1.47E+04	3.87E+03	3.91E+04	1.03E+04
B-111	8.97E+05	1.02E+04	2.71E+03	1.02E+04	2.71E+03	2.84E+04	7.50E+03
B-112	1.25E+05	1.02E+04	2.71E+03	1.02E+04	2.71E+03	2.23E+04	5.90E+03
B-201	1.10E+05	2.22E+04	5.86E+03	1.10E+05	2.90E+04	2.22E+04	5.86E+03
B-202	1.02E+05	6.56E+04	1.73E+04	3.78E+05	9.97E+04	6.56E+04	1.73E+04
B-203	1.93E+05	1.67E+04	4.41E+03	2.66E+08	7.02E+07	1.67E+04	4.41E+03
B-204	1.89E+05	1.45E+05	3.82E+04	4.97E+09	1.31E+09	1.45E+05	3.82E+04
BX-101	1.63E+05	4.90E+04	1.29E+04	9.14E+05	2.41E+05	4.90E+04	1.29E+04
BX-102	3.63E+05	1.02E+04	2.71E+03	1.02E+04	2.71E+03	4.34E+04	1.15E+04
BX-103	2.50E+05	2.90E+05	7.65E+04	1.09E+06	2.88E+05	2.90E+05	7.65E+04
BX-104	3.75E+05	3.97E+04	1.05E+04	3.97E+04	1.05E+04	5.68E+04	1.50E+04
BX-105	1.93E+05	4.32E+04	1.14E+04	4.32E+04	1.14E+04	6.84E+04	1.81E+04
BX-106	1.74E+05	1.02E+04	2.71E+03	1.02E+04	2.71E+03	4.75E+04	1.25E+04
BX-107	1.31E+06	6.32E+04	1.67E+04	1.13E+06	2.99E+05	6.32E+04	1.67E+04
BX-108	9.84E+04	6.37E+05	1.68E+05	2.10E+06	5.56E+05	6.37E+05	1.68E+05
BX-109	7.31E+05	3.85E+04	1.02E+04	4.79E+05	1.27E+05	3.85E+04	1.02E+04
BX-110	7.49E+05	1.18E+04	3.13E+03	1.18E+04	3.13E+03	3.64E+04	9.61E+03
BX-111	7.99E+05	1.26E+04	3.33E+03	1.26E+04	3.33E+03	5.45E+04	1.44E+04
BX-112	6.25E+05	8.10E+04	2.14E+04	3.50E+05	9.26E+04	8.10E+04	2.14E+04
BY-101	1.39E+06	1.60E+04	4.24E+03	1.60E+04	4.24E+03	2.31E+04	6.10E+03
BY-102	1.29E+06	1.02E+04	2.71E+03	1.02E+04	2.71E+03	6.58E+04	1.74E+04
BY-103	1.51E+06	3.91E+04	1.03E+04	3.91E+04	1.03E+04	6.91E+04	1.83E+04
BY-104	1.54E+06	1.76E+04	4.65E+03	1.76E+04	4.65E+03	2.32E+04	6.14E+03

Table C1-1. Summary of Preliminary SST Threshold Leakage Values (Cont'd)

		Combined (Note 1)		Carcinogenic (R, Note 2)		Toxicant (HI, Note 3)	
	Total	Threshold Leakage		Threshold Leakage		Threshold Leakage	
Tank	Vol. (L)	L	Gal.	L	Gal.	L	Gal.
BY-105	1.90E+06	4.58E+04	1.21E+04	1.37E+05	3.61E+04	4.58E+04	1.21E+04
BY-106	2.43E+06	5.20E+04	1.37E+04	5.20E+04	1.37E+04	6.59E+04	1.74E+04
BY-107	1.01E+06	2.34E+04	6.17E+03	2.34E+04	6.17E+03	2.73E+04	7.21E+03
BY-108	8.63E+05	2.01E+04	5.31E+03	2.01E+04	5.31E+03	2.42E+04	6.40E+03
BY-109	1.60E+06	5.04E+04	1.33E+04	5.04E+04	1.33E+04	8.55E+04	2.26E+04
BY-110	1.50E+06	1.73E+04	4.57E+03	1.73E+04	4.57E+03	2.35E+04	6.22E+03
BY-111	1.74E+06	2.00E+04	5.28E+03	2.00E+04	5.28E+03	2.44E+04	6.45E+03
BY-112	1.10E+06	6.09E+04	1.61E+04	6.09E+04	1.61E+04	7.55E+04	1.99E+04
C-101	3.33E+05	2.99E+04	7.90E+03	2.99E+04	7.90E+03	3.17E+04	8.37E+03
C-102	1.60E+06	1.87E+05	4.94E+04	2.86E+05	7.57E+04	1.87E+05	4.94E+04
C-103	7.38E+05	1.13E+05	3.00E+04	1.13E+05	3.00E+04	3.02E+05	7.98E+04
C-104	1.12E+06	4.68E+04	1.24E+04	1.59E+05	4.21E+04	4.68E+04	1.24E+04
C-105	5.11E+05	1.34E+04	3.54E+03	1.81E+04	4.78E+03	1.34E+04	3.54E+03
C-106	8.67E+05	1.85E+04	4.89E+03	3.35E+04	8.86E+03	1.85E+04	4.89E+03
C-107	1.04E+06	5.56E+04	1.47E+04	5.56E+04	1.47E+04	1.06E+05	2.80E+04
C-108	2.50E+05	1.37E+05	3.62E+04	2.48E+06	6.55E+05	1.37E+05	3.62E+04
C-109	2.50E+05	6.02E+04	1.59E+04	5.66E+05	1.50E+05	6.02E+04	1.59E+04
C-110	7.08E+05	6.78E+04	1.79E+04	6.78E+04	1.79E+04	9.48E+04	2.50E+04
C-111	2.16E+05	1.02E+05	2.69E+04	5.16E+05	1.36E+05	1.02E+05	2.69E+04
C-112	3.94E+05	6.91E+04	1.83E+04	7.05E+05	1.86E+05	6.91E+04	1.83E+04
C-201	7.57E+03	7.09E+04	1.87E+04	5.22E+07	1.38E+07	7.09E+04	1.87E+04
C-202	3.79E+03	1.32E+06	3.48E+05	1.32E+06	3.48E+05	5.98E+08	1.58E+08
C-203	1.89E+04	6.59E+07	1.74E+07	6.59E+07	1.74E+07	2.98E+10	7.89E+09
C-204	1.14E+04	8.53E+05	2.25E+05	1.47E+09	3.87E+08	8.53E+05	2.25E+05
S-101	1.62E+06	2.62E+04	6.92E+03	3.71E+04	9.79E+03	2.62E+04	6.92E+03
S-102	2.08E+06	4.36E+04	1.15E+04	4.15E+09	1.10E+09	4.36E+04	1.15E+04
S-103	9.31E+05	1.08E+05	2.86E+04	2.68E+09	7.07E+08	1.08E+05	2.86E+04
S-104	1.11E+06	2.87E+04	7.58E+03	8.81E+04	2.33E+04	2.87E+04	7.58E+03
S-105	1.73E+06	3.13E+04	8.27E+03	2.20E+05	5.81E+04	3.13E+04	8.27E+03
S-106	1.81E+06	3.05E+04	8.06E+03	1.28E+05	3.38E+04	3.05E+04	8.06E+03
S-107	1.42E+06	4.06E+04	1.07E+04	1.43E+07	3.77E+06	4.06E+04	1.07E+04
S-108	2.29E+06	4.65E+04	1.23E+04	5.17E+04	1.37E+04	4.65E+04	1.23E+04
S-109	1.92E+06	1.51E+04	3.99E+03	1.51E+04	3.99E+03	2.84E+04	7.50E+03
S-110	1.48E+06	1.70E+04	4.50E+03	1.70E+04	4.50E+03	2.96E+04	7.83E+03
S-111	2.26E+06	3.49E+04	9.22E+03	3.49E+04	9.22E+03	3.92E+04	1.04E+04
S-112	1.98E+06	1.02E+04	2.71E+03	1.02E+04	2.71E+03	2.40E+04	6.35E+03
SX-101	1.73E+06	1.34E+05	3.54E+04	3.27E+05	8.63E+04	1.34E+05	3.54E+04
SX-102	2.06E+06	2.61E+04	6.89E+03	6.76E+06	1.79E+06	2.61E+04	6.89E+03
SX-103	2.47E+06	1.02E+04	2.71E+03	1.02E+04	2.71E+03	1.36E+04	3.59E+03
SX-104	2.32E+06	2.30E+04	6.08E+03	3.59E+04	9.48E+03	2.30E+04	6.08E+03
SX-105	2.59E+06	1.72E+04	4.54E+03	1.72E+04	4.54E+03	2.94E+04	7.77E+03
SX-106	2.03E+06	3.15E+04	8.31E+03	3.15E+04	8.31E+03	1.53E+05	4.03E+04
SX-107	3.94E+05	7.93E+04	2.10E+04	1.96E+07	5.17E+06	7.93E+04	2.10E+04
SX-108	3.07E+05	3.18E+04	8.40E+03	1.53E+07	4.05E+06	3.18E+04	8.40E+03
SX-109	9.46E+05	3.18E+04	8.40E+03	8.65E+07	2.29E+07	3.18E+04	8.40E+03
SX-110	2.35E+05	3.18E+04	8.40E+03	1.18E+07	3.11E+06	3.18E+04	8.40E+03
SX-111	4.73E+05	7.09E+04	1.87E+04	2.34E+07	6.19E+06	7.09E+04	1.87E+04
SX-112	3.48E+05	3.18E+04	8.40E+03	1.24E+06	3.26E+05	3.18E+04	8.40E+03
SX-113	9.84E+04	1.02E+04	2.71E+03	1.02E+04	2.71E+03	3.18E+04	8.39E+03
SX-114	6.85E+05	3.18E+04	8.40E+03	2.28E+07	6.03E+06	3.18E+04	8.40E+03
SX-115	4.54E+04	1.02E+04	2.70E+03	1.02E+04	2.70E+03	3.15E+04	8.32E+03
T-101	3.86E+05	3.99E+04	1.05E+04	4.26E+04	1.13E+04	3.99E+04	1.05E+04
T-102	1.21E+05	7.42E+04	1.96E+04	3.77E+05	9.95E+04	7.42E+04	1.96E+04
T-103	1.02E+05	6.49E+04	1.72E+04	6.49E+04	1.72E+04	9.19E+04	2.43E+04
T-104	1.68E+06	7.92E+04	2.09E+04	2.42E+06	6.39E+05	7.92E+04	2.09E+04
T-105	3.63E+05	1.33E+05	3.52E+04	1.85E+07	4.88E+06	1.33E+05	3.52E+04
T-106	7.95E+04	2.94E+04	7.78E+03	9.64E+05	2.55E+05	2.94E+04	7.78E+03
T-107	6.81E+05	3.30E+05	8.71E+04	1.77E+08	4.68E+07	3.30E+05	8.71E+04
T-108	1.67E+05	1.20E+05	3.17E+04	1.77E+06	4.67E+05	1.20E+05	3.17E+04
T-109	2.20E+05	1.11E+05	2.94E+04	4.86E+05	1.28E+05	1.11E+05	2.94E+04
T-110	1.43E+06	2.08E+05	5.49E+04	6.89E+08	1.82E+08	2.08E+05	5.49E+04
T-111	1.71E+06	2.85E+08	7.52E+07	2.85E+08	7.52E+07	4.00E+08	1.06E+08
T-112	2.54E+05	1.68E+05	4.45E+04	1.29E+07	3.41E+06	1.68E+05	4.45E+04
T-201	1.10E+05	1.10E+05	2.90E+04	1.10E+05	2.90E+04	1.74E+13	4.58E+12
T-202	7.95E+04	1.57E+05	4.15E+04	6.74E+10	1.78E+10	1.57E+05	4.15E+04
T-203	1.32E+05	1.35E+05	3.56E+04	1.12E+10	2.97E+09	1.35E+05	3.56E+04
T-204	1.44E+05	1.00E+05	2.65E+04	7.50E+09	1.98E+09	1.00E+05	2.65E+04
TX-101	3.29E+05	3.18E+04	8.40E+03	1.09E+06	2.89E+05	3.18E+04	8.40E+03
TX-102	8.21E+05	3.05E+04	8.07E+03	2.87E+05	7.59E+04	3.05E+04	8.07E+03

Table C1-1. Summary of Preliminary SST Threshold Leakage Values (Cont'd)

		Combined (Note 1)		Carcinogenic (R, Note 2)		Toxicant (HI, Note 3)	
	Total	Threshold Leakage		Threshold Leakage		Threshold Leakage	
Tank	Vol. (L)	L	Gal.	L	Gal.	L	Gal.
TX-103	5.94E+05	7.16E+04	1.89E+04	8.89E+05	2.35E+05	7.16E+04	1.89E+04
TX-104	2.46E+05	2.77E+04	7.32E+03	1.58E+11	4.17E+10	2.77E+04	7.32E+03
TX-105	2.31E+06	6.80E+04	1.80E+04	9.95E+04	2.63E+04	6.80E+04	1.80E+04
TX-106	1.71E+06	3.98E+05	1.05E+05	4.98E+05	1.32E+05	3.98E+05	1.05E+05
TX-107	1.36E+05	6.31E+04	1.67E+04	1.20E+12	3.18E+11	6.31E+04	1.67E+04
TX-108	5.07E+05	2.72E+04	7.18E+03	5.63E+04	1.49E+04	2.72E+04	7.18E+03
TX-109	1.38E+06	1.02E+04	2.71E+03	1.02E+04	2.71E+03	2.24E+04	5.91E+03
TX-110	1.75E+06	2.72E+04	7.19E+03	2.72E+04	7.19E+03	5.03E+04	1.33E+04
TX-111	1.40E+06	8.54E+04	2.26E+04	1.16E+05	3.06E+04	8.54E+04	2.26E+04
TX-112	2.46E+06	7.89E+04	2.08E+04	5.09E+05	1.35E+05	7.89E+04	2.08E+04
TX-113	2.30E+06	8.66E+04	2.29E+04	4.79E+05	1.27E+05	8.66E+04	2.29E+04
TX-114	2.02E+06	2.09E+05	5.53E+04	3.87E+05	1.02E+05	2.09E+05	5.53E+04
TX-115	2.42E+06	1.17E+05	3.10E+04	5.45E+05	1.44E+05	1.17E+05	3.10E+04
TX-116	2.39E+06	4.44E+04	1.17E+04	1.51E+06	3.98E+05	4.44E+04	1.17E+04
TX-117	2.37E+06	6.47E+04	1.71E+04	8.50E+05	2.25E+05	6.47E+04	1.71E+04
TX-118	1.31E+06	1.02E+04	2.71E+03	1.02E+04	2.71E+03	2.19E+04	5.78E+03
TY-101	4.47E+05	3.13E+04	8.26E+03	2.87E+05	7.59E+04	3.13E+04	8.26E+03
TY-102	2.42E+05	1.02E+04	2.71E+03	1.02E+04	2.71E+03	3.56E+04	9.40E+03
TY-103	6.13E+05	5.52E+04	1.46E+04	2.32E+05	6.12E+04	5.52E+04	1.46E+04
TY-104	1.74E+05	7.70E+04	2.03E+04	7.70E+04	2.03E+04	1.06E+05	2.80E+04
TY-105	8.74E+05	8.63E+04	2.28E+04	8.63E+04	2.28E+04	9.54E+04	2.52E+04
TY-106	6.43E+04	2.80E+04	7.39E+03	2.80E+04	7.39E+03	7.09E+04	1.87E+04
U-101	9.46E+04	2.19E+04	5.79E+03	2.19E+04	5.79E+03	1.63E+07	4.32E+06
U-102	1.42E+06	5.35E+04	1.41E+04	1.17E+05	3.09E+04	5.35E+04	1.41E+04
U-103	1.77E+06	3.87E+04	1.02E+04	6.63E+08	1.75E+08	3.87E+04	1.02E+04
U-104	4.62E+05	2.10E+07	5.55E+06	2.10E+07	5.55E+06	3.57E+08	9.44E+07
U-105	1.58E+06	4.11E+04	1.09E+04	2.35E+08	6.20E+07	4.11E+04	1.09E+04
U-106	8.55E+05	4.99E+04	1.32E+04	2.77E+13	7.31E+12	4.99E+04	1.32E+04
U-107	1.54E+06	7.61E+04	2.01E+04	7.61E+04	2.01E+04	1.70E+05	4.48E+04
U-108	1.76E+06	3.68E+04	9.71E+03	1.10E+08	2.91E+07	3.68E+04	9.71E+03
U-109	1.75E+06	1.81E+05	4.79E+04	8.12E+05	2.14E+05	1.81E+05	4.79E+04
U-110	7.04E+05	3.17E+04	8.37E+03	1.63E+06	4.31E+05	3.17E+04	8.37E+03
U-111	1.25E+06	2.92E+04	7.71E+03	2.58E+05	6.82E+04	2.92E+04	7.71E+03
U-112	1.85E+05	2.74E+04	7.25E+03	2.88E+04	7.62E+03	2.74E+04	7.25E+03
U-201	1.89E+04	1.72E+04	4.55E+03	1.72E+04	4.55E+03	2.24E+04	5.91E+03
U-202	1.89E+04	1.72E+04	4.55E+03	1.72E+04	4.55E+03	1.25E+05	3.30E+04
U-203	1.14E+04	1.16E+04	3.06E+03	1.31E+04	3.47E+03	1.16E+04	3.06E+03
U-204	1.14E+04	1.79E+04	4.73E+03	5.14E+04	1.36E+04	1.79E+04	4.73E+03

Notes:

1. The combined threshold leakage values are taken as the minimum of either the Carcinogenic or the Toxicant threshold values shown in the table.

2. The Carcinogenic (R) threshold leakage values are based on the Carcinogenic COCs and the Case 3 analysis method as discussed in Section 2.0 below.

3. The Toxicant or (HI) threshold values are based on the non-carcinogenic COCs and the Case 3 analysis method as discussed in Section 2.0 below.

Figure C1-1. Preliminary SST Threshold Leakage Values

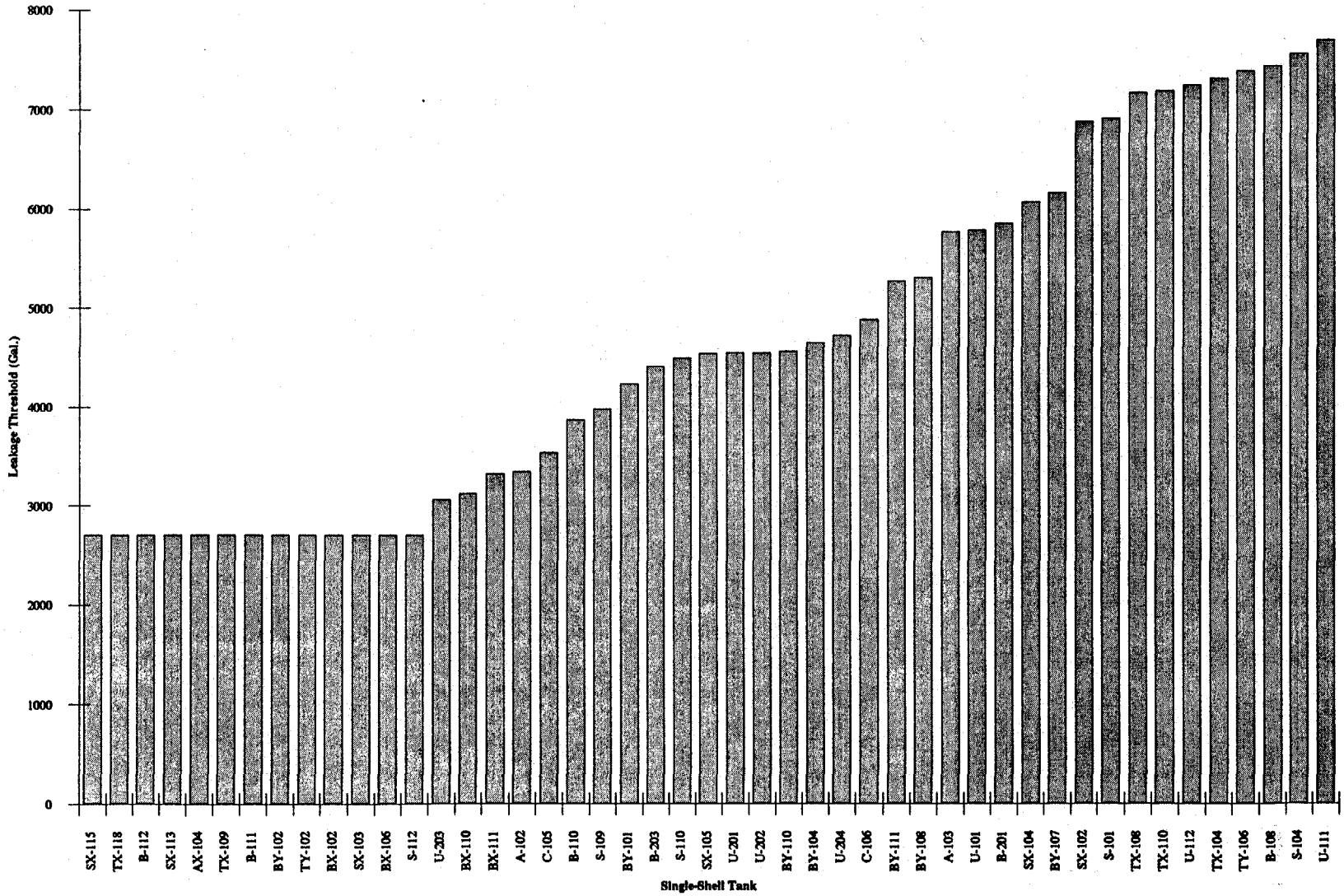


Figure C1-2. Preliminary SST Threshold Leakage Values (Cont'd)

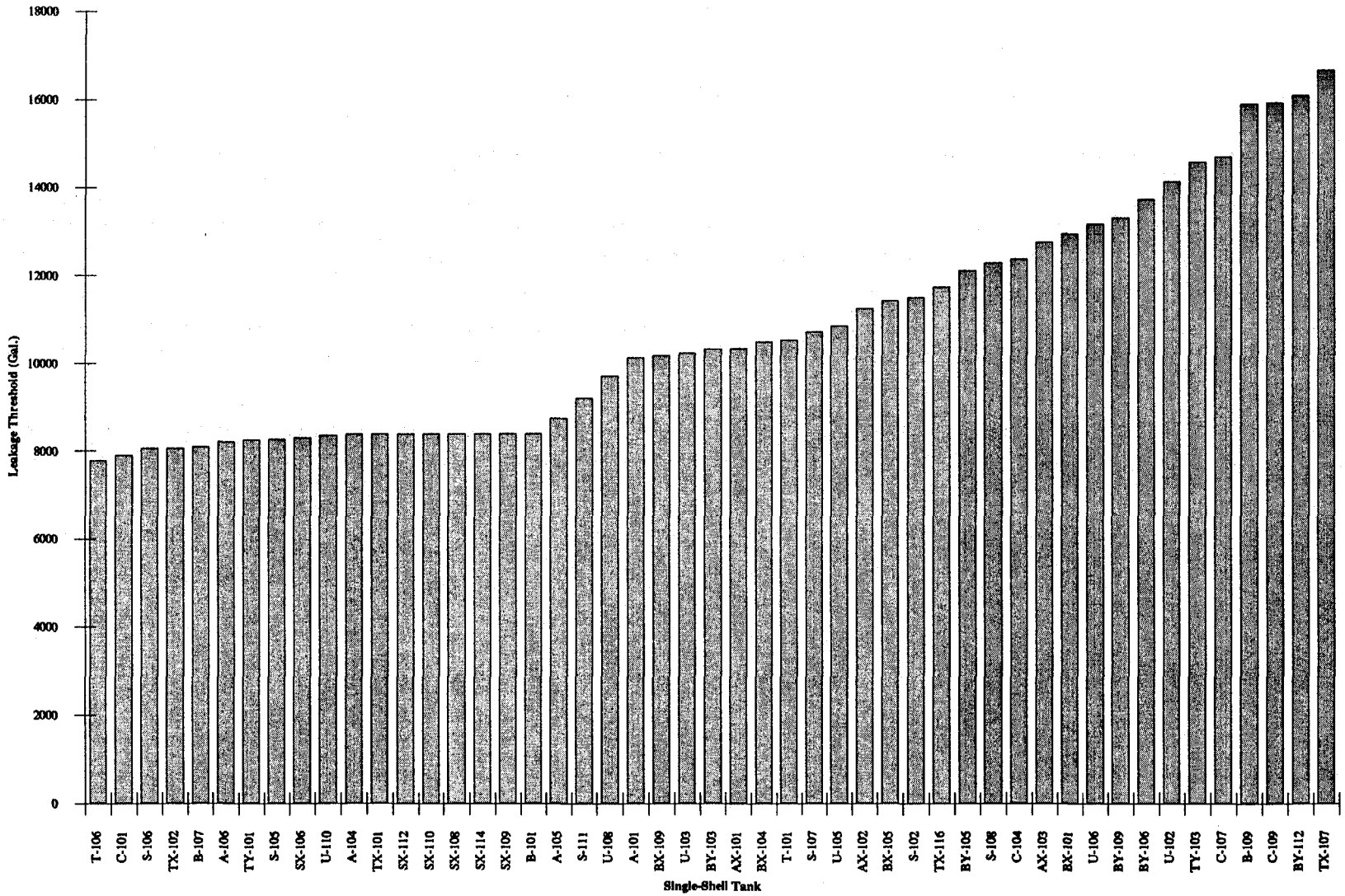
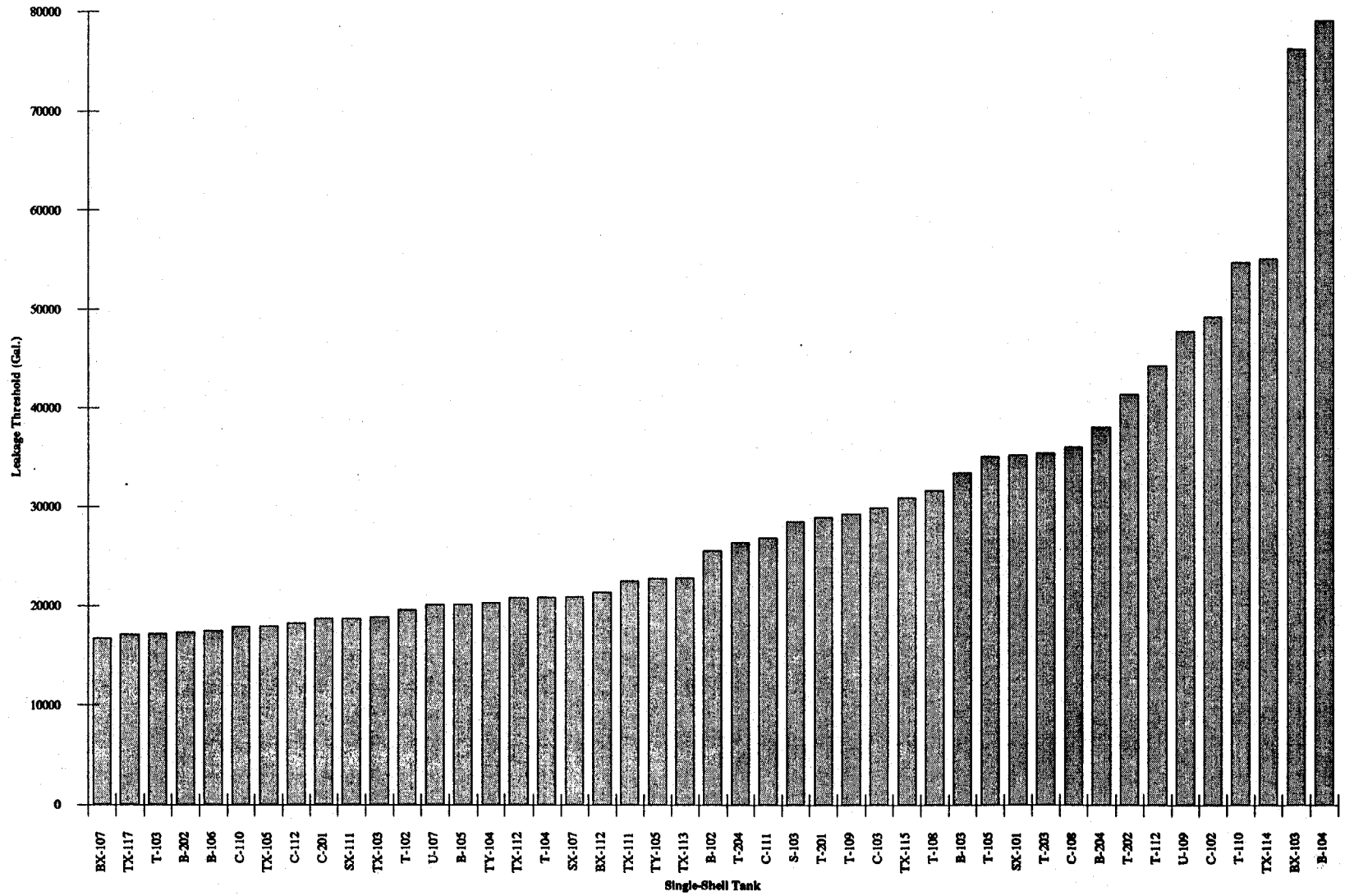


Figure C1-3. Preliminary SST Threshold Leakage Values (Cont'd)



Note: Tanks BX-108, C-202, C-203, C-204, T-107, T-111, and TX-106 were not included on the graph since their leakage thresholds are greater than 80,000 gallons.

2.0 ANALYTICAL METHOD, BASES AND RATIONALE

The general approach to the analyses documented herein involved the following primary steps:

- Establish the constituents of concern (COC) from a risk standpoint.

- Calculate a solubility-controlled release value for each COC based on the best data available for each tank. Solubility (S_i) was used as the parameter to determine the mass (m_i) of a given COC($_i$) that would be released from a tank based on a unit volume (V_u) of leakage:

$$S_i = m_i/V_u$$

- Using factors for each COC indicating the resulting risk (R or HI) per unit mass (m_i) of material released, calculate a volume-based risk factor for each COC that is dependant on its solubility (S_i) in a given tank:

$$(R,HI)/V_u = [(R,HI)/m_i]xS_i$$

- Sum the volume-based risk factors for each COC and divide this number into an overall risk threshold for a given tank. This value indicates the volume that could be released from a tank before the threshold was exceeded. For carcinogens, this value was set at 1.0E-06 (R - lifetime occurrences); for non-carcinogens, the value was set at 1.0E-02 (HI). These values are upper limits of risk generally accepted in environmental cleanup actions.

The approach was conducted for three cases involving varying assumptions:

- **Case 1** analyzed the complete set of COCs with solubility based on tank-specific liquid sample data or a total inventory ratio if no sample data was available.

- **Case 2** analyzed the complete set of COCs with solubility calculated as in Case 1 except that the upper limit of solubility was set equal to the highest value for a tank indicated in the supporting documents. This rationale is considered somewhat less conservative but appropriate.

- **Case 3** analyzed a reduced set of COCs. Some of the COCs were eliminated from consideration due to their very low mobility, as indicated by the adsorption coefficient (K_d). The COCs with higher K_d values will migrate very slowly, and, therefore will not produce a risk impact during the analytical period of performance which is already greater than the 10,000 year value used in most performance assessments. The solubility calculations for the retained set of COCs were the same in Case 3 as those in Case 2.

The threshold values selected were based on Case 3 since it was considered the most appropriate set of assumptions. The following sections provide a more detailed discussion of the analyses along with the detailed results of all three cases.

2.1 Constituents of Concern

The SST waste inventory includes more than 150 chemicals and radionuclides. However, a relatively small subset of the constituents are present in sufficient quantity and are both sufficiently toxic and mobile that they could produce risks to the public via the groundwater pathway that would exceed EPA's general acceptance thresholds. The COCs were developed on this basis and are shown in Table C2-1; the primary source of data was Droppo et al. (1991). This study evaluated risks, based on leakage and transport to groundwater and human health exposure through ingestion and use of groundwater for irrigation. Those constituents determined to result in a potential carcinogenic risk greater than 1.0E-06 or a non-carcinogen hazard index (HI) greater than 1.0 were determined to be COCs. The transport model used in Droppo et al. (1991) assumed a recharge rate of 10 cm/yr (4 in/yr.) which is conservative relative to the assumed TWRS baseline system performance.

The specific risk index values shown in Table C2-1 were derived based on the model and approach as documented in Treat et al. (1994) to analyze the TWRS baseline alternative performance in terms of public risk exposure via the ground-water pathway. The values indicate the potential peak risk to a maximally exposed individual, with key assumptions of a 70 year lifetime and distribution coefficients (K_d) set to zero. It should be noted that the time at which such a peak would occur would be approximately 19,000 years following closure of the tank farms. The assumptions of K_d equal to zero and using the potential for peaks so far in the future as bases for the leakage thresholds is highly conservative for each COC and should be reviewed as the evaluation of leakage detection and monitoring technologies progresses. In addition, the model results used to determine the risk factors (Treat et al., 1994) assumed a tank farm consisting of twelve tanks with average waste composition and geological features typical of the Hanford 200 East and West Areas. Accordingly, the risk factors may be somewhat non-conservative in under certain geologic and inventory conditions. Also, the risk factors do not take into account the potential superposition of contaminant plumes migrating from multiple tank farms and other sources such as cribs, ponds and burial trenches.

The COCs listed in Table C2-1 were included in Cases 1 and 2 of the analysis, except beryllium which was eliminated since the current reports of SST chemical inventories indicate no beryllium present in the tanks. Case 3 of the analysis was based on a reduced set of COCs based on their very low mobility as indicated by their K_d values. The COCs that were eliminated were plutonium, americium, curium, neptunium, niobium, and copper.

Table C2-1. Constituents of Concern

Constituent	Specific Activity Bq/g	Specific Risk Index R/g or HI/g	Adsorption Coefficient (Kd)	Max. Assumed Solubility g/L	Basis Note 5
Radionuclides:					
Americium, Am241	1.27E+11	3.92E-09	8.2	2.91E-04	dl/AX-102
Americium, Am242m	2.99E+16	9.62E-04	8.2	Note 1	
Carbon, C14	1.65E+11	1.36E-06	0.0	6.73E-07	sw
Curium, Cm242	1.22E+14	6.99E-05	8.2	Note 1	
Iodine, I129	6.44E+06	2.52E-13	0.0	1.72E-03	sw
Niobium, Nb93m	1.05E+13	5.18E-04	1.2	Note 1	
Neptunium, Np237	2.61E+07	8.77E-13	3.0	1.98E-01	sw
Plutonium, Pu238	6.33E+11	2.14E-08	10.0	5.85E-06	sw
Plutonium, Pu239	2.30E+09	7.41E-11	10.0	6.09E-02	sn/U-109
Plutonium, Pu240	8.44E+09	Note 2	10.0	Note 2	
Plutonium, Pu241	3.74E+12	7.69E-06	10.0	9.90E-07	sw
Technitium, Tc99	6.29E+08	3.58E-09	0.0	2.70E-02	sn/BY-102
Uranium, U233	3.57E+08	Note 3	0.0		
Uranium, U234	2.32E+08	"	0.0		
Uranium, U235	7.99E+04	"	0.0		
Uranium, U238	1.24E+04	3.29E-15	0.0	3.84E+02	sn/BX-112
Chemicals/Elements:					
Arsenic, As	n/a	2.76E-15	0.6	3.45E-01	dr
Beryllium, Be	n/a	Note 4	0.0		
Cyanide, CN	n/a	5.32E-08	0.0	9.13E-02	sn/C-102
Chromium, Cr	n/a	1.18E-16	1.0	1.00E+01	sw
Copper, Cu	n/a	1.34E-07	4.2	3.45E+00	dr
EDTA	n/a	5.02E-07	0.0	2.81E-02	dr
Fluoride, F	n/a	7.52E-10	0.0	6.02E+00	sn/T-110
Mercury, Hg	n/a	1.30E-06	0.0	3.20E-01	dr
Sodium, Na	n/a	2.75E-13	0.0	3.56E+02	dl/SX-104
Nitrite, NO2	n/a	9.09E-10	0.0	1.41E+02	dl/C-109
Nitrate, NO3	n/a	7.69E-10	0.0	4.09E+02	dl/SX-104
Antimony, Sb	n/a	9.26E-08	0.0	8.46E+00	dr
Sulfate, SO4	n/a	1.81E-12	0.0	9.70E+00	sn/A-102
Vanadium, V	n/a	4.29E-09	0.0	8.46E+00	dr

Notes:

1. Solubility data not available.
2. Pu239 and Pu240 were combined in the analysis as Pu239.
3. The Uranium isotopes were combined in the analysis as U238.
4. Beryllium was not analyzed since no current reports indicate its presence in any tank.
5. Symbols as follows: "dl/x-xxx" means based on drainable liquid sample from tank x-xxx; "sn/x-xxx" means based on supernate sample from tank x-xxx; "sw" means based on data from Serne & Wood (1990); "dr" means based on data from Droppo et al. (1991).

2.2 Inventory and Solubility of COCs

With the COCs established as those constituents that pose a potential environmental threat, the next step in the analysis was to determine the fraction of the COCs that could be released with a given volume of waste (i.e. solubility) on a tank specific basis. Where possible, solubility was determined based on liquid sample data (supernate or drainable liquid) as presented in Van Vleet (1993), Droppo et al. (1991), or in Serne and Wood (1990). If no sample data was available, the solubility was assumed to be the ratio of the inventory of the given COC to the total waste volume of the tank (Case 1), or the Case 1 rationale except with solubility limited to the maximum solubility observed in any liquid sample regardless of tank (Cases 2 and 3).

Tank inventories of COCs were taken primarily from Van Vleet (1993) and were based on TRAC data or sample information. In cases where sample information indicated a larger inventory than estimated by TRAC, the sample information was conservatively used as the basis. Inventory data for niobium-93m was taken from Boomer et al. (1993), Appendix D since this data was not provided in Van Vleet (1993).

2.3 Volume-Based Specific Risk

Volume-based specific risk values were determined for each COC and each tank based on the solubility, as described in Section 2.2, multiplied by the specific risk or HI values (based on mass) shown in Table C2-1 to obtain a volumetric-based risk for the given tank and COC. These values are tabulated along with the inventory and solubility information in Tables C2-2/C2-3 for Case 1, C2-4/C2-5 for Case 2, and C2-6/C2-7 for Case 3.

2.4 Threshold Leakage Values

The selected threshold leakage values (Case 3) are summarized in Table C1-1. The table provides the final value which is taken as the minimum of either the carcinogenic or the non-carcinogenic thresholds which are also shown. Threshold leakage values based on the carcinogenic COCs are presented at the beginning of Tables C2-2, C2-4 and C2-6 for Cases 1, 2, and 3, respectively. The values were calculated by dividing an assumed individual tank risk threshold of 1.0E-06 (risk) by the sum of the individual volume based COC values. The assumed overall tank farm risk threshold from leaks (1.0E-05) is obtained by multiplying the individual tank risk threshold of 1.0E-06 by and assumed 10 leaking tanks in a tank farm; this value would limit the threshold-based leakage risk to 10% of the maximum risk (1.0E-04) generally considered acceptable by EPA in risk assessments.

Threshold leakage values based on the non-carcinogenic COCs are provided at the beginning of Tables C2-3, C2-5, and C2-7 for Cases 1, 2, and 3, respectively. The values were calculated by dividing an assumed individual tank (HI) threshold of 1.0E-02 by the sum of the individual volume-based COC HI values. The overall tank farm HI threshold from leaks (1.0E-01) is obtained by multiplying the individual tank risk threshold of 1.0E-02 by an assumed 10 leaking tanks in a tank farm; this value would limit the threshold-based leakage risk to 10% of the maximum risk (1.0) generally considered acceptable by EPA in risk assessments.

Table C2-2. SST Threshold Leakage Values - Case 1/Carcinogenic

Tank	Total Vol. (L)	Carcinogenic Threshold Leakage L	Gal.	Tc-99 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	U-238 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L
A-101	3.61E+06	3.22E+03	8.51E+02						2.60E+11	2.10E+07	5.81E+00		1.91E-14
A-102	1.55E+05	2.66E+02	7.03E+01	7.40E+12	1.18E+04	2.18E-02	sn	7.80E-11	3.70E+10	2.98E+06	3.70E-03	sn	1.22E-17
A-103	1.40E+06	4.57E+03	1.21E+03	1.24E+13	1.97E+04	1.27E-02	dl	4.55E-11	3.70E+10	2.98E+06	2.13E+00		7.01E-15
A-104	1.06E+05	2.32E+02	6.14E+01	2.20E-06	3.50E-15	3.30E-20		1.18E-28	7.40E+10	5.97E+06	5.63E+01		1.85E-13
A-105	7.19E+04	1.85E+04	4.90E+03	3.70E+11	5.88E+02	8.18E-03		2.93E-11	1.90E+02	1.53E-02	2.13E-07		7.01E-22
A-106	4.73E+05	6.96E+02	1.84E+02	2.92E+12	4.64E+03	8.89E-03	dl	3.18E-11	1.50E+11	1.21E+07	3.53E-03	dl	1.16E-17
AX-101	2.83E+06	1.32E+04	3.49E+03	7.40E+02	1.18E-06	4.16E-13		1.49E-21	3.70E+10	2.98E+06	1.05E+00		3.47E-15
AX-102	1.48E+05	1.19E+03	3.13E+02	3.70E-05	5.88E-14	3.98E-19		1.43E-27	1.50E+09	1.21E+05	8.19E-01		2.70E-15
AX-103	4.24E+05	4.48E+04	1.18E+04	3.70E+11	5.88E+02	1.39E-03		4.97E-12	1.90E+02	1.53E-02	3.61E-08		1.19E-22
AX-104	2.65E+04	2.88E+01	7.60E+00	1.10E+12	1.75E+03	6.60E-02		2.36E-10	3.70E+09	2.98E+05	1.13E+01		3.71E-14
B-101	4.28E+05	3.36E+03	8.88E+02	7.40E-18	1.18E-26	2.75E-32		9.85E-41	2.60E+11	2.10E+07	4.90E+01		1.61E-13
B-102	1.21E+05	4.94E+03	1.30E+03	3.30E+10	5.25E+01	4.33E-04		1.55E-12	3.00E+10	2.42E+06	2.00E+01		6.57E-14
B-103	2.23E+05	4.39E+03	1.16E+03	1.90E+11	3.02E+02	1.35E-03		4.84E-12	7.40E+10	5.97E+06	2.67E+01		8.79E-14
B-104	1.40E+06	4.90E+05	1.29E+05	7.40E+10	1.18E+02	8.38E-05		3.00E-13	1.10E+10	8.87E+05	6.32E-01		2.08E-15
B-105	1.16E+06	2.01E+05	5.30E+04	3.70E+11	5.88E+02	5.08E-04		1.82E-12	7.40E+09	5.97E+05	5.15E-01		1.70E-15
B-106	4.43E+05	1.32E+06	3.48E+05	2.60E+10	4.13E+01	9.33E-05		3.34E-13	1.10E+10	8.87E+05	2.00E+00		6.59E-15
B-107	6.25E+05	8.29E+04	2.19E+04	3.70E+11	5.88E+02	9.42E-04		3.37E-12	7.40E+10	5.97E+06	9.56E+00		3.14E-14
B-108	3.56E+05	3.55E+04	9.39E+03	1.10E+12	1.75E+03	4.92E-03		1.76E-11	3.00E+11	2.42E+07	6.80E+01		2.24E-13
B-109	4.81E+05	1.14E+05	3.01E+04	3.30E+11	5.25E+02	1.09E-03		3.91E-12	7.40E+10	5.97E+06	1.24E+01		4.08E-14
B-110	9.31E+05	4.22E+03	1.11E+03	1.10E+13	1.75E+04	1.88E-02		6.72E-11	2.80E+11	2.26E+07	2.43E+01		7.98E-14
B-111	8.97E+05	6.68E+02	1.77E+02	1.10E+14	1.75E+05	1.95E-01		6.98E-10	1.50E+10	1.21E+06	1.35E+00		4.44E-15
B-112	1.25E+05	1.76E+03	4.65E+02	7.40E+12	1.18E+04	9.42E-02		3.37E-10	2.20E+10	1.77E+06	1.42E+01		4.67E-14
B-201	1.10E+05	1.99E+05	5.26E+04										
B-202	1.02E+05	2.57E+03	6.79E+02	3.77E+10	5.99E+01	6.60E-04		2.36E-12	1.10E+11	8.87E+06	8.68E+01		2.86E-13
B-203	1.93E+05	2.21E+06	5.83E+05						2.73E+09	2.20E+05	1.14E+00		3.75E-15
B-204	1.89E+05	2.50E+05	6.59E+04						5.00E+07	4.03E+03	2.13E-02		7.01E-17
BX-101	1.63E+05	6.94E+02	1.83E+02	2.20E-06	3.50E-15	2.15E-20		7.69E-29	1.10E+11	8.87E+06	5.45E+01		1.79E-13
BX-102	3.63E+05	1.08E+03	2.85E+02	2.20E+13	3.50E+04	9.63E-02		3.45E-10	1.50E+09	1.21E+05	3.33E-01		1.10E-15
BX-103	2.50E+05	9.18E+03	2.43E+03	1.50E-05	2.38E-14	9.55E-20		3.42E-28	1.50E+09	1.21E+05	4.84E-01		1.59E-15
BX-104	3.75E+05	3.44E+03	9.08E+02	1.10E+14	1.75E+05	6.95E-03	dl	2.49E-11	3.00E+10	2.42E+06	7.53E+00	dl	2.48E-14
BX-105	1.93E+05	2.32E+03	6.14E+02	7.40E+13	1.18E+05	6.41E-03	sn	2.29E-11	1.90E+09	1.53E+05	9.27E-03	sn	3.05E-17
BX-106	1.74E+05	1.68E+02	4.44E+01	7.40E+13	1.18E+05	6.76E-01		2.42E-09	1.50E+09	1.21E+05	1.54E-02	sn	5.07E-17
BX-107	1.31E+06	2.34E+05	6.17E+04	1.90E+11	3.02E+02	2.31E-04		8.28E-13	3.00E+10	2.42E+06	1.81E+00	sn	5.95E-15
BX-108	9.84E+04	2.00E+05	5.27E+04	3.70E+09	5.88E+00	5.98E-05		2.14E-13	3.70E+09	2.98E+05	3.03E+00		9.98E-15
BX-109	7.31E+05	1.95E+04	5.16E+03	1.50E+11	2.38E+02	3.26E-04		1.17E-12	1.50E+11	1.21E+07	5.37E-01	sn	1.77E-15
BX-110	7.49E+05	7.46E+03	1.97E+03	1.10E+13	1.75E+04	2.33E-02		8.35E-11	7.40E+09	5.97E+05	9.03E-03	sn	2.97E-17
BX-111	7.99E+05	8.02E+03	2.12E+03	1.10E+13	1.75E+04	2.19E-02		7.84E-11	3.70E+09	2.98E+05	3.83E+00	sn	1.26E-14
BX-112	6.25E+05	1.81E+05	4.79E+04	7.40E+10	1.18E+02	1.88E-04		6.74E-13	1.50E+12	1.21E+08	3.84E+02	sn	1.26E-12
BY-101	1.39E+06	8.99E+03	2.37E+03	1.50E+13	2.38E+04	1.72E-02		6.15E-11	1.90E+09	1.53E+05	1.10E-01		3.63E-16
BY-102	1.29E+06	9.04E+03	2.39E+03	3.70E+12	5.88E+03	2.70E-02	sn	9.67E-11	1.50E+10	1.21E+06	9.37E-01		3.08E-15
BY-103	1.51E+06	5.54E+03	1.46E+03	1.77E+12	2.81E+03	6.88E-03	dl	2.46E-11	1.90E+11	1.53E+07	1.01E+01		3.33E-14
BY-104	1.54E+06	7.25E+03	1.92E+03	1.50E+13	2.38E+04	1.55E-02		5.56E-11	1.90E+12	1.53E+08	9.97E+01		3.28E-13
BY-105	1.90E+06	1.94E+04	5.11E+03	1.11E+13	1.76E+04	1.76E-03	dl	6.30E-12	7.40E+11	5.97E+07	3.13E+01		1.03E-13
BY-106	2.43E+06	1.87E+04	4.95E+03	1.50E+13	2.38E+04	5.12E-03	dl	1.83E-11	7.40E+09	5.97E+05	2.46E-01		8.08E-16
BY-107	1.01E+06	1.32E+04	3.47E+03	7.40E+12	1.18E+04	1.17E-02		4.18E-11	1.90E+11	1.53E+07	1.52E+01		5.01E-14
BY-108	8.63E+05	1.11E+04	2.94E+03	7.40E+12	1.18E+04	1.36E-02		4.88E-11	3.30E+10	2.66E+06	3.08E+00		1.01E-14
BY-109	1.60E+06	3.29E+04	8.69E+03	3.70E+12	5.88E+03	5.29E-03	sn	1.89E-11	1.10E+10	8.87E+05	5.54E-01		1.82E-15
BY-110	1.50E+06	1.03E+04	2.71E+03	1.50E+13	2.38E+04	1.59E-02		5.70E-11	2.20E+09	1.77E+05	1.18E-01		3.89E-16
BY-111	1.74E+06	1.12E+04	2.95E+03	1.50E+13	2.38E+04	1.37E-02		4.91E-11	3.70E+10	2.98E+06	1.72E+00		5.65E-15
BY-112	1.10E+06	3.98E+04	1.05E+04	3.00E+12	4.77E+03	4.33E-03		1.55E-11	1.90E+09	1.53E+05	1.39E-01		4.58E-16
C-101	3.33E+05	6.60E+03	1.74E+03	1.90E+12	3.02E+03	9.07E-03		3.25E-11	7.40E+10	5.97E+06	1.79E+01		5.89E-14
C-102	1.60E+06	2.56E+03	6.75E+02	6.72E+09	1.07E+01	9.41E-04	sn	3.37E-12	7.40E+11	5.97E+07	3.73E+01		1.23E-13
C-103	7.38E+05	2.93E+03	7.74E+02	6.89E+11	1.10E+03	2.18E-03	sn	7.80E-12	2.60E+11	2.10E+07	2.84E+01		9.35E-14
C-104	1.12E+06	4.36E+03	1.15E+03	1.25E+16	1.99E+07	1.64E-03	dl	5.87E-12	7.91E+11	6.38E+07	5.32E-02	dl	1.75E-16
C-105	5.11E+05	6.83E+02	1.80E+02	3.70E+13	5.88E+04	1.52E-02	dl	5.43E-11	4.40E+11	3.55E+07	7.68E+00	dl	2.53E-14
C-106	8.67E+05	5.78E+03	1.53E+03	8.96E+12	1.42E+04	8.30E-03	dl	2.97E-11	1.10E+11	8.87E+06	2.02E-03	dl	6.65E-18
C-107	1.04E+06	1.31E+04	3.45E+03	3.86E+11	6.14E+02	4.77E-03	dl	1.71E-11	1.50E+11	1.21E+07	1.16E+01		3.82E-14
C-108	2.50E+05	1.06E+04	2.81E+03	3.70E+07	5.88E-02	2.35E-07		8.43E-16	3.70E+10	2.98E+06	1.19E+01		3.93E-14
C-109	2.50E+05	2.11E+05	5.58E+04	3.70E+10	5.88E+01	2.35E-04		8.43E-13	7.80E+09	6.29E+05	2.52E+00		8.28E-15
C-110	7.08E+05	2.62E+04	6.93E+03	4.91E+10	7.81E+01	4.12E-03	sn	1.47E-11	3.70E+09	2.98E+05	4.22E-01		1.39E-15
C-111	2.16E+05	1.55E+04	4.10E+03	3.70E+10	5.88E+01	2.73E-04		9.76E-13	3.70E+10	2.98E+06	1.38E+01		4.55E-14
C-112	3.94E+05	2.90E+04	7.66E+03	3.30E+10	5.25E+01	1.33E-04		4.77E-13	4.00E+10	3.23E+06	8.19E+00		2.70E-14
C-201	7.57E+03	1.52E+05	4.03E+04	2.20E+07	3.50E-02	4.62E-06		1.65E-14	7.00E+07	5.65E+03	1.61E-01	sn	5.30E-16
C-202	3.79E+03	4.20E+04	1.11E+04	7.40E-06	1.18E-14	3.11E-18		1.11E-26	7.40E+09	5.97E+05	1.58E+02		5.19E-13
C-203	1.89E+04	2.11E+06	5.56E+05	7.40E+01	1.18E-07	6.22E-12		2.23E-20	7.40E+08	5.97E+04	3.15E+00		1.04E-14
C-204	1.14E+04	2.87E+08	7.57E+07	1.10E+06	1.75E-03	1.54E-07		5.51E-16	3.30E+06	2.66E+02	2.34E-02		7.71E-17
S-101	1.62E+06	1.33E+04	3.53E+03	7.40E+12	1.18E+04	7.28E-03		2.61E-11	7.40E+10	5.97E+06	3.69E+00		1.21E-14
S-102	2.08E+06	3.62E+05	9.57E+04	1.10E+04	1.75E-05	8.42E-12		3.01E-20	1.10E+10	8.87E+05	6.80E-04	sn	2.24E-18
S-103	9.31E+05	1.44E+06	3.81E+05	1.50E+04	2.38E-05	2.56E-11		9.17E-20	1.10E+09	8.87E+04	9.53E-02		3.13E-16
S-104	1.11E+06	1.63E+04	4.31E+03	1.85E+12	2.94E+03	2.91E-03		1.04E-11	7.40E+10	5.97E+06	5.36E+00		1.76E-14
S-105	1.73E+06	1.17E+05	3.10E+04	1.10E+12	1.75E+03	1.01E-03		3.63E-12	3.70E+09	2.98E+05	1.73E-01		5.69E-16
S-106	1.81E+06	8.11E+04	2.14E+04	2.20E+12	3.50E+03	1.93E-03		6.91E-12	3.70E+08	2.98E+04	1.65E-02		5.41E-17
S-107	1.42E+06	6.64E+03	1.75E+03	1.50E+04	2.38E-05	1.68E-11		6.00E-20	3.70E+11	2.98E+07	2.10E+01		6.90E-14
S-108	2.29E+06	3.17E+04	8.38E+03	7.40E+12	1.18E+04	5.15E-03		1.84E-11	7.40E+09	5.97E+05	2.61E-01		8.59E-16

Table C2-2 (Continued). SST Threshold Leakage Values - Case 1/Carcinogenic

		Carcinogenic													
	Total	Threshold Leakage			Tc-99		Solubility	Basis	Sp. Risk		U-238		Solubility	Basis	Sp. Risk
Tank	Vol. (L)	L	Gal.		Bq	g	g/L	Note 1	R/L		Bq	g	g/L	Note 1	R/L
S-109	1.92E+06	8.36E+03	2.21E+03		2.20E+13	3.50E+04	1.83E-02		6.54E-11		1.10E+09	8.87E+04	4.63E-02		1.52E-16
S-110	1.48E+06	7.90E+03	2.09E+03		1.50E+13	2.38E+04	1.62E-02		5.78E-11		3.30E+10	2.66E+06	1.80E+00		5.93E-15
S-111	2.26E+06	1.68E+04	4.43E+03		1.10E+13	1.75E+04	7.75E-03		2.78E-11		3.70E+09	2.98E+05	1.32E-01		4.35E-16
S-112	1.98E+06	2.55E+03	6.72E+02		7.40E+13	1.18E+05	5.94E-02		2.13E-10		7.40E+08	5.97E+04	3.01E-02		9.92E-17
SX-101	1.73E+06	2.30E+04	6.08E+03		2.94E+15	4.67E+06	8.54E-04	dl	3.06E-12		3.70E+10	2.98E+06	1.73E+00		5.69E-15
SX-102	2.06E+06	2.81E+05	7.43E+04		3.70E+10	5.88E+01	2.86E-05		1.02E-13		7.40E+09	5.97E+05	2.90E-01		9.55E-16
SX-103	2.47E+06	3.67E+03	9.70E+02		7.40E+13	1.18E+05	4.77E-02		1.71E-10		1.90E+09	1.53E+05	6.21E-02		2.04E-16
SX-104	2.32E+06	1.53E+04	4.04E+03		1.10E+13	1.75E+04	7.53E-03		2.69E-11		3.70E+10	2.98E+06	1.28E+00		4.22E-15
SX-105	2.59E+06	1.28E+04	3.38E+03		2.60E+13	4.13E+04	1.60E-02		5.72E-11		3.70E+09	2.98E+05	1.15E-01		3.80E-16
SX-106	2.03E+06	2.34E+04	6.17E+03		1.10E+13	1.75E+04	8.62E-03		3.09E-11		7.40E+09	5.97E+05	2.94E-01		9.68E-16
SX-107	3.94E+05	2.77E+03	7.31E+02		1.10E+05	1.75E-04	4.44E-10		1.59E-18		7.40E+10	5.97E+06	1.52E+01		4.99E-14
SX-108	3.07E+05	1.93E+03	5.10E+02		2.20E+05	3.50E-04	1.14E-09		4.08E-18		7.40E+10	5.97E+06	1.95E+01		6.40E-14
SX-109	9.46E+05	1.16E+04	3.07E+03		1.10E+05	1.75E-04	1.85E-10		6.62E-19		3.70E+10	2.98E+06	3.15E+00		1.04E-14
SX-110	2.35E+05	1.33E+03	3.51E+02		7.40E+03	1.18E-05	5.01E-11		1.79E-19		7.40E+10	5.97E+06	2.54E+01		8.37E-14
SX-111	4.73E+05	2.28E+03	6.02E+02		3.70E-03	5.88E-12	1.24E-17		4.45E-26		7.40E+10	5.97E+06	1.26E+01		4.15E-14
SX-112	3.48E+05	3.32E+03	8.76E+02		2.60E+10	4.13E+01	1.19E-04		4.25E-13		3.70E+10	2.98E+06	8.57E+00		2.82E-14
SX-113	9.84E+04	1.41E+03	3.74E+02		3.70E+12	5.88E+03	5.98E-02		2.14E-10		1.50E+10	1.21E+06	1.23E+01		4.04E-14
SX-114	6.85E+05	2.94E+03	7.77E+02		3.70E-03	5.88E-12	8.59E-18		3.07E-26		1.10E+11	8.87E+06	1.29E+01		4.26E-14
SX-115	4.54E+04	3.31E+02	8.74E+01		7.40E+12	1.18E+04	2.59E-01		9.27E-10		2.60E+10	2.10E+06	4.62E+01		1.52E-13
T-101	3.86E+05	1.21E+04	3.20E+03		3.00E+12	4.77E+03	6.30E-03	sn	2.26E-11		1.90E+09	1.53E+05	3.97E-01		1.31E-15
T-102	1.21E+05	2.21E+05	5.84E+04		3.70E+10	5.88E+01	4.86E-04		1.74E-12		1.90E+08	1.53E+04	1.27E-01		4.16E-16
T-103	1.02E+05	2.68E+04	7.07E+03		2.60E+11	4.13E+02	4.04E-03		1.45E-11		7.40E+08	5.97E+04	5.84E-01		1.92E-15
T-104	1.68E+06	1.34E+05	3.53E+04		1.10E+11	1.75E+02	1.04E-04		3.72E-13		3.30E+10	2.66E+06	1.58E+00		5.20E-15
T-105	3.63E+05	2.11E+04	5.56E+03		1.10E-05	1.75E-14	4.81E-20		1.72E-28		7.40E+10	5.97E+06	1.64E+01		5.40E-14
T-106	7.95E+04	4.36E+04	1.15E+04		7.40E+09	1.18E+01	1.48E-04		5.30E-13		3.70E+10	2.98E+06	3.75E+01		1.24E-13
T-107	6.81E+05	1.83E+05	4.83E+04		7.40E-06	1.18E-14	1.73E-20		6.18E-29		1.10E+10	8.87E+05	1.30E+00		4.28E-15
T-108	1.67E+05	3.55E+05	9.39E+04		1.10E+10	1.75E+01	1.05E-04		3.76E-13		4.00E+09	3.23E+05	1.94E+00		6.37E-15
T-109	2.20E+05	4.27E+05	1.13E+05		7.40E+10	1.18E+02	5.36E-04		1.92E-12		1.50E+09	1.21E+05	5.51E-01		1.81E-15
T-110	1.43E+06	4.04E+05	1.07E+05		3.70E+00	5.88E-09	4.10E-15		1.47E-23		7.40E+09	5.97E+05	4.16E-01		1.37E-15
T-111	1.71E+06	2.10E+05	5.55E+04								2.20E+10	1.77E+06	1.03E+00		3.40E-15
T-112	2.54E+05	1.61E+04	4.25E+03		1.90E-25	3.02E-34	1.19E-39		4.26E-48		7.40E+10	5.97E+06	2.35E+01		7.74E-14
T-201	1.10E+05	1.10E+05	2.90E+04												
T-202	7.95E+04	3.44E+06	9.09E+05												
T-203	1.32E+05	5.74E+05	1.52E+05												
T-204	1.44E+05	1.03E+07	2.73E+06								4.70E+05	3.79E+01	2.15E-03	dl	7.07E-18
TX-101	3.29E+05	5.40E+04	1.43E+04		3.70E+03	5.88E-06	1.79E-11		6.40E-20		3.00E+03	2.42E-01	7.35E-07		2.42E-21
TX-102	8.21E+05	2.54E+05	6.71E+04		3.70E+11	5.88E+02	7.16E-04		2.56E-12		3.70E+02	2.98E-02	3.63E-08		1.20E-22
TX-103	5.94E+05	8.53E+05	2.25E+05		7.40E+10	1.18E+02	1.98E-04		7.09E-13		7.40E+03	5.97E-01	1.00E-06		3.30E-21
TX-104	2.46E+05	3.48E+06	9.18E+05		7.40E+04	1.18E-04	4.78E-10		1.71E-18		3.70E+06	2.98E+02	1.21E-03		3.99E-18
TX-105	2.31E+06	7.17E+04	1.90E+04		3.70E+12	5.88E+03	2.55E-03		9.14E-12		3.70E-02	2.98E-06	1.29E-12		4.26E-27
TX-106	1.71E+06	4.83E+05	1.28E+05		3.30E+11	5.25E+02	3.06E-04		1.10E-12		1.10E+04	8.87E-01	5.17E-07		1.70E-21
TX-107	1.36E+05	5.99E+06	1.58E+06		1.90E+04	3.02E-05	2.22E-10		7.94E-19		7.40E+03	5.97E-01	4.38E-06		1.44E-20
TX-108	5.07E+05	4.14E+04	1.09E+04		1.50E+12	2.38E+03	4.70E-03		1.68E-11		7.40E+09	5.97E+05	1.18E+00		3.87E-15
TX-109	1.38E+06	4.49E+03	1.19E+03		3.30E+13	5.25E+04	3.81E-02		1.36E-10		3.70E+10	2.98E+06	2.17E+00		7.13E-15
TX-110	1.75E+06	1.76E+04	4.64E+03		1.10E+13	1.75E+04	1.00E-02		3.58E-11		1.50E+10	1.21E+06	6.92E-01		2.28E-15
TX-111	1.40E+06	9.56E+04	2.53E+04		1.90E+12	3.02E+03	2.16E-03		7.72E-12		7.40E+09	5.97E+05	4.26E-01		1.40E-15
TX-112	2.46E+06	4.86E+05	1.28E+05		7.40E+11	1.18E+03	4.79E-04		1.71E-12		1.50E+09	1.21E+05	4.92E-02		1.62E-16
TX-113	2.30E+06	2.28E+05	6.03E+04		3.00E+11	4.77E+02	2.08E-04		7.43E-13		3.70E+12	2.98E+08	1.30E+02		4.27E-13
TX-114	2.02E+06	3.46E+05	9.14E+04		7.40E+11	1.18E+03	5.81E-04		2.08E-12		1.10E+11	8.87E+06	4.38E+00		1.44E-14
TX-115	2.42E+06	5.31E+05	1.40E+05		3.70E+11	5.88E+02	2.43E-04		8.69E-13		7.40E+11	5.97E+07	2.46E+01		8.11E-14
TX-116	2.39E+06	1.46E+06	3.86E+05		2.20E+11	3.50E+02	1.46E-04		5.24E-13		1.10E+11	8.87E+06	3.71E+00		1.22E-14
TX-117	2.37E+06	6.43E+05	1.70E+05		7.40E+10	1.18E+02	4.97E-05		1.78E-13		7.40E+11	5.97E+07	2.52E+01		8.29E-14
TX-118	1.31E+06	1.49E+03	3.94E+02		3.30E+13	5.25E+04	3.99E-02		1.43E-10		3.00E+11	2.42E+07	1.84E+01		6.06E-14
TY-101	4.47E+05	1.56E+04	4.13E+03		1.99E+11	3.16E+02	7.08E-04		2.54E-12		4.46E+10	3.60E+06	8.05E+00		2.65E-14
TY-102	2.42E+05	1.58E+03	4.18E+02		7.40E+12	1.18E+04	4.86E-02		1.74E-10		1.63E+09	1.31E+05	5.43E-01		1.79E-15
TY-103	6.13E+05	5.85E+03	1.55E+03		2.60E+13	4.13E+04	9.50E-04		3.40E-12		3.65E+11	2.94E+07	8.23E-02	dl	2.71E-16
TY-104	1.74E+05	4.20E+04	1.11E+04		3.32E+11	5.28E+02	3.53E-03	dl	1.26E-11		1.80E+11	1.45E+07	7.79E-02	sn	2.56E-16
TY-105	8.74E+05	1.95E+04	5.14E+03		1.63E+12	2.59E+03	2.96E-03		1.06E-11		1.90E+11	1.53E+07	1.75E+01		5.77E-14
TY-106	6.43E+04	1.11E+04	2.93E+03		3.98E+11	6.33E+02	9.83E-03		3.52E-11		1.90E+10	1.53E+06	2.38E+01		7.83E-14
U-101	9.46E+04	9.65E+03	2.55E+03		7.40E+11	1.18E+03	1.24E-02		4.45E-11		7.40E+10	5.97E+06	6.31E+01		2.07E-13
U-102	1.42E+06	6.86E+04	1.81E+04		1.90E+12	3.02E+03	2.13E-03		7.64E-12		1.90E+02	1.53E-02	1.08E-08		3.56E-23
U-103	1.77E+06	1.10E+08	2.90E+07		2.50E+08	3.97E-01	2.24E-07		8.03E-16		4.35E+07	3.51E+03	1.98E-03		6.52E-18
U-104	4.62E+05	2.00E+07	5.28E+06		3.70E+03	5.88E-06	1.27E-11		4.56E-20		8.29E+10	6.69E+06	1.45E+01		4.76E-14
U-105	1.58E+06	5.88E+06	1.55E+06		3.70E+08	5.88E-01	3.72E-07		1.33E-15		9.38E+09	7.56E+05	4.78E-01		1.57E-15
U-106	8.55E+05	1.45E+10	3.84E+09		1.90E+03	3.02E-06	3.53E-12		1.26E-20		7.40E+03	5.97E-01	6.98E-07		2.30E-21
U-107	1.54E+06	5.53E+04	1.46E+04		3.30E+12	5.25E+03	3.41E-03		1.22E-11		1.90E+04	1.53E+00	9.97E-07		3.28E-21
U-108	1.76E+06	4.50E+05	1.19E+05		7.40E+08	1.18E+00	6.67E-07		2.39E-15		3.30E+10	2.66E+06	1.51E+00		4.96E-15
U-109	1.75E+06	1.72E+05	4.54E+04		2.20E+11	3.50E+02	2.00E-04		7.15E-13		7.40E+08	5.97E+04	3.41E-02		1.12E-16
U-110	7.04E+05	1.41E+04	3.73E+03		1.10E+10	1.75E+01	2.48E-05		8.89E-14		1.10E+12	8.87E+07	1.26E+02		4.15E-13
U-111	1.25E+06	1.43E+05	3.77E+04		7.40E+11	1.18E+03	9.45E-04		3.38E-12		1.10E+10	8.87E+05	7.12E-01		2.34E-15
U-112	1.85E+05	1.47E+04	3.87E+03		1.10E+12	1.75E+03	9.43E-03		3.38E-11		2.60E+09	2.10E+05	1.13E+00		3.72E-15
U-201	1.89E+04	9.48E+03	2.51E+03		1.90E+11	3.02E+02	1.60E-02		5.71E-11		7.40E+01	5.97E-03	3.15E-07		1.04E-21
U-202	1.89E+04	9.48E+03	2.50E+03		1.90E+11	3.02E+02	1.60E-02		5.71E-11		1.10E-12	8.87E-17	4.69E-21		1.54E-35
U-203	1.14E+04	7.72E+03	2.04E+03		1.50E+11	2.38E+02	2.10E-02		7.52E-11		1.10E-12	8.87E-17	7.81E-21		2.57E-35
U-204	1.14E+04	2.88E+04	7.60E+03		3.70E+10	5.88E+01	5.18E-03		1.85E-11		1.33E+06	1.07E+02	9.45E-03		3.11E-17

Table C2-2 (Continued). SST Threshold Leakage Values - Case 1/Carcinogenic

Tank	I-129 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	C-14 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Am-241 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L
A-101											3.70E+13	2.91E+02	8.08E-05		3.17E-13
A-102	1.10E+10	1.71E+03	1.10E-02		2.77E-15	1.50E+13	9.09E+01	5.86E-04		7.97E-10	1.10E+14	8.66E+02	2.54E-07	sn	9.94E-16
A-103	4.53E+09	7.03E+02	6.89E-04	dl	1.74E-16	1.10E+12	6.67E+00	2.12E-07	dl	2.88E-13	1.90E+13	1.50E+02	4.92E-07	dl	1.93E-15
A-104	3.70E-09	5.75E-16	5.42E-21		1.37E-33	2.60E+13	1.58E+02	1.49E-03		2.02E-09	3.00E+13	2.36E+02	2.23E-03		8.74E-12
A-105	3.70E+08	5.75E+01	7.99E-04		2.01E-16	1.90E+11	1.15E+00	1.60E-05		2.18E-11	3.70E+05	2.91E-06	4.05E-11		1.59E-19
A-106	2.27E+09	3.52E+02	1.03E-03	dl	2.61E-16	1.62E+10	9.82E-02	2.44E-07	dl	3.32E-13	1.10E+13	8.66E+01	1.38E-06	dl	5.40E-15
AX-101	3.70E-01	5.75E-08	2.03E-14		5.11E-27	3.70E+09	2.24E-02	7.92E-09		1.08E-14	1.10E+12	8.66E+00	3.06E-06		1.20E-14
AX-102	1.10E-07	1.71E-14	1.16E-19		2.92E-32	7.40E-05	4.48E-16	3.04E-21		4.13E-27	7.40E+11	5.83E+00	2.91E-04	dl	1.14E-12
AX-103	7.40E+08	1.15E+02	2.71E-04		6.83E-17	3.30E+11	2.00E+00	4.72E-06		6.42E-12	7.40E+11	5.83E+00	1.37E-05		5.39E-14
AX-104	1.50E+09	2.33E+02	8.79E-03		2.22E-15	3.30E+12	2.00E+01	7.55E-04		1.03E-09	4.10E+12	3.23E+01	1.22E-03		4.78E-12
B-101	1.10E-20	1.71E-27	3.99E-33		1.01E-45	1.90E+11	1.15E+00	2.69E-06		3.66E-12	3.70E+12	2.91E+01	6.81E-05		2.67E-13
B-102	3.70E+07	5.75E+00	4.74E-05		1.20E-17	5.20E+10	3.15E-01	2.60E-06		3.54E-12	3.80E+11	2.99E+00	2.47E-05		9.68E-14
B-103	3.00E+08	4.66E+01	2.09E-04		5.26E-17	1.10E+11	6.67E-01	2.99E-06		4.06E-12	2.50E+12	1.97E+01	8.81E-05		3.46E-13
B-104	1.10E+08	1.71E+01	1.22E-05		3.07E-18	1.50E+10	9.09E-02	6.47E-08		8.80E-14	1.50E+11	1.18E+00	8.41E-07		3.30E-15
B-105	7.40E+08	1.15E+02	9.92E-05		2.50E-17	3.70E+11	2.24E+00	1.94E-06		2.63E-12	1.50E+10	1.18E-01	1.02E-07		4.00E-16
B-106	3.70E+07	5.75E+00	1.30E-05		3.27E-18	1.90E+10	1.15E-01	2.60E-07		3.54E-13	9.30E+09	7.32E-02	1.65E-07		6.48E-16
B-107	7.40E+08	1.15E+02	1.84E-04		4.64E-17	4.80E+11	2.91E+00	4.66E-06		6.33E-12	3.70E+10	2.91E-01	4.66E-07		1.83E-15
B-108	1.50E+09	2.33E+02	6.55E-04		1.65E-16	3.70E+11	2.24E+00	6.30E-06		8.57E-12	1.90E+11	1.50E+00	4.20E-06		1.65E-14
B-109	3.70E+08	5.75E+01	1.20E-04		3.01E-17	2.60E+11	1.58E+00	3.28E-06		4.46E-12	7.50E+10	5.91E-01	1.23E-06		4.82E-15
B-110	1.90E+10	2.95E+03	3.17E-03		7.98E-16	3.70E+12	2.24E+01	2.41E-05		3.28E-11	3.90E+13	3.07E+02	3.30E-04		1.29E-12
B-111	1.90E+11	2.95E+04	3.29E-02		8.29E-15	7.80E+13	4.73E+02	5.27E-04		7.17E-10	1.50E+11	1.18E+00	1.32E-06		5.16E-15
B-112	1.10E+10	1.71E+03	1.37E-02		3.45E-15	3.00E+12	1.82E+01	1.46E-04		1.98E-10	1.50E+12	1.18E+01	9.46E-05		3.71E-13
B-201															
B-202	1.43E+10	2.22E+03	2.17E-02		5.48E-15						1.50E+12	1.18E+01	1.16E-04		4.53E-13
B-203											3.70E+09	2.91E-02	1.51E-07		5.92E-16
B-204											3.70E+10	2.91E-01	1.54E-06		6.03E-15
BX-101	3.70E-09	5.75E-16	3.53E-21		8.90E-34	7.40E+11	4.48E+00	2.76E-05		3.75E-11	3.70E+12	2.91E+01	1.79E-04		7.02E-13
BX-102	3.70E+10	5.75E+03	1.58E-02		3.98E-15	2.20E+13	1.33E+02	3.67E-04		4.99E-10	2.60E+13	2.05E+02	5.63E-04		2.21E-12
BX-103	3.70E-08	5.75E-15	2.30E-20		5.80E-33	3.30E+12	2.00E+01	8.01E-05		1.09E-10	7.40E+07	5.83E-04	2.33E-09		9.14E-18
BX-104	1.90E+11	2.95E+04	6.32E-04	dl	1.59E-16	3.70E+13	2.24E+02	1.88E-07	dl	2.56E-13	7.40E+11	5.83E+00	1.55E-05		6.10E-14
BX-105	7.40E+10	1.15E+04	3.21E-04	sn	8.10E-17	3.00E+13	1.82E+02	1.31E-07	sn	1.78E-13	1.50E+14	1.18E+03	8.66E-06	sn	3.40E-14
BX-106	1.50E+11	2.33E+04	1.34E-01		3.37E-14	6.30E+13	3.82E+02	2.19E-03		2.98E-09	1.10E+14	8.66E+02	6.94E-08	sn	2.72E-16
BX-107	3.00E+08	4.66E+01	3.57E-05		8.99E-18	7.70E+09	4.67E-02	3.57E-08		4.86E-14	1.10E+11	8.66E-01	7.25E-08	sn	2.84E-16
BX-108	7.40E+06	1.15E+00	1.17E-05		2.94E-18	3.00E+09	1.82E-02	1.85E-07		2.51E-13	1.10E+10	8.66E-02	8.80E-07		3.45E-15
BX-109	2.60E+08	4.04E+01	5.53E-05		1.39E-17	2.60E+11	1.58E+00	2.16E-06		2.93E-12	1.10E+12	8.66E+00	9.84E-07	sn	3.86E-15
BX-110	1.90E+10	2.95E+03	3.94E-03		9.92E-16	3.70E+12	2.24E+01	2.99E-05		4.07E-11	2.30E+12	1.81E+01	7.57E-08	sn	2.97E-16
BX-111	1.90E+10	2.95E+03	3.69E-03		9.31E-16	3.70E+12	2.24E+01	2.81E-05		3.82E-11	2.20E+12	1.73E+01	4.02E-08	sn	1.58E-16
BX-112	1.10E+08	1.71E+01	2.73E-05		6.89E-18	1.10E+11	6.67E-01	1.07E-06		1.45E-12	1.10E+11	8.66E-01	3.50E-07	sn	1.37E-15
BY-101	2.20E+10	3.42E+03	2.46E-03		6.20E-16	7.40E+12	4.48E+01	3.23E-05		4.39E-11	3.00E+12	2.36E+01	1.70E-05		6.67E-14
BY-102	7.40E+09	1.15E+03	8.90E-04		2.24E-16	1.90E+12	1.15E+01	8.92E-06		1.21E-11	7.40E+11	5.83E+00	4.51E-06		1.77E-14
BY-103	1.10E+09	1.71E+02	1.13E-04		2.84E-17	4.80E+11	2.91E+00	1.92E-06		2.61E-12	7.50E+12	5.91E+01	3.90E-05		1.53E-13
BY-104	2.60E+10	4.04E+03	2.63E-03		6.62E-16	7.50E+12	4.55E+01	2.96E-05		4.02E-11	9.24E+12	7.28E+01	4.73E-05		1.86E-13
BY-105	1.90E+10	2.95E+03	1.55E-03		3.91E-16	4.00E+12	2.42E+01	1.27E-05		1.73E-11	5.60E+12	4.41E+01	2.32E-05		9.08E-14
BY-106	2.20E+10	3.42E+03	1.41E-03		3.54E-16	7.40E+12	4.48E+01	1.85E-05		2.51E-11	4.40E+12	3.46E+01	1.43E-05		5.59E-14
BY-107	7.40E+09	1.15E+03	1.14E-03		2.88E-16	2.20E+12	1.33E+01	1.32E-05		1.80E-11	2.20E+12	1.73E+01	1.72E-05		6.74E-14
BY-108	1.10E+10	1.71E+03	1.98E-03		4.99E-16	2.20E+12	1.33E+01	1.55E-05		2.10E-11	3.30E+12	2.60E+01	3.01E-05		1.18E-13
BY-109	7.40E+09	1.15E+03	7.18E-04		1.81E-16	1.90E+12	1.15E+01	7.19E-06		9.78E-12	1.10E+12	8.66E+00	5.41E-06		2.12E-14
BY-110	2.20E+10	3.42E+03	2.28E-03		5.74E-16	3.70E+12	2.24E+01	1.50E-05		2.03E-11	4.40E+12	3.46E+01	2.31E-05		9.06E-14
BY-111	2.60E+10	4.04E+03	2.32E-03		5.86E-16	7.50E+12	4.55E+01	2.62E-05		3.56E-11	3.00E+12	2.36E+01	1.36E-05		5.33E-14
BY-112	3.70E+09	5.75E+02	5.22E-04		1.31E-16	1.10E+12	6.67E+00	6.05E-06		8.23E-12	3.70E+11	2.91E+00	2.65E-06		1.04E-14
C-101	2.60E+09	4.04E+02	1.21E-03		3.05E-16	7.40E+11	4.48E+00	1.35E-05		1.83E-11	1.90E+12	1.50E+01	4.49E-05		1.76E-13
C-102	1.90E+00	2.95E-07	1.84E-13		4.64E-26	3.70E+07	2.24E-04	1.40E-10		1.90E-16	3.70E+13	2.91E+02	1.82E-04		7.13E-13
C-103	1.50E+00	2.33E-07	3.16E-13		7.95E-26	1.90E+13	1.15E+02	1.56E-04		2.12E-10	3.70E+12	2.91E+01	8.74E-08	sn	3.43E-16
C-104	3.70E-01	5.75E-08	5.15E-14		1.30E-26	3.34E+10	2.02E-01	2.98E-07	dl	4.06E-13	1.40E+14	1.10E+03	2.40E-07	dl	9.41E-16
C-105	7.40E+10	1.15E+04	1.55E-03	dl	3.91E-16	1.90E+13	1.15E+02	6.30E-07	dl	8.57E-13	3.60E+14	2.83E+03	1.66E-06	dl	6.51E-15
C-106	3.23E+09	5.02E+02	8.04E-05	dl	2.03E-17	3.00E+10	1.82E-01	7.88E-08	dl	1.07E-13	4.15E+13	3.27E+02	4.05E-06	dl	1.59E-14
C-107	1.10E+08	1.71E+01	1.64E-05		4.14E-18	1.10E+11	6.67E-01	6.40E-07		8.71E-13	4.40E+12	3.46E+01	2.21E-07	dl	8.67E-16
C-108	7.40E+04	1.15E-02	4.60E-08		1.16E-20	1.10E+10	6.67E-02	2.67E-07		3.63E-13	1.50E+12	1.18E+01	4.73E-05		1.85E-13
C-109	7.40E+07	1.15E+01	4.60E-05		1.16E-17	7.00E+10	4.24E-01	1.70E-06		2.31E-12	3.70E+09	2.91E-02	1.17E-07		4.57E-16
C-110	1.90E-02	2.95E-09	4.17E-15		1.05E-27	3.00E+00	1.82E-11	2.57E-17		3.49E-23	7.40E+11	5.83E+00	8.23E-06		3.23E-14
C-111	7.40E+07	1.15E+01	5.33E-05		1.34E-17	2.80E+10	1.70E-01	7.87E-07		1.07E-12	7.40E+11	5.83E+00	2.70E-05		1.06E-13
C-112	3.70E+07	5.75E+00	1.46E-05		3.68E-18	8.90E+10	5.39E-01	1.37E-06		1.86E-12	7.40E+11	5.83E+00	1.48E-05		5.80E-14
C-201	3.30E+04	5.12E-03	6.77E-07		1.71E-19	1.90E+06	1.15E-05	1.52E-09		2.07E-15	3.70E+08	2.91E-03	3.85E-07		1.51E-15
C-202	1.10E-08	1.71E-15	4.51E-19		1.14E-31	1.10E+08	6.67E-04	1.76E-07		2.40E-13	1.10E+09	8.66E-03	2.29E-06		8.97E-15
C-203	1.10E-01	1.71E-08	9.03E-13		2.27E-25	1.10E+07	6.67E-05	3.52E-09		4.79E-15	1.10E+08	8.66E-04	4.58E-08		1.79E-16
C-204	1.50E+03	2.33E-04	2.05E-08		5.17E-21	7.40E+04	4.48E-07	3.95E-11		5.37E-17	3.40E+05	2.68E-06	2.36E-10		9.24E-19
S-101	1.10E+10	1.71E+03	1.06E-03		2.66E-16	1.90E+12	1.15E+01	7.12E-06		9.69E-12	1.50E+13	1.18E+02	7.31E-05		2.86E-13
S-102	1.90E+01	2.95E-06	1.42E-12		3.58E-25	3.00E+03	1.82E-08	8.75E-15		1.19E-20	3.70E+11	2.91E+00	1.40E-06		5.50E-15
S-103	2.60E+01	4.04E-06	4.34E-12		1.09E-24	7.50E+04	4.55E-07	4.88E-13		6.64E-19	3.70E+10	2.91E-01	3.13E-07		1.23E-15
S-104	2.24E+12	3.48E+05	3.13E-01		7.88E-14	1.90E+11	1.15E+00	1.03E-06		1.41E-12	8.05E+12	6.34E+01	5.70E-05		2.23E-13
S-105	1.90E+09	2.95E+02	1.71E-04		4.31E-17	3.70E+11	2.24E+00	1.30E-06		1.77E-12	3.30E+11	2.60E+00	1.51E-06		5.90E-15
S-106	3.30E+09	5.12E+02	2.83E-04		7.12E-17	1.10E+12	6.67E+00	3.68E-06		5.00E-12	5.60E+10	4.41E-01	2.43E-07		9.53E-16
S-107	2.60E+01	4.04E-06	2.84E-12		7.15E-25	3.70E+03	2.24E-08	1.58E-14		2.14E-20	1.50E+13	1.18E+02	8.30E-05		3.25E-13
S-108	7.40E+09	1.15E+03	5.03E-04		1.27E-16	2.20E+12	1.33E+01	5.83E-06		7.93E-12	4.10E+12	3.23E+01	1.41E-05		5.54E-14

Table C2-2 (Continued). SST Threshold Leakage Values - Case 1/Carcinogenic

Tank	I-129 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	C-14 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Am-241 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L
S-109	3.30E+10	5.12E+03	2.68E-03		6.74E-16	1.10E+13	6.67E+01	3.48E-05		4.73E-11	7.40E+12	5.83E+01	3.04E-05		1.19E-13
S-110	2.20E+10	3.42E+03	2.31E-03		5.83E-16	7.40E+12	4.48E+01	3.04E-05		4.13E-11	2.40E+12	1.89E+01	1.28E-05		5.02E-14
S-111	1.90E+10	2.95E+03	1.31E-03		3.30E-16	7.40E+12	4.48E+01	1.99E-05		2.70E-11	5.60E+11	4.41E+00	1.95E-06		7.66E-15
S-112	1.50E+11	2.33E+04	1.18E-02		2.97E-15	3.70E+13	2.24E+02	1.13E-04		1.54E-10	3.70E+13	2.91E+02	1.47E-04		5.77E-13
SX-101	7.40E-01	1.15E-07	6.66E-14		1.68E-26	2.20E+02	1.33E-09	7.73E-16		1.05E-21	1.62E+13	1.28E+02	2.33E-08	dl	9.14E-17
SX-102	7.40E+07	1.15E+01	5.59E-06		1.41E-18	1.10E+10	6.67E-02	3.24E-08		4.41E-14	4.40E+11	3.46E+00	1.69E-06		6.61E-15
SX-103	1.10E+11	1.71E+04	6.92E-03		1.74E-15	2.30E+13	1.39E+02	5.65E-05		7.68E-11	1.10E+14	8.66E+02	3.51E-04		1.38E-12
SX-104	1.90E+10	2.95E+03	1.27E-03		3.20E-16	2.60E+12	1.58E+01	6.78E-06		9.22E-12	1.90E+13	1.50E+02	6.44E-05		2.52E-13
SX-105	3.70E+10	5.75E+03	2.22E-03		5.60E-16	3.70E+12	2.24E+01	8.67E-06		1.18E-11	3.70E+13	2.91E+02	1.13E-04		4.42E-13
SX-106	1.50E+10	2.33E+03	1.15E-03		2.89E-16	7.70E+11	4.67E+00	2.30E-06		3.13E-12	1.50E+13	1.18E+02	5.82E-05		2.28E-13
SX-107	1.10E+02	1.71E-05	4.34E-11		1.09E-23	7.40E+04	4.48E-07	1.14E-12		1.55E-18	1.90E+13	1.50E+02	3.80E-04		1.49E-12
SX-108	1.90E+02	2.95E-05	9.62E-11		2.43E-23	1.50E+05	9.09E-07	2.97E-12		4.03E-18	1.90E+13	1.50E+02	4.88E-04		1.91E-12
SX-109	1.90E+02	2.95E-05	3.12E-11		7.86E-24	7.40E+04	4.48E-07	4.74E-13		6.45E-19	7.40E+12	5.83E+01	6.16E-05		2.41E-13
SX-110	7.40E+00	1.15E-06	4.90E-12		1.23E-24	4.10E+04	2.48E-07	1.06E-12		1.44E-18	2.60E+13	2.05E+02	8.72E-04		3.42E-12
SX-111	7.40E-06	1.15E-12	2.43E-18		6.12E-31	2.20E-03	1.33E-14	2.82E-20		3.83E-26	3.30E+13	2.60E+02	5.49E-04		2.15E-12
SX-112	3.70E+07	5.75E+00	1.65E-05		4.16E-18	1.50E+10	9.09E-02	2.61E-07		3.55E-13	1.10E+13	8.66E+01	2.49E-04		9.75E-13
SX-113	7.40E+09	1.15E+03	1.17E-02		2.94E-15	2.60E+12	1.58E+01	1.60E-04		2.18E-10	1.50E+12	1.18E+01	1.20E-04		4.70E-13
SX-114	7.40E-06	1.15E-12	1.68E-18		4.23E-31	2.20E-03	1.33E-14	1.95E-20		2.65E-26	3.00E+13	2.36E+02	3.45E-04		1.35E-12
SX-115	1.50E+10	2.33E+03	5.13E-02		1.29E-14	3.70E+12	2.24E+01	4.94E-04		6.71E-10	7.40E+12	5.83E+01	1.28E-03		5.03E-12
T-101	3.70E+09	5.75E+02	1.49E-03		3.75E-16	2.60E+12	1.58E+01	4.08E-05		5.55E-11	3.30E+12	2.60E+01	3.29E-08	sn	1.29E-16
T-102	7.40E+07	1.15E+01	9.49E-05		2.39E-17	3.70E+10	2.24E-01	1.85E-06		2.52E-12	7.40E+10	5.83E-01	4.81E-06		1.89E-14
T-103	3.70E+08	5.75E+01	5.62E-04		1.42E-16	2.60E+11	1.58E+00	1.54E-05		2.10E-11	3.30E+11	2.60E+00	2.54E-05		9.97E-14
T-104	1.90E+08	2.95E+01	1.75E-05		4.41E-18	7.40E+09	4.48E-02	2.66E-08		3.62E-14	7.40E+11	5.83E+00	3.46E-06		1.36E-14
T-105	1.90E-08	2.95E-15	8.12E-21		2.05E-33	7.40E-08	4.48E-19	1.23E-24		1.68E-30	7.40E+11	5.83E+00	1.60E-05		6.29E-14
T-106	1.10E+07	1.71E+00	2.15E-05		5.42E-18	3.70E+09	2.24E-02	2.82E-07		3.84E-13	1.10E+11	8.66E-01	1.09E-05		4.27E-14
T-107	1.10E-08	1.71E-15	2.51E-21		6.32E-34	1.10E+08	6.67E-04	9.79E-10		1.33E-15	7.40E+10	5.83E-01	5.80E-09	sn	2.27E-17
T-108	1.90E+07	2.95E+00	1.77E-05		4.46E-18	3.70E+09	2.24E-02	1.35E-07		1.83E-13	7.40E+09	5.83E-02	3.50E-07		1.37E-15
T-109	1.10E+08	1.71E+01	7.78E-05		1.96E-17	3.70E+09	2.24E-02	1.02E-07		1.39E-13	7.50E+08	5.91E-03	2.69E-08		1.05E-16
T-110	3.00E-03	4.66E-10	3.25E-16		8.18E-29	7.40E-02	4.48E-13	3.13E-19		4.25E-25	3.00E+11	2.36E+00	1.65E-06		6.46E-15
T-111											7.40E+11	5.83E+00	3.40E-06		1.33E-14
T-112	3.30E-28	5.12E-35	2.02E-40		5.09E-53	1.50E-26	9.09E-38	3.58E-43		4.88E-49	1.10E+12	8.66E+00	6.35E-07	sn	2.49E-15
T-201															
T-202											1.90E+09	1.50E-02	1.88E-07		7.38E-16
T-203											1.90E+10	1.50E-01	1.13E-06		4.43E-15
T-204													6.36E-09	dl	2.49E-17
TX-101	3.30E+00	5.12E-07	1.56E-12		3.92E-25	7.40E+11	4.48E+00	1.36E-05		1.85E-11	3.70E+07	2.91E-04	8.85E-10		3.47E-18
TX-102	7.40E+08	1.15E+02	1.40E-04		3.53E-17	1.10E+11	6.67E-01	8.12E-07		1.10E-12	1.80E+07	1.42E-04	1.73E-10		6.76E-19
TX-103	7.40E+07	1.15E+01	1.93E-05		4.87E-18	3.00E+10	1.82E-01	3.06E-07		4.16E-13	3.70E+09	2.91E-02	4.90E-08		1.92E-16
TX-104	1.10E+02	1.71E-05	6.94E-11		1.75E-23	1.90E+04	1.15E-07	4.68E-13		6.37E-19	3.30E+05	2.60E-06	1.06E-11		4.14E-20
TX-105	3.70E+09	5.75E+02	2.49E-04		6.28E-17	1.10E+12	6.67E+00	2.89E-06		3.93E-12	1.10E+08	8.66E-04	3.76E-10		1.47E-18
TX-106	3.70E+08	5.75E+01	3.35E-05		8.44E-18	1.90E+11	1.15E+00	6.72E-07		9.13E-13	2.20E+06	1.73E-05	1.01E-11		3.96E-20
TX-107	1.90E+01	2.95E-06	2.17E-11		5.46E-24	3.70E+02	2.24E-09	1.65E-14		2.24E-20	2.50E+04	1.97E-07	1.44E-12		5.66E-21
TX-108	2.20E+09	3.42E+02	6.74E-04		1.70E-16	3.70E+11	2.24E+00	4.42E-06		6.01E-12	3.70E+10	2.91E-01	5.74E-07		2.25E-15
TX-109	3.70E+10	5.75E+03	4.17E-03		1.05E-15	1.10E+13	6.67E+01	4.84E-05		6.58E-11	4.80E+12	3.78E+01	2.74E-05		1.08E-13
TX-110	1.90E+10	2.95E+03	1.69E-03		4.25E-16	3.70E+12	2.24E+01	1.28E-05		1.74E-11	1.60E+12	1.26E+01	7.20E-06		2.82E-14
TX-111	2.60E+09	4.04E+02	2.88E-04		7.26E-17	3.70E+11	2.24E+00	1.60E-06		2.18E-12	1.90E+11	1.50E+00	1.07E-06		4.19E-15
TX-112	1.50E+09	2.33E+02	9.48E-05		2.39E-17	7.40E+10	4.48E-01	1.83E-07		2.48E-13	1.10E+10	8.66E-02	3.53E-08		1.38E-16
TX-113	3.70E+08	5.75E+01	2.50E-05		6.30E-18	3.80E+11	2.30E+00	1.00E-06		1.36E-12	2.20E+11	1.73E+00	7.54E-07		2.96E-15
TX-114	1.10E+09	1.71E+02	8.44E-05		2.13E-17	1.20E+11	7.27E-01	3.59E-07		4.88E-13	2.20E+10	1.73E-01	8.55E-08		3.35E-16
TX-115	7.40E+08	1.15E+02	4.74E-05		1.20E-17	2.60E+11	1.58E+00	6.50E-07		8.85E-13	2.60E+09	2.05E-02	8.45E-09		3.31E-17
TX-116	3.00E+08	4.66E+01	1.95E-05		4.92E-18	3.70E+10	2.24E-01	9.39E-08		1.28E-13	3.50E+08	2.76E-03	1.15E-09		4.52E-18
TX-117	1.10E+08	1.71E+01	7.21E-06		1.82E-18	3.70E+11	2.24E+00	9.46E-07		1.29E-12	7.50E+08	5.91E-03	2.49E-09		9.77E-18
TX-118	3.70E+10	5.75E+03	4.37E-03		1.10E-15	3.70E+13	2.24E+02	1.71E-04		2.32E-10	7.80E+13	6.14E+02	4.30E-06	sn	1.69E-14
TY-101	1.27E+09	1.97E+02	4.42E-04		1.11E-16	1.10E+11	6.67E-01	1.49E-06		2.03E-12	1.90E+12	1.50E+01	3.35E-05		1.31E-13
TY-102	1.50E+10	2.33E+03	9.62E-03		2.42E-15	2.30E+12	1.39E+01	5.75E-05		7.83E-11	1.78E+11	1.40E+00	1.70E-05	dl	6.67E-14
TY-103	1.83E+12	2.84E+05	4.63E-01		1.17E-13	7.40E+12	4.48E+01	7.31E-05		9.95E-11	1.50E+12	1.18E+01	1.21E-06	dl	4.75E-15
TY-104	5.26E+11	8.17E+04	4.69E-01		1.18E-13	1.98E+10	1.20E-01	2.62E-07	sn	3.57E-13	3.29E+11	2.59E+00	8.90E-08	sn	3.49E-16
TY-105	1.70E+09	2.64E+02	3.02E-04		7.61E-17	4.40E+11	2.67E+00	3.05E-06		4.15E-12	1.57E+12	1.24E+01	1.41E-05		5.54E-14
TY-106	4.09E+11	6.35E+04	9.87E-01		2.49E-13	3.70E+09	2.24E-02	3.49E-07		4.74E-13	1.88E+11	1.48E+00	2.30E-05		9.02E-14
U-101	1.10E+09	1.71E+02	1.81E-03		4.55E-16	3.70E+11	2.24E+00	2.37E-05		3.22E-11	3.30E+11	2.60E+00	2.75E-05		1.08E-13
U-102	2.60E+09	4.04E+02	2.85E-04		7.19E-17	1.10E+12	6.67E+00	4.71E-06		6.40E-12	1.90E+11	1.50E+00	1.06E-06		4.14E-15
U-103	3.70E+05	5.75E-02	3.24E-08		8.17E-21	1.50E+08	9.09E-04	5.13E-10		6.98E-16	4.01E+11	3.16E+00	1.78E-06		6.99E-15
U-104	7.40E+00	1.15E-06	2.49E-12		6.27E-25	7.40E+01	4.48E-10	9.71E-16		1.32E-21	4.10E+03	3.23E-08	6.99E-14		2.74E-22
U-105	7.40E+05	1.15E-01	7.26E-08		1.83E-20	2.60E+08	1.58E-03	9.96E-10		1.35E-15	7.40E+09	5.83E-02	3.68E-08		1.44E-16
U-106	3.30E+00	5.12E-07	5.99E-13		1.51E-25	2.20E+03	1.33E-08	1.56E-14		2.12E-20	3.00E+04	2.36E-07	2.76E-13		1.08E-21
U-107	3.70E+09	5.75E+02	3.74E-04		9.42E-17	3.00E+11	1.82E+00	1.18E-06		1.61E-12	7.40E+12	5.83E+01	3.79E-05		1.49E-13
U-108	1.10E+06	1.71E-01	9.68E-08		2.44E-20	3.70E+08	2.24E-03	1.27E-09		1.73E-15	3.30E+11	2.60E+00	1.47E-06		5.77E-15
U-109	3.30E+08	5.12E+01	2.92E-05		7.37E-18	1.10E+11	6.67E-01	3.80E-07		5.17E-13	1.10E+10	8.66E-02	4.94E-08		1.94E-16
U-110	1.90E+07	2.95E+00	4.19E-06		1.06E-18	9.30E+09	5.64E-02	8.01E-08		1.09E-13	3.70E+12	2.91E+01	4.14E-05		1.62E-13
U-111	1.50E+09	2.33E+02	1.87E-04		4.71E-17	7.40E+10	4.48E-01	3.60E-07		4.90E-13	1.60E+12	1.26E+01	1.01E-05		3.97E-14
U-112	1.90E+09	2.95E+02	1.59E-03		4.01E-16	7.40E+11	4.48E+00	2.42E-05		3.29E-11	1.90E+10	1.50E-01	8.07E-07		3.16E-15
U-201	3.00E+08	4.66E+01	2.46E-03		6.20E-16	1.10E+11	6.67E-01	3.52E-05		4.79E-11	4.40E+06	3.46E-05	1.83E-09		7.18E-18
U-202	3.00E+08	4.66E+01	2.46E-03		6.20E-16	1.10E+11	6.67E-01	3.52E-05		4.79E-11	4.40E+06	3.46E-05	1.83E-09		7.18E-18
U-203	2.60E+08	4.04E+01	3.56E-03		8.96E-16	7.40E+10	4.48E-01	3.95E-05		5.37E-11	4.00E+06	3.15E-05	2.77E-09		1.09E-17
U-204	7.40E+07	1.15E+01	1.01E-03		2.55E-16	2.20E+10	1.33E-01	1.17E-05		1.60E-11	1.73E+08	1.36E-03	1.20E-07		4.70E-16

Table C2-2 (Continued). SST Threshold Leakage Values - Case 1/Carcinogenic

Tank	Am-242m Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Cm-242 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Nb-93m Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L
A-101	3.30E+10	1.10E-06	3.06E-13		2.94E-16	3.00E+10	2.46E-04	6.82E-11		4.77E-15	1.35E+13	1.29E+00	3.57E-07		1.85E-10
A-102	1.90E+11	6.35E-06	4.09E-11		3.94E-14	1.50E+11	1.23E-03	7.92E-09		5.54E-13	7.99E+12	7.61E-01	4.90E-06		2.54E-09
A-103	3.30E+10	1.10E-06	7.88E-13		7.58E-16	2.60E+10	2.13E-04	1.52E-10		1.06E-14	3.36E+12	3.20E-01	2.29E-07		1.18E-10
A-104	3.00E+10	1.00E-06	9.47E-12		9.11E-15	2.60E+10	2.13E-04	2.01E-09		1.41E-13	3.33E+12	3.17E-01	2.99E-06		1.55E-09
A-105	3.70E+02	1.24E-14	1.72E-19		1.66E-22	3.30E+02	2.70E-12	3.76E-17		2.63E-21	4.22E+09	4.02E-04	5.59E-09		2.89E-12
A-106	7.40E+09	2.47E-07	5.23E-13		5.03E-16	7.40E+09	6.07E-05	1.28E-10		8.96E-15	8.88E+12	8.46E-01	1.79E-06		9.26E-10
AX-101	3.30E+00	1.10E-16	3.90E-23		3.75E-26	2.60E+00	2.13E-14	7.53E-21		5.26E-25	2.80E+12	2.66E-01	9.41E-08		4.87E-11
AX-102	2.20E-06	7.36E-23	4.98E-28		4.80E-31	1.90E-06	1.56E-20	1.06E-25		7.37E-30	1.44E+12	1.37E-01	9.26E-07		4.80E-10
AX-103	1.10E+09	3.68E-08	8.68E-14		8.35E-17	1.10E+09	9.02E-06	2.13E-11		1.49E-15	9.36E+10	8.92E-03	2.10E-08		1.09E-11
AX-104	2.20E+09	7.36E-08	2.78E-12		2.67E-15	1.90E+09	1.56E-05	5.88E-10		4.11E-14	8.07E+12	7.68E-01	2.90E-05		1.50E-08
B-101	3.30E-20	1.10E-36	2.58E-42		2.48E-45	2.60E-20	2.13E-34	4.98E-40		3.48E-44	9.84E+11	9.37E-02	2.19E-07		1.14E-10
B-102	1.50E+07	5.02E-10	4.14E-15		3.98E-18	1.50E+07	1.23E-07	1.02E-12		7.10E-17	2.59E+10	2.46E-03	2.03E-08		1.05E-11
B-103	1.10E+09	3.68E-08	1.65E-13		1.58E-16	1.00E+09	8.20E-06	3.67E-11		2.57E-15	7.10E+10	6.77E-03	3.03E-08		1.57E-11
B-104	1.10E+06	3.68E-11	2.62E-17		2.52E-20	1.10E+06	9.02E-09	6.42E-15		4.49E-19	1.34E+10	1.27E-03	9.06E-10		4.69E-13
B-105	1.20E+06	4.01E-11	3.47E-17		3.33E-20	8.10E+05	6.64E-09	5.73E-15		4.01E-19	3.81E+09	3.63E-04	3.13E-10		1.62E-13
B-106	1.10E+07	3.68E-10	8.31E-16		7.99E-19	1.10E+07	9.02E-08	2.04E-13		1.42E-17	2.54E+08	2.42E-05	5.47E-11		2.83E-14
B-107	1.50E+06	5.02E-11	8.03E-17		7.73E-20	1.10E+06	9.02E-09	1.44E-14		1.01E-18	1.65E+10	1.58E-03	2.52E-09		1.31E-12
B-108	3.70E+08	1.24E-08	3.48E-14		3.35E-17	3.30E+08	2.70E-06	7.60E-12		5.31E-16	1.16E+10	1.10E-03	3.10E-09		1.61E-12
B-109	1.50E+08	5.02E-09	1.04E-14		1.00E-17	1.10E+08	9.02E-07	1.88E-12		1.31E-16	3.46E+09	3.30E-04	6.86E-10		3.55E-13
B-110	1.50E+11	5.02E-06	5.39E-12		5.18E-15	1.10E+11	9.02E-04	9.68E-10		6.77E-14	1.47E+12	1.40E-01	1.51E-07		7.80E-11
B-111	7.50E+06	2.51E-10	2.80E-16		2.69E-19	7.50E+06	6.15E-08	6.85E-14		4.79E-18	1.45E+12	1.38E-01	1.54E-07		7.96E-11
B-112	3.30E+09	1.10E-07	8.84E-13		8.50E-16	2.60E+09	2.13E-05	1.71E-10		1.19E-14	7.92E+10	7.54E-03	6.04E-08		3.13E-11
B-201															
B-202															
B-203															
B-204															
BX-101	1.10E+06	3.68E-11	2.26E-16		2.17E-19	1.10E+06	9.02E-09	5.54E-14		3.87E-18	2.64E+10	2.52E-03	1.55E-08		8.01E-12
BX-102	3.70E+10	1.24E-06	3.41E-12		3.28E-15	3.70E+10	3.03E-04	8.35E-10		5.83E-14	2.84E+11	2.71E-02	7.45E-08		3.86E-11
BX-103	7.40E+04	2.47E-12	9.91E-18		9.53E-21	7.40E+04	6.07E-10	2.43E-15		1.70E-19	1.67E+03	1.59E-10	6.38E-16		3.30E-19
BX-104	3.00E+08	1.00E-08	2.68E-14		2.58E-17	2.20E+08	1.80E-06	4.81E-12		3.36E-16	1.71E+12	1.63E-01	4.34E-07		2.25E-10
BX-105	2.60E+11	8.70E-06	4.50E-11		4.33E-14	2.20E+11	1.80E-03	9.34E-09		6.53E-13	1.59E+12	1.52E-01	7.85E-07		4.07E-10
BX-106	1.90E+11	6.35E-06	3.65E-11		3.51E-14	1.50E+11	1.23E-03	7.06E-09		4.94E-13	1.91E+12	1.82E-01	1.05E-06		5.42E-10
BX-107	1.50E+06	5.02E-11	3.84E-17		3.70E-20	1.10E+06	9.02E-09	6.90E-15		4.83E-19	7.44E+10	7.08E-03	5.42E-09		2.81E-12
BX-108	1.50E+05	5.02E-12	5.10E-17		4.90E-20	1.10E+05	9.02E-10	9.16E-15		6.40E-19	7.36E+09	7.01E-04	7.13E-09		3.69E-12
BX-109	1.90E+09	6.35E-08	8.70E-14		8.37E-17	1.50E+09	1.23E-05	1.68E-11		1.18E-15	6.66E+11	6.34E-02	8.68E-08		4.50E-11
BX-110	3.70E+09	1.24E-07	1.65E-13		1.59E-16	3.70E+09	3.03E-05	4.05E-11		2.83E-15	1.39E+11	1.32E-02	1.76E-08		9.13E-12
BX-111	3.70E+09	1.24E-07	1.55E-13		1.49E-16	3.70E+09	3.03E-05	3.80E-11		2.65E-15	1.30E+11	1.23E-02	1.54E-08		8.00E-12
BX-112	2.20E+08	7.36E-09	1.18E-14		1.13E-17	1.90E+08	1.56E-06	2.49E-12		1.74E-16	1.14E+10	1.08E-03	1.73E-09		8.97E-13
BY-101	7.40E+09	2.47E-07	1.78E-13		1.71E-16	3.70E+09	3.03E-05	2.18E-11		1.53E-15	1.65E+11	1.57E-02	1.13E-08		5.85E-12
BY-102	1.90E+09	6.35E-08	4.92E-14		4.74E-17	1.50E+09	1.23E-05	9.53E-12		6.66E-16	4.77E+10	4.55E-03	3.52E-09		1.82E-12
BY-103	1.10E+09	3.68E-08	2.43E-14		2.34E-17	6.70E+08	5.49E-06	3.63E-12		2.54E-16	8.99E+10	8.56E-03	5.66E-09		2.93E-12
BY-104	1.10E+10	3.68E-07	2.39E-13		2.30E-16	1.00E+10	8.20E-05	5.33E-11		3.73E-15	1.14E+12	1.08E-01	7.04E-08		3.65E-11
BY-105	7.00E+09	2.34E-07	1.23E-13		1.18E-16	6.70E+09	5.49E-05	2.88E-11		2.02E-15	9.47E+11	9.02E-02	4.74E-08		2.45E-11
BY-106	7.80E+09	2.61E-07	1.07E-13		1.03E-16	4.10E+09	3.36E-05	1.38E-11		9.67E-16	4.26E+11	4.05E-02	1.67E-08		8.64E-12
BY-107	3.00E+09	1.00E-07	9.97E-14		9.59E-17	2.20E+09	1.80E-05	1.79E-11		1.25E-15	2.81E+11	2.68E-02	2.66E-08		1.38E-11
BY-108	4.10E+09	1.37E-07	1.59E-13		1.53E-16	3.70E+09	3.03E-05	3.51E-11		2.46E-15	2.85E+11	2.71E-02	3.14E-08		1.63E-11
BY-109	2.20E+09	7.36E-08	4.60E-14		4.42E-17	1.90E+09	1.56E-05	9.73E-12		6.80E-16	5.33E+10	5.07E-03	3.17E-09		1.64E-12
BY-110	8.50E+09	2.84E-07	1.90E-13		1.82E-16	4.40E+09	3.61E-05	2.41E-11		1.68E-15	5.18E+11	4.93E-02	3.29E-08		1.70E-11
BY-111	7.40E+09	2.47E-07	1.42E-13		1.37E-16	7.40E+09	6.07E-05	3.49E-11		2.44E-15	1.70E+11	1.62E-02	9.33E-09		4.83E-12
BY-112	1.10E+09	3.68E-08	3.34E-14		3.21E-17	1.10E+09	9.02E-06	8.19E-12		5.72E-16	3.09E+10	2.94E-03	2.67E-09		1.38E-12
C-101	1.10E+09	3.68E-08	1.10E-13		1.06E-16	7.40E+08	6.07E-06	1.82E-11		1.27E-15	2.17E+11	2.06E-02	6.20E-08		3.21E-11
C-102	3.70E+10	1.24E-06	7.73E-13		7.44E-16	3.70E+10	3.03E-04	1.89E-10		1.32E-14	1.72E+12	1.64E-01	1.02E-07		5.30E-11
C-103	3.70E+09	1.24E-07	1.68E-13		1.61E-16	3.70E+09	3.03E-05	4.11E-11		2.87E-15	2.72E+11	2.59E-02	3.50E-08		1.82E-11
C-104	3.70E+10	1.24E-06	1.11E-12		1.07E-15	3.30E+10	2.70E-04	2.42E-10		1.69E-14	4.59E+11	4.37E-02	3.91E-08		2.03E-11
C-105	7.70E+11	2.58E-05	5.04E-11		4.85E-14	3.90E+11	3.20E-03	6.26E-09		4.37E-13	9.10E+12	8.67E-01	1.70E-06		8.79E-10
C-106	1.50E+10	5.02E-07	5.79E-13		5.57E-16	1.10E+10	9.02E-05	1.04E-10		7.27E-15	1.41E+12	1.35E-01	1.55E-07		8.04E-11
C-107	2.60E+09	8.70E-08	8.35E-14		8.04E-17	2.20E+09	1.80E-05	1.73E-11		1.21E-15	3.07E+11	2.92E-02	2.81E-08		1.46E-11
C-108	1.10E+09	3.68E-08	1.47E-13		1.42E-16	7.40E+08	6.07E-06	2.43E-11		1.70E-15	1.62E+11	1.55E-02	6.19E-08		3.21E-11
C-109	1.20E+05	4.01E-12	1.61E-17		1.55E-20	7.80E+04	6.39E-10	2.56E-15		1.79E-19	7.77E+09	7.40E-04	2.96E-09		1.53E-12
C-110	1.50E+07	5.02E-10	7.09E-16		6.82E-19	1.10E+07	9.02E-08	1.27E-13		8.90E-18	2.58E+10	2.46E-03	3.48E-09		1.80E-12
C-111	3.30E+08	1.10E-08	5.12E-14		4.92E-17	2.60E+08	2.13E-06	9.88E-12		6.90E-16	1.16E+11	1.10E-02	5.11E-08		2.65E-11
C-112	7.40E+08	2.47E-08	6.29E-14		6.05E-17	7.40E+08	6.07E-06	1.54E-11		1.08E-15	1.02E+11	9.69E-03	2.46E-08		1.28E-11
C-201	7.40E+03	2.47E-13	3.27E-17		3.15E-20	3.70E+03	3.03E-11	4.01E-15		2.80E-19	4.70E+08	4.48E-05	5.91E-09		3.06E-12
C-202	1.90E+04	6.35E-13	1.68E-16		1.62E-19	1.50E+04	1.23E-10	3.25E-14		2.27E-18	1.76E+09	1.67E-04	4.42E-08		2.29E-11
C-203	1.90E+03	6.35E-14	3.36E-18		3.23E-21	1.50E+03	1.23E-11	6.50E-16		4.54E-20	1.75E+08	1.67E-05	8.81E-10		4.56E-13
C-204	3.70E+00	1.24E-16	1.09E-20		1.05E-23	3.70E+00	3.03E-14	2.67E-18		1.87E-22	6.22E+05	5.92E-08	5.21E-12		2.70E-15
S-101	2.20E+10	7.36E-07	4.55E-13		4.38E-16	1.70E+10	1.39E-04	8.62E-11		6.03E-15	9.58E+11	9.13E-02	5.65E-08		2.93E-11
S-102	3.30E+08	1.10E-08	5.31E-15		5.11E-18	2.60E+08	2.13E-06	1.03E-12		7.17E-17	8.51E+10	8.10E-03	3.90E-09		2.02E-12
S-103	3.70E+07	1.24E-09	1.33E-15		1.28E-18	3.00E+07	2.46E-07	2.64E-13		1.85E-17	6.44E+09	6.13E-04	6.59E-10		3.41E-13
S-104	2.60E+09	8.70E-08	7.81E-14		7.52E-17	1.90E+09	1.56E-05	1.40E-11		9.78E-16	7.84E+11	7.47E-02	6.71E-08		3.48E-11
S-105	2.20E+08	7.36E-09	4.26E-15		4.10E-18	1.90E+08	1.56E-06	9.02E-13		6.31E-17	7.81E+10	7.44E-03	4.31E-09		2.23E-12
S-106	5.20E+07	1.74E-09	9.59E-16		9.23E-19	4.40E+07	3.61E-07	1.99E-13		1.39E-17	1.24E+10	1.18E-03	6.51E-10		3.37E-13
S-107	7.40E+09	2.47E-07	1.74E-13		1.67E-16	7.40E+09	6.07E-05	4.26E-11		2.98E-15	1.22E+12	1.16E-01	8.17E-08		4.23E-11
S-108	7.70E+09	2.58E-07	1.13E-13		1.08E-16	7.70E+09	6.31E-05	2.76E-11		1.93E-15	1.44E+11	1.37E-02	6.00E-09		3.11E-12

Table C2-2 (Continued). SST Threshold Leakage Values - Case 1/Carcinogenic

Tank	Am-242m Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Cm-242 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Nb-93m Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L
S-109	1.10E+10	3.68E-07	1.92E-13		1.85E-16	1.10E+10	9.02E-05	4.71E-11		3.29E-15	2.53E+11	2.41E-02	1.26E-08		6.51E-12
S-110	2.10E+09	7.02E-08	4.76E-14		4.58E-17	1.70E+09	1.39E-05	9.44E-12		6.60E-16	6.62E+11	6.31E-02	4.27E-08		2.21E-11
S-111	5.60E+08	1.87E-08	8.30E-15		7.99E-18	5.20E+08	4.26E-06	1.89E-12		1.32E-16	2.04E+11	1.94E-02	8.59E-09		4.45E-12
S-112	7.40E+10	2.47E-06	1.25E-12		1.20E-15	3.70E+10	3.03E-04	1.53E-10		1.07E-14	1.02E+12	9.73E-02	4.91E-08		2.54E-11
SX-101	1.10E+10	3.68E-07	2.13E-13		2.05E-16	7.40E+09	6.07E-05	3.51E-11		2.46E-15	1.10E+12	1.05E-01	6.08E-08		3.15E-11
SX-102	1.20E+09	4.01E-08	1.95E-14		1.88E-17	8.10E+08	6.64E-06	3.23E-12		2.26E-16	1.10E+11	1.05E-02	5.11E-09		2.65E-12
SX-103	1.90E+11	6.35E-06	2.57E-12		2.48E-15	1.50E+11	1.23E-03	4.98E-10		3.48E-14	1.17E+12	1.11E-01	4.51E-08		2.34E-11
SX-104	4.10E+10	1.37E-06	5.90E-13		5.68E-16	3.30E+10	2.70E-04	1.16E-10		8.14E-15	1.05E+12	1.00E-01	4.32E-08		2.24E-11
SX-105	7.50E+10	2.51E-06	9.70E-13		9.33E-16	3.80E+10	3.11E-04	1.20E-10		8.42E-15	4.18E+11	3.98E-02	1.54E-08		7.98E-12
SX-106	2.20E+10	7.36E-07	3.63E-13		3.49E-16	1.90E+10	1.56E-04	7.68E-11		5.37E-15	3.53E+11	3.37E-02	1.66E-08		8.59E-12
SX-107	2.20E+10	7.36E-07	1.87E-12		1.80E-15	1.90E+10	1.56E-04	3.96E-10		2.77E-14	2.07E+12	1.97E-01	5.01E-07		2.60E-10
SX-108	2.20E+10	7.36E-07	2.40E-12		2.31E-15	1.90E+10	1.56E-04	5.08E-10		3.55E-14	2.28E+12	2.17E-01	7.09E-07		3.67E-10
SX-109	1.10E+10	3.68E-07	3.89E-13		3.74E-16	1.10E+10	9.02E-05	9.53E-11		6.66E-15	1.18E+12	1.12E-01	1.19E-07		6.15E-11
SX-110	3.00E+10	1.00E-06	4.28E-12		4.11E-15	2.20E+10	1.80E-04	7.68E-10		5.37E-14	2.31E+12	2.20E-01	9.37E-07		4.85E-10
SX-111	3.70E+10	1.24E-06	2.62E-12		2.52E-15	3.30E+10	2.70E-04	5.72E-10		4.00E-14	2.63E+12	2.51E-01	5.30E-07		2.75E-10
SX-112	1.10E+10	3.68E-07	1.06E-12		1.02E-15	1.10E+10	9.02E-05	2.59E-10		1.81E-14	1.48E+12	1.41E-01	4.06E-07		2.10E-10
SX-113	7.40E+08	2.47E-08	2.51E-13		2.42E-16	7.40E+08	6.07E-06	6.16E-11		4.31E-15	4.22E+11	4.02E-02	4.08E-07		2.11E-10
SX-114	3.30E+10	1.10E-06	1.61E-12		1.55E-15	2.60E+10	2.13E-04	3.11E-10		2.17E-14	3.31E+12	3.15E-01	4.60E-07		2.38E-10
SX-115	7.40E+09	2.47E-07	5.45E-12		5.24E-15	7.40E+09	6.07E-05	1.34E-09		9.33E-14	9.88E+11	9.41E-02	2.07E-06		1.07E-09
T-101	7.40E+09	2.47E-07	6.41E-13		6.17E-16	3.70E+09	3.03E-05	7.86E-11		5.49E-15	3.53E+10	3.36E-03	8.71E-09		4.51E-12
T-102	1.10E+08	3.68E-09	3.04E-14		2.92E-17	7.40E+07	6.07E-07	5.01E-12		3.50E-16	5.99E+08	5.71E-05	4.71E-10		2.44E-13
T-103	7.40E+08	2.47E-08	2.42E-13		2.33E-16	3.70E+08	3.03E-06	2.97E-11		2.07E-15	3.62E+09	3.45E-04	3.37E-09		1.75E-12
T-104	1.90E+07	6.35E-10	3.77E-16		3.63E-19	1.50E+07	1.23E-07	7.30E-14		5.10E-18	7.25E+10	6.91E-03	4.10E-09		2.12E-12
T-105	3.00E+08	1.00E-08	2.76E-14		2.66E-17	2.60E+08	2.13E-06	5.87E-12		4.10E-16	3.44E+10	3.27E-03	9.01E-09		4.67E-12
T-106	3.30E+07	1.10E-09	1.39E-14		1.34E-17	2.60E+07	2.13E-07	2.68E-12		1.87E-16	3.26E+09	3.10E-04	3.91E-09		2.02E-12
T-107	7.40E+05	2.47E-11	3.63E-17		3.49E-20	7.40E+05	6.07E-09	8.90E-15		6.22E-19	6.73E+10	6.41E-03	9.41E-09		4.88E-12
T-108	7.50E+04	2.51E-12	1.51E-17		1.45E-20	7.50E+04	6.15E-10	3.69E-15		2.58E-19	6.77E+09	6.45E-04	3.87E-09		2.01E-12
T-109	1.10E+04	3.68E-13	1.68E-18		1.61E-21	7.80E+03	6.39E-11	2.91E-16		2.04E-20	1.15E+09	1.09E-04	4.98E-10		2.58E-13
T-110	3.00E+05	1.00E-11	6.99E-18		6.73E-21	2.60E+05	2.13E-09	1.49E-15		1.04E-19	9.21E+09	8.77E-04	6.12E-10		3.17E-13
T-111	7.40E+07	2.47E-09	1.44E-15		1.39E-18	7.40E+07	6.07E-07	3.54E-13		2.47E-17	7.88E+09	7.51E-04	4.38E-10		2.27E-13
T-112	1.10E+07	3.68E-10	1.45E-15		1.40E-18	1.10E+07	9.02E-08	3.56E-13		2.49E-17	1.04E+10	9.94E-04	3.92E-09		2.03E-12
T-201															
T-202															
T-203															
T-204															
TX-101	3.70E+04	1.24E-12	3.76E-18		3.62E-21	3.30E+04	2.70E-10	8.21E-16		5.74E-20	1.56E+03	1.49E-10	4.52E-16		2.34E-19
TX-102	4.40E+03	1.47E-13	1.79E-19		1.72E-22	3.70E+03	3.03E-11	3.69E-17		2.58E-21	4.44E+09	4.23E-04	5.15E-10		2.67E-13
TX-103	7.40E+06	2.47E-10	4.16E-16		4.01E-19	7.40E+06	6.07E-08	1.02E-13		7.13E-18	3.85E+08	3.66E-05	6.17E-11		3.19E-14
TX-104	3.00E-04	1.00E-20	4.08E-26		3.92E-29	2.20E-04	1.80E-18	7.33E-24		5.12E-28	2.10E+06	2.00E-07	8.12E-13		4.21E-16
TX-105	1.90E+04	6.35E-13	2.76E-19		2.65E-22	1.50E+04	1.23E-10	5.33E-17		3.73E-21	4.07E+10	3.88E-03	1.68E-09		8.71E-13
TX-106	7.40E+03	2.47E-13	1.44E-19		1.39E-22	3.70E+03	3.03E-11	1.77E-17		1.24E-21	2.13E+09	2.03E-04	1.19E-10		6.14E-14
TX-107	3.70E-01	1.24E-17	9.08E-23		8.74E-26	3.30E-01	2.70E-15	1.99E-20		1.39E-24	5.37E+03	5.11E-10	3.75E-15		1.94E-18
TX-108	1.10E+06	3.68E-11	7.25E-17		6.98E-20	7.50E+05	6.15E-09	1.21E-14		8.47E-19	1.18E+10	1.13E-03	2.22E-09		1.15E-12
TX-109	7.40E+09	2.47E-07	1.80E-13		1.73E-16	7.40E+09	6.07E-05	4.40E-11		3.08E-15	4.18E+11	3.98E-02	2.89E-08		1.50E-11
TX-110	3.00E+09	1.00E-07	5.74E-14		5.52E-17	2.60E+09	2.13E-05	1.22E-11		8.52E-16	1.17E+11	1.11E-02	6.35E-09		3.29E-12
TX-111	3.00E+08	1.00E-08	7.16E-15		6.89E-18	2.60E+08	2.13E-06	1.52E-12		1.06E-16	1.44E+10	1.37E-03	9.76E-10		5.06E-13
TX-112	1.90E+07	6.35E-10	2.59E-16		2.49E-19	1.50E+09	1.23E-05	5.01E-12		3.50E-16	4.66E+09	4.44E-04	1.81E-10		9.36E-14
TX-113	7.40E+08	2.47E-08	1.08E-14		1.04E-17	7.40E+08	6.07E-06	2.64E-12		1.85E-16	3.85E+10	3.66E-03	1.60E-09		8.26E-13
TX-114	7.40E+07	2.47E-09	1.22E-15		1.18E-18	7.40E+07	6.07E-07	3.00E-13		2.09E-17	7.84E+09	7.47E-04	3.69E-10		1.91E-13
TX-115	7.40E+06	2.47E-10	1.02E-16		9.83E-20	7.40E+06	6.07E-08	2.50E-14		1.75E-18	1.91E+09	1.82E-04	7.51E-11		3.89E-14
TX-116	7.60E+04	2.54E-12	1.06E-18		1.02E-21	3.80E+04	3.11E-10	1.30E-16		9.12E-21	9.77E+08	9.30E-05	3.90E-11		2.02E-14
TX-117	7.40E+05	2.47E-11	1.04E-17		1.00E-20	7.40E+05	6.07E-09	2.56E-15		1.79E-19	4.00E+08	3.81E-05	1.61E-11		8.32E-15
TX-118	7.40E+10	2.47E-06	1.88E-12		1.81E-15	7.40E+10	6.07E-04	4.62E-10		3.23E-14	1.63E+12	1.55E-01	1.18E-07		6.12E-11
TY-101	1.50E+07	5.02E-10	1.12E-15		1.08E-18	1.10E+07	9.02E-08	2.02E-13		1.41E-17	6.73E+10	6.41E-03	1.44E-08		7.44E-12
TY-102	1.90E+05	6.35E-12	2.62E-17		2.52E-20	1.50E+05	1.23E-09	5.08E-15		3.55E-19	1.03E+11	9.80E-03	4.04E-08		2.09E-11
TY-103	3.30E+07	1.10E-09	1.80E-15		1.73E-18	2.60E+07	2.13E-07	3.48E-13		2.43E-17	5.25E+11	5.00E-02	8.16E-08		4.23E-11
TY-104	1.50E+06	5.02E-11	2.88E-16		2.77E-19	1.20E+06	9.84E-09	5.65E-14		3.95E-18	2.23E+10	2.12E-03	1.22E-08		6.31E-12
TY-105	2.20E+09	7.36E-08	8.42E-14		8.10E-17	1.90E+09	1.56E-05	1.78E-11		1.25E-15	6.14E+11	5.85E-02	6.69E-08		3.47E-11
TY-106	2.20E+08	7.36E-09	1.14E-13		1.10E-16	1.90E+08	1.56E-06	2.42E-11		1.69E-15	6.73E+10	6.41E-03	9.97E-08		5.16E-11
U-101	1.10E+06	3.68E-11	3.89E-16		3.74E-19	1.10E+06	9.02E-09	9.53E-14		6.66E-18	4.63E+10	4.40E-03	4.65E-08		2.41E-11
U-102	3.30E+08	1.10E-08	7.80E-15		7.50E-18	2.60E+08	2.13E-06	1.51E-12		1.05E-16	1.47E+10	1.40E-03	9.86E-10		5.11E-13
U-103	1.10E+04	3.68E-13	2.08E-19		2.00E-22	7.40E+03	6.07E-11	3.42E-17		2.39E-21	4.81E+06	4.58E-07	2.59E-13		1.34E-16
U-104	1.50E-01	5.02E-18	1.09E-23		1.05E-26	1.10E-01	9.02E-16	1.95E-21		1.36E-25	3.23E+03	3.08E-10	6.66E-16		3.45E-19
U-105	2.20E+05	7.36E-12	4.65E-18		4.47E-21	1.90E+05	1.56E-09	9.84E-16		6.88E-20	7.62E+08	7.26E-05	4.59E-11		2.38E-14
U-106	3.70E+01	1.24E-15	1.45E-21		1.39E-24	3.00E+01	2.46E-13	2.87E-19		2.01E-23	8.44E+02	8.03E-11	9.39E-17		4.87E-20
U-107	7.40E+09	2.47E-07	1.61E-13		1.55E-16	7.40E+09	6.07E-05	3.95E-11		2.76E-15	1.27E+11	1.21E-02	7.89E-09		4.09E-12
U-108	3.70E+08	1.24E-08	7.02E-15		6.75E-18	3.00E+08	2.46E-06	1.39E-12		9.75E-17	1.58E+10	1.50E-03	8.53E-10		4.42E-13
U-109	1.90E+06	6.35E-11	3.63E-17		3.49E-20	1.50E+06	1.23E-08	7.02E-15		4.90E-19	2.57E+09	2.45E-04	1.40E-10		7.23E-14
U-110	2.60E+09	8.70E-08	1.24E-13		1.19E-16	2.20E+09	1.80E-05	2.56E-11		1.79E-15	5.40E+11	5.14E-02	7.31E-08		3.79E-11
U-111	2.40E+09	8.03E-08	6.45E-14		6.20E-17	2.00E+09	1.64E-05	1.32E-11		9.20E-16	7.33E+10	6.98E-03	5.60E-09		2.90E-12
U-112	1.90E+07	6.35E-10	3.43E-15		3.30E-18	1.50E+07	1.23E-07	6.63E-13		4.63E-17	5.37E+09	5.11E-04	2.75E-09		1.43E-12
U-201	1.70E+04	5.69E-13	3.00E-17		2.89E-20	1.30E+04	1.07E-10	5.63E-15		3.94E-19	1.55E+08	1.48E-05	7.80E-10		4.04E-13
U-202	4.40E+03	1.47E-13	7.78E-18		7.48E-21	3.70E+03	3.03E-11	1.60E-15		1.12E-19	1.64E+08	1.56E-05	8.25E-10		4.27E-13
U-203	4.00E+03	1.34E-13	1.18E-17		1.13E-20	3.60E+03	2.95E-11	2.60E-15		1.82E-19	1.44E+08	1.37E-05	1.21E-09		6.27E-13
U-204	1.90E+03	6.35E-14	5.60E-18		5.38E-21	1.50E+03	1.23E-11	1.08E-15		7.57E-20	3.92E+07	3.74E-06	3.29E-10		1.70E-13

Table C2-2 (Continued). SST Threshold Leakage Values - Case 1/Carcinogenic

Tank	Np-237 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Pu-238 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Pu-239/240 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L
A-101	1.50E+08	5.75E+00	1.59E-06		1.40E-18	3.00E+12	4.74E+00	1.31E-06		2.81E-14	9.60E+13	4.17E+04	6.43E-04	dl	4.77E-14
A-102	1.10E+10	4.21E+02	2.72E-03		2.38E-15	3.80E+11	6.00E-01	3.87E-06		8.28E-14	1.40E+13	6.09E+03	7.30E-05	sn	5.41E-15
A-103	3.70E+08	1.42E+01	1.01E-05		8.88E-18	7.40E+11	1.17E+00	8.35E-07		1.79E-14	1.40E+13	6.09E+03	4.05E-06	dl	3.00E-16
A-104	1.80E+08	6.90E+00	6.51E-05		5.71E-17	7.40E+11	1.17E+00	1.10E-05		2.36E-13	2.60E+13	1.13E+04	1.07E-01		7.90E-12
A-105	1.50E+09	5.75E+01	7.99E-04		7.01E-16	1.50E+07	2.37E-05	3.30E-10		7.05E-18	5.90E+05	2.57E-04	3.57E-09		2.64E-19
A-106	3.70E+07	1.42E+00	3.00E-06		2.63E-18	1.90E+12	3.00E+00	6.34E-06		1.36E-13	6.74E+13	2.93E+04	4.20E-06	dl	3.11E-16
AX-101	1.90E+06	7.28E-02	2.57E-08		2.25E-20	7.40E+11	1.17E+00	4.13E-07		8.84E-15	1.40E+13	6.09E+03	3.22E-05	sn	2.38E-15
AX-102	1.50E+06	5.75E-02	3.89E-07		3.41E-19	3.30E+11	5.21E-01	3.53E-06		7.56E-14	5.20E+12	2.26E+03	1.56E-03	sn	1.16E-13
AX-103	7.40E+08	2.84E+01	6.69E-05		5.87E-17	7.80E+07	1.23E-04	2.91E-10		6.22E-18	2.86E+11	1.24E+02	3.61E-05	sn	2.68E-15
AX-104	1.23E+16	4.71E+08	1.78E+04		1.56E-08	7.40E+11	1.17E+00	4.41E-05		9.44E-13	1.42E+13	6.17E+03	2.33E-01		1.73E-11
B-101	1.90E+07	7.28E-01	1.70E-06		1.49E-18	1.10E+12	1.74E+00	4.06E-06		8.69E-14	2.60E+13	1.13E+04	2.64E-02		1.96E-12
B-102	1.10E+08	4.21E+00	3.48E-05		3.05E-17	1.50E+11	2.37E-01	1.96E-06		4.19E-14	2.30E+12	1.00E+03	3.41E-05	sn	2.53E-15
B-103	7.50E+08	2.87E+01	1.29E-04		1.13E-16	1.90E+11	3.00E-01	1.34E-06		2.88E-14	9.30E+12	4.04E+03	1.83E-05	sn	1.35E-15
B-104	2.20E+08	8.43E+00	6.00E-06		5.26E-18	7.40E+09	1.17E-02	8.33E-09		1.78E-16	4.10E+12	1.78E+03	1.27E-03		9.41E-14
B-105	1.90E+09	7.28E+01	6.29E-05		5.51E-17	7.40E+08	1.17E-03	1.01E-09		2.16E-17	8.45E+12	3.67E+03	3.17E-03		2.35E-13
B-106	7.40E+07	2.84E+00	6.40E-06		5.61E-18	1.50E+08	2.37E-04	5.35E-10		1.15E-17	4.10E+10	1.78E+01	1.38E-05	sn	1.02E-15
B-107	2.20E+09	8.43E+01	1.35E-04		1.18E-16	3.30E+09	5.21E-03	8.35E-09		1.79E-16	7.49E+12	3.26E+03	5.21E-03		3.86E-13
B-108	3.00E+09	1.15E+02	3.23E-04		2.83E-16	7.80E+08	1.23E-03	3.46E-09		7.41E-17	1.60E+11	6.96E+01	1.96E-04		1.45E-14
B-109	1.10E+09	4.21E+01	8.77E-05		7.69E-17	3.80E+08	6.00E-04	1.25E-09		2.67E-17	2.10E+10	9.13E+00	2.87E-06	sn	2.13E-16
B-110	1.10E+09	4.21E+01	4.53E-05		3.97E-17	3.80E+11	6.00E-01	6.45E-07		1.38E-14	9.30E+12	4.04E+03	4.34E-03		3.22E-13
B-111	3.70E+11	1.42E+04	1.58E-02		1.39E-14	7.40E+09	1.17E-02	1.30E-08		2.79E-16	1.30E+12	5.65E+02	6.30E-04		4.67E-14
B-112	2.20E+10	8.43E+02	6.75E-03		5.92E-15	3.70E+10	5.85E-02	4.68E-07		1.00E-14	1.70E+11	7.39E+01	5.92E-04		4.38E-14
B-201											1.71E+13	7.43E+03	6.77E-02		5.02E-12
B-202	2.91E+12	1.11E+05	1.09E+00		9.57E-13	1.50E+11	2.37E-01	2.32E-06		4.96E-14	9.30E+12	4.04E+03	3.96E-02		2.93E-12
B-203	3.30E+04	1.26E-03	6.55E-09		5.74E-21	1.90E+08	3.00E-04	1.55E-09		3.33E-17	7.74E+11	3.37E+02	1.74E-03		1.29E-13
B-204	3.30E+05	1.26E-02	6.68E-08		5.86E-20	1.90E+09	3.00E-03	1.59E-08		3.39E-16	4.35E+12	1.89E+03	9.99E-03		7.41E-13
BX-101	2.20E+07	8.43E-01	5.18E-06		4.54E-18	3.70E+11	5.85E-01	3.59E-06		7.69E-14	2.30E+13	1.00E+04	6.14E-02		4.55E-12
BX-102	3.30E+10	1.26E+03	3.48E-03		3.05E-15	4.10E+10	6.48E-02	1.78E-07		3.81E-15	1.40E+12	6.09E+02	1.68E-03		1.24E-13
BX-103	3.70E+02	1.42E-05	5.67E-11		4.98E-23	7.40E+09	1.17E-02	4.68E-08		1.00E-15	2.61E+11	1.13E+02	1.28E-04	sn	9.50E-15
BX-104	3.70E+11	1.42E+04	3.78E-02		3.32E-14	7.40E+10	1.17E-01	3.12E-07		6.68E-15	7.88E+12	3.43E+03	2.96E-04	dl	2.19E-14
BX-105	3.70E+10	1.42E+03	7.34E-03		6.44E-15	3.30E+10	5.21E-02	2.70E-07		5.78E-15	1.04E+12	4.52E+02	2.48E-04	sn	1.84E-14
BX-106	1.50E+11	5.75E+03	3.30E-02		2.89E-14	2.20E+10	3.48E-02	2.00E-07		4.27E-15	1.20E+09	5.22E-01	2.07E-06	sn	1.54E-16
BX-107	7.40E+08	2.84E+01	2.17E-05		1.90E-17	3.70E+09	5.85E-03	4.48E-09		9.58E-17	2.10E+12	9.13E+02	6.83E-05	sn	5.06E-15
BX-108	1.90E+07	7.28E-01	7.40E-06		6.49E-18	3.70E+08	5.85E-04	5.94E-09		1.27E-16	2.10E+11	9.13E+01	9.28E-04		6.87E-14
BX-109	7.50E+08	2.87E+01	3.93E-05		3.45E-17	1.90E+10	3.00E-02	4.11E-08		8.79E-16	2.50E+12	1.09E+03	1.57E-05	sn	1.16E-15
BX-110	3.30E+10	1.26E+03	1.69E-03		1.48E-15	4.10E+09	6.48E-03	8.64E-09		1.85E-16	8.10E+11	3.52E+02	1.29E-06	sn	9.54E-17
BX-111	3.70E+10	1.42E+03	1.78E-03		1.56E-15	1.50E+09	2.37E-03	2.97E-09		6.35E-17	8.20E+10	3.57E+01	1.38E-06	sn	1.02E-16
BX-112	3.70E+08	1.42E+01	2.27E-05		1.99E-17	3.70E+09	5.85E-03	9.36E-09		2.00E-16	4.40E+11	1.91E+02	1.85E-04	sn	1.37E-14
BY-101	3.70E+10	1.42E+03	1.02E-03		8.95E-16	4.40E+09	6.95E-03	5.00E-09		1.07E-16	1.90E+09	8.26E-01	5.95E-07		4.41E-17
BY-102	1.50E+10	5.75E+02	4.45E-04		3.91E-16	7.70E+09	1.22E-02	9.42E-09		2.02E-16	2.20E+08	9.57E-02	7.41E-08		5.49E-18
BY-103	2.30E+09	8.81E+01	5.82E-05		5.10E-17	7.40E+11	1.17E+00	7.72E-07		1.65E-14	4.00E+13	1.74E+04	1.15E-02		8.51E-13
BY-104	3.70E+10	1.42E+03	9.23E-04		8.09E-16	1.50E+12	2.37E+00	1.54E-06		3.30E-14	8.50E+12	3.70E+03	2.40E-03		1.78E-13
BY-105	3.70E+10	1.42E+03	7.45E-04		6.53E-16	3.70E+11	5.85E-01	3.07E-07		6.57E-15	4.00E+12	1.74E+03	9.13E-04		6.77E-14
BY-106	3.70E+10	1.42E+03	5.83E-04		5.12E-16	3.70E+11	5.85E-01	2.41E-07		5.15E-15	1.30E+12	5.65E+02	2.33E-04		1.72E-14
BY-107	1.90E+10	7.28E+02	7.23E-04		6.34E-16	2.60E+11	4.11E-01	4.08E-07		8.73E-15	1.30E+12	5.65E+02	5.61E-04		4.16E-14
BY-108	2.60E+10	9.96E+02	1.15E-03		1.01E-15	3.70E+11	5.85E-01	6.77E-07		1.45E-14	2.30E+12	1.00E+03	1.16E-03		8.59E-14
BY-109	1.50E+10	5.75E+02	3.59E-04		3.15E-16	3.90E+09	6.16E-03	3.85E-09		8.24E-17	6.60E+07	2.87E-02	1.79E-08		1.33E-18
BY-110	3.70E+10	1.42E+03	9.46E-04		8.29E-16	3.70E+11	5.85E-01	3.90E-07		8.35E-15	2.30E+12	1.00E+03	6.67E-04		4.94E-14
BY-111	3.70E+10	1.42E+03	8.16E-04		7.16E-16	4.40E+09	6.95E-03	4.00E-09		8.56E-17	9.30E+09	4.04E+00	2.33E-06		1.72E-16
BY-112	7.40E+09	2.84E+02	2.57E-04		2.26E-16	3.80E+09	6.00E-03	5.45E-09		1.17E-16	6.00E+07	2.61E-02	2.37E-08		1.76E-18
C-101	7.40E+09	2.84E+02	8.51E-04		7.47E-16	7.40E+10	1.17E-01	3.51E-07		7.51E-15	4.80E+12	2.09E+03	6.27E-03		4.64E-13
C-102	2.60E+08	9.96E+00	6.22E-06		5.46E-18	1.90E+12	3.00E+00	1.87E-06		4.01E-14	9.30E+13	4.04E+04	9.35E-05	sn	6.93E-15
C-103	3.30E+07	1.26E+00	1.71E-06		1.50E-18	3.30E+11	5.21E-01	7.06E-07		1.51E-14	1.40E+13	6.09E+03	3.86E-04	sn	2.86E-14
C-104	1.90E+08	7.28E+00	6.52E-06		5.72E-18	1.90E+12	3.00E+00	2.69E-06		5.75E-14	4.38E+14	1.90E+05	1.24E-04	dl	9.21E-15
C-105	2.80E+09	1.07E+02	2.10E-04		1.84E-16	2.10E+12	3.32E+00	6.49E-06		1.39E-13	9.50E+13	4.13E+04	8.08E-02		5.99E-12
C-106	7.40E+07	2.84E+00	3.27E-06		2.87E-18	2.60E+11	4.11E-01	4.74E-07		1.01E-14	1.08E+14	4.70E+04	1.57E-02	dl	1.17E-12
C-107	2.90E+08	1.11E+01	1.07E-05		9.36E-18	1.50E+11	2.37E-01	2.28E-07		4.87E-15	1.30E+13	5.65E+03	7.43E-03	dl	5.51E-13
C-108	1.10E+07	4.21E-01	1.69E-06		1.48E-18	7.40E+10	1.17E-01	4.68E-07		1.00E-14	4.40E+12	1.91E+03	7.66E-03		5.67E-13
C-109	2.20E+08	8.43E+00	3.37E-05		2.96E-17	3.70E+09	5.85E-03	2.34E-08		5.01E-16	4.40E+10	1.91E+01	7.66E-05		5.67E-15
C-110	3.70E+06	1.42E-01	2.00E-07		1.76E-19	3.70E+11	5.85E-01	8.26E-07		1.77E-14	4.80E+12	2.09E+03	7.09E-04	sn	5.25E-14
C-111	1.90E+08	7.28E+00	3.37E-05		2.96E-17	1.10E+11	1.74E-01	8.05E-07		1.72E-14	3.00E+12	1.30E+03	6.05E-03		4.48E-13
C-112	1.60E+08	6.13E+00	1.56E-05		1.37E-17	3.70E+10	5.85E-02	1.48E-07		3.18E-15	2.60E+12	1.13E+03	3.08E-06	dl	2.28E-16
C-201	7.70E+04	2.95E-03	3.90E-07		3.42E-19	1.10E+06	1.74E-06	2.30E-10		4.91E-18	1.62E+12	7.04E+02	4.65E-02	sn	3.45E-12
C-202	1.50E+04	5.75E-04	1.52E-07		1.33E-19	3.70E+06	5.85E-06	1.54E-09		3.30E-17	2.40E+09	1.04E+00	2.76E-04		2.04E-14
C-203	1.50E+03	5.75E-05	3.04E-09		2.66E-21	7.40E+05	1.17E-06	6.18E-11		1.32E-18	2.40E+08	1.04E-01	5.51E-06		4.09E-16
C-204	3.30E+03	1.26E-04	1.11E-08		9.77E-21	1.50E+03	2.37E-09	2.09E-13		4.47E-21	4.43E+08	1.93E-01	1.16E-06	sn	8.57E-17
S-101	3.70E+09	1.42E+02	8.77E-05		7.69E-17	3.70E+11	5.85E-01	3.62E-07		7.74E-15	8.90E+12	3.87E+03	2.39E-03		1.77E-13
S-102	3.70E+06	1.42E-01	6.82E-08		5.98E-20	7.40E+10	1.17E-01	5.63E-08		1.20E-15	8.90E+11	3.87E+02	8.13E-08	sn	6.02E-18
S-103	2.60E+05	9.96E-03	1.07E-08		9.38E-21	7.40E+09	1.17E-02	1.26E-08		2.69E-16	2.00E+12	8.70E+02	1.46E-03	sn	1.08E-13
S-104	1.50E+09	5.75E+01	5.16E-05		4.53E-17	3.30E+11	5.21E-01	4.68E-07		1.00E-14	2.52E+13	1.10E+04	9.85E-03		7.30E-13
S-105	3.70E+09	1.42E+02	8.21E-05		7.20E-17	1.10E+10	1.74E-02	1.01E-08		2.15E-16	4.80E+11	2.09E+02	1.21E-04		8.96E-15
S-106	7.40E+09	2.84E+02	1.56E-04		1.37E-16	3.30E+09	5.21E-03	2.88E-09		6.15E-17	1.89E+13	8.22E+03	1.16E-06	sn	8.57E-17
S-107	1.10E+08	4.21E+00	2.96E-06		2.60E-18	1.90E+12	3.00E+00	2.11E-06		4.51E-14	4.40E+13	1.91E+04	1.34E-02		9.96E-13
S-108	7.40E+09	2.84E+02	1.24E-04		1.09E-16	1.10E+11	1.74E-01	7.60E-08		1.63E-15	1.30E+12	5.65E+02	2.47E-04		1.83E-14

Table C2-2 (Continued). SST Threshold Leakage Values - Case 1/Carcinogenic

Tank	Np-237 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Pu-238 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Pu-239/240 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L
S-109	3.70E+10	1.42E+03	7.40E-04		6.49E-16	1.60E+10	2.53E-02	1.32E-08		2.82E-16	3.52E+12	1.53E+03	7.99E-04		5.92E-14
S-110	1.10E+10	4.21E+02	2.86E-04		2.50E-16	7.40E+10	1.17E-01	7.92E-08		1.69E-15	4.00E+12	1.74E+03	1.18E-03		8.73E-14
S-111	1.10E+10	4.21E+02	1.87E-04		1.64E-16	1.10E+10	1.74E-02	7.70E-09		1.65E-16	4.00E+11	1.74E+02	7.71E-05		5.71E-15
S-112	1.50E+11	5.75E+03	2.90E-03		2.55E-15	1.10E+10	1.74E-02	8.78E-09		1.88E-16	7.62E+10	3.31E+01	1.67E-05		1.24E-15
SX-101	7.40E+07	2.84E+00	1.64E-06		1.44E-18	1.50E+12	2.37E+00	1.37E-06		2.94E-14	8.90E+12	3.87E+03	4.83E-07	dl	3.58E-17
SX-102	3.30E+07	1.26E+00	6.15E-07		5.40E-19	1.50E+11	2.37E-01	1.15E-07		2.47E-15	8.90E+11	3.87E+02	1.88E-04		1.40E-14
SX-103	7.40E+10	2.84E+03	1.15E-03		1.01E-15	4.40E+10	6.95E-02	2.82E-08		6.03E-16	2.12E+11	9.22E+01	3.74E-05		2.77E-15
SX-104	7.40E+09	2.84E+02	1.22E-04		1.07E-16	1.10E+12	1.74E+00	7.48E-07		1.60E-14	8.90E+12	3.87E+03	1.13E-05	dl	8.34E-16
SX-105	1.50E+10	5.75E+02	2.22E-04		1.95E-16	1.50E+11	2.37E-01	9.17E-08		1.96E-15	8.50E+11	3.70E+02	1.43E-04		1.06E-14
SX-106	1.90E+10	7.28E+02	3.59E-04		3.15E-16	1.80E+09	2.84E-03	1.40E-09		3.00E-17	6.60E+07	2.87E-02	1.41E-08		1.05E-18
SX-107	1.50E+08	5.75E+00	1.46E-05		1.28E-17	7.40E+11	1.17E+00	2.97E-06		6.36E-14	1.30E+13	5.65E+03	1.44E-02		1.06E-12
SX-108	1.50E+08	5.75E+00	1.87E-05		1.64E-17	7.40E+11	1.17E+00	3.81E-06		8.16E-14	1.30E+13	5.65E+03	1.84E-02		1.37E-12
SX-109	7.40E+07	2.84E+00	3.00E-06		2.63E-18	7.40E+11	1.17E+00	1.24E-06		2.64E-14	8.90E+12	3.87E+03	4.09E-03		3.03E-13
SX-110	1.50E+08	5.75E+00	2.45E-05		2.15E-17	2.20E+11	3.48E-01	1.48E-06		3.17E-14	1.40E+13	6.09E+03	2.59E-02		1.92E-12
SX-111	2.60E+08	9.96E+00	2.11E-05		1.85E-17	1.10E+12	1.74E+00	3.67E-06		7.86E-14	1.80E+13	7.83E+03	1.65E-02		1.23E-12
SX-112	8.90E+07	3.41E+00	9.79E-06		8.59E-18	7.40E+11	1.17E+00	3.36E-06		7.18E-14	8.90E+12	3.87E+03	1.11E-02		8.23E-13
SX-113	1.90E+10	7.28E+02	7.40E-03		6.49E-15	3.00E+10	4.74E-02	4.82E-07		1.03E-14	2.60E+12	1.13E+03	1.15E-02		8.51E-13
SX-114	1.90E+08	7.28E+00	1.06E-05		9.32E-18	3.70E+11	5.85E-01	8.53E-07		1.83E-14	1.90E+13	8.26E+03	1.21E-02		8.94E-13
SX-115	7.40E+09	2.84E+02	6.24E-03		5.47E-15	1.10E+11	1.74E-01	3.83E-06		8.19E-14	1.68E+13	7.30E+03	1.61E-01		1.19E-11
T-101	3.00E+09	1.15E+02	2.98E-04		2.61E-16	1.10E+09	1.74E-03	4.50E-09		9.63E-17	1.07E+09	4.65E-01	4.09E-06	sn	3.03E-16
T-102	3.70E+07	1.42E+00	1.17E-05		1.03E-17	1.90E+07	3.00E-05	2.48E-10		5.30E-18	1.20E+06	5.22E-04	3.94E-06	sn	2.92E-16
T-103	2.20E+08	8.43E+00	8.25E-05		7.23E-17	3.00E+09	4.74E-03	4.64E-08		9.92E-16	4.40E+09	1.91E+00	1.06E-05	sn	7.83E-16
T-104	3.80E+08	1.46E+01	8.64E-06		7.58E-18	7.40E+10	1.17E-01	6.94E-08		1.49E-15	2.19E+13	9.52E+03	5.65E-03		4.19E-13
T-105	7.40E+06	2.84E-01	7.80E-07		6.84E-19	7.40E+11	1.17E+00	3.22E-06		6.89E-14	8.50E+12	3.70E+03	1.02E-02		7.54E-13
T-106	2.30E+07	8.81E-01	1.11E-05		9.72E-18	1.10E+11	1.74E-01	2.19E-06		4.68E-14	1.58E+12	6.87E+02	8.64E-03		6.40E-13
T-107	7.40E+05	2.84E-02	4.16E-08		3.65E-20	3.30E+09	5.21E-03	7.65E-09		1.64E-16	2.10E+12	9.13E+02	1.93E-04	sn	1.43E-14
T-108	7.40E+07	2.84E+00	1.70E-05		1.49E-17	3.00E+08	4.74E-04	2.85E-09		6.09E-17	2.10E+11	9.13E+01	1.05E-04	sn	7.76E-15
T-109	2.60E+08	9.96E+00	4.54E-05		3.98E-17	7.40E+07	1.17E-04	5.33E-10		1.14E-17	2.10E+10	9.13E+00	4.64E-05	sn	3.44E-15
T-110	2.60E+06	9.96E-02	6.94E-08		6.09E-20	1.50E+10	2.37E-02	1.65E-08		3.54E-16	8.10E+12	3.52E+03	1.25E-05	sn	9.28E-16
T-111	3.70E+06	1.42E-01	8.27E-08		7.25E-20	2.60E+10	4.11E-02	2.40E-08		5.13E-16	4.40E+12	1.91E+03	1.12E-03		8.27E-14
T-112	1.10E+07	4.21E-01	1.66E-06		1.46E-18	3.70E+11	5.85E-01	2.30E-06		4.93E-14	8.90E+12	3.87E+03	2.98E-05	sn	2.21E-15
T-201															
T-202	1.50E+04	5.75E-04	7.23E-09		6.34E-21	7.40E+07	1.17E-04	1.47E-09		3.15E-17	1.30E+10	5.65E+00	7.11E-05		5.27E-15
T-203	1.50E+05	5.75E-03	4.34E-08		3.80E-20	7.40E+08	1.17E-03	8.82E-09		1.89E-16	1.30E+11	5.65E+01	4.27E-04		3.16E-14
T-204											4.50E+10	1.96E+01	1.30E-03	dl	9.67E-14
TX-101	3.00E+02	1.15E-05	3.49E-11		3.06E-23	1.10E+07	1.74E-05	5.28E-11		1.13E-18	2.00E+07	8.70E-03	2.64E-08		1.96E-18
TX-102	7.40E+08	2.84E+01	3.45E-05		3.03E-17	3.70E+06	5.85E-06	7.12E-12		1.52E-19	3.80E+06	1.65E-03	2.01E-09		1.49E-19
TX-103	1.50E+08	5.75E+00	9.67E-06		8.48E-18	1.90E+07	3.00E-05	5.05E-11		1.08E-18	8.08E+11	3.51E+02	1.99E-04	sn	1.47E-14
TX-104	1.90E+02	7.28E-06	2.96E-11		2.59E-23	1.92E+12	3.03E+00	1.23E-05		2.64E-13	1.50E+07	6.52E-03	3.16E-04	sn	2.34E-14
TX-105	7.40E+09	2.84E+02	1.23E-04		1.08E-16	3.00E+07	4.74E-05	2.06E-11		4.40E-19	3.10E+07	1.35E-02	5.85E-09		4.33E-19
TX-106	1.50E+09	5.75E+01	3.35E-05		2.94E-17	3.70E+05	5.85E-07	3.41E-13		7.30E-21	2.60E+05	1.13E-04	6.59E-11		4.89E-21
TX-107	7.40E+01	2.84E-06	2.08E-11		1.82E-23	7.40E+03	1.17E-08	8.58E-14		1.84E-21	1.36E+13	5.91E+03	2.25E-03	sn	1.67E-13
TX-108	3.00E+09	1.15E+02	2.27E-04		1.99E-16	3.70E+09	5.85E-03	1.15E-08		2.47E-16	2.60E+10	1.13E+01	2.23E-05		1.65E-15
TX-109	7.40E+10	2.84E+03	2.06E-03		1.80E-15	1.90E+11	3.00E-01	2.18E-07		4.66E-15	8.50E+12	3.70E+03	2.68E-03		1.99E-13
TX-110	3.00E+10	1.15E+03	6.57E-04		5.76E-16	7.70E+09	1.22E-02	6.96E-09		1.49E-16	4.40E+11	1.91E+02	1.09E-04		8.11E-15
TX-111	3.70E+09	1.42E+02	1.01E-04		8.88E-17	7.70E+08	1.22E-03	8.69E-10		1.86E-17	4.40E+10	1.91E+01	1.37E-05		1.01E-15
TX-112	3.00E+09	1.15E+02	4.68E-05		4.10E-17	3.00E+07	4.74E-05	1.93E-11		4.13E-19	2.50E+09	1.09E+00	4.42E-07		3.28E-17
TX-113	1.10E+09	4.21E+01	1.83E-05		1.61E-17	1.10E+10	1.74E-02	7.56E-09		1.62E-16	2.20E+12	9.57E+02	4.16E-04		3.09E-14
TX-114	3.00E+09	1.15E+02	5.68E-05		4.98E-17	3.70E+09	5.85E-03	2.89E-09		6.18E-17	2.20E+11	9.57E+01	4.72E-05		3.50E-15
TX-115	1.10E+09	4.21E+01	1.74E-05		1.53E-17	2.20E+09	3.48E-03	1.43E-09		3.07E-17	2.20E+10	9.57E+00	3.95E-06		2.93E-16
TX-116	7.40E+08	2.84E+01	1.19E-05		1.04E-17	1.70E+08	2.69E-04	1.12E-10		2.41E-18	2.80E+04	1.22E-05	5.10E-12		3.78E-22
TX-117	3.00E+08	1.15E+01	4.85E-06		4.25E-18	7.40E+08	1.17E-03	4.93E-10		1.06E-17	3.70E+05	1.61E-04	6.79E-11		5.03E-21
TX-118	7.40E+10	2.84E+03	2.16E-03		1.89E-15	7.40E+11	1.17E+00	8.90E-07		1.90E-14	4.00E+13	1.74E+04	2.84E-05	sn	2.11E-15
TY-101	2.70E+08	1.03E+01	2.32E-05		2.03E-17	5.15E+12	8.14E+00	1.82E-05		3.90E-13	9.80E+12	4.26E+03	9.54E-03		7.07E-13
TY-102	2.20E+10	8.43E+02	3.48E-03		3.05E-15	1.90E+10	3.00E-02	1.24E-07		2.65E-15	2.69E+15	1.17E+06	4.83E+00		3.58E-10
TY-103	7.40E+10	2.84E+03	4.62E-03		4.06E-15	3.70E+12	5.85E+00	9.53E-06		2.04E-13	1.30E+13	5.65E+03	9.22E-03		6.83E-13
TY-104	7.50E+07	2.87E+00	1.65E-05		1.45E-17	2.20E+10	3.48E-02	2.00E-07		4.27E-15	1.80E+12	7.83E+02	3.07E-05	sn	2.28E-15
TY-105	1.10E+09	4.21E+01	4.82E-05		4.23E-17	1.90E+10	3.00E-02	3.43E-08		7.35E-16	2.90E+12	1.26E+03	1.44E-03		1.07E-13
TY-106	1.10E+06	4.21E-02	6.55E-07		5.74E-19	2.20E+09	3.48E-03	5.40E-08		1.16E-15	3.30E+11	1.43E+02	2.23E-03		1.65E-13
U-101	3.00E+09	1.15E+02	1.21E-03		1.07E-15	7.40E+09	1.17E-02	1.24E-07		2.64E-15	8.90E+10	3.87E+01	4.09E-04		3.03E-14
U-102	7.40E+09	2.84E+02	2.00E-04		1.76E-16	9.60E+07	1.52E-04	1.07E-10		2.29E-18	2.20E+12	9.57E+02	2.07E-04	sn	1.53E-14
U-103	1.10E+06	4.21E-02	2.38E-08		2.09E-20	3.70E+08	5.85E-04	3.30E-10		7.06E-18	2.68E+10	1.17E+01	6.58E-06		4.87E-16
U-104	1.50E+01	5.75E-07	1.24E-12		1.09E-24	7.40E+02	1.17E-09	2.53E-15		5.42E-23	3.41E+10	1.48E+01	3.21E-05		2.38E-15
U-105	1.50E+06	5.75E-02	3.63E-08		3.19E-20	3.30E+08	5.21E-04	3.30E-10		7.05E-18	6.80E+12	2.96E+03	1.87E-03		1.38E-13
U-106	1.10E+01	4.21E-07	4.93E-13		4.32E-25	7.40E+05	1.17E-06	1.37E-12		2.92E-20	2.81E+09	1.22E+00	9.26E-07	sn	6.86E-17
U-107	7.40E+09	2.84E+02	1.85E-04		1.62E-16	1.10E+09	1.74E-03	1.13E-09		2.42E-17	1.04E+12	4.52E+02	2.94E-04		2.18E-14
U-108	4.80E+06	1.84E-01	1.04E-07		9.14E-20	1.50E+10	2.37E-02	1.34E-08		2.88E-16	9.11E+11	3.96E+02	2.25E-04		1.66E-14
U-109	3.70E+08	1.42E+01	8.09E-06		7.09E-18	1.50E+09	2.37E-03	1.35E-09		2.89E-17	5.28E+11	2.30E+02	6.09E-02	sn	4.51E-12
U-110	7.00E+07	2.68E+00	3.81E-06		3.34E-18	1.50E+12	2.37E+00	3.37E-06		7.20E-14	1.50E+12	6.52E+02	9.26E-04		6.86E-14
U-111	1.90E+09	7.28E+01	5.85E-05		5.13E-17	3.80E+09	6.00E-03	4.82E-09		1.03E-16	9.30E+10	4.04E+01	3.25E-05		2.41E-15
U-112	3.70E+09	1.42E+02	7.64E-04		6.70E-16	2.60E+09	4.11E-03	2.21E-08		4.74E-16	1.30E+10	5.65E+00	3.05E-05		2.26E-15
U-201	7.40E+08	2.84E+01	1.50E-03		1.31E-15	7.40E+07	1.17E-04	6.18E-09		1.32E-16	1.80E+05	7.83E-05	4.14E-09		3.06E-19
U-202	7.40E+08	2.84E+01	1.50E-03		1.31E-15	1.10E+08	1.74E-04	9.18E-09		1.97E-16	2.20E+05	9.57E-05	9.87E-07	sn	7.31E-17
U-203	7.40E+08	2.84E+01	2.50E-03		2.19E-15	1.10E+08	1.74E-04	1.53E-08		3.28E-16	2.20E+05	9.57E-05	8.42E-09		6.24E-19
U-204	1.90E+08	7.28E+00	6.41E-04		5.62E-16	3.70E+07	5.85E-05	5.15E-09		1.10E-16	2.20E+10	9.57E+00	8.42E-04		6.24E-14

Table C2-2 (Continued). SST Threshold Leakage Values - Case 1/Carcinogenic

Tank	Pu-241 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	As g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Cr g	Solubility g/L	Basis Note 1	Sp. Risk R/L
A-101	2.20E+14	5.88E+01	1.63E-05		1.25E-10					1.00E-02	2.77E-09		3.27E-25
A-102	2.60E+13	6.95E+00	4.48E-05		3.44E-10					2.10E+05	4.26E-02	sn	5.03E-18
A-103	3.70E+13	9.89E+00	7.06E-06		5.43E-11					2.79E+06	3.33E-01	dl	3.93E-17
A-104	3.70E+13	9.89E+00	9.33E-05		7.18E-10					2.60E-35	2.45E-40		2.89E-56
A-105	7.50E+04	2.01E-08	2.79E-13		2.14E-18					3.10E-17	4.31E-22		5.09E-38
A-106	1.10E+14	2.94E+01	6.22E-05		4.78E-10					3.87E+06	1.16E+00	dl	1.37E-16
AX-101	3.70E+13	9.89E+00	3.49E-06		2.69E-11					1.00E+06	3.53E-01		4.17E-17
AX-102	2.60E+13	6.95E+00	4.71E-05		3.62E-10					5.20E+05	2.08E-01	sn	2.45E-17
AX-103	3.30E+06	8.82E-07	2.08E-12		1.60E-17					5.20E+03	1.23E-02		1.45E-18
AX-104	3.70E+13	9.89E+00	3.73E-04		2.87E-09					4.70E+06	1.77E+02		2.09E-14
B-101	3.70E+13	9.89E+00	2.31E-05		1.78E-10					3.60E+05	8.42E-01		9.93E-17
B-102	1.10E+13	2.94E+00	2.43E-05		1.87E-10					1.60E+04	1.32E-01		1.56E-17
B-103	2.20E+13	5.88E+00	2.63E-05		2.03E-10					2.10E+03	9.40E-03		1.11E-18
B-104	7.40E+11	1.98E-01	1.41E-07		1.08E-12					1.00E+06	7.12E-01		8.40E-17
B-105	7.40E+10	1.98E-02	1.71E-08		1.31E-13					1.00E+05	8.63E-02		1.02E-17
B-106	7.40E+09	1.98E-03	4.47E-09		3.44E-14					1.00E+04	2.26E-02		2.66E-18
B-107	1.90E+11	5.08E-02	8.13E-08		6.26E-13					5.20E+05	8.33E-01		9.83E-17
B-108	1.90E+10	5.08E-03	1.43E-08		1.10E-13					5.20E+04	1.46E-01		1.72E-17
B-109	1.90E+09	5.08E-04	1.06E-09		8.13E-15					5.20E+03	1.08E-02		1.28E-18
B-110	2.60E+13	6.95E+00	7.47E-06		5.74E-11					1.60E+06	1.72E+00		2.03E-16
B-111	1.10E+12	2.94E-01	3.28E-07		2.52E-12					4.20E+05	4.68E-01		5.52E-17
B-112	1.10E+11	2.94E-02	2.35E-07		1.81E-12					4.20E+04	3.36E-01		3.97E-17
B-201													
B-202	1.90E+13	5.08E+00	4.97E-05		3.82E-10	9.36E+01	9.16E-04		2.53E-18	8.79E+04	8.60E-01		1.01E-16
B-203	3.00E+10	8.02E-03	4.16E-08		3.20E-13					2.10E+04	1.09E-01		1.28E-17
B-204	3.00E+11	8.02E-02	4.24E-07		3.26E-12					2.10E+05	1.11E+00		1.31E-16
BX-101	1.10E+14	2.94E+01	1.81E-04		1.39E-09					1.60E+01	9.83E-05		1.16E-20
BX-102	7.40E+12	1.98E+00	5.45E-06		4.19E-11					1.00E+00	2.75E-06		3.25E-22
BX-103	7.40E+07	1.98E-05	7.92E-11		6.09E-16					1.60E-04	6.40E-10		7.56E-26
BX-104	7.40E+12	1.98E+00	5.28E-06		4.06E-11					2.45E+06	9.25E-01	dl	1.09E-16
BX-105	8.70E+07	2.33E-05	1.21E-10		9.27E-16					8.11E+05	2.05E-01	sn	2.42E-17
BX-106	1.40E+08	3.74E-05	2.15E-10		1.65E-15					6.82E+04	1.20E+00	sn	1.42E-16
BX-107	3.70E+11	9.89E-02	7.58E-08		5.83E-13					5.20E+05	3.43E-01	sn	4.05E-17
BX-108	3.70E+10	9.89E-03	1.01E-07		7.73E-13					5.20E+04	5.28E-01		6.24E-17
BX-109	7.40E+11	1.98E-01	2.71E-07		2.08E-12					5.20E+03	1.03E-01	sn	1.22E-17
BX-110	2.60E+11	6.95E-02	9.28E-08		7.13E-13					3.60E+05	9.72E-01	sn	1.15E-16
BX-111	2.60E+10	6.95E-03	8.70E-09		6.69E-14					3.60E+04	4.75E-01	sn	5.61E-17
BX-112	3.70E+11	9.89E-02	1.58E-07		1.22E-12					2.10E+05	3.17E-01	sn	3.74E-17
BY-101	7.40E+08	1.98E-04	1.42E-10		1.10E-15					3.10E-11	2.23E-17		2.63E-33
BY-102	7.50E+07	2.01E-05	1.55E-11		1.19E-16	9.99E+01	1.76E-06	sn	4.86E-21	2.96E+04	5.21E-01	sn	6.15E-17
BY-103	1.10E+14	2.94E+01	1.94E-05		1.49E-10	7.36E+02	1.80E-06	dl	4.97E-21	1.53E+05	3.74E-01	dl	4.41E-17
BY-104	3.70E+12	9.89E-01	6.44E-07		4.95E-12					4.07E+07	2.65E+01		3.13E-15
BY-105	3.00E+12	8.02E-01	4.21E-07		3.24E-12	6.61E+01	9.00E-08	dl	2.48E-22	2.60E+05	2.36E-01	dl	2.78E-17
BY-106	1.50E+12	4.01E-01	1.65E-07		1.27E-12	1.78E+03	2.00E-03	dl	5.52E-18	3.59E+05	4.04E-01	dl	4.77E-17
BY-107	1.10E+12	2.94E-01	2.92E-07		2.25E-12					1.00E+05	9.93E-02		1.17E-17
BY-108	1.50E+12	4.01E-01	4.65E-07		3.57E-12					1.00E+04	1.16E-02		1.37E-18
BY-109	1.60E+07	4.28E-06	2.67E-12		2.05E-17	4.63E+01	7.20E-07	sn	1.99E-21	3.52E+04	5.46E-01	sn	6.44E-17
BY-110	2.20E+12	5.88E-01	3.92E-07		3.02E-12					1.00E+05	6.67E-02		7.87E-18
BY-111	1.10E+10	2.94E-03	1.69E-09		1.30E-14					5.70E-11	3.28E-17		3.87E-33
BY-112	3.00E+07	8.02E-06	7.28E-12		5.60E-17					1.26E+05	1.14E-01		1.35E-17
C-101	1.10E+13	2.94E+00	8.83E-06		6.79E-11					5.20E-15	1.56E-20		1.84E-36
C-102	2.60E+14	6.95E+01	4.34E-05		3.34E-10	2.61E+01	2.30E-06	sn	6.35E-21	6.32E+02	5.57E-02	sn	6.57E-18
C-103	3.70E+13	9.89E+00	1.34E-05		1.03E-10	6.04E+01	1.20E-07	sn	3.31E-22	3.81E+04	7.57E-02	sn	8.93E-18
C-104	1.10E+14	2.94E+01	2.63E-05		2.03E-10					1.36E+06	1.22E+00		1.44E-16
C-105	1.30E+14	3.48E+01	6.80E-05		5.23E-10	2.95E+05	5.77E-01		1.59E-15	1.29E+06	2.52E+00		2.98E-16
C-106	2.60E+13	6.95E+00	8.02E-06		6.17E-11	4.68E+05	5.40E-01		1.49E-15	2.10E+06	2.42E+00		2.86E-16
C-107	2.20E+13	5.88E+00	5.65E-06		4.35E-11	6.44E+01	5.00E-07	dl	1.38E-21	4.70E+05	3.22E-01	dl	3.80E-17
C-108	7.40E+12	1.98E+00	7.92E-06		6.09E-11					5.20E+04	2.08E-01		2.46E-17
C-109	3.70E+09	9.89E-04	3.96E-09		3.05E-14					1.00E+04	4.00E-02		4.72E-18
C-110	7.40E+12	1.98E+00	2.80E-06		2.15E-11	9.46E+00	5.00E-07	sn	1.38E-21	5.20E+05	3.07E-01	sn	3.62E-17
C-111	3.70E+12	9.89E-01	4.59E-06		3.53E-11					5.20E+04	2.41E-01		2.84E-17
C-112	3.70E+12	9.89E-01	2.51E-06		1.93E-11					5.20E+03	1.32E-02		1.56E-18
C-201	1.10E+08	2.94E-05	3.89E-09		2.99E-14								
C-202	2.60E+08	6.95E-05	1.84E-08		1.41E-13								
C-203	2.60E+07	6.95E-06	3.67E-10		2.82E-15								
C-204	1.10E+05	2.94E-08	2.59E-12		1.99E-17								
S-101	7.40E+12	1.98E+00	1.22E-06		9.41E-12					4.20E+07	2.60E+01		3.07E-15
S-102	7.40E+11	1.98E-01	9.52E-08		7.32E-13					4.20E+06	2.02E+00		2.39E-16
S-103	1.10E+11	2.94E-02	3.16E-08		2.43E-13					4.70E+05	5.05E-01		5.96E-17
S-104	7.40E+12	1.98E+00	1.78E-06		1.37E-11					4.70E+07	4.22E+01		4.98E-15
S-105	7.40E+11	1.98E-01	1.15E-07		8.82E-13					4.20E+06	2.43E+00		2.87E-16
S-106	7.40E+10	1.98E-02	1.09E-08		8.39E-14					4.70E+05	2.59E-01		3.06E-17
S-107	7.40E+13	1.98E+01	1.39E-05		1.07E-10					3.60E+07	2.53E+01		2.98E-15
S-108	2.20E+12	5.88E-01	2.57E-07		1.98E-12					3.60E+06	1.57E+00		1.86E-16

Table C2-2 (Continued). SST Threshold Leakage Values - Case 1/Carcinogenic

Tank	Pu-241 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	As g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Cr g	Solubility g/L	Basis Note 1	Sp. Risk R/L
S-109	2.20E+11	5.88E-02	3.07E-08		2.36E-13					2.37E+06	1.24E+00		1.46E-16
S-110	3.70E+12	9.89E-01	6.70E-07		5.15E-12					3.60E+07	2.44E+01		2.88E-15
S-111	3.70E+11	9.89E-02	4.39E-08		3.37E-13					3.96E+06	1.76E+00		2.07E-16
S-112	3.70E+10	9.89E-03	5.00E-09		3.84E-14					4.30E+05	2.17E-01		2.56E-17
SX-101	7.40E+12	1.98E+00	1.15E-06		8.82E-12					5.20E+07	3.33E-01	dl	3.93E-17
SX-102	7.40E+11	1.98E-01	9.63E-08		7.40E-13					5.20E+06	2.53E+00		2.99E-16
SX-103	1.10E+11	2.94E-02	1.19E-08		9.17E-14					1.70E+06	6.89E-01		8.13E-17
SX-104	7.40E+12	1.98E+00	8.51E-07		6.55E-12					5.20E+07	1.56E-01	dl	1.84E-17
SX-105	7.40E+11	1.98E-01	7.65E-08		5.89E-13					5.34E+06	2.07E+00		2.44E-16
SX-106	4.10E+07	1.10E-05	5.40E-12		4.16E-17					1.00E+03	4.93E-04		5.82E-20
SX-107	1.90E+13	5.08E+00	1.29E-05		9.92E-11					5.20E+07	1.32E+02		1.56E-14
SX-108	2.20E+13	5.88E+00	1.92E-05		1.48E-10					5.20E+07	1.70E+02		2.00E-14
SX-109	1.10E+13	2.94E+00	3.11E-06		2.39E-11					5.20E+07	5.50E+01		6.48E-15
SX-110	3.00E+13	8.02E+00	3.42E-05		2.63E-10					3.60E+07	1.53E+02		1.81E-14
SX-111	3.70E+13	9.89E+00	2.09E-05		1.61E-10					5.20E+07	1.10E+02		1.30E-14
SX-112	1.50E+13	4.01E+00	1.15E-05		8.86E-11					4.70E+07	1.35E+02		1.59E-14
SX-113	3.00E+12	8.02E-01	8.15E-06		6.27E-11					1.00E+07	1.02E+02		1.20E-14
SX-114	3.30E+13	8.82E+00	1.29E-05		9.90E-11					5.20E+07	7.59E+01		8.96E-15
SX-115	7.40E+12	1.98E+00	4.36E-05		3.35E-10					2.10E+07	4.62E+02		5.46E-14
T-101	7.80E+06	2.09E-06	5.40E-12		4.15E-17					1.74E+05	1.53E+00	sn	1.81E-16
T-102	8.50E+04	2.27E-08	1.88E-13		1.44E-18					4.20E-12	3.47E-17		4.09E-33
T-103	3.00E+09	8.02E-04	7.85E-09		6.04E-14					5.20E-13	5.09E-18		6.00E-34
T-104	3.70E+12	9.89E-01	5.87E-07		4.52E-12					2.99E+06	1.78E+00		2.09E-16
T-105	7.40E+12	1.98E+00	5.45E-06		4.19E-11					3.60E+05	9.91E-01		1.17E-16
T-106	7.40E+11	1.98E-01	2.49E-06		1.91E-11					3.60E+04	4.53E-01		5.34E-17
T-107	1.90E+11	5.08E-02	7.46E-08		5.73E-13					5.20E+05	2.12E-01	sn	2.50E-17
T-108	1.90E+10	5.08E-03	3.05E-08		2.35E-13					5.20E+04	3.12E-01		3.68E-17
T-109	2.20E+09	5.88E-04	2.68E-09		2.06E-14					5.20E+03	2.37E-02		2.80E-18
T-110	1.50E+12	4.01E-01	2.80E-07		2.15E-12					1.00E+06	6.97E-01		8.23E-17
T-111	3.70E+12	9.89E-01	5.77E-07		4.44E-12					1.60E+06	9.33E-01		1.10E-16
T-112	7.40E+12	1.98E+00	7.80E-06		6.00E-11					1.60E+06	5.62E-01	sn	6.63E-17
T-201													
T-202	1.10E+10	2.94E-03	3.70E-08		2.85E-13					1.00E+04	1.26E-01		1.48E-17
T-203	1.10E+11	2.94E-02	2.22E-07		1.71E-12					1.00E+05	7.55E-01		8.91E-17
T-204										1.62E+04	1.07E+00	dl	1.26E-16
TX-101	3.70E+06	9.89E-07	3.00E-12		2.31E-17					1.60E-05	4.86E-11		5.73E-27
TX-102	1.90E+04	5.08E-09	6.19E-15		4.76E-20					3.70E-12	4.50E-18		5.32E-34
TX-103	1.10E+05	2.94E-08	4.95E-14		3.81E-19					1.60E-13	2.69E-19		3.18E-35
TX-104	3.70E+06	9.89E-07	4.02E-12		3.09E-17					2.10E-20	8.54E-26		1.01E-41
TX-105	1.20E+08	3.21E-05	1.39E-11		1.07E-16					2.60E-11	1.13E-17		1.33E-33
TX-106	1.90E+03	5.08E-10	2.96E-16		2.28E-21					2.10E-12	1.22E-18		1.45E-34
TX-107	7.40E+04	1.98E-08	1.45E-13		1.12E-18								
TX-108	3.70E+10	9.89E-03	1.95E-08		1.50E-13					2.60E-11	5.13E-17		6.05E-33
TX-109	3.70E+12	9.89E-01	7.18E-07		5.52E-12					1.60E+06	1.16E+00		1.37E-16
TX-110	3.30E+11	8.82E-02	5.05E-08		3.88E-13					1.60E+05	9.15E-02		1.08E-17
TX-111	3.30E+10	8.82E-03	6.30E-09		4.85E-14					1.60E+04	1.14E-02		1.35E-18
TX-112	7.40E+08	1.98E-04	8.05E-11		6.19E-16					1.00E+03	4.07E-04		4.80E-20
TX-113	1.10E+12	2.94E-01	1.28E-07		9.84E-13					5.20E+05	2.26E-01		2.67E-17
TX-114	1.10E+11	2.94E-02	1.45E-08		1.12E-13					5.20E+04	2.57E-02		3.03E-18
TX-115	1.10E+10	2.94E-03	1.21E-09		9.34E-15					1.00E+04	4.13E-03		4.87E-19
TX-116	4.10E+01	1.10E-11	4.59E-18		3.53E-23					2.60E-10	1.09E-16		1.28E-32
TX-117	7.40E+02	1.98E-10	8.35E-17		6.42E-22					2.60E-06	1.10E-12		1.29E-28
TX-118	1.50E+14	4.01E+01	3.05E-05		2.35E-10					5.20E+03	3.96E-03		4.67E-19
TY-101	1.10E+13	2.94E+00	6.59E-06		5.06E-11					6.15E+06	1.38E+01		1.62E-15
TY-102	1.50E+11	4.01E-02	1.66E-07		1.27E-12					2.05E+04	8.46E-02		9.99E-18
TY-103	7.40E+12	1.98E+00	3.23E-06		2.48E-11					6.32E+05	1.03E+00		1.22E-16
TY-104	3.70E+11	9.89E-02	5.68E-07		4.37E-12					2.15E+04	1.89E+00	sn	2.23E-16
TY-105	7.40E+11	1.98E-01	2.26E-07		1.74E-12					1.60E-14	1.83E-20		2.16E-36
TY-106	7.40E+10	1.98E-02	3.08E-07		2.36E-12					7.22E+03	1.12E-01		1.32E-17
U-101	1.10E+11	2.94E-02	3.11E-07		2.39E-12					3.10E-04	3.28E-09		3.87E-25
U-102	7.80E+05	2.09E-07	1.47E-13		1.13E-18					9.69E+03	5.62E-03	sn	6.63E-19
U-103	1.10E+04	2.94E-09	1.66E-15		1.28E-20					5.09E+02	2.87E-04		3.39E-20
U-104	3.70E+03	9.89E-10	2.14E-15		1.65E-20								
U-105	2.60E+09	6.95E-04	4.39E-10		3.38E-15					4.20E-15	2.65E-21		3.13E-37
U-106	1.90E+04	5.08E-09	5.94E-15		4.57E-20					3.60E-13	4.21E-19		4.97E-35
U-107	1.20E+07	3.21E-06	2.09E-12		1.61E-17					4.20E+02	2.73E-04		3.23E-20
U-108	1.50E+12	4.01E-01	2.27E-07		1.75E-12					1.00E-15	5.67E-22		6.69E-38
U-109	2.60E+09	6.95E-04	3.97E-10		3.05E-15					2.60E-12	1.48E-18		1.75E-34
U-110	1.10E+13	2.94E+00	4.18E-06		3.21E-11					2.10E+07	2.98E+01		3.52E-15
U-111	1.10E+11	2.94E-02	2.36E-08		1.82E-13					2.10E+06	1.69E+00		1.99E-16
U-112	1.10E+10	2.94E-03	1.59E-08		1.22E-13					2.60E+05	1.40E+00		1.65E-16
U-201	5.90E+02	1.58E-10	8.34E-15		6.41E-20					4.70E-11	2.48E-15		2.93E-31
U-202	7.40E+02	1.98E-10	1.05E-14		8.04E-20					4.10E-12	2.17E-16		2.56E-32
U-203	6.70E+02	1.79E-10	1.58E-14		1.21E-19					4.00E-12	3.52E-16		4.16E-32
U-204	2.60E+02	6.95E-11	6.12E-15		4.71E-20					2.98E+03	2.62E-01		3.10E-17

Table C2-3. SST Threshold Leakage Values - Case 1/Toxicant

Tank	Vol. (L)	Toxicant Threshold Leakage L	Gal.	NO3 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	EDTA g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
A-101	3.61E+06	3.83E+04	1.01E+04	1.20E+09	2.02E+02	dl	1.55E-07	2.90E-36	8.04E-43		4.04E-49
A-102	1.55E+05	1.71E+02	4.53E+01	1.40E+09	1.29E+02	sn	9.92E-08	1.80E+07	1.16E+02		5.82E-05
A-103	1.40E+06	4.48E+04	1.18E+04	3.26E+08	2.03E+02	dl	1.56E-07	1.80E+05	1.29E-01		6.45E-08
A-104	1.06E+05	9.84E+02	2.60E+02	1.40E+09	1.32E+04		1.02E-05				
A-105	7.19E+04	1.28E+05	3.38E+04	6.20E+06	8.62E+01		6.63E-08				
A-106	4.73E+05	5.89E+04	1.55E+04	1.90E+00	1.95E+02	dl	1.50E-07	1.80E-02	3.80E-08		1.91E-14
AX-101	2.83E+06	3.91E+04	1.03E+04	2.96E+08	2.07E+02	sn	1.59E-07	2.30E-05	8.12E-12		4.08E-18
AX-102	1.48E+05	4.17E+04	1.10E+04	2.61E+06	2.29E+02	sn	1.76E-07	2.60E-10	1.76E-15		8.84E-22
AX-103	4.24E+05	1.14E+04	3.00E+03	5.50E+08	1.60E+02	sn	1.23E-07	5.80E+05	1.37E+00		6.87E-07
AX-104	2.65E+04	1.70E+01	4.48E+00	1.80E+07	6.79E+02		5.22E-07				
B-101	4.28E+05	1.04E+04	2.75E+03	5.34E+08	1.25E+03		9.60E-07				
B-102	1.21E+05	9.71E+04	2.57E+04	1.20E+07	1.14E+02	sn	8.77E-08				
B-103	2.23E+05	2.13E+04	5.63E+03	3.10E+07	6.57E+01	sn	5.05E-08	1.80E+05	8.06E-01		4.05E-07
B-104	1.40E+06	3.00E+05	7.94E+04	5.00E+07	3.56E+01		2.74E-08				
B-105	1.16E+06	7.34E+04	1.94E+04	1.90E+08	1.64E+02		1.26E-07				
B-106	4.43E+05	6.62E+04	1.75E+04	4.30E+07	1.86E+02	sn	1.43E-07				
B-107	6.25E+05	2.96E+04	7.83E+03	2.40E+08	3.84E+02		2.96E-07				
B-108	3.56E+05	1.43E+04	3.78E+03	2.70E+08	7.59E+02		5.84E-07				
B-109	4.81E+05	6.01E+04	1.59E+04	8.32E+07	1.54E+02	sn	1.18E-07	8.80E+01	1.83E-04		9.19E-11
B-110	9.31E+05	3.91E+04	1.03E+04	3.10E+08	3.33E+02		2.56E-07				
B-111	8.97E+05	8.08E+03	2.13E+03	1.40E+09	1.56E+03		1.20E-06				
B-112	1.25E+05	3.01E+03	7.95E+02	4.30E+08	3.44E+03		2.65E-06				
B-201	1.10E+05	1.08E+04	2.85E+03	4.96E+06	4.52E+01		3.47E-08				
B-202	1.02E+05	6.43E+04	1.70E+04	1.90E+07	1.86E+02		1.43E-07				
B-203	1.93E+05	1.85E+02	4.88E+01	4.26E+07	2.21E+02		1.70E-07				
B-204	1.89E+05	1.45E+05	3.82E+04	1.20E+07	6.34E+01		4.88E-08				
BX-101	1.63E+05	4.90E+04	1.29E+04	4.32E+07	2.65E+02		2.04E-07				
BX-102	3.63E+05	4.34E+04	1.15E+04	1.30E+09	1.81E+02	sn	1.39E-07				
BX-103	2.50E+05	2.78E+05	7.34E+04	3.10E+09	2.10E+01	sn	1.61E-08				
BX-104	3.75E+05	5.65E+04	1.49E+04	3.10E+09	9.92E+01	dl	7.63E-08				
BX-105	1.93E+05	6.79E+04	1.79E+04	2.70E+09	1.28E+02	sn	9.84E-08				
BX-106	1.74E+05	1.86E+03	4.91E+02	8.10E+09	1.62E+02	sn	1.25E-07	1.80E+06	1.03E+01		5.19E-06
BX-107	1.31E+06	6.29E+04	1.66E+04	6.20E+07	1.64E+02	sn	1.26E-07				
BX-108	9.84E+04	6.37E+05	1.68E+05	1.20E+06	1.22E+01		9.38E-09				
BX-109	7.31E+05	3.85E+04	1.02E+04	6.20E+07	3.07E+02	sn	2.36E-07				
BX-110	7.49E+05	3.64E+04	9.61E+03	6.80E+08	3.13E+02	sn	2.41E-07				
BX-111	7.99E+05	5.45E+04	1.44E+04	6.80E+08	1.62E+02	sn	1.25E-07				
BX-112	6.25E+05	8.10E+04	2.14E+04	6.20E+07	1.24E+02	sn	9.54E-08				
BY-101	1.39E+06	1.37E+04	3.63E+03	1.10E+09	7.92E+02		6.09E-07				
BY-102	1.29E+06	6.02E+04	1.59E+04	2.10E+09	1.27E+02	sn	9.77E-08				
BY-103	1.51E+06	5.62E+04	1.48E+04	5.00E+09	1.31E+02	dl	1.01E-07				
BY-104	1.54E+06	1.37E+04	3.62E+03	1.20E+09	7.81E+02		6.01E-07				
BY-105	1.90E+06	4.46E+04	1.18E+04	6.20E+08	2.64E+02	dl	2.03E-07				
BY-106	2.43E+06	6.31E+04	1.67E+04	1.30E+09	1.18E+02	dl	9.07E-08				
BY-107	1.01E+06	2.73E+04	7.21E+03	3.70E+08	3.67E+02		2.83E-07				
BY-108	8.63E+05	1.73E+04	4.56E+03	5.40E+08	6.26E+02		4.81E-07				
BY-109	1.60E+06	8.16E+04	2.16E+04	2.10E+09	1.01E+02	sn	7.77E-08				
BY-110	1.50E+06	2.33E+04	6.17E+03	6.20E+08	4.14E+02		3.18E-07				
BY-111	1.74E+06	1.60E+04	4.22E+03	1.20E+09	6.91E+02		5.31E-07				
BY-112	1.10E+06	7.55E+04	1.99E+04	8.10E+08	1.01E+02	sn	7.77E-08				
C-101	3.33E+05	1.60E+04	4.23E+03	2.70E+08	8.11E+02		6.23E-07				
C-102	1.60E+06	1.32E+05	3.49E+04	4.05E+00	3.57E+01	sn	2.75E-08				
C-103	7.38E+05	4.49E+04	1.19E+04	3.70E+09	4.02E+00	sn	3.09E-09	5.80E-03	7.86E-09		3.94E-15
C-104	1.12E+06	4.35E+04	1.15E+04	3.10E+08	2.78E+02		2.14E-07	1.50E-03	1.34E-09		6.74E-16
C-105	5.11E+05	4.54E+03	1.20E+03	9.90E+08	1.94E+03		1.49E-06	2.60E+05	5.09E-01		2.55E-07
C-106	8.67E+05	1.68E+04	4.43E+03	1.90E+08	2.19E+02		1.69E-07				
C-107	1.04E+06	4.54E+04	1.20E+04	3.10E+07	3.68E+01	dl	2.83E-08	2.90E+05	2.79E-01		1.40E-07
C-108	2.50E+05	1.37E+05	3.62E+04	2.50E+08	6.82E+01	dl	5.24E-08				
C-109	2.50E+05	6.02E+04	1.59E+04	2.50E+07	4.90E+01	dl	3.77E-08				
C-110	7.08E+05	9.48E+04	2.50E+04	2.14E+06	1.13E+02	sn	8.69E-08				
C-111	2.16E+05	1.02E+05	2.69E+04	2.06E+07	9.55E+01	sn	7.34E-08				
C-112	3.94E+05	6.91E+04	1.83E+04	1.90E+07	1.12E+02	dl	8.61E-08				
C-201	7.57E+03	7.09E+04	1.87E+04	6.67E+05	4.41E+01	sn	3.39E-08				
C-202	3.79E+03	5.98E+08	1.58E+08	1.20E-05	3.17E-09		2.44E-18				
C-203	1.89E+04	2.98E+10	7.89E+09	2.50E-03	1.32E-07		1.02E-16				
C-204	1.14E+04	8.53E+05	2.25E+05	1.77E+06	1.06E+01	sn	8.15E-09				
S-101	1.62E+06	2.31E+04	6.11E+03	7.40E+08	4.58E+02		3.52E-07	8.80E+04	5.44E-02		2.73E-08
S-102	2.08E+06	4.36E+04	1.15E+04	6.20E+08	2.98E+02		2.29E-07	1.80E-04	8.66E-11		4.35E-17
S-103	9.31E+05	1.08E+05	2.86E+04	3.70E+09	8.87E+01	sn	6.82E-08	1.80E-02	1.93E-08		9.70E-15
S-104	1.11E+06	9.98E+03	2.64E+03	1.40E+09	1.26E+03		9.67E-07				
S-105	1.73E+06	2.02E+04	5.34E+03	1.10E+09	6.37E+02		4.90E-07				
S-106	1.81E+06	1.54E+04	4.07E+03	1.50E+09	8.27E+02		6.36E-07	5.80E+03	3.20E-03		1.61E-09
S-107	1.42E+06	4.05E+04	1.07E+04	6.20E+08	2.03E+02	sn	1.56E-07	5.80E-05	4.08E-11		2.05E-17
S-108	2.29E+06	3.78E+04	9.99E+03	5.80E+08	2.54E+02		1.95E-07	2.90E+05	1.27E-01		6.37E-08

Table C2-3 (Continued). SST Threshold Leakage Values - Case 1/Toxicant

Tank	Vol. (L)	Toxicant Threshold Leakage L	Gal.	NO3 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	EDTA g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
S-109	1.92E+06	4.00E+03	1.06E+03	5.00E+09	2.61E+03		2.01E-06	1.80E+06	9.40E-01		4.72E-07
S-110	1.48E+06	2.54E+04	6.72E+03	6.60E+08	4.47E+02		3.44E-07	1.20E+05	8.13E-02		4.08E-08
S-111	2.26E+06	3.74E+04	9.87E+03	6.20E+08	2.75E+02		2.11E-07	1.20E+05	5.32E-02		2.67E-08
S-112	1.98E+06	2.50E+03	6.60E+02	9.30E+09	4.70E+03		3.61E-06	1.20E+06	6.06E-01		3.04E-07
SX-101	1.73E+06	1.34E+05	3.54E+04	1.20E+09	8.99E+01	dl	6.91E-08	1.50E-05	8.69E-12		4.36E-18
SX-102	2.06E+06	6.88E+03	1.82E+03	3.70E+09	1.80E+03		1.38E-06	2.30E+02	1.12E-04		5.62E-11
SX-103	2.47E+06	3.03E+03	8.00E+02	7.40E+09	3.00E+03		2.31E-06	2.90E+06	1.18E+00		5.90E-07
SX-104	2.32E+06	2.21E+04	5.83E+03	2.00E+09	4.09E+02	dl	3.15E-07	1.50E+05	6.45E-02		3.24E-08
SX-105	2.59E+06	1.77E+04	4.68E+03	1.76E+09	6.81E+02		5.24E-07	1.50E+05	5.80E-02		2.91E-08
SX-106	2.03E+06	6.73E+03	1.78E+03	2.50E+08	4.44E+01	sn	3.41E-08	5.80E+06	2.86E+00		1.44E-06
SX-107	3.94E+05	7.93E+04	2.10E+04	6.20E+08	1.12E+02	sn	8.61E-08				
SX-108	3.07E+05	2.10E+03	5.54E+02	1.90E+09	6.20E+03		4.77E-06				
SX-109	9.46E+05	6.48E+03	1.71E+03	1.90E+09	2.01E+03		1.54E-06				
SX-110	2.35E+05	9.84E+02	2.60E+02	3.10E+09	1.32E+04		1.02E-05	8.80E-03	3.75E-08		1.88E-14
SX-111	4.73E+05	7.09E+04	1.87E+04	1.90E+09	1.67E+02	dl	1.28E-07				
SX-112	3.48E+05	8.88E+03	2.35E+03	5.10E+08	1.46E+03		1.13E-06				
SX-113	9.84E+04	8.00E+02	2.11E+02	1.60E+09	1.63E+04		1.25E-05				
SX-114	6.85E+05	3.56E+03	9.41E+02	2.50E+09	3.65E+03		2.81E-06				
SX-115	4.54E+04	1.90E+02	5.03E+01	3.10E+09	6.83E+04		5.25E-05				
T-101	3.86E+05	3.99E+04	1.05E+04	1.20E+08	3.11E+02		2.39E-07				
T-102	1.21E+05	7.42E+04	1.96E+04	2.50E+06	1.35E+02	sn	1.04E-07				
T-103	1.02E+05	9.19E+04	2.43E+04	1.20E+07	8.12E+01	sn	6.24E-08				
T-104	1.68E+06	7.21E+04	1.90E+04	2.50E+08	1.48E+02		1.14E-07				
T-105	3.63E+05	1.33E+05	3.52E+04	1.86E+08	9.75E+01	sn	7.50E-08				
T-106	7.95E+04	6.20E+03	1.64E+03	1.48E+08	1.86E+03		1.43E-06				
T-107	6.81E+05	3.30E+05	8.71E+04	4.63E+06	6.80E+00		5.23E-09				
T-108	1.67E+05	1.20E+05	3.17E+04	1.20E+06	4.98E+01	sn	3.83E-08				
T-109	2.20E+05	1.11E+05	2.94E+04	1.90E+07	6.06E+01	sn	4.66E-08				
T-110	1.43E+06	2.08E+05	5.49E+04	1.90E+06	5.63E+01	sn	4.33E-08				
T-111	1.71E+06	4.00E+08	1.06E+08								
T-112	2.54E+05	1.68E+05	4.45E+04	6.39E+05	2.41E+01	sn	1.85E-08				
T-201	1.10E+05	1.74E+13	4.58E+12								
T-202	7.95E+04	1.57E+05	4.15E+04	6.20E+06	7.80E+01		6.00E-08				
T-203	1.32E+05	1.33E+05	3.52E+04	1.20E+07	9.06E+01		6.97E-08				
T-204	1.44E+05	1.00E+05	2.65E+04	8.59E+05	5.67E+01	sn	4.36E-08				
TX-101	3.29E+05	3.57E+03	9.43E+02	1.20E+09	3.64E+03		2.80E-06	1.80E-05	5.47E-11		2.74E-17
TX-102	8.21E+05	3.05E+04	8.07E+03	1.65E+08	2.78E+02	dl	2.14E-07				
TX-103	5.94E+05	7.16E+04	1.89E+04	2.19E+08	1.24E+02	sn	9.54E-08				
TX-104	2.46E+05	2.72E+04	7.18E+03	7.37E+08	2.75E+02	sn	2.11E-07				
TX-105	2.31E+06	6.80E+04	1.80E+04	4.30E+08	1.87E+02		1.43E-07				
TX-106	1.71E+06	3.98E+05	1.05E+05	5.60E+07	3.27E+01		2.51E-08				
TX-107	1.36E+05	6.31E+04	1.67E+04	4.62E+08	1.76E+02	sn	1.35E-07				
TX-108	5.07E+05	1.01E+04	2.66E+03	6.20E+08	1.22E+03		9.40E-07				
TX-109	1.38E+06	1.06E+04	2.80E+03	1.30E+09	9.44E+02		7.26E-07				
TX-110	1.75E+06	5.03E+04	1.33E+04	6.20E+08	1.43E+02	sn	1.10E-07				
TX-111	1.40E+06	8.54E+04	2.26E+04	1.90E+08	1.36E+02		1.04E-07				
TX-112	2.46E+06	7.89E+04	2.08E+04	3.70E+08	1.51E+02		1.16E-07				
TX-113	2.30E+06	8.44E+04	2.23E+04	3.10E+08	1.35E+02		1.04E-07				
TX-114	2.02E+06	2.09E+05	5.53E+04	1.20E+08	5.93E+01		4.56E-08				
TX-115	2.42E+06	1.17E+05	3.10E+04	2.50E+08	1.03E+02		7.94E-08				
TX-116	2.39E+06	4.30E+04	1.14E+04	6.80E+08	2.85E+02		2.19E-07				
TX-117	2.37E+06	5.95E+04	1.57E+04	4.60E+08	1.94E+02		1.49E-07				
TX-118	1.31E+06	6.42E+02	1.70E+02	7.40E+09	5.63E+03		4.33E-06	2.90E+07	2.21E+01		1.11E-05
TY-101	4.47E+05	1.69E+04	4.47E+03	3.40E+08	7.61E+02		5.85E-07				
TY-102	2.42E+05	3.56E+04	9.40E+03	1.95E+08	3.63E+02	dl	2.79E-07				
TY-103	6.13E+05	5.52E+04	1.46E+04	1.05E+08	2.19E+02	dl	1.68E-07				
TY-104	1.74E+05	1.06E+05	2.80E+04	1.20E+07	1.14E+02	sn	8.77E-08				
TY-105	8.74E+05	9.54E+04	2.52E+04	2.38E+08	1.28E+02	dl	9.84E-08				
TY-106	6.43E+04	7.08E+04	1.87E+04	1.18E+07	1.83E+02		1.41E-07				
U-101	9.46E+04	1.09E+07	2.87E+06	4.30E+04	4.54E-01		3.49E-10				
U-102	1.42E+06	5.35E+04	1.41E+04	3.70E+08	2.16E+02	sn	1.66E-07	2.30E+04	1.62E-02		8.16E-09
U-103	1.77E+06	3.87E+04	1.02E+04	5.60E+08	3.16E+02		2.43E-07				
U-104	4.62E+05	3.57E+08	9.44E+07	3.70E-02	8.01E-08		6.16E-17				
U-105	1.58E+06	4.11E+04	1.09E+04	3.94E+08	2.49E+02		1.92E-07				
U-106	8.55E+05	4.99E+04	1.32E+04	3.36E+08	2.54E+02	sn	1.95E-07	2.30E-03	2.69E-09		1.35E-15
U-107	1.54E+06	1.43E+04	3.78E+03	6.80E+07	4.43E+01		3.40E-08	2.00E+06	1.30E+00		6.53E-07
U-108	1.76E+06	3.68E+04	9.71E+03	6.20E+08	3.52E+02		2.70E-07				
U-109	1.75E+06	1.81E+05	4.79E+04	1.20E+08	6.85E+01		5.27E-08				
U-110	7.04E+05	2.40E+04	6.35E+03	3.80E+08	5.40E+02		4.15E-07				
U-111	1.25E+06	1.55E+04	4.11E+03	6.40E+08	5.14E+02		3.95E-07	5.80E+05	4.66E-01		2.34E-07
U-112	1.85E+05	2.73E+03	7.22E+02	8.70E+08	4.69E+03		3.61E-06				
U-201	1.89E+04	2.13E+03	5.63E+02	1.10E+08	5.81E+03		4.47E-06				
U-202	1.89E+04	1.25E+05	3.30E+04	1.10E+08	9.11E+01	sn	7.01E-08				
U-203	1.14E+04	1.33E+03	3.52E+02	9.90E+07	8.72E+03		6.70E-06				
U-204	1.14E+04	4.17E+03	1.10E+03	3.10E+07	2.73E+03		2.10E-06				

Table C2-3 (Continued). SST Threshold Leakage Values - Case 1/Toxicant

Tank	NO2 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	CN g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Cu g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
A-101	1.82E+08	1.16E+02	dl	1.05E-07								
A-102	1.40E+07	1.98E+00	sn	1.80E-09								
A-103	4.10E+05	2.93E-01		2.66E-10					1.63E+04	1.81E-02	dl	2.43E-09
A-104	1.80E-12	1.70E-17		1.54E-26								
A-105	9.20E+05	1.28E+01		1.16E-08								
A-106	2.30E-02	4.86E-08		4.42E-17					7.02E+04	1.48E-01		1.99E-08
AX-101	1.52E+08	1.06E+02	sn	9.64E-08								
AX-102	7.31E+05	6.44E+01	sn	5.85E-08						3.81E-02	sn	5.11E-09
AX-103	2.64E+08	7.68E+01	sn	6.98E-08								
AX-104	3.70E+05	1.40E+01		1.27E-08								
B-101	9.20E-24	2.15E-29		1.96E-38								
B-102	1.51E+06	1.66E+01	sn	1.51E-08								
B-103	2.27E+08	1.53E+01	sn	1.39E-08								
B-104	2.30E+06	1.64E+00		1.49E-09								
B-105	1.80E+05	1.55E-01		1.41E-10								
B-106	5.54E+05	8.60E+00	sn	7.82E-09								
B-107	1.80E+07	2.88E+01		2.62E-08								
B-108	1.40E+07	3.93E+01		3.58E-08								
B-109	2.84E+07	5.25E+01	sn	4.77E-08								
B-110												
B-111	3.70E+07	4.12E+01		3.75E-08								
B-112	9.20E+07	7.37E+02		6.70E-07								
B-201	6.02E+03	5.48E-02		4.99E-11								
B-202	3.40E+05	3.33E+00		3.02E-09	7.95E+02	7.78E-03		4.14E-10				
B-203	1.95E+06	1.01E+01		9.18E-09								
B-204	5.96E+05	3.15E+00		2.86E-09								
BX-101	9.20E-13	5.65E-18		5.14E-27								
BX-102	9.20E+07	9.98E+01	sn	9.07E-08								
BX-103	1.76E+07	1.99E+01	sn	1.81E-08								
BX-104	4.10E+07	1.09E+02		9.95E-08					3.91E+04	5.06E-03	dl	6.78E-10
BX-105	9.20E+06	4.77E+01		4.33E-08					7.63E+03	7.04E-03	sn	9.43E-10
BX-106	3.20E+08	7.78E+01	sn	7.07E-08								
BX-107	3.70E+06	3.42E+01	sn	3.11E-08					1.70E+02	4.98E-03	sn	6.67E-10
BX-108	3.70E+05	3.76E+00		3.42E-09								
BX-109	9.20E+06	2.41E+01	sn	2.19E-08								
BX-110	1.40E+08	3.65E+01	sn	3.32E-08								
BX-111	1.40E+08	6.35E+01	sn	5.77E-08								
BX-112	4.60E+06	2.99E+01	sn	2.72E-08								
BY-101	1.80E+08	1.30E+02		1.18E-07								
BY-102	4.60E+07	5.35E+01	sn	4.86E-08	1.18E+03	2.07E-02	sn	1.10E-09	3.96E+03	5.21E-02	sn	6.98E-09
BY-103	1.78E+07	4.34E+01	dl	3.95E-08								
BY-104	1.80E+08	1.17E+02		1.06E-07	1.67E+05	1.09E-01		5.78E-09	1.09E+05	7.09E-02		9.50E-09
BY-105	1.40E+08	1.57E+01	dl	1.43E-08					3.30E+04	4.50E-02	dl	6.03E-09
BY-106	1.80E+08	6.64E+01	dl	6.04E-08					4.45E+04	5.00E-02	dl	6.70E-09
BY-107	9.20E+07	9.14E+01		8.31E-08								
BY-108	9.20E+07	1.07E+02		9.69E-08								
BY-109	4.60E+07	4.07E+01	sn	3.70E-08					2.67E+03	4.14E-02	sn	5.55E-09
BY-110	1.80E+08	1.20E+02		1.09E-07								
BY-111	1.80E+08	1.04E+02		9.42E-08								
BY-112	3.70E+07	5.96E+01	sn	5.42E-08								
C-101	4.10E+05	1.23E+00		1.12E-09								
C-102	2.07E+05	1.83E+01	sn	1.66E-08	1.04E+03	9.13E-02	sn	4.86E-09				
C-103	1.41E+07	2.80E+01	sn	2.55E-08					1.41E+03	2.80E-03	sn	3.75E-10
C-104	4.60E-04	4.12E-10		3.74E-19					1.36E+05	1.22E-01		1.63E-08
C-105	9.20E+04	1.80E-01		1.64E-10					1.47E+05	2.88E-01		3.85E-08
C-106	2.30E-36	2.65E-42		2.41E-51					3.60E+05	4.15E-01		5.57E-08
C-107	6.89E+06	5.35E+01	dl	4.86E-08	7.98E+03	6.20E-02	dl	3.30E-09				
C-108	3.40E+05	2.25E+01	dl	2.05E-08								
C-109	3.20E+06	1.41E+02	dl	1.28E-07								
C-110	3.57E+05	1.89E+01	sn	1.72E-08								
C-111	5.86E+06	2.71E+01	sn	2.46E-08								
C-112	3.17E+06	6.44E+01	dl	5.85E-08								
C-201	1.76E+04	1.16E+00	sn	1.05E-09								
C-202												
C-203												
C-204	6.55E+05	3.93E+00	sn	3.57E-09								
S-101	9.43E+07	5.83E+01		5.30E-08								
S-102	2.80E-02	1.35E-08		1.22E-17								
S-103	1.58E+07	2.66E+01	sn	2.42E-08								
S-104	9.20E+06	8.27E+00		7.52E-09								
S-105	9.20E+06	5.33E+00		4.85E-09								
S-106	2.30E+07	1.27E+01		1.15E-08								
S-107	1.27E+08	9.40E+01	sn	8.54E-08								
S-108	1.40E+07	6.12E+00		5.57E-09								

Table C2-3 (Continued). SST Threshold Leakage Values - Case 1/Toxicant

Tank	NO2 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	CN g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Cu g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
S-109	4.60E+07	2.40E+01		2.18E-08								
S-110	1.40E+07	9.48E+00		8.62E-09								
S-111	1.40E+07	6.21E+00		5.64E-09								
S-112	1.80E+08	9.09E+01		8.27E-08								
SX-101	2.78E+06	5.06E+00	dl	4.60E-09								
SX-102	1.56E+08	7.59E+01		6.90E-08								
SX-103	1.40E+08	5.67E+01		5.16E-08								
SX-104	1.09E+08	1.15E+02	dl	1.05E-07								
SX-105	3.20E+07	1.24E+01		1.13E-08								
SX-106	4.60E+07	1.86E+01	sn	1.69E-08								
SX-107	2.80E-03	4.39E+01	sn	3.99E-08								
SX-108	1.80E-04	5.87E-10		5.34E-19								
SX-109												
SX-110	9.20E-02	3.92E-07		3.56E-16								
SX-111	4.29E+07	1.38E+01	dl	1.25E-08								
SX-112												
SX-113												
SX-114	4.60E-19	6.71E-25		6.10E-34								
SX-115	1.39E+05	3.06E+00		2.78E-09								
T-101	4.60E+06	1.19E+01		1.08E-08								
T-102	9.20E+04	3.32E+01	sn	3.02E-08								
T-103	4.60E+05	5.02E+01	sn	4.56E-08								
T-104	1.40E+07	8.31E+00		7.56E-09								
T-105	1.40E-10	3.85E-16		3.50E-25								
T-106	1.80E+06	2.26E+01		2.06E-08								
T-107	9.14E+05	2.68E+01	sn	2.44E-08								
T-108	1.40E+04	4.88E+01	sn	4.44E-08								
T-109	9.20E+05	4.69E+01	sn	4.26E-08								
T-110		2.95E-01	sn	2.68E-10								
T-111												
T-112	1.18E+06	4.44E+01	sn	4.04E-08								
T-201												
T-202												
T-203												
T-204	9.72E+03	6.42E-01	dl	5.84E-10								
TX-101	4.60E-03	1.40E-08		1.27E-17								
TX-102	1.44E+08	1.25E+02	dl	1.14E-07								
TX-103	8.62E+07	4.88E+01	sn	4.44E-08								
TX-104	1.20E+08	4.49E+01	sn	4.08E-08					1.39E+05	5.19E-02	sn	6.95E-09
TX-105	9.20E+06	3.99E+00		3.63E-09								
TX-106	3.20E-04	1.87E-10		1.70E-19								
TX-107	6.70E+07	2.55E+01	sn	2.32E-08								
TX-108	2.80E+07	5.52E+01		5.02E-08								
TX-109	3.20E+08	2.32E+02		2.11E-07								
TX-110	1.40E+08	9.39E+01	sn	8.54E-08								
TX-111	1.80E+07	1.29E+01		1.17E-08								
TX-112	2.80E+07	1.14E+01		1.04E-08								
TX-113	1.80E+07	7.83E+00		7.12E-09								
TX-114	4.60E+06	2.27E+00		2.06E-09								
TX-115	9.20E+06	3.80E+00		3.45E-09								
TX-116	3.70E+06	1.55E+00		1.41E-09								
TX-117	1.40E+06	5.91E-01		5.37E-10								
TX-118	2.30E+08	1.75E+02		1.59E-07								
TY-101	4.60E+05	1.03E+00		9.36E-10								
TY-102	4.60E+06	1.52E+00	dl	1.38E-09								
TY-103	1.40E+07	1.37E+01	dl	1.25E-08								
TY-104	9.20E+05	6.90E+00	sn	6.27E-09								
TY-105	3.20E+03	6.49E+00	dl	5.90E-09								
TY-106	2.30E-05	3.57E-10		3.25E-19								
U-101	2.80E-15	2.96E-20		2.69E-29								
U-102	2.38E+07	1.38E+01	sn	1.25E-08								
U-103	5.09E+06	2.87E+00		2.61E-09								
U-104												
U-105	8.99E+07	5.68E+01		5.17E-08								
U-106	7.56E+06	5.71E+00	sn	5.19E-09								
U-107	1.80E+07	1.17E+01		1.06E-08								
U-108	9.20E+04	5.22E-02		4.74E-11								
U-109	4.60E+06	2.62E+00		2.39E-09								
U-110	9.20E+05	1.31E+00		1.19E-09								
U-111	1.93E+07	1.55E+01		1.41E-08								
U-112	9.20E+06	4.96E+01		4.51E-08								
U-201	4.60E+06	2.43E+02		2.21E-07								
U-202	9.20E+06	1.09E+01	sn	9.91E-09								
U-203	4.60E+06	4.05E+02		3.68E-07								
U-204	2.30E+06	2.03E+02		1.84E-07								

Table C2-3 (Continued). SST Threshold Leakage Values - Case 1/Toxicant

Tank	F g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Hg g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Na g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
A-101	1.90E-37	5.27E-44		3.96E-53					4.60E+08	1.28E+02		3.51E-11
A-102	3.52E+05	1.29E+00	sn	9.70E-10					4.60E+08	2.00E+02	sn	5.50E-11
A-103	9.50E+03	6.78E-03		5.10E-12					4.64E+08	1.88E+02	dl	5.17E-11
A-104	1.90E-18	1.79E-23		1.35E-32					5.30E+08	5.00E+03		1.38E-09
A-105	5.70E-01	7.93E-06		5.96E-15					4.62E+07	6.42E+02		1.77E-10
A-106	3.80E-04	8.03E-10		6.04E-19					5.69E+07	2.55E+02	dl	7.01E-11
AX-101	7.60E-07	2.68E-13		2.02E-22					6.90E+03	2.44E-03		6.70E-16
AX-102	3.80E-17	2.57E-22		1.94E-31					1.91E+06	1.68E+02	sn	4.62E-11
AX-103	1.90E+04	4.48E-02		3.37E-11					6.90E+06	1.63E+01		4.48E-12
AX-104	1.20E+05	4.53E+00		3.41E-09	1.20E+07	4.53E+02		5.89E-04	5.50E+06	2.08E+02		5.71E-11
B-101	1.70E-26	3.97E-32		2.99E-41					9.20E+06	2.15E+01		5.92E-12
B-102	1.90E+04	2.09E-01	sn	1.57E-10					8.00E+06	6.44E+01	sn	1.77E-11
B-103	3.80E+04	1.33E-01	sn	1.00E-10					1.60E+07	5.68E+01	sn	1.56E-11
B-104	8.20E+06	5.84E+00		4.39E-09					6.90E+07	4.91E+01		1.35E-11
B-105	1.50E+07	1.30E+01		9.74E-09					2.80E+08	2.42E+02		6.65E-11
B-106	1.30E+06	1.86E-01	sn	1.40E-10					1.40E+08	9.20E+01	sn	2.53E-11
B-107	1.30E+07	2.08E+01		1.57E-08					1.10E+08	1.76E+02		4.84E-11
B-108	3.80E+07	1.07E+02		8.03E-08					2.30E+08	6.46E+02		1.78E-10
B-109	1.90E+07	4.64E-03	sn	3.49E-12					1.90E+08	1.10E+02	sn	3.03E-11
B-110	1.70E-36	1.83E-42		1.37E-51					1.20E+08	1.29E+02		3.54E-11
B-111	1.90E+03	2.12E-03		1.59E-12					7.40E+08	8.25E+02		2.27E-10
B-112	1.30E+06	1.04E+01		7.83E-09					1.20E+08	9.61E+02		2.64E-10
B-201					7.52E+04	6.85E-01		8.91E-07	4.21E+06	3.84E+01		1.05E-11
B-202	1.04E+06	1.02E+01		7.65E-09	1.17E+02	1.14E-03		1.49E-09	7.40E+06	7.24E+01		1.99E-11
B-203	9.50E+05	4.92E+00		3.70E-09	8.02E+06	4.15E+01		5.40E-05	7.69E+07	3.98E+02		1.10E-10
B-204	9.50E+05	5.02E+00		3.77E-09	1.99E+03	1.05E-02		1.37E-08	6.90E+06	3.65E+01		1.00E-11
BX-101	7.60E-14	4.67E-19		3.51E-28					4.60E+06	2.83E+01		7.77E-12
BX-102	1.30E+06	1.74E-01	sn	1.31E-10					4.80E+08	2.62E+02	sn	7.21E-11
BX-103	1.70E+07	7.30E-02	sn	5.49E-11					1.40E+09	5.60E+03		1.54E-09
BX-104	1.90E+01	5.07E-05		3.81E-14					1.40E+09	1.02E+02	dl	2.81E-11
BX-105	1.10E+06	5.70E+00		4.29E-09					1.00E+09	1.20E+02	sn	3.30E-11
BX-106	9.50E+06	1.48E+00	sn	1.11E-09					2.80E+09	1.62E+02	sn	4.46E-11
BX-107	1.90E+06	1.42E+00	sn	1.07E-09					9.30E+07	9.70E+01	sn	2.67E-11
BX-108	3.80E+05	3.86E+00		2.90E-09					9.20E+05	9.35E+00		2.57E-12
BX-109	1.13E+04	1.49E+00	sn	1.12E-09	1.87E+00	2.47E-04	sn	3.21E-10	2.80E+07	1.40E+02	sn	3.85E-11
BX-110	1.90E+06	1.41E+00	sn	1.06E-09					1.80E+08	1.64E+02	sn	4.51E-11
BX-111	1.90E+06	1.46E+00	sn	1.10E-09	1.88E+00	2.61E-05	sn	3.39E-11	2.10E+08	2.14E+02	sn	5.89E-11
BX-112	9.50E+05	1.11E+00	sn	8.35E-10					3.40E+07	7.95E+01	sn	2.19E-11
BY-101	1.90E+06	1.37E+00		1.03E-09					3.90E+08	2.81E+02		7.72E-11
BY-102	2.00E+07	1.55E+01		1.17E-08					7.60E+08	1.28E+02	sn	3.52E-11
BY-103	7.60E+07	5.02E+01		3.77E-08					2.10E+09	1.37E+02	dl	3.77E-11
BY-104	1.63E+07	1.06E+01		7.98E-09					3.88E+08	2.52E+02		6.94E-11
BY-105	1.90E+06	9.98E-01		7.50E-10					2.30E+08	1.14E+02	dl	3.14E-11
BY-106	2.00E+06	8.23E-01		6.19E-10					2.50E+08	1.44E+02	dl	3.96E-11
BY-107	9.50E+05	9.44E-01		7.10E-10					9.90E+07	9.83E+01		2.70E-11
BY-108	1.70E+06	1.97E+00		1.48E-09					1.80E+08	2.09E+02		5.74E-11
BY-109	4.80E+06	3.00E+00		2.25E-09					7.40E+08	1.29E+02	sn	3.55E-11
BY-110	1.90E+06	1.27E+00		9.53E-10					2.30E+08	1.53E+02		4.22E-11
BY-111	1.90E+06	1.09E+00		8.22E-10					2.30E+08	1.32E+02		3.64E-11
BY-112	7.60E+05	6.90E-01		5.19E-10					2.80E+08	2.71E+02	sn	7.45E-11
C-101	9.50E+01	2.85E-04		2.14E-13					9.90E+07	2.97E+02		8.17E-11
C-102	5.70E+07	3.56E+01		2.68E-08					6.90E+07	6.17E+01	sn	1.70E-11
C-103	1.90E+08	2.57E+02		1.94E-07					1.80E+09	3.36E+01	sn	9.24E-12
C-104	1.70E-10	1.52E-16		1.14E-25					1.16E+08	1.04E+02		2.86E-11
C-105	5.70E+02	1.12E-03		8.39E-13					3.90E+08	7.63E+02		2.10E-10
C-106									1.87E+08	2.16E+02		5.93E-11
C-107	1.10E+04	1.06E-02		7.95E-12					1.20E+07	5.44E+01	dl	1.50E-11
C-108	1.90E+02	7.61E-04		5.72E-13					9.20E+07	3.68E+02		1.01E-10
C-109	5.70E+04	2.28E-01		1.72E-10					9.40E+06	3.76E+01		1.03E-11
C-110	7.60E-04	1.07E-09		8.07E-19	1.99E+01	1.05E-03	sn	1.37E-09	1.32E+06	6.99E+01	sn	1.92E-11
C-111	1.70E+04	7.88E-02		5.93E-11					7.10E+06	3.29E+01		9.05E-12
C-112	1.90E+05	4.67E-02	dl	3.51E-11					7.60E+06	6.16E+01	dl	1.69E-11
C-201	8.78E+03	5.80E-01	sn	4.36E-10	1.23E+03	8.12E-02	sn	1.06E-07	4.74E+05	3.13E+01	sn	8.61E-12
C-202									2.30E+05	6.08E+01		1.67E-11
C-203									2.30E+04	1.22E+00		3.34E-13
C-204	1.89E+02	1.14E-03	sn	8.57E-13					1.71E+06	1.03E+01	sn	2.83E-12
S-101	1.90E+05	1.18E-01		8.84E-11					2.80E+08	1.73E+02		4.76E-11
S-102	7.60E-04	3.66E-10		2.75E-19					2.30E+08	1.11E+02		3.04E-11
S-103	3.48E-01	8.11E-02	sn	6.10E-11					1.40E+09	8.83E+01	sn	2.43E-11
S-104									4.80E+08	4.31E+02		1.19E-10
S-105									3.20E+08	1.85E+02		5.10E-11
S-106	1.50E+03	8.27E-04		6.22E-13					5.50E+08	3.03E+02		8.34E-11
S-107	9.50E+06	6.68E+00		5.02E-09					2.30E+08	1.62E+02		4.44E-11
S-108	5.70E+05	2.49E-01		1.87E-10					1.40E+08	6.12E+01		1.68E-11

Table C2-3 (Continued). SST Threshold Leakage Values - Case 1/Toxicant

Tank	F g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Hg g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Na g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
S-109	3.80E+06	1.98E+00		1.49E-09					1.40E+09	7.31E+02		2.01E-10
S-110	1.10E+05	7.45E-02		5.60E-11					1.10E+08	7.45E+01		2.05E-11
S-111	1.88E+05	8.33E-02		6.27E-11	4.13E+04	1.83E-02		2.38E-08	9.20E+07	4.08E+01		1.12E-11
S-112	1.30E+07	6.57E+00		4.94E-09					2.50E+09	1.26E+03		3.47E-10
SX-101	6.99E+05	1.27E+00	dl	9.55E-10					4.60E+08	2.78E+01	dl	7.65E-12
SX-102	1.10E+03	5.35E-04		4.02E-13					1.40E+09	6.81E+02		1.87E-10
SX-103	1.90E+06	7.70E-01		5.79E-10	6.72E+05	2.72E-01		3.54E-07	2.50E+09	1.01E+03		2.79E-10
SX-104	1.80E+06	1.90E+00	dl	1.43E-09					7.40E+08	3.56E+02	dl	9.79E-11
SX-105	7.60E+05	2.94E-01		2.21E-10					6.41E+08	2.48E+02		6.82E-11
SX-106	9.50E+05	4.68E-01		3.52E-10					8.36E+07	5.19E+01	sn	1.43E-11
SX-107									4.60E+08	1.16E+02	sn	3.19E-11
SX-108									6.90E+08	2.25E+03		6.19E-10
SX-109									6.90E+08	7.29E+02		2.01E-10
SX-110	1.90E-03	8.10E-09		6.09E-18					1.10E+09	4.69E+03		1.29E-09
SX-111	9.50E-12	2.01E-17		1.51E-26					6.90E+08	9.65E+01	dl	2.65E-11
SX-112									1.90E+08	5.46E+02		1.50E-10
SX-113									4.60E+08	4.67E+03		1.29E-09
SX-114	3.80E-20	5.55E-26		4.17E-35					9.20E+08	1.34E+03		3.69E-10
SX-115									9.20E+08	2.03E+04		5.57E-09
T-101	3.00E+06	1.09E+00	sn	8.20E-10					7.40E+07	5.91E+01	sn	1.63E-11
T-102	5.70E+04	8.70E-01	sn	6.54E-10					1.10E+06	9.47E+01	sn	2.60E-11
T-103	1.10E+04	8.66E-01	sn	6.51E-10					4.60E+06	9.03E+01	sn	2.48E-11
T-104	3.82E+07	2.27E+01		1.71E-08					1.10E+08	6.53E+01		1.80E-11
T-105	1.45E+05	7.60E-02	sn	5.72E-11					1.11E+08	5.80E+01	sn	1.60E-11
T-106	1.70E+07	2.14E+02		1.61E-07					1.40E+08	1.76E+03		4.84E-10
T-107	3.18E+04	9.33E-01	sn	7.02E-10					1.84E+06	5.40E+01	sn	1.49E-11
T-108		7.66E-01	sn	5.76E-10					9.00E+06	7.20E+01	sn	1.98E-11
T-109	1.90E+05	9.29E-01	sn	6.99E-10					2.30E+07	8.60E+01	sn	2.37E-11
T-110	1.50E+05	6.02E+00	sn	4.53E-09					1.80E+06	4.30E+01	sn	1.18E-11
T-111	5.70E+04	3.32E-02		2.50E-11								
T-112	5.70E+04	6.73E-01	sn	5.06E-10					1.66E+06	6.28E+01	sn	1.73E-11
T-201									2.30E+02	2.10E-03		5.76E-16
T-202	3.80E+05	4.78E+00		3.60E-09					4.60E+06	5.79E+01		1.59E-11
T-203	9.50E+05	7.17E+00		5.39E-09					6.90E+06	5.21E+01		1.43E-11
T-204					6.48E+02	4.28E-02	dl	5.56E-08	4.68E+05	3.21E+01	dl	8.83E-12
TX-101	7.60E-05	2.31E-10		1.74E-19					4.60E+08	1.40E+03		3.84E-10
TX-102	3.80E+03	4.63E-03		3.48E-12					2.81E+08	3.42E+02		9.41E-11
TX-103	1.90E+04	3.20E-02		2.40E-11					4.60E+06	7.74E+00		2.13E-12
TX-104	9.50E-03	3.86E-08		2.90E-17	2.24E+05	8.36E-02	sn	1.09E-07	5.80E+08	2.17E+02	sn	5.97E-11
TX-105	5.70E+04	2.47E-02		1.86E-11					1.80E+08	7.81E+01		2.15E-11
TX-106									1.10E+07	6.42E+00		1.76E-12
TX-107									2.30E+03	1.69E-02		4.64E-15
TX-108	2.10E+06	4.14E+00		3.11E-09					2.10E+08	4.14E+02		1.14E-10
TX-109	9.50E+06	6.90E+00		5.19E-09					2.50E+08	1.81E+02		4.99E-11
TX-110	7.80E+06	4.46E+00		3.35E-09					2.30E+08	1.32E+02		3.62E-11
TX-111	1.90E+06	1.36E+00		1.02E-09					1.80E+08	1.29E+02		3.53E-11
TX-112	1.70E+06	6.92E-01		5.20E-10					2.40E+08	9.77E+01		2.69E-11
TX-113	2.30E+07	1.00E+01		7.53E-09					3.40E+08	2.23E+02	sn	6.13E-11
TX-114	1.90E+05	9.38E-02		7.06E-11					2.10E+08	1.04E+02		2.85E-11
TX-115	7.60E+06	3.14E+00		2.36E-09					1.40E+08	5.78E+01		1.59E-11
TX-116	3.80E+07	1.59E+01		1.20E-08					8.30E+08	3.48E+02		9.56E-11
TX-117	5.70E+07	2.41E+01		1.81E-08					7.40E+08	3.12E+02		8.59E-11
TX-118	4.20E+07	1.54E-01	sn	1.16E-10					4.60E+09	9.82E+01	sn	2.70E-11
TY-101	2.47E+06	5.53E+00		4.16E-09					1.30E+08	2.91E+02		8.00E-11
TY-102	2.00E+05	5.51E-01	dl	4.14E-10					9.20E+07	3.80E+02		1.04E-10
TY-103	1.38E+06	5.13E-01	dl	3.86E-10					8.34E+07	1.36E+02		3.74E-11
TY-104	1.70E+05	5.89E-01	sn	4.43E-10					4.70E+06	7.48E+01	sn	2.06E-11
TY-105	1.70E+03	5.13E-01	dl	3.86E-10					1.54E+08	1.76E+02		4.84E-11
TY-106	9.50E-06	1.48E-10		1.11E-19					2.80E+07	4.35E+02		1.20E-10
U-101	1.10E-15	1.16E-20		8.74E-30					1.40E+08	1.48E+03		4.07E-10
U-102	3.80E+05	2.68E-01		2.02E-10					4.60E+07	3.25E+01		8.94E-12
U-103	4.24E+03	2.39E-03		1.80E-12	1.70E+04	9.60E-03		1.25E-08	2.10E+08	1.19E+02		3.26E-11
U-104									4.70E+07	1.02E+02		2.80E-11
U-105									7.92E+08	5.01E+02		1.38E-10
U-106	3.65E+04	2.75E-02	sn	2.07E-11					1.75E+08	1.32E+02	sn	3.63E-11
U-107	3.80E+05	2.47E-01		1.86E-10					1.10E+07	7.16E+00		1.97E-12
U-108	3.80E+06	2.15E+00		1.62E-09					2.30E+08	1.30E+02		3.59E-11
U-109	1.90E+05	1.08E-01		8.15E-11					2.30E+07	1.31E+01		3.61E-12
U-110	3.80E+02	5.40E-04		4.06E-13					1.40E+08	1.99E+02		5.47E-11
U-111	9.50E+04	7.63E-02		5.74E-11					2.30E+08	1.85E+02		5.08E-11
U-112	2.10E+06	1.13E+01		8.51E-09					2.50E+08	1.35E+03		3.71E-10
U-201	1.10E+05	5.81E+00		4.37E-09					2.40E+07	1.27E+03		3.49E-10
U-202	1.10E+05	1.81E-02	sn	1.36E-11					2.40E+07	8.99E+01	sn	2.47E-11
U-203	9.50E+04	8.37E+00		6.29E-09	3.63E+03	3.20E-01		4.16E-07	2.30E+07	2.03E+03		5.57E-10
U-204	4.07E+04	3.58E+00		2.70E-09	9.92E+02	8.74E-02		1.14E-07	6.90E+06	6.08E+02		1.67E-10

Table C2-3 (Continued). SST Threshold Leakage Values - Case 1/Toxicant

Tank	Sb g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	SO4 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	V g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
A-101					4.80E+04	1.83E+01	dl	3.31E-11				
A-102					5.80E+07	9.70E+01	sn	1.76E-10				
A-103					3.00E+05	2.14E-01		3.88E-13				
A-104					6.80E+07	6.42E+02		1.16E-09				
A-105												
A-106												
AX-101												
AX-102												
AX-103					7.70E+05	1.82E+00		3.29E-12				
AX-104					2.20E+05	8.30E+00		1.50E-11				
B-101					1.90E+06	4.44E+00		8.04E-12				
B-102					3.80E+06	3.14E+01		5.68E-11				
B-103					3.80E+06	1.70E+01		3.08E-11				
B-104					6.70E+06	4.77E+00		8.64E-12				
B-105					3.80E+07	3.28E+01		5.94E-11				
B-106					9.60E+05	2.17E+00		3.92E-12				
B-107					2.90E+06	4.64E+00		8.40E-12				
B-108					1.90E+06	5.34E+00		9.67E-12				
B-109					7.70E+05	1.60E+00		2.90E-12				
B-110					4.80E-06	5.16E-12		9.33E-24				
B-111					7.30E+07	8.14E+01		1.47E-10				
B-112					9.60E+06	7.69E+01		1.39E-10				
B-201												
B-202					5.80E+04	5.68E-01		1.03E-12				
B-203					6.70E+04	3.47E-01		6.28E-13				
B-204					6.70E+04	3.54E-01		6.41E-13				
BX-101					1.90E+05	1.17E+00		2.11E-12				
BX-102					2.00E+07	5.50E+01		9.96E-11				
BX-103					1.90E+07	7.61E+01		1.38E-10				
BX-104					9.60E+07	2.56E+02		4.64E-10				
BX-105					2.90E+07	1.50E+02		2.72E-10				
BX-106					1.40E+08	1.54E+01	sn	2.79E-11				
BX-107					1.90E+07	1.74E+01	sn	3.15E-11				
BX-108					3.90E+04	3.96E-01		7.17E-13				
BX-109					3.80E+06	2.36E+01	sn	4.27E-11				
BX-110					1.90E+07	1.46E+01	sn	2.64E-11				
BX-111					1.90E+07	1.52E+01	sn	2.75E-11				
BX-112					2.90E+06	7.86E+00	sn	1.42E-11				
BY-101					2.90E+07	2.09E+01		3.78E-11				
BY-102					7.70E+06	1.55E+01	sn	2.81E-11				
BY-103					7.70E+06	4.97E+00	dl	9.00E-12				
BY-104					2.90E+07	1.89E+01		3.42E-11				
BY-105					1.90E+07	2.00E+01	dl	3.62E-11				
BY-106					2.90E+07	3.29E+01	dl	5.95E-11				
BY-107					9.60E+06	9.54E+00		1.73E-11				
BY-108					9.60E+06	1.11E+01		2.01E-11				
BY-109					8.60E+06	3.93E+01	sn	7.11E-11				
BY-110					2.90E+07	1.93E+01		3.50E-11				
BY-111					2.90E+07	1.67E+01		3.02E-11				
BY-112					4.80E+06	4.36E+00		7.89E-12				
C-101					9.70E+05	2.91E+00		5.27E-12				
C-102					2.90E+02	7.49E-01	sn	1.36E-12				
C-103					9.60E+07	2.43E+01	sn	4.40E-11				
C-104					7.70E+02	6.90E-04		1.25E-15				
C-105	2.30E+06	4.50E+00		4.17E-07	3.00E+05	5.87E-01		1.06E-12	5.52E+04	1.08E-01		4.63E-10
C-106	3.48E+06	4.01E+00		3.72E-07	9.60E+03	1.11E-02		2.00E-14				
C-107					7.70E+05	9.65E+00	dl	1.75E-11				
C-108					3.20E+03	1.28E-02		2.32E-14				
C-109					4.80E+05	1.92E+00		3.48E-12				
C-110					5.80E+01	1.75E+01	sn	3.17E-11				
C-111					1.90E+05	8.81E-01		1.59E-12				
C-112					2.90E+05	7.37E-01		1.33E-12				
C-201					2.90E+03	1.39E+01	sn	2.52E-11				
C-202					7.70E+00	2.03E-03		3.68E-15				
C-203					7.70E+00	4.07E-04		7.36E-16				
C-204					9.60E+01	8.45E-03		1.53E-14				
S-101					4.80E+06	2.97E+00		5.38E-12				
S-102					1.90E+05	9.14E-02		1.65E-13				
S-103					2.90E+03	1.16E+00	sn	2.10E-12				
S-104	3.20E+05	2.88E-01		2.66E-08	7.70E+05	6.92E-01		1.25E-12				
S-105					2.90E+06	1.68E+00		3.04E-12				
S-106					4.80E+06	2.65E+00		4.79E-12				
S-107					7.70E+02	5.41E-04		9.79E-16				
S-108					7.70E+06	3.37E+00		6.10E-12				

Table C2-3 (Continued). SST Threshold Leakage Values - Case 1/Toxicant

Tank	Sb g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	SO4 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	V g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
S-109					3.80E+07	1.98E+01		3.59E-11				
S-110					1.90E+07	1.29E+01		2.33E-11				
S-111					1.59E+07	7.05E+00		1.28E-11				
S-112					1.90E+08	9.60E+01		1.74E-10				
SX-101					5.80E+05	7.01E+00	dl	1.27E-11				
SX-102					3.06E+07	1.49E+01		2.69E-11				
SX-103					6.70E+07	2.71E+01		4.91E-11				
SX-104					7.70E+06	2.88E+00	dl	5.21E-12				
SX-105					9.80E+06	3.79E+00		6.86E-12				
SX-106					3.90E+06	1.92E+00		3.48E-12				
SX-107					4.80E+03	1.22E-02		2.21E-14				
SX-108					3.80E+03	1.24E-02		2.24E-14				
SX-109					3.80E+03	4.02E-03		7.27E-15				
SX-110					9.60E+03	4.09E-02		7.40E-14				
SX-111					6.70E+03	1.42E-02		2.56E-14				
SX-112					5.10E+04	1.46E-01		2.65E-13				
SX-113					5.80E+06	5.89E+01		1.07E-10				
SX-114					7.70E+03	1.12E-02		2.03E-14				
SX-115					8.60E+06	1.89E+02		3.43E-10				
T-101					6.70E+06	1.32E+01	sn	2.39E-11				
T-102					9.60E+04	9.80E+00	sn	1.77E-11				
T-103					9.60E+04	1.82E+01	sn	3.29E-11				
T-104					9.60E+06	5.70E+00		1.03E-11				
T-105					9.60E+01	2.64E-04		4.78E-16				
T-106					3.90E+04	4.91E-01		8.88E-13				
T-107					2.90E+02	1.63E+01	sn	2.95E-11				
T-108					2.90E+05	1.43E+01	sn	2.59E-11				
T-109					7.70E+06	1.58E+01	sn	2.86E-11				
T-110					2.00E-01	1.95E+00	sn	3.53E-12				
T-111												
T-112					5.80E-01	8.77E+00	sn	1.59E-11				
T-201												
T-202					2.90E+04	3.65E-01		6.60E-13				
T-203					6.70E+04	5.06E-01		9.15E-13				
T-204						1.07E+00	dl	1.94E-12				
TX-101					9.60E+05	2.92E+00		5.28E-12				
TX-102					3.90E+05	4.75E-01		8.59E-13				
TX-103					1.90E+06	2.02E+00	sn	3.66E-12				
TX-104					7.70E+02	1.77E+01	sn	3.20E-11				
TX-105					3.80E+06	1.65E+00		2.98E-12				
TX-106					3.80E+05	2.22E-01		4.01E-13				
TX-107					5.80E-01	4.26E-06		7.70E-18				
TX-108					2.90E+07	5.72E+01		1.03E-10				
TX-109					9.60E+07	6.97E+01		1.26E-10				
TX-110					7.70E+07	4.40E+01		7.97E-11				
TX-111					5.80E+07	4.14E+01		7.50E-11				
TX-112					8.60E+07	3.50E+01		6.34E-11				
TX-113					3.80E+07	1.65E+01		2.99E-11				
TX-114					6.70E+07	3.31E+01		5.99E-11				
TX-115					1.90E+07	7.84E+00		1.42E-11				
TX-116					1.90E+07	7.96E+00		1.44E-11				
TX-117					7.70E+06	3.25E+00		5.88E-12				
TX-118					3.80E+08	2.89E+02		5.24E-10				
TY-101					4.80E+06	1.07E+01		1.95E-11				
TY-102					2.90E+07	2.06E+01	dl	3.73E-11				
TY-103					2.90E+07	1.10E+01	dl	1.99E-11				
TY-104					3.80E+05	6.24E+00	sn	1.13E-11				
TY-105					1.90E+07	8.36E+00	dl	1.51E-11				
TY-106					1.90E+02	2.95E-03		5.34E-15				
U-101					8.60E+06	9.09E+01		1.65E-10				
U-102					8.60E+06	6.08E+00		1.10E-11				
U-103					2.00E+03	1.13E-03		2.04E-15				
U-104					9.60E-02	2.08E-07		3.76E-19				
U-105					7.70E+02	4.87E-04		8.81E-16				
U-106					4.80E+02	2.02E+00	sn	3.66E-12				
U-107					9.60E+05	6.25E-01		1.13E-12				
U-108					7.70E+02	4.37E-04		7.90E-16				
U-109					2.90E+05	1.65E-01		3.00E-13				
U-110					2.40E+03	3.41E-03		6.17E-15				
U-111					3.90E+05	3.13E-01		5.67E-13				
U-112					7.70E+06	4.15E+01		7.51E-11				
U-201					7.70E+05	4.07E+01		7.36E-11				
U-202					6.70E+05	3.54E+01		6.41E-11				
U-203					6.70E+05	5.90E+01		1.07E-10				
U-204					1.90E+05	1.67E+01		3.03E-11				

Table C2-4. SST Threshold Leakage Values - Case 2/Carcinogenic

Tank	Total Vol. (L)	Carcinogenic Threshold Leakage L	Gal.	Tc-99 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	U-238 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L
A-101	3.61E+06	5.19E+03	1.37E+03						2.60E+11	2.10E+07	5.81E+00		1.91E-14
A-102	1.55E+05	3.81E+02	1.01E+02	7.40E+12	1.18E+04	2.18E-02	sn	7.80E-11	3.70E+10	2.98E+06	3.70E-03	sn	1.22E-17
A-103	1.40E+06	5.82E+03	1.54E+03	1.24E+13	1.97E+04	1.27E-02	dl	4.55E-11	3.70E+10	2.98E+06	2.13E+00		7.01E-15
A-104	1.06E+05	6.35E+02	1.68E+02	2.20E-06	3.50E-15	3.30E-20		1.18E-28	7.40E+10	5.97E+06	5.63E+01		1.85E-13
A-105	7.19E+04	3.02E+04	7.98E+03	3.70E+11	5.88E+02	8.18E-03		2.93E-11	1.90E+02	1.53E-02	2.13E-07		7.01E-22
A-106	4.73E+05	1.04E+03	2.74E+02	2.92E+12	4.64E+03	8.89E-03	dl	3.18E-11	1.50E+11	1.21E+07	3.53E-03	dl	1.16E-17
AX-101	2.83E+06	1.77E+04	4.69E+03	7.40E+02	1.18E-06	4.16E-13		1.49E-21	3.70E+10	2.98E+06	1.05E+00		3.47E-15
AX-102	1.48E+05	2.05E+03	5.41E+02	3.70E-05	5.88E-14	3.98E-19		1.43E-27	1.50E+09	1.21E+05	8.19E-01		2.70E-15
AX-103	4.24E+05	5.94E+04	1.57E+04	3.70E+11	5.88E+02	1.39E-03		4.97E-12	1.90E+02	1.53E-02	3.61E-08		1.19E-22
AX-104	2.65E+04	6.60E+01	1.74E+01	1.10E+12	1.75E+03	2.70E-02	mx	9.67E-11	3.70E+09	2.98E+05	1.13E+01		3.71E-14
B-101	4.28E+05	8.03E+03	2.12E+03	7.40E-18	1.18E-26	2.75E-32		9.85E-41	2.60E+11	2.10E+07	4.90E+01		1.61E-13
B-102	1.21E+05	4.80E+04	1.27E+04	3.30E+10	5.25E+01	4.33E-04		1.55E-12	3.00E+10	2.42E+06	2.00E+01		6.57E-14
B-103	2.23E+05	3.39E+04	8.95E+03	1.90E+11	3.02E+02	1.35E-03		4.84E-12	7.40E+10	5.97E+06	2.67E+01		8.79E-14
B-104	1.40E+06	4.90E+05	1.29E+05	7.40E+10	1.18E+02	8.38E-05		3.00E-13	1.10E+10	8.87E+05	6.32E-01		2.08E-15
B-105	1.16E+06	3.06E+05	8.09E+04	3.70E+11	5.88E+02	5.08E-04		1.82E-12	7.40E+09	5.97E+05	5.15E-01		1.70E-15
B-106	4.43E+05	1.32E+06	3.48E+05	2.60E+10	4.13E+01	9.33E-05		3.34E-13	1.10E+10	8.87E+05	2.00E+00		6.59E-15
B-107	6.25E+05	1.51E+05	3.98E+04	3.70E+11	5.88E+02	9.42E-04		3.37E-12	7.40E+10	5.97E+06	9.56E+00		3.14E-14
B-108	3.56E+05	4.88E+04	1.29E+04	1.10E+12	1.75E+03	4.92E-03		1.76E-11	3.00E+11	2.42E+07	6.80E+01		2.24E-13
B-109	4.81E+05	1.91E+05	5.05E+04	3.30E+11	5.25E+02	1.09E-03		3.91E-12	7.40E+10	5.97E+06	1.24E+01		4.08E-14
B-110	9.31E+05	6.43E+03	1.70E+03	1.10E+13	1.75E+04	1.88E-02		6.72E-11	2.80E+11	2.26E+07	2.43E+01		7.98E-14
B-111	8.97E+05	5.56E+03	1.47E+03	1.10E+14	1.75E+05	2.70E-02	mx	9.67E-11	1.50E+10	1.21E+06	1.35E+00		4.44E-15
B-112	1.25E+05	7.62E+03	2.01E+03	7.40E+12	1.18E+04	2.70E-02	mx	9.67E-11	2.20E+10	1.77E+06	1.42E+01		4.67E-14
B-201	1.10E+05	1.99E+05	5.26E+04										
B-202	1.02E+05	7.17E+04	1.89E+04	3.77E+10	5.99E+01	6.60E-04		2.36E-12	1.10E+11	8.87E+06	8.68E+01		2.86E-13
B-203	1.93E+05	2.21E+06	5.83E+05						2.73E+09	2.20E+05	1.14E+00		3.75E-15
B-204	1.89E+05	2.50E+05	6.59E+04						5.00E+07	4.03E+03	2.13E-02		7.01E-17
BX-101	1.63E+05	4.54E+04	1.20E+04	2.20E-06	3.50E-15	2.15E-20		7.69E-29	1.10E+11	8.87E+06	5.45E+01		1.79E-13
BX-102	3.63E+05	6.84E+03	1.81E+03	2.20E+13	3.50E+04	2.70E-02	mx	9.67E-11	1.50E+09	1.21E+05	3.33E-01		1.10E-15
BX-103	2.50E+05	1.08E+06	2.85E+05	1.50E-05	2.38E-14	9.55E-20		3.42E-28	1.50E+09	1.21E+05	4.84E-01		1.59E-15
BX-104	3.75E+05	3.88E+03	1.02E+03	1.10E+14	1.75E+05	6.95E-03	dl	2.49E-11	3.00E+10	2.42E+06	7.53E+00	dl	2.48E-14
BX-105	1.93E+05	2.32E+03	6.14E+02	7.40E+13	1.18E+05	6.41E-03	sn	2.29E-11	1.90E+09	1.53E+05	9.27E-03	sn	3.05E-17
BX-106	1.74E+05	1.56E+03	4.13E+02	7.40E+13	1.18E+05	2.70E-02	mx	9.67E-11	1.50E+09	1.21E+05	1.54E-02	sn	5.07E-17
BX-107	1.31E+06	2.34E+05	6.17E+04	1.90E+11	3.02E+02	2.31E-04		8.28E-13	3.00E+10	2.42E+06	1.81E+00	sn	5.95E-15
BX-108	9.84E+04	2.00E+05	5.27E+04	3.70E+09	5.88E+00	5.98E-05		2.14E-13	3.70E+09	2.98E+05	3.03E+00		9.98E-15
BX-109	7.31E+05	2.03E+04	5.38E+03	1.50E+11	2.38E+02	3.26E-04		1.17E-12	1.50E+11	1.21E+07	5.37E-01	sn	1.77E-15
BX-110	7.49E+05	1.06E+04	2.80E+03	1.10E+13	1.75E+04	2.33E-02		8.35E-11	7.40E+09	5.97E+05	9.03E-03	sn	2.97E-17
BX-111	7.99E+05	1.14E+04	3.02E+03	1.10E+13	1.75E+04	2.19E-02		7.84E-11	3.70E+09	2.98E+05	3.83E+00	sn	1.26E-14
BX-112	6.25E+05	2.01E+05	5.30E+04	7.40E+10	1.18E+02	1.88E-04		6.74E-13	1.50E+12	1.21E+08	3.84E+02	sn	1.26E-12
BY-101	1.39E+06	1.46E+04	3.87E+03	1.50E+13	2.38E+04	1.72E-02		6.15E-11	1.90E+09	1.53E+05	1.10E-01		3.63E-16
BY-102	1.29E+06	1.01E+04	2.66E+03	3.70E+12	5.88E+03	2.70E-02	sn	9.67E-11	1.50E+10	1.21E+06	9.37E-01		3.08E-15
BY-103	1.51E+06	2.69E+04	7.11E+03	1.77E+12	2.81E+03	6.88E-03	dl	2.46E-11	1.90E+11	1.53E+07	1.01E+01		3.33E-14
BY-104	1.54E+06	1.01E+04	2.68E+03	1.50E+13	2.38E+04	1.55E-02		5.56E-11	1.90E+12	1.53E+08	9.97E+01		3.28E-13
BY-105	1.90E+06	2.84E+04	7.49E+03	1.11E+13	1.76E+04	1.76E-03	dl	6.30E-12	7.40E+11	5.97E+07	3.13E+01		1.03E-13
BY-106	2.43E+06	3.42E+04	9.04E+03	1.50E+13	2.38E+04	5.12E-03	dl	1.83E-11	7.40E+09	5.97E+05	2.46E-01		8.08E-16
BY-107	1.01E+06	1.70E+04	4.48E+03	7.40E+12	1.18E+04	1.17E-02		4.18E-11	1.90E+11	1.53E+07	1.52E+01		5.01E-14
BY-108	8.63E+05	1.43E+04	3.79E+03	7.40E+12	1.18E+04	1.36E-02		4.88E-11	3.30E+10	2.66E+06	3.08E+00		1.01E-14
BY-109	1.60E+06	4.65E+04	1.23E+04	3.70E+12	5.88E+03	5.29E-03	sn	1.89E-11	1.10E+10	8.87E+05	5.54E-01		1.82E-15
BY-110	1.50E+06	1.28E+04	3.38E+03	1.50E+13	2.38E+04	1.59E-02		5.70E-11	2.20E+09	1.77E+05	1.18E-01		3.89E-16
BY-111	1.74E+06	1.82E+04	4.81E+03	1.50E+13	2.38E+04	1.37E-02		4.91E-11	3.70E+10	2.98E+06	1.72E+00		5.65E-15
BY-112	1.10E+06	5.61E+04	1.48E+04	3.00E+12	4.77E+03	4.33E-03		1.55E-11	1.90E+09	1.53E+05	1.39E-01		4.58E-16
C-101	3.33E+05	1.35E+04	3.58E+03	1.90E+12	3.02E+03	9.07E-03		3.25E-11	7.40E+10	5.97E+06	1.79E+01		5.89E-14
C-102	1.60E+06	1.54E+04	4.07E+03	6.72E+09	1.07E+01	9.41E-04	sn	3.37E-12	7.40E+11	5.97E+07	3.73E+01		1.23E-13
C-103	7.38E+05	2.89E+04	7.63E+03	6.89E+11	1.10E+03	2.18E-03	sn	7.80E-12	2.60E+11	2.10E+07	2.84E+01		9.35E-14
C-104	1.12E+06	2.92E+04	7.71E+03	1.25E+16	1.99E+07	1.64E-03	dl	5.87E-12	7.91E+11	6.38E+07	5.32E-02	dl	1.75E-16
C-105	5.11E+05	1.05E+03	2.79E+02	3.70E+13	5.88E+04	1.52E-02	dl	5.43E-11	4.40E+11	3.55E+07	7.68E+00	dl	2.53E-14
C-106	8.67E+05	8.40E+03	2.22E+03	8.96E+12	1.42E+04	8.30E-03	dl	2.97E-11	1.10E+11	8.87E+06	2.02E-03	dl	6.65E-18
C-107	1.04E+06	2.46E+04	6.49E+03	3.86E+11	6.14E+02	4.77E-03	dl	1.71E-11	1.50E+11	1.21E+07	1.16E+01		3.82E-14
C-108	2.50E+05	2.45E+04	6.47E+03	3.70E+07	5.88E-02	2.35E-07		8.43E-16	3.70E+10	2.98E+06	1.19E+01		3.93E-14
C-109	2.50E+05	3.00E+05	7.91E+04	3.70E+10	5.88E+01	2.35E-04		8.43E-13	7.80E+09	6.29E+05	2.52E+00		8.28E-15
C-110	7.08E+05	4.12E+04	1.09E+04	4.91E+10	7.81E+01	4.12E-03	sn	1.47E-11	3.70E+09	2.98E+05	4.22E-01		1.39E-15
C-111	2.16E+05	2.73E+04	7.22E+03	3.70E+10	5.88E+01	2.73E-04		9.76E-13	3.70E+10	2.98E+06	1.38E+01		4.55E-14
C-112	3.94E+05	4.58E+04	1.21E+04	3.30E+10	5.25E+01	1.33E-04		4.77E-13	4.00E+10	3.23E+06	8.19E+00		2.70E-14
C-201	7.57E+03	1.52E+05	4.03E+04	2.20E+07	3.50E-02	4.62E-06		1.65E-14	7.00E+07	5.65E+03	1.61E-01	sn	5.30E-16
C-202	3.79E+03	4.20E+04	1.11E+04	7.40E-06	1.18E-14	3.11E-18		1.11E-26	7.40E+09	5.97E+05	1.58E+02		5.19E-13
C-203	1.89E+04	2.11E+06	5.56E+05	7.40E+01	1.18E-07	6.22E-12		2.23E-20	7.40E+08	5.97E+04	3.15E+00		1.04E-14
C-204	1.14E+04	2.87E+08	7.57E+07	1.10E+06	1.75E-03	1.54E-07		5.51E-16	3.30E+06	2.66E+02	2.34E-02		7.71E-17
S-101	1.62E+06	1.55E+04	4.11E+03	7.40E+12	1.18E+04	7.28E-03		2.61E-11	7.40E+10	5.97E+06	3.69E+00		1.21E-14
S-102	2.08E+06	3.62E+05	9.57E+04	1.10E+04	1.75E-05	8.42E-12		3.01E-20	1.10E+10	8.87E+05	6.80E-04	sn	2.24E-18
S-103	9.31E+05	1.44E+06	3.81E+05	1.50E+04	2.38E-05	2.56E-11		9.17E-20	1.10E+09	8.87E+04	9.53E-02		3.13E-16
S-104	1.11E+06	1.83E+04	4.83E+03	1.85E+12	2.94E+03	2.91E-03		1.04E-11	7.40E+10	5.97E+06	5.36E+00		1.76E-14
S-105	1.73E+06	1.30E+05	3.44E+04	1.10E+12	1.75E+03	1.01E-03		3.63E-12	3.70E+09	2.98E+05	1.73E-01		5.69E-16
S-106	1.81E+06	1.21E+05	3.20E+04	2.20E+12	3.50E+03	1.93E-03		6.91E-12	3.70E+08	2.98E+04	1.65E-02		5.41E-17
S-107	1.42E+06	1.95E+04	5.14E+03	1.50E+04	2.38E-05	1.68E-11		6.00E-20	3.70E+11	2.98E+07	2.10E+01		6.90E-14
S-108	2.29E+06	4.08E+04	1.08E+04	7.40E+12	1.18E+04	5.15E-03		1.84E-11	7.40E+09	5.97E+05	2.61E-01		8.59E-16

Table C2-4 (Continued). SST Threshold Leakage Values - Case 2/Carcinogenic

		Carcinogenic													
	Total	Threshold Leakage			Tc-99		Solubility	Basis	Sp. Risk	U-238		Solubility	Basis	Sp. Risk
Tank	Vol. (L)	L	Gal.		Bq	g	g/L	Note 1	R/L	Bq	g	g/L	Note 1	R/L
S-109	1.92E+06	1.37E+04	3.61E+03		2.20E+13	3.50E+04	1.83E-02		6.54E-11	1.10E+09	8.87E+04	4.63E-02		1.52E-16
S-110	1.48E+06	1.16E+04	3.07E+03		1.50E+13	2.38E+04	1.62E-02		5.78E-11	3.30E+10	2.66E+06	1.80E+00		5.93E-15
S-111	2.26E+06	2.99E+04	7.89E+03		1.10E+13	1.75E+04	7.75E-03		2.78E-11	3.70E+09	2.98E+05	1.32E-01		4.35E-16
S-112	1.98E+06	8.09E+03	2.14E+03		7.40E+13	1.18E+05	2.70E-02	mx	9.67E-11	7.40E+08	5.97E+04	3.01E-02		9.92E-17
SX-101	1.73E+06	5.91E+03	1.56E+03		2.94E+15	4.67E+06	8.54E-04	dl	3.06E-12	3.70E+10	2.98E+06	1.73E+00		5.69E-15
SX-102	2.06E+06	2.81E+05	7.43E+04		3.70E+10	5.88E+01	2.86E-05		1.02E-13	7.40E+09	5.97E+05	2.90E-01		9.55E-16
SX-103	2.47E+06	8.17E+03	2.16E+03		7.40E+13	1.18E+05	2.70E-02	mx	9.67E-11	1.90E+09	1.53E+05	6.21E-02		2.04E-16
SX-104	2.32E+06	1.75E+04	4.63E+03		1.10E+13	1.75E+04	7.53E-03		2.69E-11	3.70E+10	2.98E+06	1.28E+00		4.22E-15
SX-105	2.59E+06	1.49E+04	3.93E+03		2.60E+13	4.13E+04	1.60E-02		5.72E-11	3.70E+09	2.98E+05	1.15E-01		3.80E-16
SX-106	2.03E+06	2.46E+04	6.51E+03		1.10E+13	1.75E+04	8.62E-03		3.09E-11	7.40E+09	5.97E+05	2.94E-01		9.68E-16
SX-107	3.94E+05	3.70E+03	9.79E+02		1.10E+05	1.75E-04	4.44E-10		1.59E-18	7.40E+10	5.97E+06	1.52E+01		4.99E-14
SX-108	3.07E+05	2.64E+03	6.98E+02		2.20E+05	3.50E-04	1.14E-09		4.08E-18	7.40E+10	5.97E+06	1.95E+01		6.40E-14
SX-109	9.46E+05	1.43E+04	3.79E+03		1.10E+05	1.75E-04	1.85E-10		6.62E-19	3.70E+10	2.98E+06	3.15E+00		1.04E-14
SX-110	2.35E+05	2.01E+03	5.30E+02		7.40E+03	1.18E-05	5.01E-11		1.79E-19	7.40E+10	5.97E+06	2.54E+01		8.37E-14
SX-111	4.73E+05	3.50E+03	9.24E+02		3.70E-03	5.88E-12	1.24E-17		4.45E-26	7.40E+10	5.97E+06	1.26E+01		4.15E-14
SX-112	3.48E+05	4.53E+03	1.20E+03		2.60E+10	4.13E+01	1.19E-04		4.25E-13	3.70E+10	2.98E+06	8.57E+00		2.82E-14
SX-113	9.84E+04	3.14E+03	8.31E+02		3.70E+12	5.88E+03	2.70E-02	mx	9.67E-11	1.50E+10	1.21E+06	1.23E+01		4.04E-14
SX-114	6.85E+05	4.03E+03	1.06E+03		3.70E-03	5.88E-12	8.59E-18		3.07E-26	1.10E+11	8.87E+06	1.29E+01		4.26E-14
SX-115	4.54E+04	8.36E+02	2.21E+02		7.40E+12	1.18E+04	2.70E-02	mx	9.67E-11	2.60E+10	2.10E+06	4.62E+01		1.52E-13
T-101	3.86E+05	3.57E+04	9.44E+03		3.00E+12	4.77E+03	6.30E-03	sn	2.26E-11	1.90E+09	1.53E+05	3.97E-01		1.31E-15
T-102	1.21E+05	3.43E+05	9.05E+04		3.70E+10	5.88E+01	4.86E-04		1.74E-12	1.90E+08	1.53E+04	1.27E-01		4.16E-16
T-103	1.02E+05	5.78E+04	1.53E+04		2.60E+11	4.13E+02	4.04E-03		1.45E-11	7.40E+08	5.97E+04	5.84E-01		1.92E-15
T-104	1.68E+06	1.34E+05	3.53E+04		1.10E+11	1.75E+02	1.04E-04		3.72E-13	3.30E+10	2.66E+06	1.58E+00		5.20E-15
T-105	3.63E+05	7.56E+04	2.00E+04		1.10E-05	1.75E-14	4.81E-20		1.72E-28	7.40E+10	5.97E+06	1.64E+01		5.40E-14
T-106	7.95E+04	8.77E+04	2.32E+04		7.40E+09	1.18E+01	1.48E-04		5.30E-13	3.70E+10	2.98E+06	3.75E+01		1.24E-13
T-107	6.81E+05	1.83E+05	4.83E+04		7.40E-06	1.18E-14	1.73E-20		6.18E-29	1.10E+10	8.87E+05	1.30E+00		4.28E-15
T-108	1.67E+05	3.55E+05	9.39E+04		1.10E+10	1.75E+01	1.05E-04		3.76E-13	4.00E+09	3.23E+05	1.94E+00		6.37E-15
T-109	2.20E+05	4.27E+05	1.13E+05		7.40E+10	1.18E+02	5.36E-04		1.92E-12	1.50E+09	1.21E+05	5.51E-01		1.81E-15
T-110	1.43E+06	4.04E+05	1.07E+05		3.70E+00	5.88E-09	4.10E-15		1.47E-23	7.40E+09	5.97E+05	4.16E-01		1.37E-15
T-111	1.71E+06	2.10E+05	5.55E+04							2.20E+10	1.77E+06	1.03E+00		3.40E-15
T-112	2.54E+05	1.02E+05	2.70E+04		1.90E-25	3.02E-34	1.19E-39		4.26E-48	7.40E+10	5.97E+06	2.35E+01		7.74E-14
T-201	1.10E+05	1.10E+05	2.90E+04											
T-202	7.95E+04	3.44E+06	9.09E+05											
T-203	1.32E+05	5.74E+05	1.52E+05											
T-204	1.44E+05	1.03E+07	2.73E+06							4.70E+05	3.79E+01	2.15E-03	dl	7.07E-18
TX-101	3.29E+05	1.09E+06	2.89E+05		3.70E+03	5.88E-06	1.79E-11		6.40E-20	3.00E+03	2.42E-01	7.35E-07		2.42E-21
TX-102	8.21E+05	2.67E+05	7.05E+04		3.70E+11	5.88E+02	7.16E-04		2.56E-12	3.70E+02	2.98E-02	3.63E-08		1.20E-22
TX-103	5.94E+05	8.53E+05	2.25E+05		7.40E+10	1.18E+02	1.98E-04		7.09E-13	7.40E+03	5.97E-01	1.00E-06		3.30E-21
TX-104	2.46E+05	6.71E+06	1.77E+06		7.40E+04	1.18E-04	4.78E-10		1.71E-18	3.70E+06	2.98E+02	1.21E-03		3.99E-18
TX-105	2.31E+06	9.16E+04	2.42E+04		3.70E+12	5.88E+03	2.55E-03		9.14E-12	3.70E-02	2.98E-06	1.29E-12		4.26E-27
TX-106	1.71E+06	4.83E+05	1.28E+05		3.30E+11	5.25E+02	3.06E-04		1.10E-12	1.10E+04	8.87E-01	5.17E-07		1.70E-21
TX-107	1.36E+05	5.99E+06	1.58E+06		1.90E+04	3.02E-05	2.22E-10		7.94E-19	7.40E+03	5.97E-01	4.38E-06		1.44E-20
TX-108	5.07E+05	5.25E+04	1.39E+04		1.50E+12	2.38E+03	4.70E-03		1.68E-11	7.40E+09	5.97E+05	1.18E+00		3.87E-15
TX-109	1.38E+06	8.45E+03	2.23E+03		3.30E+13	5.25E+04	2.70E-02	mx	9.67E-11	3.70E+10	2.98E+06	2.17E+00		7.13E-15
TX-110	1.75E+06	2.47E+04	6.53E+03		1.10E+13	1.75E+04	1.00E-02		3.58E-11	1.50E+10	1.21E+06	6.92E-01		2.28E-15
TX-111	1.40E+06	1.09E+05	2.87E+04		1.90E+12	3.02E+03	2.16E-03		7.72E-12	7.40E+09	5.97E+05	4.26E-01		1.40E-15
TX-112	2.46E+06	4.86E+05	1.28E+05		7.40E+11	1.18E+03	4.79E-04		1.71E-12	1.50E+09	1.21E+05	4.92E-02		1.62E-16
TX-113	2.30E+06	2.54E+05	6.72E+04		3.00E+11	4.77E+02	2.08E-04		7.43E-13	3.70E+12	2.98E+08	1.30E+02		4.27E-13
TX-114	2.02E+06	3.46E+05	9.14E+04		7.40E+11	1.18E+03	5.81E-04		2.08E-12	1.10E+11	8.87E+06	4.38E+00		1.44E-14
TX-115	2.42E+06	5.31E+05	1.40E+05		3.70E+11	5.88E+02	2.43E-04		8.69E-13	7.40E+11	5.97E+07	2.46E+01		8.11E-14
TX-116	2.39E+06	1.46E+06	3.86E+05		2.20E+11	3.50E+02	1.46E-04		5.24E-13	1.10E+11	8.87E+06	3.71E+00		1.22E-14
TX-117	2.37E+06	8.44E+05	2.23E+05		7.40E+10	1.18E+02	4.97E-05		1.78E-13	7.40E+11	5.97E+07	2.52E+01		8.29E-14
TX-118	1.31E+06	6.01E+03	1.59E+03		3.30E+13	5.25E+04	2.70E-02	mx	9.67E-11	3.00E+11	2.42E+07	1.84E+01		6.06E-14
TY-101	4.47E+05	5.13E+04	1.36E+04		1.99E+11	3.16E+02	7.08E-04		2.54E-12	4.46E+10	3.60E+06	8.05E+00		2.65E-14
TY-102	2.42E+05	6.42E+03	1.70E+03		7.40E+12	1.18E+04	2.70E-02	mx	9.67E-11	1.63E+09	1.31E+05	5.43E-01		1.79E-15
TY-103	6.13E+05	1.82E+04	4.80E+03		2.60E+13	4.13E+04	9.50E-04		3.40E-12	3.65E+11	2.94E+07	8.23E-02	dl	2.71E-16
TY-104	1.74E+05	4.22E+04	1.12E+04		3.32E+11	5.28E+02	3.53E-03	dl	1.26E-11	1.80E+11	1.45E+07	7.79E-02	sn	2.56E-16
TY-105	8.74E+05	2.08E+04	5.49E+03		1.63E+12	2.59E+03	2.96E-03		1.06E-11	1.90E+11	1.53E+07	1.75E+01		5.77E-14
TY-106	6.43E+04	1.11E+04	2.94E+03		3.98E+11	6.33E+02	9.83E-03		3.52E-11	1.90E+10	1.53E+06	2.38E+01		7.83E-14
U-101	9.46E+04	1.38E+04	3.66E+03		7.40E+11	1.18E+03	1.24E-02		4.45E-11	7.40E+10	5.97E+06	6.31E+01		2.07E-13
U-102	1.42E+06	1.10E+05	2.91E+04		1.90E+12	3.02E+03	2.13E-03		7.64E-12	1.90E+02	1.53E-02	1.08E-08		3.56E-23
U-103	1.77E+06	1.10E+08	2.90E+07		2.50E+08	3.97E-01	2.24E-07		8.03E-16	4.35E+07	3.51E+03	1.98E-03		6.52E-18
U-104	4.62E+05	2.00E+07	5.28E+06		3.70E+03	5.88E-06	1.27E-11		4.56E-20	8.29E+10	6.69E+06	1.45E+01		4.76E-14
U-105	1.58E+06	5.88E+06	1.55E+06		3.70E+08	5.88E-01	3.72E-07		1.33E-15	9.38E+09	7.56E+05	4.78E-01		1.57E-15
U-106	8.55E+05	1.45E+10	3.84E+09		1.90E+03	3.02E-06	3.53E-12		1.26E-20	7.40E+03	5.97E-01	6.98E-07		2.30E-21
U-107	1.54E+06	5.75E+04	1.52E+04		3.30E+12	5.25E+03	3.41E-03		1.22E-11	1.90E+04	1.53E+00	9.97E-07		3.28E-21
U-108	1.76E+06	4.50E+05	1.19E+05		7.40E+08	1.18E+00	6.67E-07		2.39E-15	3.30E+10	2.66E+06	1.51E+00		4.96E-15
U-109	1.75E+06	1.72E+05	4.54E+04		2.20E+11	3.50E+02	2.00E-04		7.15E-13	7.40E+08	5.97E+04	3.41E-02		1.12E-16
U-110	7.04E+05	2.16E+04	5.70E+03		1.10E+10	1.75E+01	2.48E-05		8.89E-14	1.10E+12	8.87E+07	1.26E+02		4.15E-13
U-111	1.25E+06	1.43E+05	3.77E+04		7.40E+11	1.18E+03	9.45E-04		3.38E-12	1.10E+10	8.87E+05	7.12E-01		2.34E-15
U-112	1.85E+05	2.76E+04	7.29E+03		1.10E+12	1.75E+03	9.43E-03		3.38E-11	2.60E+09	2.10E+05	1.13E+00		3.72E-15
U-201	1.89E+04	1.71E+04	4.52E+03		1.90E+11	3.02E+02	1.60E-02		5.71E-11	7.40E+01	5.97E-03	3.15E-07		1.04E-21
U-202	1.89E+04	1.71E+04	4.52E+03		1.90E+11	3.02E+02	1.60E-02		5.71E-11	1.10E-12	8.87E-17	4.69E-21		1.54E-35
U-203	1.14E+04	1.30E+04	3.44E+03		1.50E+11	2.38E+02	2.10E-02		7.52E-11	1.10E-12	8.87E-17	7.81E-21		2.57E-35
U-204	1.14E+04	5.08E+04	1.34E+04		3.70E+10	5.88E+01	5.18E-03		1.85E-11	1.33E+06	1.07E+02	9.45E-03		3.11E-17

Table C2-4 (Continued). SST Threshold Leakage Values - Case 2/Carcinogenic

Tank	I-129 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	C-14 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Am-241 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L
A-101											3.70E+13	2.91E+02	8.08E-05		3.17E-13
A-102	1.10E+10	1.71E+03	1.72E-03	mx	4.33E-16	1.50E+13	9.09E+01	6.73E-07	mx	9.15E-13	1.10E+14	8.66E+02	2.54E-07	sn	9.94E-16
A-103	4.53E+09	7.03E+02	6.89E-04	dl	1.74E-16	1.10E+12	6.67E+00	2.12E-07	dl	2.88E-13	1.90E+13	1.50E+02	4.92E-07	dl	1.93E-15
A-104	3.70E-09	5.75E-16	5.42E-21		1.37E-33	2.60E+13	1.58E+02	6.73E-07	mx	9.15E-13	3.00E+13	2.36E+02	2.91E-04	mx	1.14E-12
A-105	3.70E+08	5.75E+01	7.99E-04		2.01E-16	1.90E+11	1.15E+00	6.73E-07	mx	9.15E-13	3.70E+05	2.91E-06	4.05E-11		1.59E-19
A-106	2.27E+09	3.52E+02	1.03E-03	dl	2.61E-16	1.62E+10	9.82E-02	2.44E-07	dl	3.32E-13	1.10E+13	8.66E+01	1.38E-06	dl	5.40E-15
AX-101	3.70E-01	5.75E-08	2.03E-14		5.11E-27	3.70E+09	2.24E-02	7.92E-09		1.08E-14	1.10E+12	8.66E+00	3.06E-06		1.20E-14
AX-102	1.10E-07	1.71E-14	1.16E-19		2.92E-32	7.40E-05	4.48E-16	3.04E-21		4.13E-27	7.40E+11	5.83E+00	2.91E-04	dl	1.14E-12
AX-103	7.40E+08	1.15E+02	2.71E-04		6.83E-17	3.30E+11	2.00E+00	6.73E-07	mx	9.15E-13	7.40E+11	5.83E+00	1.37E-05		5.39E-14
AX-104	1.50E+09	2.33E+02	1.72E-03	mx	4.33E-16	3.30E+12	2.00E+01	6.73E-07	mx	9.15E-13	4.10E+12	3.23E+01	2.91E-04	mx	1.14E-12
B-101	1.10E-20	1.71E-27	3.99E-33		1.01E-45	1.90E+11	1.15E+00	6.73E-07	mx	9.15E-13	3.70E+12	2.91E+01	6.81E-05		2.67E-13
B-102	3.70E+07	5.75E+00	4.74E-05		1.20E-17	5.20E+10	3.15E-01	6.73E-07	mx	9.15E-13	3.80E+11	2.99E+00	2.47E-05		9.68E-14
B-103	3.00E+08	4.66E+01	2.09E-04		5.26E-17	1.10E+11	6.67E-01	6.73E-07	mx	9.15E-13	2.50E+12	1.97E+01	8.81E-05		3.46E-13
B-104	1.10E+08	1.71E+01	1.22E-05		3.07E-18	1.50E+10	9.09E-02	6.47E-08		8.80E-14	1.50E+11	1.18E+00	8.41E-07		3.30E-15
B-105	7.40E+08	1.15E+02	9.92E-05		2.50E-17	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13	1.50E+10	1.18E-01	1.02E-07		4.00E-16
B-106	3.70E+07	5.75E+00	1.30E-05		3.27E-18	1.90E+10	1.15E-01	2.60E-07		3.54E-13	9.30E+09	7.32E-02	1.65E-07		6.48E-16
B-107	7.40E+08	1.15E+02	1.84E-04		4.64E-17	4.80E+11	2.91E+00	6.73E-07	mx	9.15E-13	3.70E+10	2.91E-01	4.66E-07		1.83E-15
B-108	1.50E+09	2.33E+02	6.55E-04		1.65E-16	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13	1.90E+11	1.50E+00	4.20E-06		1.65E-14
B-109	3.70E+08	5.75E+01	1.20E-04		3.01E-17	2.60E+11	1.58E+00	6.73E-07	mx	9.15E-13	7.50E+10	5.91E-01	1.23E-06		4.82E-15
B-110	1.90E+10	2.95E+03	1.72E-03	mx	4.33E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13	3.90E+13	3.07E+02	2.91E-04	mx	1.14E-12
B-111	1.90E+11	2.95E+04	1.72E-03	mx	4.33E-16	7.80E+13	4.73E+02	6.73E-07	mx	9.15E-13	1.50E+11	1.18E+00	1.32E-06		5.16E-15
B-112	1.10E+10	1.71E+03	1.72E-03	mx	4.33E-16	3.00E+12	1.82E+01	6.73E-07	mx	9.15E-13	1.50E+12	1.18E+01	9.46E-05		3.71E-13
B-201															
B-202	1.43E+10	2.22E+03	1.72E-03	mx	4.33E-16						1.50E+12	1.18E+01	1.16E-04		4.53E-13
B-203											3.70E+09	2.91E-02	1.51E-07		5.92E-16
B-204											3.70E+10	2.91E-01	1.54E-06		6.03E-15
BX-101	3.70E-09	5.75E-16	3.53E-21		8.90E-34	7.40E+11	4.48E+00	6.73E-07	mx	9.15E-13	3.70E+12	2.91E+01	1.79E-04		7.02E-13
BX-102	3.70E+10	5.75E+03	1.72E-03	mx	4.33E-16	2.20E+13	1.33E+02	6.73E-07	mx	9.15E-13	2.60E+13	2.05E+02	2.91E-04	mx	1.14E-12
BX-103	3.70E-08	5.75E-15	2.30E-20		5.80E-33	3.30E+12	2.00E+01	6.73E-07	mx	9.15E-13	7.40E+07	5.83E-04	2.33E-09		9.14E-18
BX-104	1.90E+11	2.95E+04	6.32E-04	dl	1.59E-16	3.70E+13	2.24E+02	1.88E-07	dl	2.56E-13	7.40E+11	5.83E+00	1.55E-05		6.10E-14
BX-105	7.40E+10	1.15E+04	3.21E-04	sn	8.10E-17	3.00E+13	1.82E+02	1.31E-07	sn	1.78E-13	1.50E+14	1.18E+03	8.66E-06	sn	3.40E-14
BX-106	1.50E+11	2.33E+04	1.72E-03	mx	4.33E-16	6.30E+13	3.82E+02	6.73E-07	mx	9.15E-13	1.10E+14	8.66E+02	6.94E-08	sn	2.72E-16
BX-107	3.00E+08	4.66E+01	3.57E-05		8.99E-18	7.70E+09	4.67E-02	3.57E-08		4.86E-14	1.10E+11	8.66E-01	7.25E-08	sn	2.84E-16
BX-108	7.40E+06	1.15E+00	1.17E-05		2.94E-18	3.00E+09	1.82E-02	1.85E-07		2.51E-13	1.10E+10	8.66E-02	8.80E-07		3.45E-15
BX-109	2.60E+08	4.04E+01	5.53E-05		1.39E-17	2.60E+11	1.58E+00	6.73E-07	mx	9.15E-13	1.10E+12	8.66E+00	9.84E-07	sn	3.86E-15
BX-110	1.90E+10	2.95E+03	1.72E-03	mx	4.33E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13	2.30E+12	1.81E+01	7.57E-08	sn	2.97E-16
BX-111	1.90E+10	2.95E+03	1.72E-03	mx	4.33E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13	2.20E+12	1.73E+01	4.02E-08	sn	1.58E-16
BX-112	1.10E+08	1.71E+01	2.73E-05		6.89E-18	1.10E+11	6.67E-01	6.73E-07	mx	9.15E-13	1.10E+11	8.66E-01	3.50E-07	sn	1.37E-15
BY-101	2.20E+10	3.42E+03	1.72E-03	mx	4.33E-16	7.40E+12	4.48E+01	6.73E-07	mx	9.15E-13	3.00E+12	2.36E+01	1.70E-05		6.67E-14
BY-102	7.40E+09	1.15E+03	8.90E-04		2.24E-16	1.90E+12	1.15E+01	6.73E-07	mx	9.15E-13	7.40E+11	5.83E+00	4.51E-06		1.77E-14
BY-103	1.10E+09	1.71E+02	1.13E-04		2.84E-17	4.80E+11	2.91E+00	6.73E-07	mx	9.15E-13	7.50E+12	5.91E+01	3.90E-05		1.53E-13
BY-104	2.60E+10	4.04E+03	1.72E-03	mx	4.33E-16	7.50E+12	4.55E+01	6.73E-07	mx	9.15E-13	9.24E+12	7.28E+01	4.73E-05		1.86E-13
BY-105	1.90E+10	2.95E+03	1.55E-03		3.91E-16	4.00E+12	2.42E+01	6.73E-07	mx	9.15E-13	5.60E+12	4.41E+01	2.32E-05		9.08E-14
BY-106	2.20E+10	3.42E+03	1.41E-03		3.54E-16	7.40E+12	4.48E+01	6.73E-07	mx	9.15E-13	4.40E+12	3.46E+01	1.43E-05		5.59E-14
BY-107	7.40E+09	1.15E+03	1.14E-03		2.88E-16	2.20E+12	1.33E+01	6.73E-07	mx	9.15E-13	2.20E+12	1.73E+01	1.72E-05		6.74E-14
BY-108	1.10E+10	1.71E+03	1.72E-03	mx	4.33E-16	2.20E+12	1.33E+01	6.73E-07	mx	9.15E-13	3.30E+12	2.60E+01	3.01E-05		1.18E-13
BY-109	7.40E+09	1.15E+03	7.18E-04		1.81E-16	1.90E+12	1.15E+01	6.73E-07	mx	9.15E-13	1.10E+12	8.66E+00	5.41E-06		2.12E-14
BY-110	2.20E+10	3.42E+03	1.72E-03	mx	4.33E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13	4.40E+12	3.46E+01	2.31E-05		9.06E-14
BY-111	2.60E+10	4.04E+03	1.72E-03	mx	4.33E-16	7.50E+12	4.55E+01	6.73E-07	mx	9.15E-13	3.00E+12	2.36E+01	1.36E-05		5.33E-14
BY-112	3.70E+09	5.75E+02	5.22E-04		1.31E-16	1.10E+12	6.67E+00	6.73E-07	mx	9.15E-13	3.70E+11	2.91E+00	2.65E-06		1.04E-14
C-101	2.60E+09	4.04E+02	1.21E-03		3.05E-16	7.40E+11	4.48E+00	6.73E-07	mx	9.15E-13	1.90E+12	1.50E+01	4.49E-05		1.76E-13
C-102	1.90E+00	2.95E-07	1.84E-13		4.64E-26	3.70E+07	2.24E-04	1.40E-10		1.90E-16	3.70E+13	2.91E+02	1.82E-04		7.13E-13
C-103	1.50E+00	2.33E-07	3.16E-13		7.95E-26	1.90E+13	1.15E+02	6.73E-07	mx	9.15E-13	3.70E+12	2.91E+01	8.74E-08	sn	3.43E-16
C-104	3.70E-01	5.75E-08	5.15E-14		1.30E-26	3.34E+10	2.02E-01	2.98E-07	dl	4.06E-13	1.40E+14	1.10E+03	2.40E-07	dl	9.41E-16
C-105	7.40E+10	1.15E+04	1.55E-03	dl	3.91E-16	1.90E+13	1.15E+02	6.30E-07	dl	8.57E-13	3.60E+14	2.83E+03	1.66E-06	dl	6.51E-15
C-106	3.23E+09	5.02E+02	8.04E-05	dl	2.03E-17	3.00E+10	1.82E-01	7.88E-08	dl	1.07E-13	4.15E+13	3.27E+02	4.05E-06	dl	1.59E-14
C-107	1.10E+08	1.71E+01	1.64E-05		4.14E-18	1.10E+11	6.67E-01	6.40E-07		8.71E-13	4.40E+12	3.46E+01	2.21E-07	dl	8.67E-16
C-108	7.40E+04	1.15E-02	4.60E-08		1.16E-20	1.10E+10	6.67E-02	2.67E-07		3.63E-13	1.50E+12	1.18E+01	4.73E-05		1.85E-13
C-109	7.40E+07	1.15E+01	4.60E-05		1.16E-17	7.00E+10	4.24E-01	6.73E-07	mx	9.15E-13	3.70E+09	2.91E-02	1.17E-07		4.57E-16
C-110	1.90E-02	2.95E-09	4.17E-15		1.05E-27	3.00E+00	1.82E-11	2.57E-17		3.49E-23	7.40E+11	5.83E+00	8.23E-06		3.23E-14
C-111	7.40E+07	1.15E+01	5.33E-05		1.34E-17	2.80E+10	1.70E-01	6.73E-07	mx	9.15E-13	7.40E+11	5.83E+00	2.70E-05		1.06E-13
C-112	3.70E+07	5.75E+00	1.46E-05		3.68E-18	8.90E+10	5.39E-01	6.73E-07	mx	9.15E-13	7.40E+11	5.83E+00	1.48E-05		5.80E-14
C-201	3.30E+04	5.12E-03	6.77E-07		1.71E-19	1.90E+06	1.15E-05	1.52E-09		2.07E-15	3.70E+08	2.91E-03	3.85E-07		1.51E-15
C-202	1.10E-08	1.71E-15	4.51E-19		1.14E-31	1.10E+08	6.67E-04	1.76E-07		2.40E-13	1.10E+09	8.66E-03	2.29E-06		8.97E-15
C-203	1.10E-01	1.71E-08	9.03E-13		2.27E-25	1.10E+07	6.67E-05	3.52E-09		4.79E-15	1.10E+08	8.66E-04	4.58E-08		1.79E-16
C-204	1.50E+03	2.33E-04	2.05E-08		5.17E-21	7.40E+04	4.48E-07	3.95E-11		5.37E-17	3.40E+05	2.68E-06	2.36E-10		9.24E-19
S-101	1.10E+10	1.71E+03	1.06E-03		2.66E-16	1.90E+12	1.15E+01	6.73E-07	mx	9.15E-13	1.50E+13	1.18E+02	7.31E-05		2.86E-13
S-102	1.90E+01	2.95E-06	1.42E-12		3.58E-25	3.00E+03	1.82E-08	8.75E-15		1.19E-20	3.70E+11	2.91E+00	1.40E-06		5.50E-15
S-103	2.60E+01	4.04E-06	4.34E-12		1.09E-24	7.50E+04	4.55E-07	4.88E-13		6.64E-19	3.70E+10	2.91E-01	3.13E-07		1.23E-15
S-104	2.24E+12	3.48E+05	1.72E-03	mx	4.33E-16	1.90E+11	1.15E+00	6.73E-07	mx	9.15E-13	8.05E+12	6.34E+01	5.70E-05		2.23E-13
S-105	1.90E+09	2.95E+02	1.71E-04		4.31E-17	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13	3.30E+11	2.60E+00	1.51E-06		5.90E-15
S-106	3.30E+09	5.12E+02	2.83E-04		7.12E-17	1.10E+12	6.67E+00	6.73E-07	mx	9.15E-13	5.60E+10	4.41E-01	2.43E-07		9.53E-16
S-107	2.60E+01	4.04E-06	2.84E-12		7.15E-25	3.70E+03	2.24E-08	1.58E-14		2.14E-20	1.50E+13	1.18E+02	8.30E-05		3.25E-13
S-108	7.40E+09	1.15E+03	5.03E-04		1.27E-16	2.20E+12	1.33E+01	6.73E-07	mx	9.15E-13	4.10E+12	3.23E+01	1.41E-05		5.54E-14

Table C2-4 (Continued). SST Threshold Leakage Values - Case 2/Carcinogenic

					Sp.					Sp.					Sp.
	I-129		Solubility	Basis	Risk	C-14		Solubility	Basis	Risk	Am-241		Solubility	Basis	Risk
Tank	Bq	g	g/L	Note 1	R/L	Bq	g	g/L	Note 1	R/L	Bq	g	g/L	Note 1	R/L
S-109	3.30E+10	5.12E+03	1.72E-03	mx	4.33E-16	1.10E+13	6.67E+01	6.73E-07	mx	9.15E-13	7.40E+12	5.83E+01	3.04E-05		1.19E-13
S-110	2.20E+10	3.42E+03	1.72E-03	mx	4.33E-16	7.40E+12	4.48E+01	6.73E-07	mx	9.15E-13	2.40E+12	1.89E+01	1.28E-05		5.02E-14
S-111	1.90E+10	2.95E+03	1.31E-03		3.30E-16	7.40E+12	4.48E+01	6.73E-07	mx	9.15E-13	5.60E+11	4.41E+00	1.95E-06		7.66E-15
S-112	1.50E+11	2.33E+04	1.72E-03	mx	4.33E-16	3.70E+13	2.24E+02	6.73E-07	mx	9.15E-13	3.70E+13	2.91E+02	1.47E-04		5.77E-13
SX-101	7.40E-01	1.15E-07	6.66E-14		1.68E-26	2.20E+02	1.33E-09	7.73E-16		1.05E-21	1.62E+13	1.28E+02	2.33E-08	dl	9.14E-17
SX-102	7.40E+07	1.15E+01	5.59E-06		1.41E-18	1.10E+10	6.67E-02	3.24E-08		4.41E-14	4.40E+11	3.46E+00	1.69E-06		6.61E-15
SX-103	1.10E+11	1.71E+04	1.72E-03	mx	4.33E-16	2.30E+13	1.39E+02	6.73E-07	mx	9.15E-13	1.10E+14	8.66E+02	2.91E-04	mx	1.14E-12
SX-104	1.90E+10	2.95E+03	1.27E-03		3.20E-16	2.60E+12	1.58E+01	6.73E-07	mx	9.15E-13	1.90E+13	1.50E+02	6.44E-05		2.52E-13
SX-105	3.70E+10	5.75E+03	1.72E-03	mx	4.33E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13	3.70E+13	2.91E+02	1.13E-04		4.42E-13
SX-106	1.50E+10	2.33E+03	1.15E-03		2.89E-16	7.70E+11	4.67E+00	6.73E-07	mx	9.15E-13	1.50E+13	1.18E+02	5.82E-05		2.28E-13
SX-107	1.10E+02	1.71E-05	4.34E-11		1.09E-23	7.40E+04	4.48E-07	1.14E-12		1.55E-18	1.90E+13	1.50E+02	2.91E-04	mx	1.14E-12
SX-108	1.90E+02	2.95E-05	9.62E-11		2.43E-23	1.50E+05	9.09E-07	2.97E-12		4.03E-18	1.90E+13	1.50E+02	2.91E-04	mx	1.14E-12
SX-109	1.90E+02	2.95E-05	3.12E-11		7.86E-24	7.40E+04	4.48E-07	4.74E-13		6.45E-19	7.40E+12	5.83E+01	6.16E-05		2.41E-13
SX-110	7.40E+00	1.15E-06	4.90E-12		1.23E-24	4.10E+04	2.48E-07	1.06E-12		1.44E-18	2.60E+13	2.05E+02	2.91E-04	mx	1.14E-12
SX-111	7.40E-06	1.15E-12	2.43E-18		6.12E-31	2.20E-03	1.33E-14	2.82E-20		3.83E-26	3.30E+13	2.60E+02	2.91E-04	mx	1.14E-12
SX-112	3.70E+07	5.75E+00	1.65E-05		4.16E-18	1.50E+10	9.09E-02	2.61E-07		3.55E-13	1.10E+13	8.66E+01	2.49E-04		9.75E-13
SX-113	7.40E+09	1.15E+03	1.72E-03	mx	4.33E-16	2.60E+12	1.58E+01	6.73E-07	mx	9.15E-13	1.50E+12	1.18E+01	1.20E-04		4.70E-13
SX-114	7.40E-06	1.15E-12	1.68E-18		4.23E-31	2.20E-03	1.33E-14	1.95E-20		2.65E-26	3.00E+13	2.36E+02	2.91E-04	mx	1.14E-12
SX-115	1.50E+10	2.33E+03	1.72E-03	mx	4.33E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13	7.40E+12	5.83E+01	2.91E-04	mx	1.14E-12
T-101	3.70E+09	5.75E+02	1.49E-03		3.75E-16	2.60E+12	1.58E+01	6.73E-07	mx	9.15E-13	3.30E+12	2.60E+01	3.29E-08	sn	1.29E-16
T-102	7.40E+07	1.15E+01	9.49E-05		2.39E-17	3.70E+10	2.24E-01	6.73E-07	mx	9.15E-13	7.40E+10	5.83E-01	4.81E-06		1.89E-14
T-103	3.70E+08	5.75E+01	5.62E-04		1.42E-16	2.60E+11	1.58E+00	6.73E-07	mx	9.15E-13	3.30E+11	2.60E+00	2.54E-05		9.97E-14
T-104	1.90E+08	2.95E+01	1.75E-05		4.41E-18	7.40E+09	4.48E-02	2.66E-08		3.62E-14	7.40E+11	5.83E+00	3.46E-06		1.36E-14
T-105	1.90E-08	2.95E-15	8.12E-21		2.05E-33	7.40E-08	4.48E-19	1.23E-24		1.68E-30	7.40E+11	5.83E+00	1.60E-05		6.29E-14
T-106	1.10E+07	1.71E+00	2.15E-05		5.42E-18	3.70E+09	2.24E-02	2.82E-07		3.84E-13	1.10E+11	8.66E-01	1.09E-05		4.27E-14
T-107	1.10E-08	1.71E-15	2.51E-21		6.32E-34	1.10E+08	6.67E-04	9.79E-10		1.33E-15	7.40E+10	5.83E-01	5.80E-09	sn	2.27E-17
T-108	1.90E+07	2.95E+00	1.77E-05		4.46E-18	3.70E+09	2.24E-02	1.35E-07		1.83E-13	7.40E+09	5.83E-02	3.50E-07		1.37E-15
T-109	1.10E+08	1.71E+01	7.78E-05		1.96E-17	3.70E+09	2.24E-02	1.02E-07		1.39E-13	7.50E+08	5.91E-03	2.69E-08		1.05E-16
T-110	3.00E-03	4.66E-10	3.25E-16		8.18E-29	7.40E-02	4.48E-13	3.13E-19		4.25E-25	3.00E+11	2.36E+00	1.65E-06		6.46E-15
T-111											7.40E+11	5.83E+00	3.40E-06		1.33E-14
T-112	3.30E-28	5.12E-35	2.02E-40		5.09E-53	1.50E-26	9.09E-38	3.58E-43		4.88E-49	1.10E+12	8.66E+00	6.35E-07	sn	2.49E-15
T-201															
T-202											1.90E+09	1.50E-02	1.88E-07		7.38E-16
T-203											1.90E+10	1.50E-01	1.13E-06		4.43E-15
T-204													6.36E-09	dl	2.49E-17
TX-101	3.30E+00	5.12E-07	1.56E-12		3.92E-25	7.40E+11	4.48E+00	6.73E-07	mx	9.15E-13	3.70E+07	2.91E-04	8.85E-10		3.47E-18
TX-102	7.40E+08	1.15E+02	1.40E-04		3.53E-17	1.10E+11	6.67E-01	6.73E-07	mx	9.15E-13	1.80E+07	1.42E-04	1.73E-10		6.76E-19
TX-103	7.40E+07	1.15E+01	1.93E-05		4.87E-18	3.00E+10	1.82E-01	3.06E-07		4.16E-13	3.70E+09	2.91E-02	4.90E-08		1.92E-16
TX-104	1.10E+02	1.71E-05	6.94E-11		1.75E-23	1.90E+04	1.15E-07	4.68E-13		6.37E-19	3.30E+05	2.60E-06	1.06E-11		4.14E-20
TX-105	3.70E+09	5.75E+02	2.49E-04		6.28E-17	1.10E+12	6.67E+00	6.73E-07	mx	9.15E-13	1.10E+08	8.66E-04	3.76E-10		1.47E-18
TX-106	3.70E+08	5.75E+01	3.35E-05		8.44E-18	1.90E+11	1.15E+00	6.72E-07		9.13E-13	2.20E+06	1.73E-05	1.01E-11		3.96E-20
TX-107	1.90E+01	2.95E-06	2.17E-11		5.46E-24	3.70E+02	2.24E-09	1.65E-14		2.24E-20	2.50E+04	1.97E-07	1.44E-12		5.66E-21
TX-108	2.20E+09	3.42E+02	6.74E-04		1.70E-16	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13	3.70E+10	2.91E-01	5.74E-07		2.25E-15
TX-109	3.70E+10	5.75E+03	1.72E-03	mx	4.33E-16	1.10E+13	6.67E+01	6.73E-07	mx	9.15E-13	4.80E+12	3.78E+01	2.74E-05		1.08E-13
TX-110	1.90E+10	2.95E+03	1.69E-03		4.25E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13	1.60E+12	1.26E+01	7.20E-06		2.82E-14
TX-111	2.60E+09	4.04E+02	2.88E-04		7.26E-17	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13	1.90E+11	1.50E+00	1.07E-06		4.19E-15
TX-112	1.50E+09	2.33E+02	9.48E-05		2.39E-17	7.40E+10	4.48E-01	1.83E-07		2.48E-13	1.10E+10	8.66E-02	3.53E-08		1.38E-16
TX-113	3.70E+08	5.75E+01	2.50E-05		6.30E-18	3.80E+11	2.30E+00	6.73E-07	mx	9.15E-13	2.20E+11	1.73E+00	7.54E-07		2.96E-15
TX-114	1.10E+09	1.71E+02	8.44E-05		2.13E-17	1.20E+11	7.27E-01	3.59E-07		4.88E-13	2.20E+10	1.73E-01	8.55E-08		3.35E-16
TX-115	7.40E+08	1.15E+02	4.74E-05		1.20E-17	2.60E+11	1.58E+00	6.50E-07		8.85E-13	2.60E+09	2.05E-02	8.45E-09		3.31E-17
TX-116	3.00E+08	4.66E+01	1.95E-05		4.92E-18	3.70E+10	2.24E-01	9.39E-08		1.28E-13	3.50E+08	2.76E-03	1.15E-09		4.52E-18
TX-117	1.10E+08	1.71E+01	7.21E-06		1.82E-18	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13	7.50E+08	5.91E-03	2.49E-09		9.77E-18
TX-118	3.70E+10	5.75E+03	1.72E-03	mx	4.33E-16	3.70E+13	2.24E+02	6.73E-07	mx	9.15E-13	7.80E+13	6.14E+02	4.30E-06	sn	1.69E-14
TY-101	1.27E+09	1.97E+02	4.42E-04		1.11E-16	1.10E+11	6.67E-01	6.73E-07	mx	9.15E-13	1.90E+12	1.50E+01	3.35E-05		1.31E-13
TY-102	1.50E+10	2.33E+03	1.72E-03	mx	4.33E-16	2.30E+12	1.39E+01	6.73E-07	mx	9.15E-13	1.78E+11	1.40E+00	1.70E-05	dl	6.67E-14
TY-103	1.83E+12	2.84E+05	1.72E-03	mx	4.33E-16	7.40E+12	4.48E+01	6.73E-07	mx	9.15E-13	1.50E+12	1.18E+01	1.21E-06	dl	4.75E-15
TY-104	5.26E+11	8.17E+04	1.72E-03	mx	4.33E-16	1.98E+10	1.20E-01	2.62E-07	sn	3.57E-13	3.29E+11	2.59E+00	8.90E-08	sn	3.49E-16
TY-105	1.70E+09	2.64E+02	3.02E-04		7.61E-17	4.40E+11	2.67E+00	6.73E-07	mx	9.15E-13	1.57E+12	1.24E+01	1.41E-05		5.54E-14
TY-106	4.09E+11	6.35E+04	1.72E-03	mx	4.33E-16	3.70E+09	2.24E-02	3.49E-07		4.74E-13	1.88E+11	1.48E+00	2.30E-05		9.02E-14
U-101	1.10E+09	1.71E+02	1.72E-03	mx	4.33E-16	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13	3.30E+11	2.60E+00	2.75E-05		1.08E-13
U-102	2.60E+09	4.04E+02	2.85E-04		7.19E-17	1.10E+12	6.67E+00	6.73E-07	mx	9.15E-13	1.90E+11	1.50E+00	1.06E-06		4.14E-15
U-103	3.70E+05	5.75E-02	3.24E-08		8.17E-21	1.50E+08	9.09E-04	5.13E-10		6.98E-16	4.01E+11	3.16E+00	1.78E-06		6.99E-15
U-104	7.40E+00	1.15E-06	2.49E-12		6.27E-25	7.40E+01	4.48E-10	9.71E-16		1.32E-21	4.10E+03	3.23E-08	6.99E-14		2.74E-22
U-105	7.40E+05	1.15E-01	7.26E-08		1.83E-20	2.60E+08	1.58E-03	9.96E-10		1.35E-15	7.40E+09	5.83E-02	3.68E-08		1.44E-16
U-106	3.30E+00	5.12E-07	5.99E-13		1.51E-25	2.20E+03	1.33E-08	1.56E-14		2.12E-20	3.00E+04	2.36E-07	2.76E-13		1.08E-21
U-107	3.70E+09	5.75E+02	3.74E-04		9.42E-17	3.00E+11	1.82E+00	6.73E-07	mx	9.15E-13	7.40E+12	5.83E+01	3.79E-05		1.49E-13
U-108	1.10E+06	1.71E-01	9.68E-08		2.44E-20	3.70E+08	2.24E-03	1.27E-09		1.73E-15	3.30E+11	2.60E+00	1.47E-06		5.77E-15
U-109	3.30E+08	5.12E+01	2.92E-05		7.37E-18	1.10E+11	6.67E-01	3.80E-07		5.17E-13	1.10E+10	8.66E-02	4.94E-08		1.94E-16
U-110	1.90E+07	2.95E+00	4.19E-06		1.06E-18	9.30E+09	5.64E-02	8.01E-08		1.09E-13	3.70E+12	2.91E+01	4.14E-05		1.62E-13
U-111	1.50E+09	2.33E+02	1.87E-04		4.71E-17	7.40E+10	4.48E-01	3.60E-07		4.90E-13	1.60E+12	1.26E+01	1.01E-05		3.97E-14
U-112	1.90E+09	2.95E+02	1.59E-03		4.01E-16	7.40E+11	4.48E+00	6.73E-07	mx	9.15E-13	1.90E+10	1.50E-01	8.07E-07		3.16E-15
U-201	3.00E+08	4.66E+01	1.72E-03	mx	4.33E-16	1.10E+11	6.67E-01	6.73E-07	mx	9.15E-13	4.40E+06	3.46E-05	1.83E-09		7.18E-18
U-202	3.00E+08	4.66E+01	1.72E-03	mx	4.33E-16	1.10E+11	6.67E-01	6.73E-07	mx	9.15E-13	4.40E+06	3.46E-05	1.83E-09		7.18E-18
U-203	2.60E+08	4.04E+01	1.72E-03	mx	4.33E-16	7.40E+10	4.48E-01	6.73E-07	mx	9.15E-13	4.00E+06	3.15E-05	2.77E-09		1.09E-17
U-204	7.40E+07	1.15E+01	1.01E-03		2.55E-16	2.20E+10	1.33E-01	6.73E-07	mx	9.15E-13	1.73E+08	1.36E-03	1.20E-07		4.70E-16

Table C2-4 (Continued). SST Threshold Leakage Values - Case 2/Carcinogenic

Tank	Am-242m Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Cm-242 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Nb-93m Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L
A-101	3.30E+10	1.10E-06	3.06E-13		2.94E-16	3.00E+10	2.46E-04	6.82E-11		4.77E-15	1.35E+13	1.29E+00	3.57E-07		1.85E-10
A-102	1.90E+11	6.35E-06	4.09E-11		3.94E-14	1.50E+11	1.23E-03	7.92E-09		5.54E-13	7.99E+12	7.61E-01	4.90E-06		2.54E-09
A-103	3.30E+10	1.10E-06	7.88E-13		7.58E-16	2.60E+10	2.13E-04	1.52E-10		1.06E-14	3.36E+12	3.20E-01	2.29E-07		1.18E-10
A-104	3.00E+10	1.00E-06	9.47E-12		9.11E-15	2.60E+10	2.13E-04	2.01E-09		1.41E-13	3.33E+12	3.17E-01	2.99E-06		1.55E-09
A-105	3.70E+02	1.24E-14	1.72E-19		1.66E-22	3.30E+02	2.70E-12	3.76E-17		2.63E-21	4.22E+09	4.02E-04	5.59E-09		2.89E-12
A-106	7.40E+09	2.47E-07	5.23E-13		5.03E-16	7.40E+09	6.07E-05	1.28E-10		8.96E-15	8.88E+12	8.46E-01	1.79E-06		9.26E-10
AX-101	3.30E+00	1.10E-16	3.90E-23		3.75E-26	2.60E+00	2.13E-14	7.53E-21		5.26E-25	2.80E+12	2.66E-01	9.41E-08		4.87E-11
AX-102	2.20E-06	7.36E-23	4.98E-28		4.80E-31	1.90E-06	1.56E-20	1.06E-25		7.37E-30	1.44E+12	1.37E-01	9.26E-07		4.80E-10
AX-103	1.10E+09	3.68E-08	8.68E-14		8.35E-17	1.10E+09	9.02E-06	2.13E-11		1.49E-15	9.36E+10	8.92E-03	2.10E-08		1.09E-11
AX-104	2.20E+09	7.36E-08	2.78E-12		2.67E-15	1.90E+09	1.56E-05	5.88E-10		4.11E-14	8.07E+12	7.68E-01	2.90E-05		1.50E-08
B-101	3.30E-20	1.10E-36	2.58E-42		2.48E-45	2.60E-20	2.13E-34	4.98E-40		3.48E-44	9.84E+11	9.37E-02	2.19E-07		1.14E-10
B-102	1.50E+07	5.02E-10	4.14E-15		3.98E-18	1.50E+07	1.23E-07	1.02E-12		7.10E-17	2.59E+10	2.46E-03	2.03E-08		1.05E-11
B-103	1.10E+09	3.68E-08	1.65E-13		1.58E-16	1.00E+09	8.20E-06	3.67E-11		2.57E-15	7.10E+10	6.77E-03	3.03E-08		1.57E-11
B-104	1.10E+06	3.68E-11	2.62E-17		2.52E-20	1.10E+06	9.02E-09	6.42E-15		4.49E-19	1.34E+10	1.27E-03	9.06E-10		4.69E-13
B-105	1.20E+06	4.01E-11	3.47E-17		3.33E-20	8.10E+05	6.64E-09	5.73E-15		4.01E-19	3.81E+09	3.63E-04	3.13E-10		1.62E-13
B-106	1.10E+07	3.68E-10	8.31E-16		7.99E-19	1.10E+07	9.02E-08	2.04E-13		1.42E-17	2.54E+08	2.42E-05	5.47E-11		2.83E-14
B-107	1.50E+06	5.02E-11	8.03E-17		7.73E-20	1.10E+06	9.02E-09	1.44E-14		1.01E-18	1.65E+10	1.58E-03	2.52E-09		1.31E-12
B-108	3.70E+08	1.24E-08	3.48E-14		3.35E-17	3.30E+08	2.70E-06	7.60E-12		5.31E-16	1.16E+10	1.10E-03	3.10E-09		1.61E-12
B-109	1.50E+08	5.02E-09	1.04E-14		1.00E-17	1.10E+08	9.02E-07	1.88E-12		1.31E-16	3.46E+09	3.30E-04	6.86E-10		3.55E-13
B-110	1.50E+11	5.02E-06	5.39E-12		5.18E-15	1.10E+11	9.02E-04	9.68E-10		6.77E-14	1.47E+12	1.40E-01	1.51E-07		7.80E-11
B-111	7.50E+06	2.51E-10	2.80E-16		2.69E-19	7.50E+06	6.15E-08	6.85E-14		4.79E-18	1.45E+12	1.38E-01	1.54E-07		7.96E-11
B-112	3.30E+09	1.10E-07	8.84E-13		8.50E-16	2.60E+09	2.13E-05	1.71E-10		1.19E-14	7.92E+10	7.54E-03	6.04E-08		3.13E-11
B-201															
B-202															
B-203															
B-204															
BX-101	1.10E+06	3.68E-11	2.26E-16		2.17E-19	1.10E+06	9.02E-09	5.54E-14		3.87E-18	2.64E+10	2.52E-03	1.55E-08		8.01E-12
BX-102	3.70E+10	1.24E-06	3.41E-12		3.28E-15	3.70E+10	3.03E-04	8.35E-10		5.83E-14	2.84E+11	2.71E-02	7.45E-08		3.86E-11
BX-103	7.40E+04	2.47E-12	9.91E-18		9.53E-21	7.40E+04	6.07E-10	2.43E-15		1.70E-19	1.67E+03	1.59E-10	6.38E-16		3.30E-19
BX-104	3.00E+08	1.00E-08	2.68E-14		2.58E-17	2.20E+08	1.80E-06	4.81E-12		3.36E-16	1.71E+12	1.63E-01	4.34E-07		2.25E-10
BX-105	2.60E+11	8.70E-06	4.50E-11		4.33E-14	2.20E+11	1.80E-03	9.34E-09		6.53E-13	1.59E+12	1.52E-01	7.85E-07		4.07E-10
BX-106	1.90E+11	6.35E-06	3.65E-11		3.51E-14	1.50E+11	1.23E-03	7.06E-09		4.94E-13	1.91E+12	1.82E-01	1.05E-06		5.42E-10
BX-107	1.50E+06	5.02E-11	3.84E-17		3.70E-20	1.10E+06	9.02E-09	6.90E-15		4.83E-19	7.44E+10	7.08E-03	5.42E-09		2.81E-12
BX-108	1.50E+05	5.02E-12	5.10E-17		4.90E-20	1.10E+05	9.02E-10	9.16E-15		6.40E-19	7.36E+09	7.01E-04	7.13E-09		3.69E-12
BX-109	1.90E+09	6.35E-08	8.70E-14		8.37E-17	1.50E+09	1.23E-05	1.68E-11		1.18E-15	6.66E+11	6.34E-02	8.68E-08		4.50E-11
BX-110	3.70E+09	1.24E-07	1.65E-13		1.59E-16	3.70E+09	3.03E-05	4.05E-11		2.83E-15	1.39E+11	1.32E-02	1.76E-08		9.13E-12
BX-111	3.70E+09	1.24E-07	1.55E-13		1.49E-16	3.70E+09	3.03E-05	3.80E-11		2.65E-15	1.30E+11	1.23E-02	1.54E-08		8.00E-12
BX-112	2.20E+08	7.36E-09	1.18E-14		1.13E-17	1.90E+08	1.56E-06	2.49E-12		1.74E-16	1.14E+10	1.08E-03	1.73E-09		8.97E-13
BY-101	7.40E+09	2.47E-07	1.78E-13		1.71E-16	3.70E+09	3.03E-05	2.18E-11		1.53E-15	1.65E+11	1.57E-02	1.13E-08		5.85E-12
BY-102	1.90E+09	6.35E-08	4.92E-14		4.74E-17	1.50E+09	1.23E-05	9.53E-12		6.66E-16	4.77E+10	4.55E-03	3.52E-09		1.82E-12
BY-103	1.10E+09	3.68E-08	2.43E-14		2.34E-17	6.70E+08	5.49E-06	3.63E-12		2.54E-16	8.99E+10	8.56E-03	5.66E-09		2.93E-12
BY-104	1.10E+10	3.68E-07	2.39E-13		2.30E-16	1.00E+10	8.20E-05	5.33E-11		3.73E-15	1.14E+12	1.08E-01	7.04E-08		3.65E-11
BY-105	7.00E+09	2.34E-07	1.23E-13		1.18E-16	6.70E+09	5.49E-05	2.88E-11		2.02E-15	9.47E+11	9.02E-02	4.74E-08		2.45E-11
BY-106	7.80E+09	2.61E-07	1.07E-13		1.03E-16	4.10E+09	3.36E-05	1.38E-11		9.67E-16	4.26E+11	4.05E-02	1.67E-08		8.64E-12
BY-107	3.00E+09	1.00E-07	9.97E-14		9.59E-17	2.20E+09	1.80E-05	1.79E-11		1.25E-15	2.81E+11	2.68E-02	2.66E-08		1.38E-11
BY-108	4.10E+09	1.37E-07	1.59E-13		1.53E-16	3.70E+09	3.03E-05	3.51E-11		2.46E-15	2.85E+11	2.71E-02	3.14E-08		1.63E-11
BY-109	2.20E+09	7.36E-08	4.60E-14		4.42E-17	1.90E+09	1.56E-05	9.73E-12		6.80E-16	5.33E+10	5.07E-03	3.17E-09		1.64E-12
BY-110	8.50E+09	2.84E-07	1.90E-13		1.82E-16	4.40E+09	3.61E-05	2.41E-11		1.68E-15	5.18E+11	4.93E-02	3.29E-08		1.70E-11
BY-111	7.40E+09	2.47E-07	1.42E-13		1.37E-16	7.40E+09	6.07E-05	3.49E-11		2.44E-15	1.70E+11	1.62E-02	9.33E-09		4.83E-12
BY-112	1.10E+09	3.68E-08	3.34E-14		3.21E-17	1.10E+09	9.02E-06	8.19E-12		5.72E-16	3.09E+10	2.94E-03	2.67E-09		1.38E-12
C-101	1.10E+09	3.68E-08	1.10E-13		1.06E-16	7.40E+08	6.07E-06	1.82E-11		1.27E-15	2.17E+11	2.06E-02	6.20E-08		3.21E-11
C-102	3.70E+10	1.24E-06	7.73E-13		7.44E-16	3.70E+10	3.03E-04	1.89E-10		1.32E-14	1.72E+12	1.64E-01	1.02E-07		5.30E-11
C-103	3.70E+09	1.24E-07	1.68E-13		1.61E-16	3.70E+09	3.03E-05	4.11E-11		2.87E-15	2.72E+11	2.59E-02	3.50E-08		1.82E-11
C-104	3.70E+10	1.24E-06	1.11E-12		1.07E-15	3.30E+10	2.70E-04	2.42E-10		1.69E-14	4.59E+11	4.37E-02	3.91E-08		2.03E-11
C-105	7.70E+11	2.58E-05	5.04E-11		4.85E-14	3.90E+11	3.20E-03	6.26E-09		4.37E-13	9.10E+12	8.67E-01	1.70E-06		8.79E-10
C-106	1.50E+10	5.02E-07	5.79E-13		5.57E-16	1.10E+10	9.02E-05	1.04E-10		7.27E-15	1.41E+12	1.35E-01	1.55E-07		8.04E-11
C-107	2.60E+09	8.70E-08	8.35E-14		8.04E-17	2.20E+09	1.80E-05	1.73E-11		1.21E-15	3.07E+11	2.92E-02	2.81E-08		1.46E-11
C-108	1.10E+09	3.68E-08	1.47E-13		1.42E-16	7.40E+08	6.07E-06	2.43E-11		1.70E-15	1.62E+11	1.55E-02	6.19E-08		3.21E-11
C-109	1.20E+05	4.01E-12	1.61E-17		1.55E-20	7.80E+04	6.39E-10	2.56E-15		1.79E-19	7.77E+09	7.40E-04	2.96E-09		1.53E-12
C-110	1.50E+07	5.02E-10	7.09E-16		6.82E-19	1.10E+07	9.02E-08	1.27E-13		8.90E-18	2.58E+10	2.46E-03	3.48E-09		1.80E-12
C-111	3.30E+08	1.10E-08	5.12E-14		4.92E-17	2.60E+08	2.13E-06	9.88E-12		6.90E-16	1.16E+11	1.10E-02	5.11E-08		2.65E-11
C-112	7.40E+08	2.47E-08	6.29E-14		6.05E-17	7.40E+08	6.07E-06	1.54E-11		1.08E-15	1.02E+11	9.69E-03	2.46E-08		1.28E-11
C-201	7.40E+03	2.47E-13	3.27E-17		3.15E-20	3.70E+03	3.03E-11	4.01E-15		2.80E-19	4.70E+08	4.48E-05	5.91E-09		3.06E-12
C-202	1.90E+04	6.35E-13	1.68E-16		1.62E-19	1.50E+04	1.23E-10	3.25E-14		2.27E-18	1.76E+09	1.67E-04	4.42E-08		2.29E-11
C-203	1.90E+03	6.35E-14	3.36E-18		3.23E-21	1.50E+03	1.23E-11	6.50E-16		4.54E-20	1.75E+08	1.67E-05	8.81E-10		4.56E-13
C-204	3.70E+00	1.24E-16	1.09E-20		1.05E-23	3.70E+00	3.03E-14	2.67E-18		1.87E-22	6.22E+05	5.92E-08	5.21E-12		2.70E-15
S-101	2.20E+10	7.36E-07	4.55E-13		4.38E-16	1.70E+10	1.39E-04	8.62E-11		6.03E-15	9.58E+11	9.13E-02	5.65E-08		2.93E-11
S-102	3.30E+08	1.10E-08	5.31E-15		5.11E-18	2.60E+08	2.13E-06	1.03E-12		7.17E-17	8.51E+10	8.10E-03	3.90E-09		2.02E-12
S-103	3.70E+07	1.24E-09	1.33E-15		1.28E-18	3.00E+07	2.46E-07	2.64E-13		1.85E-17	6.44E+09	6.13E-04	6.59E-10		3.41E-13
S-104	2.60E+09	8.70E-08	7.81E-14		7.52E-17	1.90E+09	1.56E-05	1.40E-11		9.78E-16	7.84E+11	7.47E-02	6.71E-08		3.48E-11
S-105	2.20E+08	7.36E-09	4.26E-15		4.10E-18	1.90E+08	1.56E-06	9.02E-13		6.31E-17	7.81E+10	7.44E-03	4.31E-09		2.23E-12
S-106	5.20E+07	1.74E-09	9.59E-16		9.23E-19	4.40E+07	3.61E-07	1.99E-13		1.39E-17	1.24E+10	1.18E-03	6.51E-10		3.37E-13
S-107	7.40E+09	2.47E-07	1.74E-13		1.67E-16	7.40E+09	6.07E-05	4.26E-11		2.98E-15	1.22E+12	1.16E-01	8.17E-08		4.23E-11
S-108	7.70E+09	2.58E-07	1.13E-13		1.08E-16	7.70E+09	6.31E-05	2.76E-11		1.93E-15	1.44E+11	1.37E-02	6.00E-09		3.11E-12

Table C2-4 (Continued). SST Threshold Leakage Values - Case 2/Carcinogenic

Tank	Am-242m Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Cm-242 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Nb-93m Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L
S-109	1.10E+10	3.68E-07	1.92E-13		1.85E-16	1.10E+10	9.02E-05	4.71E-11		3.29E-15	2.53E+11	2.41E-02	1.26E-08		6.51E-12
S-110	2.10E+09	7.02E-08	4.76E-14		4.58E-17	1.70E+09	1.39E-05	9.44E-12		6.60E-16	6.62E+11	6.31E-02	4.27E-08		2.21E-11
S-111	5.60E+08	1.87E-08	8.30E-15		7.99E-18	5.20E+08	4.26E-06	1.89E-12		1.32E-16	2.04E+11	1.94E-02	8.59E-09		4.45E-12
S-112	7.40E+10	2.47E-06	1.25E-12		1.20E-15	3.70E+10	3.03E-04	1.53E-10		1.07E-14	1.02E+12	9.73E-02	4.91E-08		2.54E-11
SX-101	1.10E+10	3.68E-07	2.13E-13		2.05E-16	7.40E+09	6.07E-05	3.51E-11		2.46E-15	1.10E+12	1.05E-01	6.08E-08		3.15E-11
SX-102	1.20E+09	4.01E-08	1.95E-14		1.88E-17	8.10E+08	6.64E-06	3.23E-12		2.26E-16	1.10E+11	1.05E-02	5.11E-09		2.65E-12
SX-103	1.90E+11	6.35E-06	2.57E-12		2.48E-15	1.50E+11	1.23E-03	4.98E-10		3.48E-14	1.17E+12	1.11E-01	4.51E-08		2.34E-11
SX-104	4.10E+10	1.37E-06	5.90E-13		5.68E-16	3.30E+10	2.70E-04	1.16E-10		8.14E-15	1.05E+12	1.00E-01	4.32E-08		2.24E-11
SX-105	7.50E+10	2.51E-06	9.70E-13		9.33E-16	3.80E+10	3.11E-04	1.20E-10		8.42E-15	4.18E+11	3.98E-02	1.54E-08		7.98E-12
SX-106	2.20E+10	7.36E-07	3.63E-13		3.49E-16	1.90E+10	1.56E-04	7.68E-11		5.37E-15	3.53E+11	3.37E-02	1.66E-08		8.59E-12
SX-107	2.20E+10	7.36E-07	1.87E-12		1.80E-15	1.90E+10	1.56E-04	3.96E-10		2.77E-14	2.07E+12	1.97E-01	5.01E-07		2.60E-10
SX-108	2.20E+10	7.36E-07	2.40E-12		2.31E-15	1.90E+10	1.56E-04	5.08E-10		3.55E-14	2.28E+12	2.17E-01	7.09E-07		3.67E-10
SX-109	1.10E+10	3.68E-07	3.89E-13		3.74E-16	1.10E+10	9.02E-05	9.53E-11		6.66E-15	1.18E+12	1.12E-01	1.19E-07		6.15E-11
SX-110	3.00E+10	1.00E-06	4.28E-12		4.11E-15	2.20E+10	1.80E-04	7.68E-10		5.37E-14	2.31E+12	2.20E-01	9.37E-07		4.85E-10
SX-111	3.70E+10	1.24E-06	2.62E-12		2.52E-15	3.30E+10	2.70E-04	5.72E-10		4.00E-14	2.63E+12	2.51E-01	5.30E-07		2.75E-10
SX-112	1.10E+10	3.68E-07	1.06E-12		1.02E-15	1.10E+10	9.02E-05	2.59E-10		1.81E-14	1.48E+12	1.41E-01	4.06E-07		2.10E-10
SX-113	7.40E+08	2.47E-08	2.51E-13		2.42E-16	7.40E+08	6.07E-06	6.16E-11		4.31E-15	4.22E+11	4.02E-02	4.08E-07		2.11E-10
SX-114	3.30E+10	1.10E-06	1.61E-12		1.55E-15	2.60E+10	2.13E-04	3.11E-10		2.17E-14	3.31E+12	3.15E-01	4.60E-07		2.38E-10
SX-115	7.40E+09	2.47E-07	5.45E-12		5.24E-15	7.40E+09	6.07E-05	1.34E-09		9.33E-14	9.88E+11	9.41E-02	2.07E-06		1.07E-09
T-101	7.40E+09	2.47E-07	6.41E-13		6.17E-16	3.70E+09	3.03E-05	7.86E-11		5.49E-15	3.53E+10	3.36E-03	8.71E-09		4.51E-12
T-102	1.10E+08	3.68E-09	3.04E-14		2.92E-17	7.40E+07	6.07E-07	5.01E-12		3.50E-16	5.99E+08	5.71E-05	4.71E-10		2.44E-13
T-103	7.40E+08	2.47E-08	2.42E-13		2.33E-16	3.70E+08	3.03E-06	2.97E-11		2.07E-15	3.62E+09	3.45E-04	3.37E-09		1.75E-12
T-104	1.90E+07	6.35E-10	3.77E-16		3.63E-19	1.50E+07	1.23E-07	7.30E-14		5.10E-18	7.25E+10	6.91E-03	4.10E-09		2.12E-12
T-105	3.00E+08	1.00E-08	2.76E-14		2.66E-17	2.60E+08	2.13E-06	5.87E-12		4.10E-16	3.44E+10	3.27E-03	9.01E-09		4.67E-12
T-106	3.30E+07	1.10E-09	1.39E-14		1.34E-17	2.60E+07	2.13E-07	2.68E-12		1.87E-16	3.26E+09	3.10E-04	3.91E-09		2.02E-12
T-107	7.40E+05	2.47E-11	3.63E-17		3.49E-20	7.40E+05	6.07E-09	8.90E-15		6.22E-19	6.73E+10	6.41E-03	9.41E-09		4.88E-12
T-108	7.50E+04	2.51E-12	1.51E-17		1.45E-20	7.50E+04	6.15E-10	3.69E-15		2.58E-19	6.77E+09	6.45E-04	3.87E-09		2.01E-12
T-109	1.10E+04	3.68E-13	1.68E-18		1.61E-21	7.80E+03	6.39E-11	2.91E-16		2.04E-20	1.15E+09	1.09E-04	4.98E-10		2.58E-13
T-110	3.00E+05	1.00E-11	6.99E-18		6.73E-21	2.60E+05	2.13E-09	1.49E-15		1.04E-19	9.21E+09	8.77E-04	6.12E-10		3.17E-13
T-111	7.40E+07	2.47E-09	1.44E-15		1.39E-18	7.40E+07	6.07E-07	3.54E-13		2.47E-17	7.88E+09	7.51E-04	4.38E-10		2.27E-13
T-112	1.10E+07	3.68E-10	1.45E-15		1.40E-18	1.10E+07	9.02E-08	3.56E-13		2.49E-17	1.04E+10	9.94E-04	3.92E-09		2.03E-12
T-201															
T-202															
T-203															
T-204															
TX-101	3.70E+04	1.24E-12	3.76E-18		3.62E-21	3.30E+04	2.70E-10	8.21E-16		5.74E-20	1.56E+03	1.49E-10	4.52E-16		2.34E-19
TX-102	4.40E+03	1.47E-13	1.79E-19		1.72E-22	3.70E+03	3.03E-11	3.69E-17		2.58E-21	4.44E+09	4.23E-04	5.15E-10		2.67E-13
TX-103	7.40E+06	2.47E-10	4.16E-16		4.01E-19	7.40E+06	6.07E-08	1.02E-13		7.13E-18	3.85E+08	3.66E-05	6.17E-11		3.19E-14
TX-104	3.00E-04	1.00E-20	4.08E-26		3.92E-29	2.20E-04	1.80E-18	7.33E-24		5.12E-28	2.10E+06	2.00E-07	8.12E-13		4.21E-16
TX-105	1.90E+04	6.35E-13	2.76E-19		2.65E-22	1.50E+04	1.23E-10	5.33E-17		3.73E-21	4.07E+10	3.88E-03	1.68E-09		8.71E-13
TX-106	7.40E+03	2.47E-13	1.44E-19		1.39E-22	3.70E+03	3.03E-11	1.77E-17		1.24E-21	2.13E+09	2.03E-04	1.19E-10		6.14E-14
TX-107	3.70E-01	1.24E-17	9.08E-23		8.74E-26	3.30E-01	2.70E-15	1.99E-20		1.39E-24	5.37E+03	5.11E-10	3.75E-15		1.94E-18
TX-108	1.10E+06	3.68E-11	7.25E-17		6.98E-20	7.50E+05	6.15E-09	1.21E-14		8.47E-19	1.18E+10	1.13E-03	2.22E-09		1.15E-12
TX-109	7.40E+09	2.47E-07	1.80E-13		1.73E-16	7.40E+09	6.07E-05	4.40E-11		3.08E-15	4.18E+11	3.98E-02	2.89E-08		1.50E-11
TX-110	3.00E+09	1.00E-07	5.74E-14		5.52E-17	2.60E+09	2.13E-05	1.22E-11		8.52E-16	1.17E+11	1.11E-02	6.35E-09		3.29E-12
TX-111	3.00E+08	1.00E-08	7.16E-15		6.89E-18	2.60E+08	2.13E-06	1.52E-12		1.06E-16	1.44E+10	1.37E-03	9.76E-10		5.06E-13
TX-112	1.90E+07	6.35E-10	2.59E-16		2.49E-19	1.50E+09	1.23E-05	5.01E-12		3.50E-16	4.66E+09	4.44E-04	1.81E-10		9.36E-14
TX-113	7.40E+08	2.47E-08	1.08E-14		1.04E-17	7.40E+08	6.07E-06	2.64E-12		1.85E-16	3.85E+10	3.66E-03	1.60E-09		8.26E-13
TX-114	7.40E+07	2.47E-09	1.22E-15		1.18E-18	7.40E+07	6.07E-07	3.00E-13		2.09E-17	7.84E+09	7.47E-04	3.69E-10		1.91E-13
TX-115	7.40E+06	2.47E-10	1.02E-16		9.83E-20	7.40E+06	6.07E-08	2.50E-14		1.75E-18	1.91E+09	1.82E-04	7.51E-11		3.89E-14
TX-116	7.60E+04	2.54E-12	1.06E-18		1.02E-21	3.80E+04	3.11E-10	1.30E-16		9.12E-21	9.77E+08	9.30E-05	3.90E-11		2.02E-14
TX-117	7.40E+05	2.47E-11	1.04E-17		1.00E-20	7.40E+05	6.07E-09	2.56E-15		1.79E-19	4.00E+08	3.81E-05	1.61E-11		8.32E-15
TX-118	7.40E+10	2.47E-06	1.88E-12		1.81E-15	7.40E+10	6.07E-04	4.62E-10		3.23E-14	1.63E+12	1.55E-01	1.18E-07		6.12E-11
TY-101	1.50E+07	5.02E-10	1.12E-15		1.08E-18	1.10E+07	9.02E-08	2.02E-13		1.41E-17	6.73E+10	6.41E-03	1.44E-08		7.44E-12
TY-102	1.90E+05	6.35E-12	2.62E-17		2.52E-20	1.50E+05	1.23E-09	5.08E-15		3.55E-19	1.03E+11	9.80E-03	4.04E-08		2.09E-11
TY-103	3.30E+07	1.10E-09	1.80E-15		1.73E-18	2.60E+07	2.13E-07	3.48E-13		2.43E-17	5.25E+11	5.00E-02	8.16E-08		4.23E-11
TY-104	1.50E+06	5.02E-11	2.88E-16		2.77E-19	1.20E+06	9.84E-09	5.65E-14		3.95E-18	2.23E+10	2.12E-03	1.22E-08		6.31E-12
TY-105	2.20E+09	7.36E-08	8.42E-14		8.10E-17	1.90E+09	1.56E-05	1.78E-11		1.25E-15	6.14E+11	5.85E-02	6.69E-08		3.47E-11
TY-106	2.20E+08	7.36E-09	1.14E-13		1.10E-16	1.90E+08	1.56E-06	2.42E-11		1.69E-15	6.73E+10	6.41E-03	9.97E-08		5.16E-11
U-101	1.10E+06	3.68E-11	3.89E-16		3.74E-19	1.10E+06	9.02E-09	9.53E-14		6.66E-18	4.63E+10	4.40E-03	4.65E-08		2.41E-11
U-102	3.30E+08	1.10E-08	7.80E-15		7.50E-18	2.60E+08	2.13E-06	1.51E-12		1.05E-16	1.47E+10	1.40E-03	9.86E-10		5.11E-13
U-103	1.10E+04	3.68E-13	2.08E-19		2.00E-22	7.40E+03	6.07E-11	3.42E-17		2.39E-21	4.81E+06	4.58E-07	2.59E-13		1.34E-16
U-104	1.50E-01	5.02E-18	1.09E-23		1.05E-26	1.10E-01	9.02E-16	1.95E-21		1.36E-25	3.23E+03	3.08E-10	6.66E-16		3.45E-19
U-105	2.20E+05	7.36E-12	4.65E-18		4.47E-21	1.90E+05	1.56E-09	9.84E-16		6.88E-20	7.62E+08	7.26E-05	4.59E-11		2.38E-14
U-106	3.70E+01	1.24E-15	1.45E-21		1.39E-24	3.00E+01	2.46E-13	2.87E-19		2.01E-23	8.44E+02	8.03E-11	9.39E-17		4.87E-20
U-107	7.40E+09	2.47E-07	1.61E-13		1.55E-16	7.40E+09	6.07E-05	3.95E-11		2.76E-15	1.27E+11	1.21E-02	7.89E-09		4.09E-12
U-108	3.70E+08	1.24E-08	7.02E-15		6.75E-18	3.00E+08	2.46E-06	1.39E-12		9.75E-17	1.58E+10	1.50E-03	8.53E-10		4.42E-13
U-109	1.90E+06	6.35E-11	3.63E-17		3.49E-20	1.50E+06	1.23E-08	7.02E-15		4.90E-19	2.57E+09	2.45E-04	1.40E-10		7.23E-14
U-110	2.60E+09	8.70E-08	1.24E-13		1.19E-16	2.20E+09	1.80E-05	2.56E-11		1.79E-15	5.40E+11	5.14E-02	7.31E-08		3.79E-11
U-111	2.40E+09	8.03E-08	6.45E-14		6.20E-17	2.00E+09	1.64E-05	1.32E-11		9.20E-16	7.33E+10	6.98E-03	5.60E-09		2.90E-12
U-112	1.90E+07	6.35E-10	3.43E-15		3.30E-18	1.50E+07	1.23E-07	6.63E-13		4.63E-17	5.37E+09	5.11E-04	2.75E-09		1.43E-12
U-201	1.70E+04	5.69E-13	3.00E-17		2.89E-20	1.30E+04	1.07E-10	5.63E-15		3.94E-19	1.55E+08	1.48E-05	7.80E-10		4.04E-13
U-202	4.40E+03	1.47E-13	7.78E-18		7.48E-21	3.70E+03	3.03E-11	1.60E-15		1.12E-19	1.64E+08	1.56E-05	8.25E-10		4.27E-13
U-203	4.00E+03	1.34E-13	1.18E-17		1.13E-20	3.60E+03	2.95E-11	2.60E-15		1.82E-19	1.44E+08	1.37E-05	1.21E-09		6.27E-13
U-204	1.90E+03	6.35E-14	5.60E-18		5.38E-21	1.50E+03	1.23E-11	1.08E-15		7.57E-20	3.92E+07	3.74E-06	3.29E-10		1.70E-13

Table C2-4 (Continued). SST Threshold Leakage Values - Case 2/Carcinogenic

	Np-237		Solubility	Basis	Sp. Risk	Pu-238		Solubility	Basis	Sp. Risk	Pu-239/240		Solubility	Basis	Sp. Risk
Tank	Bq	g	g/L	Note 1	R/L	Bq	g	g/L	Note 1	R/L	Bq	g	g/L	Note 1	R/L
A-101	1.50E+08	5.75E+00	1.59E-06		1.40E-18	3.00E+12	4.74E+00	1.31E-06		2.81E-14	9.60E+13	4.17E+04	6.43E-04	dl	4.77E-14
A-102	1.10E+10	4.21E+02	2.72E-03		2.38E-15	3.80E+11	6.00E-01	3.87E-06		8.28E-14	1.40E+13	6.09E+03	7.30E-05	sn	5.41E-15
A-103	3.70E+08	1.42E+01	1.01E-05		8.88E-18	7.40E+11	1.17E+00	8.35E-07		1.79E-14	1.40E+13	6.09E+03	4.05E-06	dl	3.00E-16
A-104	1.80E+08	6.90E+00	6.51E-05		5.71E-17	7.40E+11	1.17E+00	5.85E-06	mx	1.25E-13	2.60E+13	1.13E+04	6.09E-02	mx	4.51E-12
A-105	1.50E+09	5.75E+01	7.99E-04		7.01E-16	1.50E+07	2.37E-05	3.30E-10		7.05E-18	5.90E+05	2.57E-04	3.57E-09		2.64E-19
A-106	3.70E+07	1.42E+00	3.00E-06		2.63E-18	1.90E+12	3.00E+00	5.85E-06	mx	1.25E-13	6.74E+13	2.93E+04	4.20E-06	dl	3.11E-16
AX-101	1.90E+06	7.28E-02	2.57E-08		2.25E-20	7.40E+11	1.17E+00	4.13E-07		8.84E-15	1.40E+13	6.09E+03	3.22E-05	sn	2.38E-15
AX-102	1.50E+06	5.75E-02	3.89E-07		3.41E-19	3.30E+11	5.21E-01	3.53E-06		7.56E-14	5.20E+12	2.26E+03	1.56E-03	sn	1.16E-13
AX-103	7.40E+08	2.84E+01	6.69E-05		5.87E-17	7.80E+07	1.23E-04	2.91E-10		6.22E-18	2.86E+11	1.24E+02	3.61E-05	sn	2.68E-15
AX-104	1.23E+16	4.71E+08	1.98E-01	mx	1.74E-13	7.40E+11	1.17E+00	5.85E-06	mx	1.25E-13	1.42E+13	6.17E+03	6.09E-02	mx	4.51E-12
B-101	1.90E+07	7.28E-01	1.70E-06		1.49E-18	1.10E+12	1.74E+00	4.06E-06		8.69E-14	2.60E+13	1.13E+04	2.64E-02		1.96E-12
B-102	1.10E+08	4.21E+00	3.48E-05		3.05E-17	1.50E+11	2.37E-01	1.96E-06		4.19E-14	2.30E+12	1.00E+03	3.41E-05	sn	2.53E-15
B-103	7.50E+08	2.87E+01	1.29E-04		1.13E-16	1.90E+11	3.00E-01	1.34E-06		2.88E-14	9.30E+12	4.04E+03	1.83E-05	sn	1.35E-15
B-104	2.20E+08	8.43E+00	6.00E-06		5.26E-18	7.40E+09	1.17E-02	8.33E-09		1.78E-16	4.10E+12	1.78E+03	1.27E-03		9.41E-14
B-105	1.90E+09	7.28E+01	6.29E-05		5.51E-17	7.40E+08	1.17E-03	1.01E-09		2.16E-17	8.45E+12	3.67E+03	3.17E-03		2.35E-13
B-106	7.40E+07	2.84E+00	6.40E-06		5.61E-18	1.50E+08	2.37E-04	5.35E-10		1.15E-17	4.10E+10	1.78E+01	1.38E-05	sn	1.02E-15
B-107	2.20E+09	8.43E+01	1.35E-04		1.18E-16	3.30E+09	5.21E-03	8.35E-09		1.79E-16	7.49E+12	3.26E+03	5.21E-03		3.86E-13
B-108	3.00E+09	1.15E+02	3.23E-04		2.83E-16	7.80E+08	1.23E-03	3.46E-09		7.41E-17	1.60E+11	6.96E+01	1.96E-04		1.45E-14
B-109	1.10E+09	4.21E+01	8.77E-05		7.69E-17	3.80E+08	6.00E-04	1.25E-09		2.67E-17	2.10E+10	9.13E+00	2.87E-06	sn	2.13E-16
B-110	1.10E+09	4.21E+01	4.53E-05		3.97E-17	3.80E+11	6.00E-01	6.45E-07		1.38E-14	9.30E+12	4.04E+03	4.34E-03		3.22E-13
B-111	3.70E+11	1.42E+04	1.58E-02		1.39E-14	7.40E+09	1.17E-02	1.30E-08		2.79E-16	1.30E+12	5.65E+02	6.30E-04		4.67E-14
B-112	2.20E+10	8.43E+02	6.75E-03		5.92E-15	3.70E+10	5.85E-02	4.68E-07		1.00E-14	1.70E+11	7.39E+01	5.92E-04		4.38E-14
B-201											1.71E+13	7.43E+03	6.09E-02	mx	4.51E-12
B-202	2.91E+12	1.11E+05	1.98E-01	mx	1.74E-13	1.50E+11	2.37E-01	5.85E-06	mx	1.25E-13	9.30E+12	4.04E+03	3.96E-02		2.93E-12
B-203	3.30E+04	1.26E-03	6.55E-09		5.74E-21	1.90E+08	3.00E-04	1.55E-09		3.33E-17	7.74E+11	3.37E+02	1.74E-03		1.29E-13
B-204	3.30E+05	1.26E-02	6.68E-08		5.86E-20	1.90E+09	3.00E-03	1.59E-08		3.39E-16	4.35E+12	1.89E+03	9.99E-03		7.41E-13
BX-101	2.20E+07	8.43E-01	5.18E-06		4.54E-18	3.70E+11	5.85E-01	3.59E-06		7.69E-14	2.30E+13	1.00E+04	6.09E-02	mx	4.51E-12
BX-102	3.30E+10	1.26E+03	3.48E-03		3.05E-15	4.10E+10	6.48E-02	1.78E-07		3.81E-15	1.40E+12	6.09E+02	1.68E-03		1.24E-13
BX-103	3.70E+02	1.42E-05	5.67E-11		4.98E-23	7.40E+09	1.17E-02	4.68E-08		1.00E-15	2.61E+11	1.13E+02	1.28E-04	sn	9.50E-15
BX-104	3.70E+11	1.42E+04	3.78E-02		3.32E-14	7.40E+10	1.17E-01	3.12E-07		6.68E-15	7.88E+12	3.43E+03	2.96E-04	dl	2.19E-14
BX-105	3.70E+10	1.42E+03	7.34E-03		6.44E-15	3.30E+10	5.21E-02	2.70E-07		5.78E-15	1.04E+12	4.52E+02	2.48E-04	sn	1.84E-14
BX-106	1.50E+11	5.75E+03	3.30E-02		2.89E-14	2.20E+10	3.48E-02	2.00E-07		4.27E-15	1.20E+09	5.22E-01	2.07E-06	sn	1.54E-16
BX-107	7.40E+08	2.84E+01	2.17E-05		1.90E-17	3.70E+09	5.85E-03	4.48E-09		9.58E-17	2.10E+12	9.13E+02	6.83E-05	sn	5.06E-15
BX-108	1.90E+07	7.28E-01	7.40E-06		6.49E-18	3.70E+08	5.85E-04	5.94E-09		1.27E-16	2.10E+11	9.13E+01	9.28E-04		6.87E-14
BX-109	7.50E+08	2.87E+01	3.93E-05		3.45E-17	1.90E+10	3.00E-02	4.11E-08		8.79E-16	2.50E+12	1.09E+03	1.57E-05	sn	1.16E-15
BX-110	3.30E+10	1.26E+03	1.69E-03		1.48E-15	4.10E+09	6.48E-03	8.64E-09		1.85E-16	8.10E+11	3.52E+02	1.29E-06	sn	9.54E-17
BX-111	3.70E+10	1.42E+03	1.78E-03		1.56E-15	1.50E+09	2.37E-03	2.97E-09		6.35E-17	8.20E+10	3.57E+01	1.38E-06	sn	1.02E-16
BX-112	3.70E+08	1.42E+01	2.27E-05		1.99E-17	3.70E+09	5.85E-03	9.36E-09		2.00E-16	4.40E+11	1.91E+02	1.85E-04	sn	1.37E-14
BY-101	3.70E+10	1.42E+03	1.02E-03		8.95E-16	4.40E+09	6.95E-03	5.00E-09		1.07E-16	1.90E+09	8.26E-01	5.95E-07		4.41E-17
BY-102	1.50E+10	5.75E+02	4.45E-04		3.91E-16	7.70E+09	1.22E-02	9.42E-09		2.02E-16	2.20E+08	9.57E-02	7.41E-08		5.49E-18
BY-103	2.30E+09	8.81E+01	5.82E-05		5.10E-17	7.40E+11	1.17E+00	7.72E-07		1.65E-14	4.00E+13	1.74E+04	1.15E-02		8.51E-13
BY-104	3.70E+10	1.42E+03	9.23E-04		8.09E-16	1.50E+12	2.37E+00	1.54E-06		3.30E-14	8.50E+12	3.70E+03	2.40E-03		1.78E-13
BY-105	3.70E+10	1.42E+03	7.45E-04		6.53E-16	3.70E+11	5.85E-01	3.07E-07		6.57E-15	4.00E+12	1.74E+03	9.13E-04		6.77E-14
BY-106	3.70E+10	1.42E+03	5.83E-04		5.12E-16	3.70E+11	5.85E-01	2.41E-07		5.15E-15	1.30E+12	5.65E+02	2.33E-04		1.72E-14
BY-107	1.90E+10	7.28E+02	7.23E-04		6.34E-16	2.60E+11	4.11E-01	4.08E-07		8.73E-15	1.30E+12	5.65E+02	5.61E-04		4.16E-14
BY-108	2.60E+10	9.96E+02	1.15E-03		1.01E-15	3.70E+11	5.85E-01	6.77E-07		1.45E-14	2.30E+12	1.00E+03	1.16E-03		8.59E-14
BY-109	1.50E+10	5.75E+02	3.59E-04		3.15E-16	3.90E+09	6.16E-03	3.85E-09		8.24E-17	6.60E+07	2.87E-02	1.79E-08		1.33E-18
BY-110	3.70E+10	1.42E+03	9.46E-04		8.29E-16	3.70E+11	5.85E-01	3.90E-07		8.35E-15	2.30E+12	1.00E+03	6.67E-04		4.94E-14
BY-111	3.70E+10	1.42E+03	8.16E-04		7.16E-16	4.40E+09	6.95E-03	4.00E-09		8.56E-17	9.30E+09	4.04E+00	2.33E-06		1.72E-16
BY-112	7.40E+09	2.84E+02	2.57E-04		2.26E-16	3.80E+09	6.00E-03	5.45E-09		1.17E-16	6.00E+07	2.61E-02	2.37E-08		1.76E-18
C-101	7.40E+09	2.84E+02	8.51E-04		7.47E-16	7.40E+10	1.17E-01	3.51E-07		7.51E-15	4.80E+12	2.09E+03	6.27E-03		4.64E-13
C-102	2.60E+08	9.96E+00	6.22E-06		5.46E-18	1.90E+12	3.00E+00	1.87E-06		4.01E-14	9.30E+13	4.04E+04	9.35E-05	sn	6.93E-15
C-103	3.30E+07	1.26E+00	1.71E-06		1.50E-18	3.30E+11	5.21E-01	7.06E-07		1.51E-14	1.40E+13	6.09E+03	3.86E-04	sn	2.86E-14
C-104	1.90E+08	7.28E+00	6.52E-06		5.72E-18	1.90E+12	3.00E+00	2.69E-06		5.75E-14	4.38E+14	1.90E+05	1.24E-04	dl	9.21E-15
C-105	2.80E+09	1.07E+02	2.10E-04		1.84E-16	2.10E+12	3.32E+00	5.85E-06	mx	1.25E-13	9.50E+13	4.13E+04	6.09E-02	mx	4.51E-12
C-106	7.40E+07	2.84E+00	3.27E-06		2.87E-18	2.60E+11	4.11E-01	4.74E-07		1.01E-14	1.08E+14	4.70E+04	1.57E-02	dl	1.17E-12
C-107	2.90E+08	1.11E+01	1.07E-05		9.36E-18	1.50E+11	2.37E-01	2.28E-07		4.87E-15	1.30E+13	5.65E+03	7.43E-03	dl	5.51E-13
C-108	1.10E+07	4.21E-01	1.69E-06		1.48E-18	7.40E+10	1.17E-01	4.68E-07		1.00E-14	4.40E+12	1.91E+03	7.66E-03		5.67E-13
C-109	2.20E+08	8.43E+00	3.37E-05		2.96E-17	3.70E+09	5.85E-03	2.34E-08		5.01E-16	4.40E+10	1.91E+01	7.66E-05		5.67E-15
C-110	3.70E+06	1.42E-01	2.00E-07		1.76E-19	3.70E+11	5.85E-01	8.26E-07		1.77E-14	4.80E+12	2.09E+03	7.09E-04	sn	5.25E-14
C-111	1.90E+08	7.28E+00	3.37E-05		2.96E-17	1.10E+11	1.74E-01	8.05E-07		1.72E-14	3.00E+12	1.30E+03	6.05E-03		4.48E-13
C-112	1.60E+08	6.13E+00	1.56E-05		1.37E-17	3.70E+10	5.85E-02	1.48E-07		3.18E-15	2.60E+12	1.13E+03	3.08E-06	dl	2.28E-16
C-201	7.70E+04	2.95E-03	3.90E-07		3.42E-19	1.10E+06	1.74E-06	2.30E-10		4.91E-18	1.62E+12	7.04E+02	4.65E-02	sn	3.45E-12
C-202	1.50E+04	5.75E-04	1.52E-07		1.33E-19	3.70E+06	5.85E-06	1.54E-09		3.30E-17	2.40E+09	1.04E+00	2.76E-04		2.04E-14
C-203	1.50E+03	5.75E-05	3.04E-09		2.66E-21	7.40E+05	1.17E-06	6.18E-11		1.32E-18	2.40E+08	1.04E-01	5.51E-06		4.09E-16
C-204	3.30E+03	1.26E-04	1.11E-08		9.77E-21	1.50E+03	2.37E-09	2.09E-13		4.47E-21	4.43E+08	1.93E-01	1.16E-06	sn	8.57E-17
S-101	3.70E+09	1.42E+02	8.77E-05		7.69E-17	3.70E+11	5.85E-01	3.62E-07		7.74E-15	8.90E+12	3.87E+03	2.39E-03		1.77E-13
S-102	3.70E+06	1.42E-01	6.82E-08		5.98E-20	7.40E+10	1.17E-01	5.63E-08		1.20E-15	8.90E+11	3.87E+02	8.13E-08	sn	6.02E-18
S-103	2.60E+05	9.96E-03	1.07E-08		9.38E-21	7.40E+09	1.17E-02	1.26E-08		2.69E-16	2.00E+12	8.70E+02	1.46E-03	sn	1.08E-13
S-104	1.50E+09	5.75E+01	5.16E-05		4.53E-17	3.30E+11	5.21E-01	4.68E-07		1.00E-14	2.52E+13	1.10E+04	9.85E-03		7.30E-13
S-105	3.70E+09	1.42E+02	8.21E-05		7.20E-17	1.10E+10	1.74E-02	1.01E-08		2.15E-16	4.80E+11	2.09E+02	1.21E-04		8.96E-15
S-106	7.40E+09	2.84E+02	1.56E-04		1.37E-16	3.30E+09	5.21E-03	2.88E-09		6.15E-17	1.89E+13	8.22E+03	1.16E-06	sn	8.57E-17
S-107	1.10E+08	4.21E+00	2.96E-06		2.60E-18	1.90E+12	3.00E+00	2.11E-06		4.51E-14	4.40E+13	1.91E+04	1.34E-02		9.96E-13
S-108	7.40E+09	2.84E+02	1.24E-04		1.09E-16	1.10E+11	1.74E-01	7.60E-08		1.63E-15	1.30E+12	5.65E+02	2.47E-04		1.83E-14

Table C2-4 (Continued). SST Threshold Leakage Values - Case 2/Carcinogenic

Tank	Np-237 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Pu-238 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Pu-239/240 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L
S-109	3.70E+10	1.42E+03	7.40E-04		6.49E-16	1.60E+10	2.53E-02	1.32E-08		2.82E-16	3.52E+12	1.53E+03	7.99E-04		5.92E-14
S-110	1.10E+10	4.21E+02	2.86E-04		2.50E-16	7.40E+10	1.17E-01	7.92E-08		1.69E-15	4.00E+12	1.74E+03	1.18E-03		8.73E-14
S-111	1.10E+10	4.21E+02	1.87E-04		1.64E-16	1.10E+10	1.74E-02	7.70E-09		1.65E-16	4.00E+11	1.74E+02	7.71E-05		5.71E-15
S-112	1.50E+11	5.75E+03	2.90E-03		2.55E-15	1.10E+10	1.74E-02	8.78E-09		1.88E-16	7.62E+10	3.31E+01	1.67E-05		1.24E-15
SX-101	7.40E+07	2.84E+00	1.64E-06		1.44E-18	1.50E+12	2.37E+00	1.37E-06		2.94E-14	8.90E+12	3.87E+03	4.83E-07	dl	3.58E-17
SX-102	3.30E+07	1.26E+00	6.15E-07		5.40E-19	1.50E+11	2.37E-01	1.15E-07		2.47E-15	8.90E+11	3.87E+02	1.88E-04		1.40E-14
SX-103	7.40E+10	2.84E+03	1.15E-03		1.01E-15	4.40E+10	6.95E-02	2.82E-08		6.03E-16	2.12E+11	9.22E+01	3.74E-05		2.77E-15
SX-104	7.40E+09	2.84E+02	1.22E-04		1.07E-16	1.10E+12	1.74E+00	7.48E-07		1.60E-14	8.90E+12	3.87E+03	1.13E-05	dl	8.34E-16
SX-105	1.50E+10	5.75E+02	2.22E-04		1.95E-16	1.50E+11	2.37E-01	9.17E-08		1.96E-15	8.50E+11	3.70E+02	1.43E-04		1.06E-14
SX-106	1.90E+10	7.28E+02	3.59E-04		3.15E-16	1.80E+09	2.84E-03	1.40E-09		3.00E-17	6.60E+07	2.87E-02	1.41E-08		1.05E-18
SX-107	1.50E+08	5.75E+00	1.46E-05		1.28E-17	7.40E+11	1.17E+00	2.97E-06		6.36E-14	1.30E+13	5.65E+03	1.44E-02		1.06E-12
SX-108	1.50E+08	5.75E+00	1.87E-05		1.64E-17	7.40E+11	1.17E+00	3.81E-06		8.16E-14	1.30E+13	5.65E+03	1.84E-02		1.37E-12
SX-109	7.40E+07	2.84E+00	3.00E-06		2.63E-18	7.40E+11	1.17E+00	1.24E-06		2.64E-14	8.90E+12	3.87E+03	4.09E-03		3.03E-13
SX-110	1.50E+08	5.75E+00	2.45E-05		2.15E-17	2.20E+11	3.48E-01	1.48E-06		3.17E-14	1.40E+13	6.09E+03	2.59E-02		1.92E-12
SX-111	2.60E+08	9.96E+00	2.11E-05		1.85E-17	1.10E+12	1.74E+00	3.67E-06		7.86E-14	1.80E+13	7.83E+03	1.65E-02		1.23E-12
SX-112	8.90E+07	3.41E+00	9.79E-06		8.59E-18	7.40E+11	1.17E+00	3.36E-06		7.18E-14	8.90E+12	3.87E+03	1.11E-02		8.23E-13
SX-113	1.90E+10	7.28E+02	7.40E-03		6.49E-15	3.00E+10	4.74E-02	4.82E-07		1.03E-14	2.60E+12	1.13E+03	1.15E-02		8.51E-13
SX-114	1.90E+08	7.28E+00	1.06E-05		9.32E-18	3.70E+11	5.85E-01	8.53E-07		1.83E-14	1.90E+13	8.26E+03	1.21E-02		8.94E-13
SX-115	7.40E+09	2.84E+02	6.24E-03		5.47E-15	1.10E+11	1.74E-01	3.83E-06		8.19E-14	1.68E+13	7.30E+03	6.09E-02	mx	4.51E-12
T-101	3.00E+09	1.15E+02	2.98E-04		2.61E-16	1.10E+09	1.74E-03	4.50E-09		9.63E-17	1.07E+09	4.65E-01	4.09E-06	sn	3.03E-16
T-102	3.70E+07	1.42E+00	1.17E-05		1.03E-17	1.90E+07	3.00E-05	2.48E-10		5.30E-18	1.20E+06	5.22E-04	3.94E-06	sn	2.92E-16
T-103	2.20E+08	8.43E+00	8.25E-05		7.23E-17	3.00E+09	4.74E-03	4.64E-08		9.92E-16	4.40E+09	1.91E+00	1.06E-05	sn	7.83E-16
T-104	3.80E+08	1.46E+01	8.64E-06		7.58E-18	7.40E+10	1.17E-01	6.94E-08		1.49E-15	2.19E+13	9.52E+03	5.65E-03		4.19E-13
T-105	7.40E+06	2.84E-01	7.80E-07		6.84E-19	7.40E+11	1.17E+00	3.22E-06		6.89E-14	8.50E+12	3.70E+03	1.02E-02		7.54E-13
T-106	2.30E+07	8.81E-01	1.11E-05		9.72E-18	1.10E+11	1.74E-01	2.19E-06		4.68E-14	1.58E+12	6.87E+02	8.64E-03		6.40E-13
T-107	7.40E+05	2.84E-02	4.16E-08		3.65E-20	3.30E+09	5.21E-03	7.65E-09		1.64E-16	2.10E+12	9.13E+02	1.93E-04	sn	1.43E-14
T-108	7.40E+07	2.84E+00	1.70E-05		1.49E-17	3.00E+08	4.74E-04	2.85E-09		6.09E-17	2.10E+11	9.13E+01	1.05E-04	sn	7.76E-15
T-109	2.60E+08	9.96E+00	4.54E-05		3.98E-17	7.40E+07	1.17E-04	5.33E-10		1.14E-17	2.10E+10	9.13E+00	4.64E-05	sn	3.44E-15
T-110	2.60E+06	9.96E-02	6.94E-08		6.09E-20	1.50E+10	2.37E-02	1.65E-08		3.54E-16	8.10E+12	3.52E+03	1.25E-05	sn	9.28E-16
T-111	3.70E+06	1.42E-01	8.27E-08		7.25E-20	2.60E+10	4.11E-02	2.40E-08		5.13E-16	4.40E+12	1.91E+03	1.12E-03		8.27E-14
T-112	1.10E+07	4.21E-01	1.66E-06		1.46E-18	3.70E+11	5.85E-01	2.30E-06		4.93E-14	8.90E+12	3.87E+03	2.98E-05	sn	2.21E-15
T-201															
T-202	1.50E+04	5.75E-04	7.23E-09		6.34E-21	7.40E+07	1.17E-04	1.47E-09		3.15E-17	1.30E+10	5.65E+00	7.11E-05		5.27E-15
T-203	1.50E+05	5.75E-03	4.34E-08		3.80E-20	7.40E+08	1.17E-03	8.82E-09		1.89E-16	1.30E+11	5.65E+01	4.27E-04		3.16E-14
T-204											4.50E+10	1.96E+01	1.30E-03	dl	9.67E-14
TX-101	3.00E+02	1.15E-05	3.49E-11		3.06E-23	1.10E+07	1.74E-05	5.28E-11		1.13E-18	2.00E+07	8.70E-03	2.64E-08		1.96E-18
TX-102	7.40E+08	2.84E+01	3.45E-05		3.03E-17	3.70E+06	5.85E-06	7.12E-12		1.52E-19	3.80E+06	1.65E-03	2.01E-09		1.49E-19
TX-103	1.50E+08	5.75E+00	9.67E-06		8.48E-18	1.90E+07	3.00E-05	5.05E-11		1.08E-18	8.08E+11	3.51E+02	1.99E-04	sn	1.47E-14
TX-104	1.90E+02	7.28E-06	2.96E-11		2.59E-23	1.92E+12	3.03E+00	5.85E-06	mx	1.25E-13	1.50E+07	6.52E-03	3.16E-04	sn	2.34E-14
TX-105	7.40E+09	2.84E+02	1.23E-04		1.08E-16	3.00E+07	4.74E-05	2.06E-11		4.40E-19	3.10E+07	1.35E-02	5.85E-09		4.33E-19
TX-106	1.50E+09	5.75E+01	3.35E-05		2.94E-17	3.70E+05	5.85E-07	3.41E-13		7.30E-21	2.60E+05	1.13E-04	6.59E-11		4.89E-21
TX-107	7.40E+01	2.84E-06	2.08E-11		1.82E-23	7.40E+03	1.17E-08	8.58E-14		1.84E-21	1.36E+13	5.91E+03	2.25E-03	sn	1.67E-13
TX-108	3.00E+09	1.15E+02	2.27E-04		1.99E-16	3.70E+09	5.85E-03	1.15E-08		2.47E-16	2.60E+10	1.13E+01	2.23E-05		1.65E-15
TX-109	7.40E+10	2.84E+03	2.06E-03		1.80E-15	1.90E+11	3.00E-01	2.18E-07		4.66E-15	8.50E+12	3.70E+03	2.68E-03		1.99E-13
TX-110	3.00E+10	1.15E+03	6.57E-04		5.76E-16	7.70E+09	1.22E-02	6.96E-09		1.49E-16	4.40E+11	1.91E+02	1.09E-04		8.11E-15
TX-111	3.70E+09	1.42E+02	1.01E-04		8.88E-17	7.70E+08	1.22E-03	8.69E-10		1.86E-17	4.40E+10	1.91E+01	1.37E-05		1.01E-15
TX-112	3.00E+09	1.15E+02	4.68E-05		4.10E-17	3.00E+07	4.74E-05	1.93E-11		4.13E-19	2.50E+09	1.09E+00	4.42E-07		3.28E-17
TX-113	1.10E+09	4.21E+01	1.83E-05		1.61E-17	1.10E+10	1.74E-02	7.56E-09		1.62E-16	2.20E+12	9.57E+02	4.16E-04		3.09E-14
TX-114	3.00E+09	1.15E+02	5.68E-05		4.98E-17	3.70E+09	5.85E-03	2.89E-09		6.18E-17	2.20E+11	9.57E+01	4.72E-05		3.50E-15
TX-115	1.10E+09	4.21E+01	1.74E-05		1.53E-17	2.20E+09	3.48E-03	1.43E-09		3.07E-17	2.20E+10	9.57E+00	3.95E-06		2.93E-16
TX-116	7.40E+08	2.84E+01	1.19E-05		1.04E-17	1.70E+08	2.69E-04	1.12E-10		2.41E-18	2.80E+04	1.22E-05	5.10E-12		3.78E-22
TX-117	3.00E+08	1.15E+01	4.85E-06		4.25E-18	7.40E+08	1.17E-03	4.93E-10		1.06E-17	3.70E+05	1.61E-04	6.79E-11		5.03E-21
TX-118	7.40E+10	2.84E+03	2.16E-03		1.89E-15	7.40E+11	1.17E+00	8.90E-07		1.90E-14	4.00E+13	1.74E+04	2.84E-05	sn	2.11E-15
TY-101	2.70E+08	1.03E+01	2.32E-05		2.03E-17	5.15E+12	8.14E+00	5.85E-06	mx	1.25E-13	9.80E+12	4.26E+03	9.54E-03		7.07E-13
TY-102	2.20E+10	8.43E+02	3.48E-03		3.05E-15	1.90E+10	3.00E-02	1.24E-07		2.65E-15	2.69E+15	1.17E+06	6.09E-02	mx	4.51E-12
TY-103	7.40E+10	2.84E+03	4.62E-03		4.06E-15	3.70E+12	5.85E+00	5.85E-06	mx	1.25E-13	1.30E+13	5.65E+03	9.22E-03		6.83E-13
TY-104	7.50E+07	2.87E+00	1.65E-05		1.45E-17	2.20E+10	3.48E-02	2.00E-07		4.27E-15	1.80E+12	7.83E+02	3.07E-05	sn	2.28E-15
TY-105	1.10E+09	4.21E+01	4.82E-05		4.23E-17	1.90E+10	3.00E-02	3.43E-08		7.35E-16	2.90E+12	1.26E+03	1.44E-03		1.07E-13
TY-106	1.10E+06	4.21E-02	6.55E-07		5.74E-19	2.20E+09	3.48E-03	5.40E-08		1.16E-15	3.30E+11	1.43E+02	2.23E-03		1.65E-13
U-101	3.00E+09	1.15E+02	1.21E-03		1.07E-15	7.40E+09	1.17E-02	1.24E-07		2.64E-15	8.90E+10	3.87E+01	4.09E-04		3.03E-14
U-102	7.40E+09	2.84E+02	2.00E-04		1.76E-16	9.60E+07	1.52E-04	1.07E-10		2.29E-18	2.20E+12	9.57E+02	2.07E-04	sn	1.53E-14
U-103	1.10E+06	4.21E-02	2.38E-08		2.09E-20	3.70E+08	5.85E-04	3.30E-10		7.06E-18	2.68E+10	1.17E+01	6.58E-06		4.87E-16
U-104	1.50E+01	5.75E-07	1.24E-12		1.09E-24	7.40E+02	1.17E-09	2.53E-15		5.42E-23	3.41E+10	1.48E+01	3.21E-05		2.38E-15
U-105	1.50E+06	5.75E-02	3.63E-08		3.19E-20	3.30E+08	5.21E-04	3.30E-10		7.05E-18	6.80E+12	2.96E+03	1.87E-03		1.38E-13
U-106	1.10E+01	4.21E-07	4.93E-13		4.32E-25	7.40E+05	1.17E-06	1.37E-12		2.92E-20	2.81E+09	1.22E+00	9.26E-07	sn	6.86E-17
U-107	7.40E+09	2.84E+02	1.85E-04		1.62E-16	1.10E+09	1.74E-03	1.13E-09		2.42E-17	1.04E+12	4.52E+02	2.94E-04		2.18E-14
U-108	4.80E+06	1.84E-01	1.04E-07		9.14E-20	1.50E+10	2.37E-02	1.34E-08		2.88E-16	9.11E+11	3.96E+02	2.25E-04		1.66E-14
U-109	3.70E+08	1.42E+01	8.09E-06		7.09E-18	1.50E+09	2.37E-03	1.35E-09		2.89E-17	5.28E+11	2.30E+02	6.09E-02	sn	4.51E-12
U-110	7.00E+07	2.68E+00	3.81E-06		3.34E-18	1.50E+12	2.37E+00	3.37E-06		7.20E-14	1.50E+12	6.52E+02	9.26E-04		6.86E-14
U-111	1.90E+09	7.28E+01	5.85E-05		5.13E-17	3.80E+09	6.00E-03	4.82E-09		1.03E-16	9.30E+10	4.04E+01	3.25E-05		2.41E-15
U-112	3.70E+09	1.42E+02	7.64E-04		6.70E-16	2.60E+09	4.11E-03	2.21E-08		4.74E-16	1.30E+10	5.65E+00	3.05E-05		2.26E-15
U-201	7.40E+08	2.84E+01	1.50E-03		1.31E-15	7.40E+07	1.17E-04	6.18E-09		1.32E-16	1.80E+05	7.83E-05	4.14E-09		3.06E-19
U-202	7.40E+08	2.84E+01	1.50E-03		1.31E-15	1.10E+08	1.74E-04	9.18E-09		1.97E-16	2.20E+05	9.57E-05	9.87E-07	sn	7.31E-17
U-203	7.40E+08	2.84E+01	2.50E-03		2.19E-15	1.10E+08	1.74E-04	1.53E-08		3.28E-16	2.20E+05	9.57E-05	8.42E-09		6.24E-19
U-204	1.90E+08	7.28E+00	6.41E-04		5.62E-16	3.70E+07	5.85E-05	5.15E-09		1.10E-16	2.20E+10	9.57E+00	8.42E-04		6.24E-14

Table C2-4 (Continued). SST Threshold Leakage Values - Case 2/Carcinogenic

Tank	Pu-241 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	As g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Cr g	Solubility g/L	Basis Note 1	Sp. Risk R/L
A-101	2.20E+14	5.88E+01	9.90E-07	mx	7.61E-12					1.00E-02	2.77E-09		3.27E-25
A-102	2.60E+13	6.95E+00	9.90E-07	mx	7.61E-12					2.10E+05	4.26E-02	sn	5.03E-18
A-103	3.70E+13	9.89E+00	9.90E-07	mx	7.61E-12					2.79E+06	3.33E-01	dl	3.93E-17
A-104	3.70E+13	9.89E+00	9.90E-07	mx	7.61E-12					2.60E-35	2.45E-40		2.89E-56
A-105	7.50E+04	2.01E-08	2.79E-13		2.14E-18					3.10E-17	4.31E-22		5.09E-38
A-106	1.10E+14	2.94E+01	9.90E-07	mx	7.61E-12					3.87E+06	1.16E+00	dl	1.37E-16
AX-101	3.70E+13	9.89E+00	9.90E-07	mx	7.61E-12					1.00E+06	3.53E-01		4.17E-17
AX-102	2.60E+13	6.95E+00	9.90E-07	mx	7.61E-12					5.20E+05	2.08E-01	sn	2.45E-17
AX-103	3.30E+06	8.82E-07	2.08E-12		1.60E-17					5.20E+03	1.23E-02		1.45E-18
AX-104	3.70E+13	9.89E+00	9.90E-07	mx	7.61E-12					4.70E+06	1.00E+01	mx	1.18E-15
B-101	3.70E+13	9.89E+00	9.90E-07	mx	7.61E-12					3.60E+05	8.42E-01		9.93E-17
B-102	1.10E+13	2.94E+00	9.90E-07	mx	7.61E-12					1.60E+04	1.32E-01		1.56E-17
B-103	2.20E+13	5.88E+00	9.90E-07	mx	7.61E-12					2.10E+03	9.40E-03		1.11E-18
B-104	7.40E+11	1.98E-01	1.41E-07		1.08E-12					1.00E+06	7.12E-01		8.40E-17
B-105	7.40E+10	1.98E-02	1.71E-08		1.31E-13					1.00E+05	8.63E-02		1.02E-17
B-106	7.40E+09	1.98E-03	4.47E-09		3.44E-14					1.00E+04	2.26E-02		2.66E-18
B-107	1.90E+11	5.08E-02	8.13E-08		6.26E-13					5.20E+05	8.33E-01		9.83E-17
B-108	1.90E+10	5.08E-03	1.43E-08		1.10E-13					5.20E+04	1.46E-01		1.72E-17
B-109	1.90E+09	5.08E-04	1.06E-09		8.13E-15					5.20E+03	1.08E-02		1.28E-18
B-110	2.60E+13	6.95E+00	9.90E-07	mx	7.61E-12					1.60E+06	1.72E+00		2.03E-16
B-111	1.10E+12	2.94E-01	3.28E-07		2.52E-12					4.20E+05	4.68E-01		5.52E-17
B-112	1.10E+11	2.94E-02	2.35E-07		1.81E-12					4.20E+04	3.36E-01		3.97E-17
B-201													
B-202	1.90E+13	5.08E+00	9.90E-07	mx	7.61E-12	9.36E+01	9.16E-04		2.53E-18	8.79E+04	8.60E-01		1.01E-16
B-203	3.00E+10	8.02E-03	4.16E-08		3.20E-13					2.10E+04	1.09E-01		1.28E-17
B-204	3.00E+11	8.02E-02	4.24E-07		3.26E-12					2.10E+05	1.11E+00		1.31E-16
BX-101	1.10E+14	2.94E+01	9.90E-07	mx	7.61E-12					1.60E+01	9.83E-05		1.16E-20
BX-102	7.40E+12	1.98E+00	9.90E-07	mx	7.61E-12					1.00E+00	2.75E-06		3.25E-22
BX-103	7.40E+07	1.98E-05	7.92E-11		6.09E-16					1.60E-04	6.40E-10		7.56E-26
BX-104	7.40E+12	1.98E+00	9.90E-07	mx	7.61E-12					2.45E+06	9.25E-01	dl	1.09E-16
BX-105	8.70E+07	2.33E-05	1.21E-10		9.27E-16					8.11E+05	2.05E-01	sn	2.42E-17
BX-106	1.40E+08	3.74E-05	2.15E-10		1.65E-15					6.82E+04	1.20E+00	sn	1.42E-16
BX-107	3.70E+11	9.89E-02	7.58E-08		5.83E-13					5.20E+05	3.43E-01	sn	4.05E-17
BX-108	3.70E+10	9.89E-03	1.01E-07		7.73E-13					5.20E+04	5.28E-01		6.24E-17
BX-109	7.40E+11	1.98E-01	2.71E-07		2.08E-12					5.20E+03	1.03E-01	sn	1.22E-17
BX-110	2.60E+11	6.95E-02	9.28E-08		7.13E-13					3.60E+05	9.72E-01	sn	1.15E-16
BX-111	2.60E+10	6.95E-03	8.70E-09		6.69E-14					3.60E+04	4.75E-01	sn	5.61E-17
BX-112	3.70E+11	9.89E-02	1.58E-07		1.22E-12					2.10E+05	3.17E-01	sn	3.74E-17
BY-101	7.40E+08	1.98E-04	1.42E-10		1.10E-15					3.10E-11	2.23E-17		2.63E-33
BY-102	7.50E+07	2.01E-05	1.55E-11		1.19E-16	9.99E+01	1.76E-06	sn	4.86E-21	2.96E+04	5.21E-01	sn	6.15E-17
BY-103	1.10E+14	2.94E+01	9.90E-07	mx	7.61E-12	7.36E+02	1.80E-06	dl	4.97E-21	1.53E+05	3.74E-01	dl	4.41E-17
BY-104	3.70E+12	9.89E-01	6.44E-07		4.95E-12					4.07E+07	1.00E+01	mx	1.18E-15
BY-105	3.00E+12	8.02E-01	4.21E-07		3.24E-12	6.61E+01	9.00E-08	dl	2.48E-22	2.60E+05	2.36E-01	dl	2.78E-17
BY-106	1.50E+12	4.01E-01	1.65E-07		1.27E-12	1.78E+03	2.00E-03	dl	5.52E-18	3.59E+05	4.04E-01	dl	4.77E-17
BY-107	1.10E+12	2.94E-01	2.92E-07		2.25E-12					1.00E+05	9.93E-02		1.17E-17
BY-108	1.50E+12	4.01E-01	4.65E-07		3.57E-12					1.00E+04	1.16E-02		1.37E-18
BY-109	1.60E+07	4.28E-06	2.67E-12		2.05E-17	4.63E+01	7.20E-07	sn	1.99E-21	3.52E+04	5.46E-01	sn	6.44E-17
BY-110	2.20E+12	5.88E-01	3.92E-07		3.02E-12					1.00E+05	6.67E-02		7.87E-18
BY-111	1.10E+10	2.94E-03	1.69E-09		1.30E-14					5.70E-11	3.28E-17		3.87E-33
BY-112	3.00E+07	8.02E-06	7.28E-12		5.60E-17					1.26E+05	1.14E-01		1.35E-17
C-101	1.10E+13	2.94E+00	9.90E-07	mx	7.61E-12					5.20E-15	1.56E-20		1.84E-36
C-102	2.60E+14	6.95E+01	9.90E-07	mx	7.61E-12	2.61E+01	2.30E-06	sn	6.35E-21	6.32E+02	5.57E-02	sn	6.57E-18
C-103	3.70E+13	9.89E+00	9.90E-07	mx	7.61E-12	6.04E+01	1.20E-07	sn	3.31E-22	3.81E+04	7.57E-02	sn	8.93E-18
C-104	1.10E+14	2.94E+01	9.90E-07	mx	7.61E-12					1.36E+06	1.22E+00		1.44E-16
C-105	1.30E+14	3.48E+01	9.90E-07	mx	7.61E-12	2.95E+05	3.45E-01	mx	9.52E-16	1.29E+06	2.52E+00		2.98E-16
C-106	2.60E+13	6.95E+00	9.90E-07	mx	7.61E-12	4.68E+05	3.45E-01	mx	9.52E-16	2.10E+06	2.42E+00		2.86E-16
C-107	2.20E+13	5.88E+00	9.90E-07	mx	7.61E-12	6.44E+01	5.00E-07	dl	1.38E-21	4.70E+05	3.22E-01	dl	3.80E-17
C-108	7.40E+12	1.98E+00	9.90E-07	mx	7.61E-12					5.20E+04	2.08E-01		2.46E-17
C-109	3.70E+09	9.89E-04	3.96E-09		3.05E-14					1.00E+04	4.00E-02		4.72E-18
C-110	7.40E+12	1.98E+00	9.90E-07	mx	7.61E-12	9.46E+00	5.00E-07	sn	1.38E-21	5.20E+05	3.07E-01	sn	3.62E-17
C-111	3.70E+12	9.89E-01	9.90E-07	mx	7.61E-12					5.20E+04	2.41E-01		2.84E-17
C-112	3.70E+12	9.89E-01	9.90E-07	mx	7.61E-12					5.20E+03	1.32E-02		1.56E-18
C-201	1.10E+08	2.94E-05	3.89E-09		2.99E-14								
C-202	2.60E+08	6.95E-05	1.84E-08		1.41E-13								
C-203	2.60E+07	6.95E-06	3.67E-10		2.82E-15								
C-204	1.10E+05	2.94E-08	2.59E-12		1.99E-17								
S-101	7.40E+12	1.98E+00	9.90E-07	mx	7.61E-12					4.20E+07	1.00E+01	mx	1.18E-15
S-102	7.40E+11	1.98E-01	9.52E-08		7.32E-13					4.20E+06	2.02E+00		2.39E-16
S-103	1.10E+11	2.94E-02	3.16E-08		2.43E-13					4.70E+05	5.05E-01		5.96E-17
S-104	7.40E+12	1.98E+00	9.90E-07	mx	7.61E-12					4.70E+07	1.00E+01	mx	1.18E-15
S-105	7.40E+11	1.98E-01	1.15E-07		8.82E-13					4.20E+06	2.43E+00		2.87E-16
S-106	7.40E+10	1.98E-02	1.09E-08		8.39E-14					4.70E+05	2.59E-01		3.06E-17
S-107	7.40E+13	1.98E+01	9.90E-07	mx	7.61E-12					3.60E+07	1.00E+01	mx	1.18E-15
S-108	2.20E+12	5.88E-01	2.57E-07		1.98E-12					3.60E+06	1.57E+00		1.86E-16

Table C2-4 (Continued). SST Threshold Leakage Values - Case 2/Carcinogenic

Tank	Pu-241 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	As g	Solubility g/L	Basis Note 1	Sp. Risk R/L	Cr g	Solubility g/L	Basis Note 1	Sp. Risk R/L
S-109	2.20E+11	5.88E-02	3.07E-08		2.36E-13					2.37E+06	1.24E+00		1.46E-16
S-110	3.70E+12	9.89E-01	6.70E-07		5.15E-12					3.60E+07	1.00E+01	mx	1.18E-15
S-111	3.70E+11	9.89E-02	4.39E-08		3.37E-13					3.96E+06	1.76E+00		2.07E-16
S-112	3.70E+10	9.89E-03	5.00E-09		3.84E-14					4.30E+05	2.17E-01		2.56E-17
SX-101	7.40E+12	1.98E+00	9.90E-07	mx	7.61E-12					5.20E+07	3.33E-01	dl	3.93E-17
SX-102	7.40E+11	1.98E-01	9.63E-08		7.40E-13					5.20E+06	2.53E+00		2.99E-16
SX-103	1.10E+11	2.94E-02	1.19E-08		9.17E-14					1.70E+06	6.89E-01		8.13E-17
SX-104	7.40E+12	1.98E+00	8.51E-07		6.55E-12					5.20E+07	1.56E-01	dl	1.84E-17
SX-105	7.40E+11	1.98E-01	7.65E-08		5.89E-13					5.34E+06	2.07E+00		2.44E-16
SX-106	4.10E+07	1.10E-05	5.40E-12		4.16E-17					1.00E+03	4.93E-04		5.82E-20
SX-107	1.90E+13	5.08E+00	9.90E-07	mx	7.61E-12					5.20E+07	1.00E+01	mx	1.18E-15
SX-108	2.20E+13	5.88E+00	9.90E-07	mx	7.61E-12					5.20E+07	1.00E+01	mx	1.18E-15
SX-109	1.10E+13	2.94E+00	9.90E-07	mx	7.61E-12					5.20E+07	1.00E+01	mx	1.18E-15
SX-110	3.00E+13	8.02E+00	9.90E-07	mx	7.61E-12					3.60E+07	1.00E+01	mx	1.18E-15
SX-111	3.70E+13	9.89E+00	9.90E-07	mx	7.61E-12					5.20E+07	1.00E+01	mx	1.18E-15
SX-112	1.50E+13	4.01E+00	9.90E-07	mx	7.61E-12					4.70E+07	1.00E+01	mx	1.18E-15
SX-113	3.00E+12	8.02E-01	9.90E-07	mx	7.61E-12					1.00E+07	1.00E+01	mx	1.18E-15
SX-114	3.30E+13	8.82E+00	9.90E-07	mx	7.61E-12					5.20E+07	1.00E+01	mx	1.18E-15
SX-115	7.40E+12	1.98E+00	9.90E-07	mx	7.61E-12					2.10E+07	1.00E+01	mx	1.18E-15
T-101	7.80E+06	2.09E-06	5.40E-12		4.15E-17					1.74E+05	1.53E+00	sn	1.81E-16
T-102	8.50E+04	2.27E-08	1.88E-13		1.44E-18					4.20E-12	3.47E-17		4.09E-33
T-103	3.00E+09	8.02E-04	7.85E-09		6.04E-14					5.20E-13	5.09E-18		6.00E-34
T-104	3.70E+12	9.89E-01	5.87E-07		4.52E-12					2.99E+06	1.78E+00		2.09E-16
T-105	7.40E+12	1.98E+00	9.90E-07	mx	7.61E-12					3.60E+05	9.91E-01		1.17E-16
T-106	7.40E+11	1.98E-01	9.90E-07	mx	7.61E-12					3.60E+04	4.53E-01		5.34E-17
T-107	1.90E+11	5.08E-02	7.46E-08		5.73E-13					5.20E+05	2.12E-01	sn	2.50E-17
T-108	1.90E+10	5.08E-03	3.05E-08		2.35E-13					5.20E+04	3.12E-01		3.68E-17
T-109	2.20E+09	5.88E-04	2.68E-09		2.06E-14					5.20E+03	2.37E-02		2.80E-18
T-110	1.50E+12	4.01E-01	2.80E-07		2.15E-12					1.00E+06	6.97E-01		8.23E-17
T-111	3.70E+12	9.89E-01	5.77E-07		4.44E-12					1.60E+06	9.33E-01		1.10E-16
T-112	7.40E+12	1.98E+00	9.90E-07	mx	7.61E-12					1.60E+06	5.62E-01	sn	6.63E-17
T-201													
T-202	1.10E+10	2.94E-03	3.70E-08		2.85E-13					1.00E+04	1.26E-01		1.48E-17
T-203	1.10E+11	2.94E-02	2.22E-07		1.71E-12					1.00E+05	7.55E-01		8.91E-17
T-204										1.62E+04	1.07E+00	dl	1.26E-16
TX-101	3.70E+06	9.89E-07	3.00E-12		2.31E-17					1.60E-05	4.86E-11		5.73E-27
TX-102	1.90E+04	5.08E-09	6.19E-15		4.76E-20					3.70E-12	4.50E-18		5.32E-34
TX-103	1.10E+05	2.94E-08	4.95E-14		3.81E-19					1.60E-13	2.69E-19		3.18E-35
TX-104	3.70E+06	9.89E-07	4.02E-12		3.09E-17					2.10E-20	8.54E-26		1.01E-41
TX-105	1.20E+08	3.21E-05	1.39E-11		1.07E-16					2.60E-11	1.13E-17		1.33E-33
TX-106	1.90E+03	5.08E-10	2.96E-16		2.28E-21					2.10E-12	1.22E-18		1.45E-34
TX-107	7.40E+04	1.98E-08	1.45E-13		1.12E-18								
TX-108	3.70E+10	9.89E-03	1.95E-08		1.50E-13					2.60E-11	5.13E-17		6.05E-33
TX-109	3.70E+12	9.89E-01	7.18E-07		5.52E-12					1.60E+06	1.16E+00		1.37E-16
TX-110	3.30E+11	8.82E-02	5.05E-08		3.88E-13					1.60E+05	9.15E-02		1.08E-17
TX-111	3.30E+10	8.82E-03	6.30E-09		4.85E-14					1.60E+04	1.14E-02		1.35E-18
TX-112	7.40E+08	1.98E-04	8.05E-11		6.19E-16					1.00E+03	4.07E-04		4.80E-20
TX-113	1.10E+12	2.94E-01	1.28E-07		9.84E-13					5.20E+05	2.26E-01		2.67E-17
TX-114	1.10E+11	2.94E-02	1.45E-08		1.12E-13					5.20E+04	2.57E-02		3.03E-18
TX-115	1.10E+10	2.94E-03	1.21E-09		9.34E-15					1.00E+04	4.13E-03		4.87E-19
TX-116	4.10E+01	1.10E-11	4.59E-18		3.53E-23					2.60E-10	1.09E-16		1.28E-32
TX-117	7.40E+02	1.98E-10	8.35E-17		6.42E-22					2.60E-06	1.10E-12		1.29E-28
TX-118	1.50E+14	4.01E+01	9.90E-07	mx	7.61E-12					5.20E+03	3.96E-03		4.67E-19
TY-101	1.10E+13	2.94E+00	9.90E-07	mx	7.61E-12					6.15E+06	1.00E+01	mx	1.18E-15
TY-102	1.50E+11	4.01E-02	1.66E-07		1.27E-12					2.05E+04	8.46E-02		9.99E-18
TY-103	7.40E+12	1.98E+00	9.90E-07	mx	7.61E-12					6.32E+05	1.03E+00		1.22E-16
TY-104	3.70E+11	9.89E-02	5.68E-07		4.37E-12					2.15E+04	1.89E+00	sn	2.23E-16
TY-105	7.40E+11	1.98E-01	2.26E-07		1.74E-12					1.60E-14	1.83E-20		2.16E-36
TY-106	7.40E+10	1.98E-02	3.08E-07		2.36E-12					7.22E+03	1.12E-01		1.32E-17
U-101	1.10E+11	2.94E-02	3.11E-07		2.39E-12					3.10E-04	3.28E-09		3.87E-25
U-102	7.80E+05	2.09E-07	1.47E-13		1.13E-18					9.69E+03	5.62E-03	sn	6.63E-19
U-103	1.10E+04	2.94E-09	1.66E-15		1.28E-20					5.09E+02	2.87E-04		3.39E-20
U-104	3.70E+03	9.89E-10	2.14E-15		1.65E-20								
U-105	2.60E+09	6.95E-04	4.39E-10		3.38E-15					4.20E-15	2.65E-21		3.13E-37
U-106	1.90E+04	5.08E-09	5.94E-15		4.57E-20					3.60E-13	4.21E-19		4.97E-35
U-107	1.20E+07	3.21E-06	2.09E-12		1.61E-17					4.20E+02	2.73E-04		3.23E-20
U-108	1.50E+12	4.01E-01	2.27E-07		1.75E-12					1.00E-15	5.67E-22		6.69E-38
U-109	2.60E+09	6.95E-04	3.97E-10		3.05E-15					2.60E-12	1.48E-18		1.75E-34
U-110	1.10E+13	2.94E+00	9.90E-07	mx	7.61E-12					2.10E+07	1.00E+01	mx	1.18E-15
U-111	1.10E+11	2.94E-02	2.36E-08		1.82E-13					2.10E+06	1.69E+00		1.99E-16
U-112	1.10E+10	2.94E-03	1.59E-08		1.22E-13					2.60E+05	1.40E+00		1.65E-16
U-201	5.90E+02	1.58E-10	8.34E-15		6.41E-20					4.70E-11	2.48E-15		2.93E-31
U-202	7.40E+02	1.98E-10	1.05E-14		8.04E-20					4.10E-12	2.17E-16		2.56E-32
U-203	6.70E+02	1.79E-10	1.58E-14		1.21E-19					4.00E-12	3.52E-16		4.16E-32
U-204	2.60E+02	6.95E-11	6.12E-15		4.71E-20					2.98E+03	2.62E-01		3.10E-17

Table C2-5. SST Threshold Leakage Values - Case 2/Toxicant

Tank	Vol. (L)	Toxicant Threshold Leakage L	Gal.	NO3 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	EDTA g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
A-101	3.61E+06	3.83E+04	1.01E+04	1.20E+09	2.02E+02	dl	1.55E-07	2.90E-36	8.04E-43		4.04E-49
A-102	1.55E+05	8.60E+04	2.27E+04	1.40E+09	1.29E+02	sn	9.92E-08	1.80E+07	2.81E-02	mx	1.41E-08
A-103	1.40E+06	5.78E+04	1.53E+04	3.26E+08	2.03E+02	dl	1.56E-07	1.80E+05	2.81E-02	mx	1.41E-08
A-104	1.06E+05	3.18E+04	8.39E+03	1.40E+09	4.09E+02	mx	3.15E-07				
A-105	7.19E+04	1.28E+05	3.39E+04	6.20E+06	8.62E+01		6.63E-08				
A-106	4.73E+05	5.89E+04	1.55E+04	1.90E+00	1.95E+02	dl	1.50E-07	1.80E-02	3.80E-08		1.91E-14
AX-101	2.83E+06	3.91E+04	1.03E+04	2.96E+08	2.07E+02	sn	1.59E-07	2.30E-05	8.12E-12		4.08E-18
AX-102	1.48E+05	4.17E+04	1.10E+04	2.61E+06	2.29E+02	sn	1.76E-07	2.60E-10	1.76E-15		8.84E-22
AX-103	4.24E+05	4.83E+04	1.28E+04	5.50E+08	1.60E+02	sn	1.23E-07	5.80E+05	2.81E-02	mx	1.41E-08
AX-104	2.65E+04	1.34E+04	3.54E+03	1.80E+07	4.09E+02	mx	3.15E-07				
B-101	4.28E+05	3.18E+04	8.40E+03	5.34E+08	4.09E+02	mx	3.15E-07				
B-102	1.21E+05	9.71E+04	2.57E+04	1.20E+07	1.14E+02	sn	8.77E-08				
B-103	2.23E+05	1.27E+05	3.36E+04	3.10E+07	6.57E+01	sn	5.05E-08	1.80E+05	2.81E-02	mx	1.41E-08
B-104	1.40E+06	3.00E+05	7.94E+04	5.00E+07	3.56E+01		2.74E-08				
B-105	1.16E+06	7.64E+04	2.02E+04	1.90E+08	1.64E+02		1.26E-07				
B-106	4.43E+05	6.62E+04	1.75E+04	4.30E+07	1.86E+02	sn	1.43E-07				
B-107	6.25E+05	3.06E+04	8.10E+03	2.40E+08	3.84E+02		2.96E-07				
B-108	3.56E+05	2.82E+04	7.44E+03	2.70E+08	4.09E+02	mx	3.15E-07				
B-109	4.81E+05	6.01E+04	1.59E+04	8.32E+07	1.54E+02	sn	1.18E-07	8.80E+01	1.83E-04		9.19E-11
B-110	9.31E+05	3.91E+04	1.03E+04	3.10E+08	3.33E+02		2.56E-07				
B-111	8.97E+05	2.84E+04	7.50E+03	1.40E+09	4.09E+02	mx	3.15E-07				
B-112	1.25E+05	2.23E+04	5.90E+03	4.30E+08	4.09E+02	mx	3.15E-07				
B-201	1.10E+05	2.22E+04	5.86E+03	4.96E+06	4.52E+01		3.47E-08				
B-202	1.02E+05	6.56E+04	1.73E+04	1.90E+07	1.86E+02		1.43E-07				
B-203	1.93E+05	1.67E+04	4.41E+03	4.26E+07	2.21E+02		1.70E-07				
B-204	1.89E+05	1.45E+05	3.82E+04	1.20E+07	6.34E+01		4.88E-08				
BX-101	1.63E+05	4.90E+04	1.29E+04	4.32E+07	2.65E+02		2.04E-07				
BX-102	3.63E+05	4.34E+04	1.15E+04	1.30E+09	1.81E+02	sn	1.39E-07				
BX-103	2.50E+05	2.90E+05	7.65E+04	3.10E+09	2.10E+01	sn	1.61E-08				
BX-104	3.75E+05	5.66E+04	1.50E+04	3.10E+09	9.92E+01	dl	7.63E-08				
BX-105	1.93E+05	6.79E+04	1.79E+04	2.70E+09	1.28E+02	sn	9.84E-08				
BX-106	1.74E+05	4.75E+04	1.25E+04	8.10E+09	1.62E+02	sn	1.25E-07	1.80E+06	2.81E-02	mx	1.41E-08
BX-107	1.31E+06	6.29E+04	1.66E+04	6.20E+07	1.64E+02	sn	1.26E-07				
BX-108	9.84E+04	6.37E+05	1.68E+05	1.20E+06	1.22E+01		9.38E-09				
BX-109	7.31E+05	3.85E+04	1.02E+04	6.20E+07	3.07E+02	sn	2.36E-07				
BX-110	7.49E+05	3.64E+04	9.61E+03	6.80E+08	3.13E+02	sn	2.41E-07				
BX-111	7.99E+05	5.45E+04	1.44E+04	6.80E+08	1.62E+02	sn	1.25E-07				
BX-112	6.25E+05	8.10E+04	2.14E+04	6.20E+07	1.24E+02	sn	9.54E-08				
BY-101	1.39E+06	2.31E+04	6.10E+03	1.10E+09	4.09E+02	mx	3.15E-07				
BY-102	1.29E+06	6.29E+04	1.66E+04	2.10E+09	1.27E+02	sn	9.77E-08				
BY-103	1.51E+06	6.91E+04	1.83E+04	5.00E+09	1.31E+02	dl	1.01E-07				
BY-104	1.54E+06	2.27E+04	6.00E+03	1.20E+09	4.09E+02	mx	3.15E-07				
BY-105	1.90E+06	4.46E+04	1.18E+04	6.20E+08	2.64E+02	dl	2.03E-07				
BY-106	2.43E+06	6.31E+04	1.67E+04	1.30E+09	1.18E+02	dl	9.07E-08				
BY-107	1.01E+06	2.73E+04	7.21E+03	3.70E+08	3.67E+02		2.83E-07				
BY-108	8.63E+05	2.42E+04	6.40E+03	5.40E+08	4.09E+02	mx	3.15E-07				
BY-109	1.60E+06	8.16E+04	2.16E+04	2.10E+09	1.01E+02	sn	7.77E-08				
BY-110	1.50E+06	2.35E+04	6.22E+03	6.20E+08	4.09E+02	mx	3.15E-07				
BY-111	1.74E+06	2.44E+04	6.45E+03	1.20E+09	4.09E+02	mx	3.15E-07				
BY-112	1.10E+06	7.55E+04	1.99E+04	8.10E+08	1.01E+02	sn	7.77E-08				
C-101	3.33E+05	3.17E+04	8.37E+03	2.70E+08	4.09E+02	mx	3.15E-07				
C-102	1.60E+06	1.87E+05	4.94E+04	4.05E+00	3.57E+01	sn	2.75E-08				
C-103	7.38E+05	2.99E+05	7.89E+04	3.70E+09	4.02E+00	sn	3.09E-09	5.80E-03	7.86E-09		3.94E-15
C-104	1.12E+06	4.35E+04	1.15E+04	3.10E+08	2.78E+02		2.14E-07	1.50E-03	1.34E-09		6.74E-16
C-105	5.11E+05	1.27E+04	3.37E+03	9.90E+08	4.09E+02	mx	3.15E-07	2.60E+05	2.81E-02	mx	1.41E-08
C-106	8.67E+05	1.68E+04	4.43E+03	1.90E+08	2.19E+02		1.69E-07				
C-107	1.04E+06	1.06E+05	2.80E+04	3.10E+07	3.68E+01	dl	2.83E-08	2.90E+05	2.81E-02	mx	1.41E-08
C-108	2.50E+05	1.37E+05	3.62E+04	2.50E+08	6.82E+01	dl	5.24E-08				
C-109	2.50E+05	6.02E+04	1.59E+04	2.50E+07	4.90E+01	dl	3.77E-08				
C-110	7.08E+05	9.48E+04	2.50E+04	2.14E+06	1.13E+02	sn	8.69E-08				
C-111	2.16E+05	1.02E+05	2.69E+04	2.06E+07	9.55E+01	sn	7.34E-08				
C-112	3.94E+05	6.91E+04	1.83E+04	1.90E+07	1.12E+02	dl	8.61E-08				
C-201	7.57E+03	7.09E+04	1.87E+04	6.67E+05	4.41E+01	sn	3.39E-08				
C-202	3.79E+03	5.98E+08	1.58E+08	1.20E-05	3.17E-09		2.44E-18				
C-203	1.89E+04	2.98E+10	7.89E+09	2.50E-03	1.32E-07		1.02E-16				
C-204	1.14E+04	8.53E+05	2.25E+05	1.77E+06	1.06E+01	sn	8.15E-09				
S-101	1.62E+06	2.62E+04	6.92E+03	7.40E+08	4.09E+02	mx	3.15E-07	8.80E+04	2.81E-02	mx	1.41E-08
S-102	2.08E+06	4.36E+04	1.15E+04	6.20E+08	2.98E+02		2.29E-07	1.80E-04	8.66E-11		4.35E-17
S-103	9.31E+05	1.08E+05	2.86E+04	3.70E+09	8.87E+01	sn	6.82E-08	1.80E-02	1.93E-08		9.70E-15
S-104	1.11E+06	2.87E+04	7.58E+03	1.40E+09	4.09E+02	mx	3.15E-07				
S-105	1.73E+06	3.13E+04	8.27E+03	1.10E+09	4.09E+02	mx	3.15E-07				
S-106	1.81E+06	3.05E+04	8.06E+03	1.50E+09	4.09E+02	mx	3.15E-07	5.80E+03	3.20E-03		1.61E-09
S-107	1.42E+06	4.06E+04	1.07E+04	6.20E+08	2.03E+02	sn	1.56E-07	5.80E-05	4.08E-11		2.05E-17
S-108	2.29E+06	4.65E+04	1.23E+04	5.80E+08	2.54E+02		1.95E-07	2.90E+05	2.81E-02	mx	1.41E-08

Table C2-5 (Continued). SST Threshold Leakage Values - Case 2/Toxicant

		Toxicant							Sp.					Sp.
		Threshold Leakage				NO3	Solubility	Basis	Risk		EDTA	Solubility	Basis	Risk
Tank	Vol. (L)	L	Gal.			g	g/L	Note 1	HI/L		g	g/L	Note 1	HI/L
S-109	1.92E+06	2.84E+04	7.50E+03			5.00E+09	4.09E+02	mx	3.15E-07		1.80E+06	2.81E-02	mx	1.41E-08
S-110	1.48E+06	2.96E+04	7.83E+03			6.60E+08	4.09E+02	mx	3.15E-07		1.20E+05	2.81E-02	mx	1.41E-08
S-111	2.26E+06	3.92E+04	1.04E+04			6.20E+08	2.75E+02		2.11E-07		1.20E+05	2.81E-02	mx	1.41E-08
S-112	1.98E+06	2.40E+04	6.35E+03			9.30E+09	4.09E+02	mx	3.15E-07		1.20E+06	2.81E-02	mx	1.41E-08
SX-101	1.73E+06	1.34E+05	3.54E+04			1.20E+09	8.99E+01	dl	6.91E-08		1.50E-05	8.69E-12		4.36E-18
SX-102	2.06E+06	2.61E+04	6.89E+03			3.70E+09	4.09E+02	mx	3.15E-07		2.30E+02	1.12E-04		5.62E-11
SX-103	2.47E+06	1.36E+04	3.59E+03			7.40E+09	4.09E+02	mx	3.15E-07		2.90E+06	2.81E-02	mx	1.41E-08
SX-104	2.32E+06	2.30E+04	6.08E+03			2.00E+09	4.09E+02	dl	3.15E-07		1.50E+05	2.81E-02	mx	1.41E-08
SX-105	2.59E+06	2.94E+04	7.77E+03			1.76E+09	4.09E+02	mx	3.15E-07		1.50E+05	2.81E-02	mx	1.41E-08
SX-106	2.03E+06	1.53E+05	4.03E+04			2.50E+08	4.44E+01	sn	3.41E-08		5.80E+06	2.81E-02	mx	1.41E-08
SX-107	3.94E+05	7.93E+04	2.10E+04			6.20E+08	1.12E+02	sn	8.61E-08					
SX-108	3.07E+05	3.18E+04	8.40E+03			1.90E+09	4.09E+02	mx	3.15E-07					
SX-109	9.46E+05	3.18E+04	8.40E+03			1.90E+09	4.09E+02	mx	3.15E-07					
SX-110	2.35E+05	3.18E+04	8.40E+03			3.10E+09	4.09E+02	mx	3.15E-07		8.80E-03	3.75E-08		1.88E-14
SX-111	4.73E+05	7.09E+04	1.87E+04			1.90E+09	1.67E+02	dl	1.28E-07					
SX-112	3.48E+05	3.18E+04	8.40E+03			5.10E+08	4.09E+02	mx	3.15E-07					
SX-113	9.84E+04	3.18E+04	8.39E+03			1.60E+09	4.09E+02	mx	3.15E-07					
SX-114	6.85E+05	3.18E+04	8.40E+03			2.50E+09	4.09E+02	mx	3.15E-07					
SX-115	4.54E+04	3.15E+04	8.32E+03			3.10E+09	4.09E+02	mx	3.15E-07					
T-101	3.86E+05	3.99E+04	1.05E+04			1.20E+08	3.11E+02		2.39E-07					
T-102	1.21E+05	7.42E+04	1.96E+04			2.50E+06	1.35E+02	sn	1.04E-07					
T-103	1.02E+05	9.19E+04	2.43E+04			1.20E+07	8.12E+01	sn	6.24E-08					
T-104	1.68E+06	7.92E+04	2.09E+04			2.50E+08	1.48E+02		1.14E-07					
T-105	3.63E+05	1.33E+05	3.52E+04			1.86E+08	9.75E+01	sn	7.50E-08					
T-106	7.95E+04	2.94E+04	7.78E+03			1.48E+08	4.09E+02	mx	3.15E-07					
T-107	6.81E+05	3.30E+05	8.71E+04			4.63E+06	6.80E+00		5.23E-09					
T-108	1.67E+05	1.20E+05	3.17E+04			1.20E+06	4.98E+01	sn	3.83E-08					
T-109	2.20E+05	1.11E+05	2.94E+04			1.90E+07	6.06E+01	sn	4.66E-08					
T-110	1.43E+06	2.08E+05	5.49E+04			1.90E+06	5.63E+01	sn	4.33E-08					
T-111	1.71E+06	4.00E+08	1.06E+08											
T-112	2.54E+05	1.68E+05	4.45E+04			6.39E+05	2.41E+01	sn	1.85E-08					
T-201	1.10E+05	1.74E+13	4.58E+12											
T-202	7.95E+04	1.57E+05	4.15E+04			6.20E+06	7.80E+01		6.00E-08					
T-203	1.32E+05	1.35E+05	3.56E+04			1.20E+07	9.06E+01		6.97E-08					
T-204	1.44E+05	1.00E+05	2.65E+04			8.59E+05	5.67E+01	sn	4.36E-08					
TX-101	3.29E+05	3.18E+04	8.40E+03			1.20E+09	4.09E+02	mx	3.15E-07		1.80E-05	5.47E-11		2.74E-17
TX-102	8.21E+05	3.05E+04	8.07E+03			1.65E+08	2.78E+02	dl	2.14E-07					
TX-103	5.94E+05	7.16E+04	1.89E+04			2.19E+08	1.24E+02	sn	9.54E-08					
TX-104	2.46E+05	2.72E+04	7.18E+03			7.37E+08	2.75E+02	sn	2.11E-07					
TX-105	2.31E+06	6.80E+04	1.80E+04			4.30E+08	1.87E+02		1.43E-07					
TX-106	1.71E+06	3.98E+05	1.05E+05			5.60E+07	3.27E+01		2.51E-08					
TX-107	1.36E+05	6.31E+04	1.67E+04			4.62E+08	1.76E+02	sn	1.35E-07					
TX-108	5.07E+05	2.72E+04	7.18E+03			6.20E+08	4.09E+02	mx	3.15E-07					
TX-109	1.38E+06	2.24E+04	5.91E+03			1.30E+09	4.09E+02	mx	3.15E-07					
TX-110	1.75E+06	5.03E+04	1.33E+04			6.20E+08	1.43E+02	sn	1.10E-07					
TX-111	1.40E+06	8.54E+04	2.26E+04			1.90E+08	1.36E+02		1.04E-07					
TX-112	2.46E+06	7.89E+04	2.08E+04			3.70E+08	1.51E+02		1.16E-07					
TX-113	2.30E+06	8.66E+04	2.29E+04			3.10E+08	1.35E+02		1.04E-07					
TX-114	2.02E+06	2.09E+05	5.53E+04			1.20E+08	5.93E+01		4.56E-08					
TX-115	2.42E+06	1.17E+05	3.10E+04			2.50E+08	1.03E+02		7.94E-08					
TX-116	2.39E+06	4.44E+04	1.17E+04			6.80E+08	2.85E+02		2.19E-07					
TX-117	2.37E+06	6.47E+04	1.71E+04			4.60E+08	1.94E+02		1.49E-07					
TX-118	1.31E+06	2.19E+04	5.78E+03			7.40E+09	4.09E+02	mx	3.15E-07		2.90E+07	2.81E-02	mx	1.41E-08
TY-101	4.47E+05	3.13E+04	8.26E+03			3.40E+08	4.09E+02	mx	3.15E-07					
TY-102	2.42E+05	3.56E+04	9.40E+03			1.95E+08	3.63E+02	dl	2.79E-07					
TY-103	6.13E+05	5.52E+04	1.46E+04			1.05E+08	2.19E+02	dl	1.68E-07					
TY-104	1.74E+05	1.06E+05	2.80E+04			1.20E+07	1.14E+02	sn	8.77E-08					
TY-105	8.74E+05	9.54E+04	2.52E+04			2.38E+08	1.28E+02	dl	9.84E-08					
TY-106	6.43E+04	7.09E+04	1.87E+04			1.18E+07	1.83E+02		1.41E-07					
U-101	9.46E+04	1.63E+07	4.32E+06			4.30E+04	4.54E-01		3.49E-10					
U-102	1.42E+06	5.35E+04	1.41E+04			3.70E+08	2.16E+02	sn	1.66E-07		2.30E+04	1.62E-02		8.16E-09
U-103	1.77E+06	3.87E+04	1.02E+04			5.60E+08	3.16E+02		2.43E-07					
U-104	4.62E+05	3.57E+08	9.44E+07			3.70E-02	8.01E-08		6.16E-17					
U-105	1.58E+06	4.11E+04	1.09E+04			3.94E+08	2.49E+02		1.92E-07					
U-106	8.55E+05	4.99E+04	1.32E+04			3.36E+08	2.54E+02	sn	1.95E-07		2.30E-03	2.69E-09		1.35E-15
U-107	1.54E+06	1.70E+05	4.48E+04			6.80E+07	4.43E+01		3.40E-08		2.00E+06	2.81E-02	mx	1.41E-08
U-108	1.76E+06	3.68E+04	9.71E+03			6.20E+08	3.52E+02		2.70E-07					
U-109	1.75E+06	1.81E+05	4.79E+04			1.20E+08	6.85E+01		5.27E-08					
U-110	7.04E+05	3.17E+04	8.37E+03			3.80E+08	4.09E+02	mx	3.15E-07					
U-111	1.25E+06	2.92E+04	7.71E+03			6.40E+08	4.09E+02	mx	3.15E-07		5.80E+05	2.81E-02	mx	1.41E-08
U-112	1.85E+05	2.74E+04	7.25E+03			8.70E+08	4.09E+02	mx	3.15E-07					
U-201	1.89E+04	2.24E+04	5.91E+03			1.10E+08	4.09E+02	mx	3.15E-07					
U-202	1.89E+04	1.25E+05	3.30E+04			1.10E+08	9.11E+01	sn	7.01E-08					
U-203	1.14E+04	1.16E+04	3.06E+03			9.90E+07	4.09E+02	mx	3.15E-07					
U-204	1.14E+04	1.79E+04	4.73E+03			3.10E+07	4.09E+02	mx	3.15E-07					

Table C2-5 (Continued). SST Threshold Leakage Values - Case 2/Toxicant

Tank	NO2 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	CN g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Cu g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
A-101	1.82E+08	1.16E+02	dl	1.05E-07								
A-102	1.40E+07	1.98E+00	sn	1.80E-09								
A-103	4.10E+05	2.93E-01		2.66E-10					1.63E+04	1.81E-02	dl	2.43E-09
A-104	1.80E-12	1.70E-17		1.54E-26								
A-105	9.20E+05	1.28E+01		1.16E-08								
A-106	2.30E-02	4.86E-08		4.42E-17					7.02E+04	1.48E-01		1.99E-08
AX-101	1.52E+08	1.06E+02	sn	9.64E-08								
AX-102	7.31E+05	6.44E+01	sn	5.85E-08						3.81E-02	sn	5.11E-09
AX-103	2.64E+08	7.68E+01	sn	6.98E-08								
AX-104	3.70E+05	1.40E+01		1.27E-08								
B-101	9.20E-24	2.15E-29		1.96E-38								
B-102	1.51E+06	1.66E+01	sn	1.51E-08								
B-103	2.27E+08	1.53E+01	sn	1.39E-08								
B-104	2.30E+06	1.64E+00		1.49E-09								
B-105	1.80E+05	1.55E-01		1.41E-10								
B-106	5.54E+05	8.60E+00	sn	7.82E-09								
B-107	1.80E+07	2.88E+01		2.62E-08								
B-108	1.40E+07	3.93E+01		3.58E-08								
B-109	2.84E+07	5.25E+01	sn	4.77E-08								
B-110												
B-111	3.70E+07	4.12E+01		3.75E-08								
B-112	9.20E+07	1.41E+02	mx	1.28E-07								
B-201	6.02E+03	5.48E-02		4.99E-11								
B-202	3.40E+05	3.33E+00		3.02E-09	7.95E+02	7.78E-03		4.14E-10				
B-203	1.95E+06	1.01E+01		9.18E-09								
B-204	5.96E+05	3.15E+00		2.86E-09								
BX-101	9.20E-13	5.65E-18		5.14E-27								
BX-102	9.20E+07	9.98E+01	sn	9.07E-08								
BX-103	1.76E+07	1.99E+01	sn	1.81E-08								
BX-104	4.10E+07	1.09E+02		9.95E-08					3.91E+04	5.06E-03	dl	6.78E-10
BX-105	9.20E+06	4.77E+01		4.33E-08					7.63E+03	7.04E-03	sn	9.43E-10
BX-106	3.20E+08	7.78E+01	sn	7.07E-08								
BX-107	3.70E+06	3.42E+01	sn	3.11E-08					1.70E+02	4.98E-03	sn	6.67E-10
BX-108	3.70E+05	3.76E+00		3.42E-09								
BX-109	9.20E+06	2.41E+01	sn	2.19E-08								
BX-110	1.40E+08	3.65E+01	sn	3.32E-08								
BX-111	1.40E+08	6.35E+01	sn	5.77E-08								
BX-112	4.60E+06	2.99E+01	sn	2.72E-08								
BY-101	1.80E+08	1.30E+02		1.18E-07								
BY-102	4.60E+07	5.35E+01	sn	4.86E-08	1.18E+03	2.07E-02	sn	1.10E-09	3.96E+03	5.21E-02	sn	6.98E-09
BY-103	1.78E+07	4.34E+01	dl	3.95E-08								
BY-104	1.80E+08	1.17E+02		1.06E-07	1.67E+05	9.13E-02	mx	4.86E-09	1.09E+05	7.09E-02		9.50E-09
BY-105	1.40E+08	1.57E+01	dl	1.43E-08					3.30E+04	4.50E-02	dl	6.03E-09
BY-106	1.80E+08	6.64E+01	dl	6.04E-08					4.45E+04	5.00E-02	dl	6.70E-09
BY-107	9.20E+07	9.14E+01		8.31E-08								
BY-108	9.20E+07	1.07E+02		9.69E-08								
BY-109	4.60E+07	4.07E+01	sn	3.70E-08					2.67E+03	4.14E-02	sn	5.55E-09
BY-110	1.80E+08	1.20E+02		1.09E-07								
BY-111	1.80E+08	1.04E+02		9.42E-08								
BY-112	3.70E+07	5.96E+01	sn	5.42E-08								
C-101	4.10E+05	1.23E+00		1.12E-09								
C-102	2.07E+05	1.83E+01	sn	1.66E-08	1.04E+03	9.13E-02	sn	4.86E-09				
C-103	1.41E+07	2.80E+01	sn	2.55E-08					1.41E+03	2.80E-03	sn	3.75E-10
C-104	4.60E-04	4.12E-10		3.74E-19					1.36E+05	1.22E-01		1.63E-08
C-105	9.20E+04	1.80E-01		1.64E-10					1.47E+05	2.88E-01		3.85E-08
C-106	2.30E-36	2.65E-42		2.41E-51					3.60E+05	4.15E-01		5.57E-08
C-107	6.89E+06	5.35E+01	dl	4.86E-08	7.98E+03	6.20E-02	dl	3.30E-09				
C-108	3.40E+05	2.25E+01	dl	2.05E-08								
C-109	3.20E+06	1.41E+02	dl	1.28E-07								
C-110	3.57E+05	1.89E+01	sn	1.72E-08								
C-111	5.86E+06	2.71E+01	sn	2.46E-08								
C-112	3.17E+06	6.44E+01	dl	5.85E-08								
C-201	1.76E+04	1.16E+00	sn	1.05E-09								
C-202												
C-203												
C-204	6.55E+05	3.93E+00	sn	3.57E-09								
S-101	9.43E+07	5.83E+01		5.30E-08								
S-102	2.80E-02	1.35E-08		1.22E-17								
S-103	1.58E+07	2.66E+01	sn	2.42E-08								
S-104	9.20E+06	8.27E+00		7.52E-09								
S-105	9.20E+06	5.33E+00		4.85E-09								
S-106	2.30E+07	1.27E+01		1.15E-08								
S-107	1.27E+08	9.40E+01	sn	8.54E-08								
S-108	1.40E+07	6.12E+00		5.57E-09								

Table C2-5 (Continued). SST Threshold Leakage Values - Case 2/Toxicant

Tank	NO2 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	CN g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Cu g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
S-109	4.60E+07	2.40E+01		2.18E-08								
S-110	1.40E+07	9.48E+00		8.62E-09								
S-111	1.40E+07	6.21E+00		5.64E-09								
S-112	1.80E+08	9.09E+01		8.27E-08								
SX-101	2.78E+06	5.06E+00	dl	4.60E-09								
SX-102	1.56E+08	7.59E+01		6.90E-08								
SX-103	1.40E+08	5.67E+01		5.16E-08								
SX-104	1.09E+08	1.15E+02	dl	1.05E-07								
SX-105	3.20E+07	1.24E+01		1.13E-08								
SX-106	4.60E+07	1.86E+01	sn	1.69E-08								
SX-107	2.80E-03	4.39E+01	sn	3.99E-08								
SX-108	1.80E-04	5.87E-10		5.34E-19								
SX-109												
SX-110	9.20E-02	3.92E-07		3.56E-16								
SX-111	4.29E+07	1.38E+01	dl	1.25E-08								
SX-112												
SX-113												
SX-114	4.60E-19	6.71E-25		6.10E-34								
SX-115	1.39E+05	3.06E+00		2.78E-09								
T-101	4.60E+06	1.19E+01		1.08E-08								
T-102	9.20E+04	3.32E+01	sn	3.02E-08								
T-103	4.60E+05	5.02E+01	sn	4.56E-08								
T-104	1.40E+07	8.31E+00		7.56E-09								
T-105	1.40E-10	3.85E-16		3.50E-25								
T-106	1.80E+06	2.26E+01		2.06E-08								
T-107	9.14E+05	2.68E+01	sn	2.44E-08								
T-108	1.40E+04	4.88E+01	sn	4.44E-08								
T-109	9.20E+05	4.69E+01	sn	4.26E-08								
T-110		2.95E-01	sn	2.68E-10								
T-111												
T-112	1.18E+06	4.44E+01	sn	4.04E-08								
T-201												
T-202												
T-203												
T-204	9.72E+03	6.42E-01	dl	5.84E-10								
TX-101	4.60E-03	1.40E-08		1.27E-17								
TX-102	1.44E+08	1.25E+02	dl	1.14E-07								
TX-103	8.62E+07	4.88E+01	sn	4.44E-08								
TX-104	1.20E+08	4.49E+01	sn	4.08E-08					1.39E+05	5.19E-02	sn	6.95E-09
TX-105	9.20E+06	3.99E+00		3.63E-09								
TX-106	3.20E-04	1.87E-10		1.70E-19								
TX-107	6.70E+07	2.55E+01	sn	2.32E-08								
TX-108	2.80E+07	5.52E+01		5.02E-08								
TX-109	3.20E+08	1.41E+02	mx	1.28E-07								
TX-110	1.40E+08	9.39E+01	sn	8.54E-08								
TX-111	1.80E+07	1.29E+01		1.17E-08								
TX-112	2.80E+07	1.14E+01		1.04E-08								
TX-113	1.80E+07	7.83E+00		7.12E-09								
TX-114	4.60E+06	2.27E+00		2.06E-09								
TX-115	9.20E+06	3.80E+00		3.45E-09								
TX-116	3.70E+06	1.55E+00		1.41E-09								
TX-117	1.40E+06	5.91E-01		5.37E-10								
TX-118	2.30E+08	1.41E+02	mx	1.28E-07								
TY-101	4.60E+05	1.03E+00		9.36E-10								
TY-102	4.60E+06	1.52E+00	dl	1.38E-09								
TY-103	1.40E+07	1.37E+01	dl	1.25E-08								
TY-104	9.20E+05	6.90E+00	sn	6.27E-09								
TY-105	3.20E+03	6.49E+00	dl	5.90E-09								
TY-106	2.30E-05	3.57E-10		3.25E-19								
U-101	2.80E-15	2.96E-20		2.69E-29								
U-102	2.38E+07	1.38E+01	sn	1.25E-08								
U-103	5.09E+06	2.87E+00		2.61E-09								
U-104												
U-105	8.99E+07	5.68E+01		5.17E-08								
U-106	7.56E+06	5.71E+00	sn	5.19E-09								
U-107	1.80E+07	1.17E+01		1.06E-08								
U-108	9.20E+04	5.22E-02		4.74E-11								
U-109	4.60E+06	2.62E+00		2.39E-09								
U-110	9.20E+05	1.31E+00		1.19E-09								
U-111	1.93E+07	1.55E+01		1.41E-08								
U-112	9.20E+06	4.96E+01		4.51E-08								
U-201	4.60E+06	1.41E+02	mx	1.28E-07								
U-202	9.20E+06	1.09E+01	sn	9.91E-09								
U-203	4.60E+06	1.41E+02	mx	1.28E-07								
U-204	2.30E+06	1.41E+02	mx	1.28E-07								

Table C2-5 (Continued). SST Threshold Leakage Values - Case 2/Toxicant

Tank	F g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Hg g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Na g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
A-101	1.90E-37	5.27E-44		3.96E-53					4.60E+08	1.28E+02		3.51E-11
A-102	3.52E+05	1.29E+00	sn	9.70E-10					4.60E+08	2.00E+02	sn	5.50E-11
A-103	9.50E+03	6.78E-03		5.10E-12					4.64E+08	1.88E+02	dl	5.17E-11
A-104	1.90E-18	1.79E-23		1.35E-32					5.30E+08	3.56E+02	mx	9.79E-11
A-105	5.70E-01	7.93E-06		5.96E-15					4.62E+07	3.56E+02	mx	9.79E-11
A-106	3.80E-04	8.03E-10		6.04E-19					5.69E+07	2.55E+02	dl	7.01E-11
AX-101	7.60E-07	2.68E-13		2.02E-22					6.90E+03	2.44E-03		6.70E-16
AX-102	3.80E-17	2.57E-22		1.94E-31					1.91E+06	1.68E+02	sn	4.62E-11
AX-103	1.90E+04	4.48E-02		3.37E-11					6.90E+06	1.63E+01		4.48E-12
AX-104	1.20E+05	4.53E+00		3.41E-09	1.20E+07	3.20E-01	mx	4.16E-07	5.50E+06	2.08E+02		5.71E-11
B-101	1.70E-26	3.97E-32		2.99E-41					9.20E+06	2.15E+01		5.92E-12
B-102	1.90E+04	2.09E-01	sn	1.57E-10					8.00E+06	6.44E+01	sn	1.77E-11
B-103	3.80E+04	1.33E-01	sn	1.00E-10					1.60E+07	5.68E+01	sn	1.56E-11
B-104	8.20E+06	5.84E+00		4.39E-09					6.90E+07	4.91E+01		1.35E-11
B-105	1.50E+07	6.02E+00	mx	4.53E-09					2.80E+08	2.42E+02		6.65E-11
B-106	1.30E+06	1.86E-01	sn	1.40E-10					1.40E+08	9.20E+01	sn	2.53E-11
B-107	1.30E+07	6.02E+00	mx	4.53E-09					1.10E+08	1.76E+02		4.84E-11
B-108	3.80E+07	6.02E+00	mx	4.53E-09					2.30E+08	3.56E+02	mx	9.79E-11
B-109	1.90E+07	4.64E-03	sn	3.49E-12					1.90E+08	1.10E+02	sn	3.03E-11
B-110	1.70E-36	1.83E-42		1.37E-51					1.20E+08	1.29E+02		3.54E-11
B-111	1.90E+03	2.12E-03		1.59E-12					7.40E+08	3.56E+02	mx	9.79E-11
B-112	1.30E+06	6.02E+00	mx	4.53E-09					1.20E+08	3.56E+02	mx	9.79E-11
B-201					7.52E+04	3.20E-01	mx	4.16E-07	4.21E+06	3.84E+01		1.05E-11
B-202	1.04E+06	6.02E+00	mx	4.53E-09	1.17E+02	1.14E-03		1.49E-09	7.40E+06	7.24E+01		1.99E-11
B-203	9.50E+05	4.92E+00		3.70E-09	8.02E+06	3.20E-01	mx	4.16E-07	7.69E+07	3.56E+02	mx	9.79E-11
B-204	9.50E+05	5.02E+00		3.77E-09	1.99E+03	1.05E-02		1.37E-08	6.90E+06	3.65E+01		1.00E-11
BX-101	7.60E-14	4.67E-19		3.51E-28					4.60E+06	2.83E+01		7.77E-12
BX-102	1.30E+06	1.74E-01	sn	1.31E-10					4.80E+08	2.62E+02	sn	7.21E-11
BX-103	1.70E+07	7.30E-02	sn	5.49E-11					1.40E+09	3.56E+02	mx	9.79E-11
BX-104	1.90E+01	5.07E-05		3.81E-14					1.40E+09	1.02E+02	dl	2.81E-11
BX-105	1.10E+06	5.70E+00		4.29E-09					1.00E+09	1.20E+02	sn	3.30E-11
BX-106	9.50E+06	1.48E+00	sn	1.11E-09					2.80E+09	1.62E+02	sn	4.46E-11
BX-107	1.90E+06	1.42E+00	sn	1.07E-09					9.30E+07	9.70E+01	sn	2.67E-11
BX-108	3.80E+05	3.86E+00		2.90E-09					9.20E+05	9.35E+00		2.57E-12
BX-109	1.13E+04	1.49E+00	sn	1.12E-09	1.87E+00	2.47E-04	sn	3.21E-10	2.80E+07	1.40E+02	sn	3.85E-11
BX-110	1.90E+06	1.41E+00	sn	1.06E-09					1.80E+08	1.64E+02	sn	4.51E-11
BX-111	1.90E+06	1.46E+00	sn	1.10E-09	1.88E+00	2.61E-05	sn	3.39E-11	2.10E+08	2.14E+02	sn	5.89E-11
BX-112	9.50E+05	1.11E+00	sn	8.35E-10					3.40E+07	7.95E+01	sn	2.19E-11
BY-101	1.90E+06	1.37E+00		1.03E-09					3.90E+08	2.81E+02		7.72E-11
BY-102	2.00E+07	6.02E+00	mx	4.53E-09					7.60E+08	1.28E+02	sn	3.52E-11
BY-103	7.60E+07	6.02E+00	mx	4.53E-09					2.10E+09	1.37E+02	dl	3.77E-11
BY-104	1.63E+07	6.02E+00	mx	4.53E-09					3.88E+08	2.52E+02		6.94E-11
BY-105	1.90E+06	9.98E-01		7.50E-10					2.30E+08	1.14E+02	dl	3.14E-11
BY-106	2.00E+06	8.23E-01		6.19E-10					2.50E+08	1.44E+02	dl	3.96E-11
BY-107	9.50E+05	9.44E-01		7.10E-10					9.90E+07	9.83E+01		2.70E-11
BY-108	1.70E+06	1.97E+00		1.48E-09					1.80E+08	2.09E+02		5.74E-11
BY-109	4.80E+06	3.00E+00		2.25E-09					7.40E+08	1.29E+02	sn	3.55E-11
BY-110	1.90E+06	1.27E+00		9.53E-10					2.30E+08	1.53E+02		4.22E-11
BY-111	1.90E+06	1.09E+00		8.22E-10					2.30E+08	1.32E+02		3.64E-11
BY-112	7.60E+05	6.90E-01		5.19E-10					2.80E+08	2.71E+02	sn	7.45E-11
C-101	9.50E+01	2.85E-04		2.14E-13					9.90E+07	2.97E+02		8.17E-11
C-102	5.70E+07	6.02E+00	mx	4.53E-09					6.90E+07	6.17E+01	sn	1.70E-11
C-103	1.90E+08	6.02E+00	mx	4.53E-09					1.80E+09	3.36E+01	sn	9.24E-12
C-104	1.70E-10	1.52E-16		1.14E-25					1.16E+08	1.04E+02		2.86E-11
C-105	5.70E+02	1.12E-03		8.39E-13					3.90E+08	3.56E+02	mx	9.79E-11
C-106									1.87E+08	2.16E+02		5.93E-11
C-107	1.10E+04	1.06E-02		7.95E-12					1.20E+07	5.44E+01	dl	1.50E-11
C-108	1.90E+02	7.61E-04		5.72E-13					9.20E+07	3.56E+02	mx	9.79E-11
C-109	5.70E+04	2.28E-01		1.72E-10					9.40E+06	3.76E+01		1.03E-11
C-110	7.60E-04	1.07E-09		8.07E-19	1.99E+01	1.05E-03	sn	1.37E-09	1.32E+06	6.99E+01	sn	1.92E-11
C-111	1.70E+04	7.88E-02		5.93E-11					7.10E+06	3.29E+01		9.05E-12
C-112	1.90E+05	4.67E-02	dl	3.51E-11					7.60E+06	6.16E+01	dl	1.69E-11
C-201	8.78E+03	5.80E-01	sn	4.36E-10	1.23E+03	8.12E-02	sn	1.06E-07	4.74E+05	3.13E+01	sn	8.61E-12
C-202									2.30E+05	6.08E+01		1.67E-11
C-203									2.30E+04	1.22E+00		3.34E-13
C-204	1.89E+02	1.14E-03	sn	8.57E-13					1.71E+06	1.03E+01	sn	2.83E-12
S-101	1.90E+05	1.18E-01		8.84E-11					2.80E+08	1.73E+02		4.76E-11
S-102	7.60E-04	3.66E-10		2.75E-19					2.30E+08	1.11E+02		3.04E-11
S-103	3.48E-01	8.11E-02	sn	6.10E-11					1.40E+09	8.83E+01	sn	2.43E-11
S-104									4.80E+08	3.56E+02	mx	9.79E-11
S-105									3.20E+08	1.85E+02		5.10E-11
S-106	1.50E+03	8.27E-04		6.22E-13					5.50E+08	3.03E+02		8.34E-11
S-107	9.50E+06	6.02E+00	mx	4.53E-09					2.30E+08	1.62E+02		4.44E-11
S-108	5.70E+05	2.49E-01		1.87E-10					1.40E+08	6.12E+01		1.68E-11

Table C2-5 (Continued). SST Threshold Leakage Values - Case 2/Toxicant

Tank	F g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Hg g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Na g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
S-109	3.80E+06	1.98E+00		1.49E-09					1.40E+09	3.56E+02	mx	9.79E-11
S-110	1.10E+05	7.45E-02		5.60E-11					1.10E+08	7.45E+01		2.05E-11
S-111	1.88E+05	8.33E-02		6.27E-11	4.13E+04	1.83E-02		2.38E-08	9.20E+07	4.08E+01		1.12E-11
S-112	1.30E+07	6.02E+00	mx	4.53E-09					2.50E+09	3.56E+02	mx	9.79E-11
SX-101	6.99E+05	1.27E+00	dl	9.55E-10					4.60E+08	2.78E+01	dl	7.65E-12
SX-102	1.10E+03	5.35E-04		4.02E-13					1.40E+09	3.56E+02	mx	9.79E-11
SX-103	1.90E+06	7.70E-01		5.79E-10	6.72E+05	2.72E-01		3.54E-07	2.50E+09	3.56E+02	mx	9.79E-11
SX-104	1.80E+06	1.90E+00	dl	1.43E-09					7.40E+08	3.56E+02	dl	9.79E-11
SX-105	7.60E+05	2.94E-01		2.21E-10					6.41E+08	2.48E+02		6.82E-11
SX-106	9.50E+05	4.68E-01		3.52E-10					8.36E+07	5.19E+01	sn	1.43E-11
SX-107									4.60E+08	1.16E+02	sn	3.19E-11
SX-108									6.90E+08	3.56E+02	mx	9.79E-11
SX-109									6.90E+08	3.56E+02	mx	9.79E-11
SX-110	1.90E-03	8.10E-09		6.09E-18					1.10E+09	3.56E+02	mx	9.79E-11
SX-111	9.50E-12	2.01E-17		1.51E-26					6.90E+08	9.65E+01	dl	2.65E-11
SX-112									1.90E+08	3.56E+02	mx	9.79E-11
SX-113									4.60E+08	3.56E+02	mx	9.79E-11
SX-114	3.80E-20	5.55E-26		4.17E-35					9.20E+08	3.56E+02	mx	9.79E-11
SX-115									9.20E+08	3.56E+02	mx	9.79E-11
T-101	3.00E+06	1.09E+00	sn	8.20E-10					7.40E+07	5.91E+01	sn	1.63E-11
T-102	5.70E+04	8.70E-01	sn	6.54E-10					1.10E+06	9.47E+01	sn	2.60E-11
T-103	1.10E+04	8.66E-01	sn	6.51E-10					4.60E+06	9.03E+01	sn	2.48E-11
T-104	3.82E+07	6.02E+00	mx	4.53E-09					1.10E+08	6.53E+01		1.80E-11
T-105	1.45E+05	7.60E-02	sn	5.72E-11					1.11E+08	5.80E+01	sn	1.60E-11
T-106	1.70E+07	6.02E+00	mx	4.53E-09					1.40E+08	3.56E+02	mx	9.79E-11
T-107	3.18E+04	9.33E-01	sn	7.02E-10					1.84E+06	5.40E+01	sn	1.49E-11
T-108		7.66E-01	sn	5.76E-10					9.00E+06	7.20E+01	sn	1.98E-11
T-109	1.90E+05	9.29E-01	sn	6.99E-10					2.30E+07	8.60E+01	sn	2.37E-11
T-110	1.50E+05	6.02E+00	sn	4.53E-09					1.80E+06	4.30E+01	sn	1.18E-11
T-111	5.70E+04	3.32E-02		2.50E-11								
T-112	5.70E+04	6.73E-01	sn	5.06E-10					1.66E+06	6.28E+01	sn	1.73E-11
T-201									2.30E+02	2.10E-03		5.76E-16
T-202	3.80E+05	4.78E+00		3.60E-09					4.60E+06	5.79E+01		1.59E-11
T-203	9.50E+05	6.02E+00	mx	4.53E-09					6.90E+06	5.21E+01		1.43E-11
T-204					6.48E+02	4.28E-02	dl	5.56E-08	4.68E+05	3.21E+01	dl	8.83E-12
TX-101	7.60E-05	2.31E-10		1.74E-19					4.60E+08	3.56E+02	mx	9.79E-11
TX-102	3.80E+03	4.63E-03		3.48E-12					2.81E+08	3.42E+02		9.41E-11
TX-103	1.90E+04	3.20E-02		2.40E-11					4.60E+06	7.74E+00		2.13E-12
TX-104	9.50E-03	3.86E-08		2.90E-17	2.24E+05	8.36E-02	sn	1.09E-07	5.80E+08	2.17E+02	sn	5.97E-11
TX-105	5.70E+04	2.47E-02		1.86E-11					1.80E+08	7.81E+01		2.15E-11
TX-106									1.10E+07	6.42E+00		1.76E-12
TX-107									2.30E+03	1.69E-02		4.64E-15
TX-108	2.10E+06	4.14E+00		3.11E-09					2.10E+08	3.56E+02	mx	9.79E-11
TX-109	9.50E+06	6.02E+00	mx	4.53E-09					2.50E+08	1.81E+02		4.99E-11
TX-110	7.80E+06	4.46E+00		3.35E-09					2.30E+08	1.32E+02		3.62E-11
TX-111	1.90E+06	1.36E+00		1.02E-09					1.80E+08	1.29E+02		3.53E-11
TX-112	1.70E+06	6.92E-01		5.20E-10					2.40E+08	9.77E+01		2.69E-11
TX-113	2.30E+07	6.02E+00	mx	4.53E-09					3.40E+08	2.23E+02	sn	6.13E-11
TX-114	1.90E+05	9.38E-02		7.06E-11					2.10E+08	1.04E+02		2.85E-11
TX-115	7.60E+06	3.14E+00		2.36E-09					1.40E+08	5.78E+01		1.59E-11
TX-116	3.80E+07	6.02E+00	mx	4.53E-09					8.30E+08	3.48E+02		9.56E-11
TX-117	5.70E+07	6.02E+00	mx	4.53E-09					7.40E+08	3.12E+02		8.59E-11
TX-118	4.20E+07	1.54E-01	sn	1.16E-10					4.60E+09	9.82E+01	sn	2.70E-11
TY-101	2.47E+06	5.53E+00		4.16E-09					1.30E+08	2.91E+02		8.00E-11
TY-102	2.00E+05	5.51E-01	dl	4.14E-10					9.20E+07	3.56E+02	mx	9.79E-11
TY-103	1.38E+06	5.13E-01	dl	3.86E-10					8.34E+07	1.36E+02		3.74E-11
TY-104	1.70E+05	5.89E-01	sn	4.43E-10					4.70E+06	7.48E+01	sn	2.06E-11
TY-105	1.70E+03	5.13E-01	dl	3.86E-10					1.54E+08	1.76E+02		4.84E-11
TY-106	9.50E-06	1.48E-10		1.11E-19					2.80E+07	3.56E+02	mx	9.79E-11
U-101	1.10E-15	1.16E-20		8.74E-30					1.40E+08	3.56E+02	mx	9.79E-11
U-102	3.80E+05	2.68E-01		2.02E-10					4.60E+07	3.25E+01		8.94E-12
U-103	4.24E+03	2.39E-03		1.80E-12	1.70E+04	9.60E-03		1.25E-08	2.10E+08	1.19E+02		3.26E-11
U-104									4.70E+07	1.02E+02		2.80E-11
U-105									7.92E+08	3.56E+02	mx	9.79E-11
U-106	3.65E+04	2.75E-02	sn	2.07E-11					1.75E+08	1.32E+02	sn	3.63E-11
U-107	3.80E+05	2.47E-01		1.86E-10					1.10E+07	7.16E+00		1.97E-12
U-108	3.80E+06	2.15E+00		1.62E-09					2.30E+08	1.30E+02		3.59E-11
U-109	1.90E+05	1.08E-01		8.15E-11					2.30E+07	1.31E+01		3.61E-12
U-110	3.80E+02	5.40E-04		4.06E-13					1.40E+08	1.99E+02		5.47E-11
U-111	9.50E+04	7.63E-02		5.74E-11					2.30E+08	1.85E+02		5.08E-11
U-112	2.10E+06	6.02E+00	mx	4.53E-09					2.50E+08	3.56E+02	mx	9.79E-11
U-201	1.10E+05	5.81E+00		4.37E-09					2.40E+07	3.56E+02	mx	9.79E-11
U-202	1.10E+05	1.81E-02	sn	1.36E-11					2.40E+07	8.99E+01	sn	2.47E-11
U-203	9.50E+04	6.02E+00	mx	4.53E-09	3.63E+03	3.20E-01		4.16E-07	2.30E+07	3.56E+02	mx	9.79E-11
U-204	4.07E+04	3.58E+00		2.70E-09	9.92E+02	8.74E-02		1.14E-07	6.90E+06	3.56E+02	mx	9.79E-11

Table C2-5 (Continued). SST Threshold Leakage Values - Case 2/Toxicant

Tank	Sb g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	SO4 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	V g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
A-101					4.80E+04	1.83E+01	dl	3.31E-11				
A-102					5.80E+07	9.70E+01	sn	1.76E-10				
A-103					3.00E+05	2.14E-01		3.88E-13				
A-104					6.80E+07	9.70E+01	mx	1.76E-10				
A-105												
A-106												
AX-101												
AX-102												
AX-103					7.70E+05	1.82E+00		3.29E-12				
AX-104					2.20E+05	8.30E+00		1.50E-11				
B-101					1.90E+06	4.44E+00		8.04E-12				
B-102					3.80E+06	3.14E+01		5.68E-11				
B-103					3.80E+06	1.70E+01		3.08E-11				
B-104					6.70E+06	4.77E+00		8.64E-12				
B-105					3.80E+07	3.28E+01		5.94E-11				
B-106					9.60E+05	2.17E+00		3.92E-12				
B-107					2.90E+06	4.64E+00		8.40E-12				
B-108					1.90E+06	5.34E+00		9.67E-12				
B-109					7.70E+05	1.60E+00		2.90E-12				
B-110					4.80E-06	5.16E-12		9.33E-24				
B-111					7.30E+07	8.14E+01		1.47E-10				
B-112					9.60E+06	7.69E+01		1.39E-10				
B-201												
B-202					5.80E+04	5.68E-01		1.03E-12				
B-203					6.70E+04	3.47E-01		6.28E-13				
B-204					6.70E+04	3.54E-01		6.41E-13				
BX-101					1.90E+05	1.17E+00		2.11E-12				
BX-102					2.00E+07	5.50E+01		9.96E-11				
BX-103					1.90E+07	7.61E+01		1.38E-10				
BX-104					9.60E+07	9.70E+01	mx	1.76E-10				
BX-105					2.90E+07	9.70E+01	mx	1.76E-10				
BX-106					1.40E+08	1.54E+01	sn	2.79E-11				
BX-107					1.90E+07	1.74E+01	sn	3.15E-11				
BX-108					3.90E+04	3.96E-01		7.17E-13				
BX-109					3.80E+06	2.36E+01	sn	4.27E-11				
BX-110					1.90E+07	1.46E+01	sn	2.64E-11				
BX-111					1.90E+07	1.52E+01	sn	2.75E-11				
BX-112					2.90E+06	7.86E+00	sn	1.42E-11				
BY-101					2.90E+07	2.09E+01		3.78E-11				
BY-102					7.70E+06	1.55E+01	sn	2.81E-11				
BY-103					7.70E+06	4.97E+00	dl	9.00E-12				
BY-104					2.90E+07	1.89E+01		3.42E-11				
BY-105					1.90E+07	2.00E+01	dl	3.62E-11				
BY-106					2.90E+07	3.29E+01	dl	5.95E-11				
BY-107					9.60E+06	9.54E+00		1.73E-11				
BY-108					9.60E+06	1.11E+01		2.01E-11				
BY-109					8.60E+06	3.93E+01	sn	7.11E-11				
BY-110					2.90E+07	1.93E+01		3.50E-11				
BY-111					2.90E+07	1.67E+01		3.02E-11				
BY-112					4.80E+06	4.36E+00		7.89E-12				
C-101					9.70E+05	2.91E+00		5.27E-12				
C-102					2.90E+02	7.49E-01	sn	1.36E-12				
C-103					9.60E+07	2.43E+01	sn	4.40E-11				
C-104					7.70E+02	6.90E-04		1.25E-15				
C-105	2.30E+06	4.50E+00		4.17E-07	3.00E+05	5.87E-01		1.06E-12	5.52E+04	1.08E-01		4.63E-10
C-106	3.48E+06	4.01E+00		3.72E-07	9.60E+03	1.11E-02		2.00E-14				
C-107					7.70E+05	9.65E+00	dl	1.75E-11				
C-108					3.20E+03	1.28E-02		2.32E-14				
C-109					4.80E+05	1.92E+00		3.48E-12				
C-110					5.80E+01	1.75E+01	sn	3.17E-11				
C-111					1.90E+05	8.81E-01		1.59E-12				
C-112					2.90E+05	7.37E-01		1.33E-12				
C-201					2.90E+03	1.39E+01	sn	2.52E-11				
C-202					7.70E+00	2.03E-03		3.68E-15				
C-203					7.70E+00	4.07E-04		7.36E-16				
C-204					9.60E+01	8.45E-03		1.53E-14				
S-101					4.80E+06	2.97E+00		5.38E-12				
S-102					1.90E+05	9.14E-02		1.65E-13				
S-103					2.90E+03	1.16E+00	sn	2.10E-12				
S-104	3.20E+05	2.88E-01		2.66E-08	7.70E+05	6.92E-01		1.25E-12				
S-105					2.90E+06	1.68E+00		3.04E-12				
S-106					4.80E+06	2.65E+00		4.79E-12				
S-107					7.70E+02	5.41E-04		9.79E-16				
S-108					7.70E+06	3.37E+00		6.10E-12				

Table C2-5 (Continued). SST Threshold Leakage Values - Case 2/Toxicant

Tank	Sb g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	SO4 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	V g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
S-109					3.80E+07	1.98E+01		3.59E-11				
S-110					1.90E+07	1.29E+01		2.33E-11				
S-111					1.59E+07	7.05E+00		1.28E-11				
S-112					1.90E+08	9.60E+01		1.74E-10				
SX-101					5.80E+05	7.01E+00	dl	1.27E-11				
SX-102					3.06E+07	1.49E+01		2.69E-11				
SX-103					6.70E+07	2.71E+01		4.91E-11				
SX-104					7.70E+06	2.88E+00	dl	5.21E-12				
SX-105					9.80E+06	3.79E+00		6.86E-12				
SX-106					3.90E+06	1.92E+00		3.48E-12				
SX-107					4.80E+03	1.22E-02		2.21E-14				
SX-108					3.80E+03	1.24E-02		2.24E-14				
SX-109					3.80E+03	4.02E-03		7.27E-15				
SX-110					9.60E+03	4.09E-02		7.40E-14				
SX-111					6.70E+03	1.42E-02		2.56E-14				
SX-112					5.10E+04	1.46E-01		2.65E-13				
SX-113					5.80E+06	5.89E+01		1.07E-10				
SX-114					7.70E+03	1.12E-02		2.03E-14				
SX-115					8.60E+06	9.70E+01	mx	1.76E-10				
T-101					6.70E+06	1.32E+01	sn	2.39E-11				
T-102					9.60E+04	9.80E+00	sn	1.77E-11				
T-103					9.60E+04	1.82E+01	sn	3.29E-11				
T-104					9.60E+06	5.70E+00		1.03E-11				
T-105					9.60E+01	2.64E-04		4.78E-16				
T-106					3.90E+04	4.91E-01		8.88E-13				
T-107					2.90E+02	1.63E+01	sn	2.95E-11				
T-108					2.90E+05	1.43E+01	sn	2.59E-11				
T-109					7.70E+06	1.58E+01	sn	2.86E-11				
T-110					2.00E-01	1.95E+00	sn	3.53E-12				
T-111												
T-112					5.80E-01	8.77E+00	sn	1.59E-11				
T-201												
T-202					2.90E+04	3.65E-01		6.60E-13				
T-203					6.70E+04	5.06E-01		9.15E-13				
T-204						1.07E+00	dl	1.94E-12				
TX-101					9.60E+05	2.92E+00		5.28E-12				
TX-102					3.90E+05	4.75E-01		8.59E-13				
TX-103					1.90E+06	2.02E+00	sn	3.66E-12				
TX-104					7.70E+02	1.77E+01	sn	3.20E-11				
TX-105					3.80E+06	1.65E+00		2.98E-12				
TX-106					3.80E+05	2.22E-01		4.01E-13				
TX-107					5.80E-01	4.26E-06		7.70E-18				
TX-108					2.90E+07	5.72E+01		1.03E-10				
TX-109					9.60E+07	6.97E+01		1.26E-10				
TX-110					7.70E+07	4.40E+01		7.97E-11				
TX-111					5.80E+07	4.14E+01		7.50E-11				
TX-112					8.60E+07	3.50E+01		6.34E-11				
TX-113					3.80E+07	1.65E+01		2.99E-11				
TX-114					6.70E+07	3.31E+01		5.99E-11				
TX-115					1.90E+07	7.84E+00		1.42E-11				
TX-116					1.90E+07	7.96E+00		1.44E-11				
TX-117					7.70E+06	3.25E+00		5.88E-12				
TX-118					3.80E+08	9.70E+01	mx	1.76E-10				
TY-101					4.80E+06	1.07E+01		1.95E-11				
TY-102					2.90E+07	2.06E+01	dl	3.73E-11				
TY-103					2.90E+07	1.10E+01	dl	1.99E-11				
TY-104					3.80E+05	6.24E+00	sn	1.13E-11				
TY-105					1.90E+07	8.36E+00	dl	1.51E-11				
TY-106					1.90E+02	2.95E-03		5.34E-15				
U-101					8.60E+06	9.09E+01		1.65E-10				
U-102					8.60E+06	6.08E+00		1.10E-11				
U-103					2.00E+03	1.13E-03		2.04E-15				
U-104					9.60E-02	2.08E-07		3.76E-19				
U-105					7.70E+02	4.87E-04		8.81E-16				
U-106					4.80E+02	2.02E+00	sn	3.66E-12				
U-107					9.60E+05	6.25E-01		1.13E-12				
U-108					7.70E+02	4.37E-04		7.90E-16				
U-109					2.90E+05	1.65E-01		3.00E-13				
U-110					2.40E+03	3.41E-03		6.17E-15				
U-111					3.90E+05	3.13E-01		5.67E-13				
U-112					7.70E+06	4.15E+01		7.51E-11				
U-201					7.70E+05	4.07E+01		7.36E-11				
U-202					6.70E+05	3.54E+01		6.41E-11				
U-203					6.70E+05	5.90E+01		1.07E-10				
U-204					1.90E+05	1.67E+01		3.03E-11				

Table C2-6. SST Threshold Leakage Values - Case 3/Carcinogenic

Tank	Total Vol. (L)	Carcinogenic Threshold Leakage L	Gal.	Tc-99 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	U-238 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L
A-101	3.61E+06	5.23E+07	1.38E+07						2.60E+11	2.10E+07	5.81E+00		1.91E-14
A-102	1.55E+05	1.27E+04	3.35E+03	7.40E+12	1.18E+04	2.18E-02	sn	7.80E-11	3.70E+10	2.98E+06	3.70E-03	sn	1.22E-17
A-103	1.40E+06	2.19E+04	5.77E+03	1.24E+13	1.97E+04	1.27E-02	dl	4.55E-11	3.70E+10	2.98E+06	2.13E+00		7.01E-15
A-104	1.06E+05	9.09E+05	2.40E+05	2.20E-06	3.50E-15	3.30E-20		1.18E-28	7.40E+10	5.97E+06	5.63E+01		1.85E-13
A-105	7.19E+04	3.31E+04	8.75E+03	3.70E+11	5.88E+02	8.18E-03		2.93E-11	1.90E+02	1.53E-02	2.13E-07		7.01E-22
A-106	4.73E+05	3.11E+04	8.22E+03	2.92E+12	4.64E+03	8.89E-03	dl	3.18E-11	1.50E+11	1.21E+07	3.53E-03	dl	1.16E-17
AX-101	2.83E+06	7.00E+07	1.85E+07	7.40E+02	1.18E-06	4.16E-13		1.49E-21	3.70E+10	2.98E+06	1.05E+00		3.47E-15
AX-102	1.48E+05	3.68E+08	9.71E+07	3.70E-05	5.88E-14	3.98E-19		1.43E-27	1.50E+09	1.21E+05	8.19E-01		2.70E-15
AX-103	4.24E+05	1.70E+05	4.49E+04	3.70E+11	5.88E+02	1.39E-03		4.97E-12	1.90E+02	1.53E-02	3.61E-08		1.19E-22
AX-104	2.65E+04	1.02E+04	2.71E+03	1.10E+12	1.75E+03	2.70E-02	mx	9.67E-11	3.70E+09	2.98E+05	1.13E+01		3.71E-14
B-101	4.28E+05	9.29E+05	2.45E+05	7.40E-18	1.18E-26	2.75E-32		9.85E-41	2.60E+11	2.10E+07	4.90E+01		1.61E-13
B-102	1.21E+05	3.95E+05	1.04E+05	3.30E+10	5.25E+01	4.33E-04		1.55E-12	3.00E+10	2.42E+06	2.00E+01		6.57E-14
B-103	2.23E+05	1.71E+05	4.52E+04	1.90E+11	3.02E+02	1.35E-03		4.84E-12	7.40E+10	5.97E+06	2.67E+01		8.79E-14
B-104	1.40E+06	2.56E+06	6.77E+05	7.40E+10	1.18E+02	8.38E-05		3.00E-13	1.10E+10	8.87E+05	6.32E-01		2.08E-15
B-105	1.16E+06	3.66E+05	9.66E+04	3.70E+11	5.88E+02	5.08E-04		1.82E-12	7.40E+09	5.97E+05	5.15E-01		1.70E-15
B-106	4.43E+05	1.44E+06	3.80E+05	2.60E+10	4.13E+01	9.33E-05		3.34E-13	1.10E+10	8.87E+05	2.00E+00		6.59E-15
B-107	6.25E+05	2.32E+05	6.12E+04	3.70E+11	5.88E+02	9.42E-04		3.37E-12	7.40E+10	5.97E+06	9.56E+00		3.14E-14
B-108	3.56E+05	5.34E+04	1.41E+04	1.10E+12	1.75E+03	4.92E-03		1.76E-11	3.00E+11	2.42E+07	6.80E+01		2.24E-13
B-109	4.81E+05	2.06E+05	5.43E+04	3.30E+11	5.25E+02	1.09E-03		3.91E-12	7.40E+10	5.97E+06	1.24E+01		4.08E-14
B-110	9.31E+05	1.47E+04	3.87E+03	1.10E+13	1.75E+04	1.88E-02		6.72E-11	2.80E+11	2.26E+07	2.43E+01		7.98E-14
B-111	8.97E+05	1.02E+04	2.71E+03	1.10E+14	1.75E+05	2.70E-02	mx	9.67E-11	1.50E+10	1.21E+06	1.35E+00		4.44E-15
B-112	1.25E+05	1.02E+04	2.71E+03	7.40E+12	1.18E+04	2.70E-02	mx	9.67E-11	2.20E+10	1.77E+06	1.42E+01		4.67E-14
B-201	1.10E+05	1.10E+05	2.90E+04										
B-202	1.02E+05	3.78E+05	9.97E+04	3.77E+10	5.99E+01	6.60E-04		2.36E-12	1.10E+11	8.87E+06	8.68E+01		2.86E-13
B-203	1.93E+05	2.66E+08	7.02E+07						2.73E+09	2.20E+05	1.14E+00		3.75E-15
B-204	1.89E+05	4.97E+09	1.31E+09						5.00E+07	4.03E+03	2.13E-02		7.01E-17
BX-101	1.63E+05	9.14E+05	2.41E+05	2.20E-06	3.50E-15	2.15E-20		7.69E-29	1.10E+11	8.87E+06	5.45E+01		1.79E-13
BX-102	3.63E+05	1.02E+04	2.71E+03	2.20E+13	3.50E+04	2.70E-02	mx	9.67E-11	1.50E+09	1.21E+05	3.33E-01		1.10E-15
BX-103	2.50E+05	1.09E+06	2.88E+05	1.50E-05	2.38E-14	9.55E-20		3.42E-28	1.50E+09	1.21E+05	4.84E-01		1.59E-15
BX-104	3.75E+05	3.97E+04	1.05E+04	1.10E+14	1.75E+05	6.95E-03	dl	2.49E-11	3.00E+10	2.42E+06	7.53E+00	dl	2.48E-14
BX-105	1.93E+05	4.32E+04	1.14E+04	7.40E+13	1.18E+05	6.41E-03	sn	2.29E-11	1.90E+09	1.53E+05	9.27E-03	sn	3.05E-17
BX-106	1.74E+05	1.02E+04	2.71E+03	7.40E+13	1.18E+05	2.70E-02	mx	9.67E-11	1.50E+09	1.21E+05	1.54E-02	sn	5.07E-17
BX-107	1.31E+06	1.13E+06	2.99E+05	1.90E+11	3.02E+02	2.31E-04		8.28E-13	3.00E+10	2.42E+06	1.81E+00	sn	5.95E-15
BX-108	9.84E+04	2.10E+06	5.56E+05	3.70E+09	5.88E+00	5.98E-05		2.14E-13	3.70E+09	2.98E+05	3.03E+00		9.98E-15
BX-109	7.31E+05	4.79E+05	1.27E+05	1.50E+11	2.38E+02	3.26E-04		1.17E-12	1.50E+11	1.21E+07	5.37E-01	sn	1.77E-15
BX-110	7.49E+05	1.18E+04	3.13E+03	1.10E+13	1.75E+04	2.33E-02		8.35E-11	7.40E+09	5.97E+05	9.03E-03	sn	2.97E-17
BX-111	7.99E+05	1.26E+04	3.33E+03	1.10E+13	1.75E+04	2.19E-02		7.84E-11	3.70E+09	2.98E+05	3.83E+00	sn	1.26E-14
BX-112	6.25E+05	3.50E+05	9.26E+04	7.40E+10	1.18E+02	1.88E-04		6.74E-13	1.50E+12	1.21E+08	3.84E+02	sn	1.26E-12
BY-101	1.39E+06	1.60E+04	4.24E+03	1.50E+13	2.38E+04	1.72E-02		6.15E-11	1.90E+09	1.53E+05	1.10E-01		3.63E-16
BY-102	1.29E+06	1.02E+04	2.71E+03	3.70E+12	5.88E+03	2.70E-02	sn	9.67E-11	1.50E+10	1.21E+06	9.37E-01		3.08E-15
BY-103	1.51E+06	3.91E+04	1.03E+04	1.77E+12	2.81E+03	6.88E-03	dl	2.46E-11	1.90E+11	1.53E+07	1.01E+01		3.33E-14
BY-104	1.54E+06	1.76E+04	4.65E+03	1.50E+13	2.38E+04	1.55E-02		5.56E-11	1.90E+12	1.53E+08	9.97E+01		3.28E-13
BY-105	1.90E+06	1.37E+05	3.61E+04	1.11E+13	1.76E+04	1.76E-03	dl	6.30E-12	7.40E+11	5.97E+07	3.13E+01		1.03E-13
BY-106	2.43E+06	5.20E+04	1.37E+04	1.50E+13	2.38E+04	5.12E-03	dl	1.83E-11	7.40E+09	5.97E+05	2.46E-01		8.08E-16
BY-107	1.01E+06	2.34E+04	6.17E+03	7.40E+12	1.18E+04	1.17E-02		4.18E-11	1.90E+11	1.53E+07	1.52E+01		5.01E-14
BY-108	8.63E+05	2.01E+04	5.31E+03	7.40E+12	1.18E+04	1.36E-02		4.88E-11	3.30E+10	2.66E+06	3.08E+00		1.01E-14
BY-109	1.60E+06	5.04E+04	1.33E+04	3.70E+12	5.88E+03	5.29E-03	sn	1.89E-11	1.10E+10	8.87E+05	5.54E-01		1.82E-15
BY-110	1.50E+06	1.73E+04	4.57E+03	1.50E+13	2.38E+04	1.59E-02		5.70E-11	2.20E+09	1.77E+05	1.18E-01		3.89E-16
BY-111	1.74E+06	2.00E+04	5.28E+03	1.50E+13	2.38E+04	1.37E-02		4.91E-11	3.70E+10	2.98E+06	1.72E+00		5.65E-15
BY-112	1.10E+06	6.09E+04	1.61E+04	3.00E+12	4.77E+03	4.33E-03		1.55E-11	1.90E+09	1.53E+05	1.39E-01		4.58E-16
C-101	3.33E+05	2.99E+04	7.90E+03	1.90E+12	3.02E+03	9.07E-03		3.25E-11	7.40E+10	5.97E+06	1.79E+01		5.89E-14
C-102	1.60E+06	2.86E+05	7.57E+04	6.72E+09	1.07E+01	9.41E-04	sn	3.37E-12	7.40E+11	5.97E+07	3.73E+01		1.23E-13
C-103	7.38E+05	1.13E+05	3.00E+04	6.89E+11	1.10E+03	2.18E-03	sn	7.80E-12	2.60E+11	2.10E+07	2.84E+01		9.35E-14
C-104	1.12E+06	1.59E+05	4.21E+04	1.25E+16	1.99E+07	1.64E-03	dl	5.87E-12	7.91E+11	6.38E+07	5.32E-02	dl	1.75E-16
C-105	5.11E+05	1.81E+04	4.78E+03	3.70E+13	5.88E+04	1.52E-02	dl	5.43E-11	4.40E+11	3.55E+07	7.68E+00	dl	2.53E-14
C-106	8.67E+05	3.35E+04	8.86E+03	8.96E+12	1.42E+04	8.30E-03	dl	2.97E-11	1.10E+11	8.87E+06	2.02E-03	dl	6.65E-18
C-107	1.04E+06	5.56E+04	1.47E+04	3.86E+11	6.14E+02	4.77E-03	dl	1.71E-11	1.50E+11	1.21E+07	1.16E+01		3.82E-14
C-108	2.50E+05	2.48E+06	6.55E+05	3.70E+07	5.88E-02	2.35E-07		8.43E-16	3.70E+10	2.98E+06	1.19E+01		3.93E-14
C-109	2.50E+05	5.66E+05	1.50E+05	3.70E+10	5.88E+01	2.35E-04		8.43E-13	7.80E+09	6.29E+05	2.52E+00		8.28E-15
C-110	7.08E+05	6.78E+04	1.79E+04	4.91E+10	7.81E+01	4.12E-03	sn	1.47E-11	3.70E+09	2.98E+05	4.22E-01		1.39E-15
C-111	2.16E+05	5.16E+05	1.36E+05	3.70E+10	5.88E+01	2.73E-04		9.76E-13	3.70E+10	2.98E+06	1.38E+01		4.55E-14
C-112	3.94E+05	7.05E+05	1.86E+05	3.30E+10	5.25E+01	1.33E-04		4.77E-13	4.00E+10	3.23E+06	8.19E+00		2.70E-14
C-201	7.57E+03	5.22E+07	1.38E+07	2.20E+07	3.50E-02	4.62E-06		1.65E-14	7.00E+07	5.65E+03	1.61E-01	sn	5.30E-16
C-202	3.79E+03	1.32E+06	3.48E+05	7.40E-06	1.18E-14	3.11E-18		1.11E-26	7.40E+09	5.97E+05	1.58E+02		5.19E-13
C-203	1.89E+04	6.59E+07	1.74E+07	7.40E+01	1.18E-07	6.22E-12		2.23E-20	7.40E+08	5.97E+04	3.15E+00		1.04E-14
C-204	1.14E+04	1.47E+09	3.87E+08	1.10E+06	1.75E-03	1.54E-07		5.51E-16	3.30E+06	2.66E+02	2.34E-02		7.71E-17
S-101	1.62E+06	3.71E+04	9.79E+03	7.40E+12	1.18E+04	7.28E-03		2.61E-11	7.40E+10	5.97E+06	3.69E+00		1.21E-14
S-102	2.08E+06	4.15E+09	1.10E+09	1.10E+04	1.75E-05	8.42E-12		3.01E-20	1.10E+10	8.87E+05	6.80E-04	sn	2.24E-18
S-103	9.31E+05	2.68E+09	7.07E+08	1.50E+04	2.38E-05	2.56E-11		9.17E-20	1.10E+09	8.87E+04	9.53E-02		3.13E-16
S-104	1.11E+06	8.81E+04	2.33E+04	1.85E+12	2.94E+03	2.91E-03		1.04E-11	7.40E+10	5.97E+06	5.36E+00		1.76E-14
S-105	1.73E+06	2.20E+05	5.81E+04	1.10E+12	1.75E+03	1.01E-03		3.63E-12	3.70E+09	2.98E+05	1.73E-01		5.69E-16
S-106	1.81E+06	1.28E+05	3.38E+04	2.20E+12	3.50E+03	1.93E-03		6.91E-12	3.70E+08	2.98E+04	1.65E-02		5.41E-17
S-107	1.42E+06	1.43E+07	3.77E+06	1.50E+04	2.38E-05	1.68E-11		6.00E-20	3.70E+11	2.98E+07	2.10E+01		6.90E-14
S-108	2.29E+06	5.17E+04	1.37E+04	7.40E+12	1.18E+04	5.15E-03		1.84E-11	7.40E+09	5.97E+05	2.61E-01		8.59E-16

Table C2-6 (Continued). SST Threshold Leakage Values - Case 3/Carcinogenic

		Carcinogenic													
	Total	Threshold Leakage			Tc-99		Solubility	Basis	Sp. Risk		U-238		Solubility	Basis	Sp. Risk
Tank	Vol. (L)	L	Gal.		Bq	g	g/L	Note 1	R/L		Bq	g	g/L	Note 1	R/L
S-109	1.92E+06	1.51E+04	3.99E+03		2.20E+13	3.50E+04	1.83E-02		6.54E-11		1.10E+09	8.87E+04	4.63E-02		1.52E-16
S-110	1.48E+06	1.70E+04	4.50E+03		1.50E+13	2.38E+04	1.62E-02		5.78E-11		3.30E+10	2.66E+06	1.80E+00		5.93E-15
S-111	2.26E+06	3.49E+04	9.22E+03		1.10E+13	1.75E+04	7.75E-03		2.78E-11		3.70E+09	2.98E+05	1.32E-01		4.35E-16
S-112	1.98E+06	1.02E+04	2.71E+03		7.40E+13	1.18E+05	2.70E-02	mx	9.67E-11		7.40E+08	5.97E+04	3.01E-02		9.92E-17
SX-101	1.73E+06	3.27E+05	8.63E+04		2.94E+15	4.67E+06	8.54E-04	dl	3.06E-12		3.70E+10	2.98E+06	1.73E+00		5.69E-15
SX-102	2.06E+06	6.76E+06	1.79E+06		3.70E+10	5.88E+01	2.86E-05		1.02E-13		7.40E+09	5.97E+05	2.90E-01		9.55E-16
SX-103	2.47E+06	1.02E+04	2.71E+03		7.40E+13	1.18E+05	2.70E-02	mx	9.67E-11		1.90E+09	1.53E+05	6.21E-02		2.04E-16
SX-104	2.32E+06	3.59E+04	9.48E+03		1.10E+13	1.75E+04	7.53E-03		2.69E-11		3.70E+10	2.98E+06	1.28E+00		4.22E-15
SX-105	2.59E+06	1.72E+04	4.54E+03		2.60E+13	4.13E+04	1.60E-02		5.72E-11		3.70E+09	2.98E+05	1.15E-01		3.80E-16
SX-106	2.03E+06	3.15E+04	8.31E+03		1.10E+13	1.75E+04	8.62E-03		3.09E-11		7.40E+09	5.97E+05	2.94E-01		9.68E-16
SX-107	3.94E+05	1.96E+07	5.17E+06		1.10E+05	1.75E-04	4.44E-10		1.59E-18		7.40E+10	5.97E+06	1.52E+01		4.99E-14
SX-108	3.07E+05	1.53E+07	4.05E+06		2.20E+05	3.50E-04	1.14E-09		4.08E-18		7.40E+10	5.97E+06	1.95E+01		6.40E-14
SX-109	9.46E+05	8.65E+07	2.29E+07		1.10E+05	1.75E-04	1.85E-10		6.62E-19		3.70E+10	2.98E+06	3.15E+00		1.04E-14
SX-110	2.35E+05	1.18E+07	3.11E+06		7.40E+03	1.18E-05	5.01E-11		1.79E-19		7.40E+10	5.97E+06	2.54E+01		8.37E-14
SX-111	4.73E+05	2.34E+07	6.19E+06		3.70E-03	5.88E-12	1.24E-17		4.45E-26		7.40E+10	5.97E+06	1.26E+01		4.15E-14
SX-112	3.48E+05	1.24E+06	3.26E+05		2.60E+10	4.13E+01	1.19E-04		4.25E-13		3.70E+10	2.98E+06	8.57E+00		2.82E-14
SX-113	9.84E+04	1.02E+04	2.71E+03		3.70E+12	5.88E+03	2.70E-02	mx	9.67E-11		1.50E+10	1.21E+06	1.23E+01		4.04E-14
SX-114	6.85E+05	2.28E+07	6.03E+06		3.70E-03	5.88E-12	8.59E-18		3.07E-26		1.10E+11	8.87E+06	1.29E+01		4.26E-14
SX-115	4.54E+04	1.02E+04	2.70E+03		7.40E+12	1.18E+04	2.70E-02	mx	9.67E-11		2.60E+10	2.10E+06	4.62E+01		1.52E-13
T-101	3.86E+05	4.26E+04	1.13E+04		3.00E+12	4.77E+03	6.30E-03	sn	2.26E-11		1.90E+09	1.53E+05	3.97E-01		1.31E-15
T-102	1.21E+05	3.77E+05	9.95E+04		3.70E+10	5.88E+01	4.86E-04		1.74E-12		1.90E+08	1.53E+04	1.27E-01		4.16E-16
T-103	1.02E+05	6.49E+04	1.72E+04		2.60E+11	4.13E+02	4.04E-03		1.45E-11		7.40E+08	5.97E+04	5.84E-01		1.92E-15
T-104	1.68E+06	2.42E+06	6.39E+05		1.10E+11	1.75E+02	1.04E-04		3.72E-13		3.30E+10	2.66E+06	1.58E+00		5.20E-15
T-105	3.63E+05	1.85E+07	4.88E+06		1.10E-05	1.75E-14	4.81E-20		1.72E-28		7.40E+10	5.97E+06	1.64E+01		5.40E-14
T-106	7.95E+04	9.64E+05	2.55E+05		7.40E+09	1.18E+01	1.48E-04		5.30E-13		3.70E+10	2.98E+06	3.75E+01		1.24E-13
T-107	6.81E+05	1.77E+08	4.68E+07		7.40E-06	1.18E-14	1.73E-20		6.18E-29		1.10E+10	8.87E+05	1.30E+00		4.28E-15
T-108	1.67E+05	1.77E+06	4.67E+05		1.10E+10	1.75E+01	1.05E-04		3.76E-13		4.00E+09	3.23E+05	1.94E+00		6.37E-15
T-109	2.20E+05	4.86E+05	1.28E+05		7.40E+10	1.18E+02	5.36E-04		1.92E-12		1.50E+09	1.21E+05	5.51E-01		1.81E-15
T-110	1.43E+06	6.89E+08	1.82E+08		3.70E+00	5.88E-09	4.10E-15		1.47E-23		7.40E+09	5.97E+05	4.16E-01		1.37E-15
T-111	1.71E+06	2.85E+08	7.52E+07								2.20E+10	1.77E+06	1.03E+00		3.40E-15
T-112	2.54E+05	1.29E+07	3.41E+06		1.90E-25	3.02E-34	1.19E-39		4.26E-48		7.40E+10	5.97E+06	2.35E+01		7.74E-14
T-201	1.10E+05	1.10E+05	2.90E+04												
T-202	7.95E+04	6.74E+10	1.78E+10												
T-203	1.32E+05	1.12E+10	2.97E+09												
T-204	1.44E+05	7.50E+09	1.98E+09								4.70E+05	3.79E+01	2.15E-03	dl	7.07E-18
TX-101	3.29E+05	1.09E+06	2.89E+05		3.70E+03	5.88E-06	1.79E-11		6.40E-20		3.00E+03	2.42E-01	7.35E-07		2.42E-21
TX-102	8.21E+05	2.87E+05	7.59E+04		3.70E+11	5.88E+02	7.16E-04		2.56E-12		3.70E+02	2.98E-02	3.63E-08		1.20E-22
TX-103	5.94E+05	8.89E+05	2.35E+05		7.40E+10	1.18E+02	1.98E-04		7.09E-13		7.40E+03	5.97E-01	1.00E-06		3.30E-21
TX-104	2.46E+05	1.58E+11	4.17E+10		7.40E+04	1.18E-04	4.78E-10		1.71E-18		3.70E+06	2.98E+02	1.21E-03		3.99E-18
TX-105	2.31E+06	9.95E+04	2.63E+04		3.70E+12	5.88E+03	2.55E-03		9.14E-12		3.70E-02	2.98E-06	1.29E-12		4.26E-27
TX-106	1.71E+06	4.98E+05	1.32E+05		3.30E+11	5.25E+02	3.06E-04		1.10E-12		1.10E+04	8.87E-01	5.17E-07		1.70E-21
TX-107	1.36E+05	1.20E+12	3.18E+11		1.90E+04	3.02E-05	2.22E-10		7.94E-19		7.40E+03	5.97E-01	4.38E-06		1.44E-20
TX-108	5.07E+05	5.63E+04	1.49E+04		1.50E+12	2.38E+03	4.70E-03		1.68E-11		7.40E+09	5.97E+05	1.18E+00		3.87E-15
TX-109	1.38E+06	1.02E+04	2.71E+03		3.30E+13	5.25E+04	2.70E-02	mx	9.67E-11		3.70E+10	2.98E+06	2.17E+00		7.13E-15
TX-110	1.75E+06	2.72E+04	7.19E+03		1.10E+13	1.75E+04	1.00E-02		3.58E-11		1.50E+10	1.21E+06	6.92E-01		2.28E-15
TX-111	1.40E+06	1.16E+05	3.06E+04		1.90E+12	3.02E+03	2.16E-03		7.72E-12		7.40E+09	5.97E+05	4.26E-01		1.40E-15
TX-112	2.46E+06	5.09E+05	1.35E+05		7.40E+11	1.18E+03	4.79E-04		1.71E-12		1.50E+09	1.21E+05	4.92E-02		1.62E-16
TX-113	2.30E+06	4.79E+05	1.27E+05		3.00E+11	4.77E+02	2.08E-04		7.43E-13		3.70E+12	2.98E+08	1.30E+02		4.27E-13
TX-114	2.02E+06	3.87E+05	1.02E+05		7.40E+11	1.18E+03	5.81E-04		2.08E-12		1.10E+11	8.87E+06	4.38E+00		1.44E-14
TX-115	2.42E+06	5.45E+05	1.44E+05		3.70E+11	5.88E+02	2.43E-04		8.69E-13		7.40E+11	5.97E+07	2.46E+01		8.11E-14
TX-116	2.39E+06	1.51E+06	3.98E+05		2.20E+11	3.50E+02	1.46E-04		5.24E-13		1.10E+11	8.87E+06	3.71E+00		1.22E-14
TX-117	2.37E+06	8.50E+05	2.25E+05		7.40E+10	1.18E+02	4.97E-05		1.78E-13		7.40E+11	5.97E+07	2.52E+01		8.29E-14
TX-118	1.31E+06	1.02E+04	2.71E+03		3.30E+13	5.25E+04	2.70E-02	mx	9.67E-11		3.00E+11	2.42E+07	1.84E+01		6.06E-14
TY-101	4.47E+05	2.87E+05	7.59E+04		1.99E+11	3.16E+02	7.08E-04		2.54E-12		4.46E+10	3.60E+06	8.05E+00		2.65E-14
TY-102	2.42E+05	1.02E+04	2.71E+03		7.40E+12	1.18E+04	2.70E-02	mx	9.67E-11		1.63E+09	1.31E+05	5.43E-01		1.79E-15
TY-103	6.13E+05	2.32E+05	6.12E+04		2.60E+13	4.13E+04	9.50E-04		3.40E-12		3.65E+11	2.94E+07	8.23E-02	dl	2.71E-16
TY-104	1.74E+05	7.70E+04	2.03E+04		3.32E+11	5.28E+02	3.53E-03	dl	1.26E-11		1.80E+11	1.45E+07	7.79E-02	sn	2.56E-16
TY-105	8.74E+05	8.63E+04	2.28E+04		1.63E+12	2.59E+03	2.96E-03		1.06E-11		1.90E+11	1.53E+07	1.75E+01		5.77E-14
TY-106	6.43E+04	2.80E+04	7.39E+03		3.98E+11	6.33E+02	9.83E-03		3.52E-11		1.90E+10	1.53E+06	2.38E+01		7.83E-14
U-101	9.46E+04	2.19E+04	5.79E+03		7.40E+11	1.18E+03	1.24E-02		4.45E-11		7.40E+10	5.97E+06	6.31E+01		2.07E-13
U-102	1.42E+06	1.17E+05	3.09E+04		1.90E+12	3.02E+03	2.13E-03		7.64E-12		1.90E+02	1.53E-02	1.08E-08		3.56E-23
U-103	1.77E+06	6.63E+08	1.75E+08		2.50E+08	3.97E-01	2.24E-07		8.03E-16		4.35E+07	3.51E+03	1.98E-03		6.52E-18
U-104	4.62E+05	2.10E+07	5.55E+06		3.70E+03	5.88E-06	1.27E-11		4.56E-20		8.29E+10	6.69E+06	1.45E+01		4.76E-14
U-105	1.58E+06	2.35E+08	6.20E+07		3.70E+08	5.88E-01	3.72E-07		1.33E-15		9.38E+09	7.56E+05	4.78E-01		1.57E-15
U-106	8.55E+05	2.77E+13	7.31E+12		1.90E+03	3.02E-06	3.53E-12		1.26E-20		7.40E+03	5.97E-01	6.98E-07		2.30E-21
U-107	1.54E+06	7.61E+04	2.01E+04		3.30E+12	5.25E+03	3.41E-03		1.22E-11		1.90E+04	1.53E+00	9.97E-07		3.28E-21
U-108	1.76E+06	1.10E+08	2.91E+07		7.40E+08	1.18E+00	6.67E-07		2.39E-15		3.30E+10	2.66E+06	1.51E+00		4.96E-15
U-109	1.75E+06	8.12E+05	2.14E+05		2.20E+11	3.50E+02	2.00E-04		7.15E-13		7.40E+08	5.97E+04	3.41E-02		1.12E-16
U-110	7.04E+05	1.63E+06	4.31E+05		1.10E+10	1.75E+01	2.48E-05		8.89E-14		1.10E+12	8.87E+07	1.26E+02		4.15E-13
U-111	1.25E+06	2.58E+05	6.82E+04		7.40E+11	1.18E+03	9.45E-04		3.38E-12		1.10E+10	8.87E+05	7.12E-01		2.34E-15
U-112	1.85E+05	2.88E+04	7.62E+03		1.10E+12	1.75E+03	9.43E-03		3.38E-11		2.60E+09	2.10E+05	1.13E+00		3.72E-15
U-201	1.89E+04	1.72E+04	4.55E+03		1.90E+11	3.02E+02	1.60E-02		5.71E-11		7.40E+01	5.97E-03	3.15E-07		1.04E-21
U-202	1.89E+04	1.72E+04	4.55E+03		1.90E+11	3.02E+02	1.60E-02		5.71E-11		1.10E-12	8.87E-17	4.69E-21		1.54E-35
U-203	1.14E+04	1.31E+04	3.47E+03		1.50E+11	2.38E+02	2.10E-02		7.52E-11		1.10E-12	8.87E-17	7.81E-21		2.57E-35
U-204	1.14E+04	5.14E+04	1.36E+04		3.70E+10	5.88E+01	5.18E-03		1.85E-11		1.33E+06	1.07E+02	9.45E-03		3.11E-17

Table C2-6 (Continued). SST Threshold Leakage Values - Case 3/Carcinogenic

Tank	I-129 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	C-14 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	As g	Solubility g/L	Basis Note 1	Sp. Risk R/L
A-101														
A-102	1.10E+10	1.71E+03	1.72E-03	mx	4.33E-16	1.50E+13	9.09E+01	6.73E-07	mx	9.15E-13				
A-103	4.53E+09	7.03E+02	6.89E-04	dl	1.74E-16	1.10E+12	6.67E+00	2.12E-07	dl	2.88E-13				
A-104	3.70E-09	5.75E-16	5.42E-21		1.37E-33	2.60E+13	1.58E+02	6.73E-07	mx	9.15E-13				
A-105	3.70E+08	5.75E+01	7.99E-04		2.01E-16	1.90E+11	1.15E+00	6.73E-07	mx	9.15E-13				
A-106	2.27E+09	3.52E+02	1.03E-03	dl	2.61E-16	1.62E+10	9.82E-02	2.44E-07	dl	3.32E-13				
AX-101	3.70E-01	5.75E-08	2.03E-14		5.11E-27	3.70E+09	2.24E-02	7.92E-09		1.08E-14				
AX-102	1.10E-07	1.71E-14	1.16E-19		2.92E-32	7.40E-05	4.48E-16	3.04E-21		4.13E-27				
AX-103	7.40E+08	1.15E+02	2.71E-04		6.83E-17	3.30E+11	2.00E+00	6.73E-07	mx	9.15E-13				
AX-104	1.50E+09	2.33E+02	1.72E-03	mx	4.33E-16	3.30E+12	2.00E+01	6.73E-07	mx	9.15E-13				
B-101	1.10E-20	1.71E-27	3.99E-33		1.01E-45	1.90E+11	1.15E+00	6.73E-07	mx	9.15E-13				
B-102	3.70E+07	5.75E+00	4.74E-05		1.20E-17	5.20E+10	3.15E-01	6.73E-07	mx	9.15E-13				
B-103	3.00E+08	4.66E+01	2.09E-04		5.26E-17	1.10E+11	6.67E-01	6.73E-07	mx	9.15E-13				
B-104	1.10E+08	1.71E+01	1.22E-05		3.07E-18	1.50E+10	9.09E-02	6.47E-08		8.80E-14				
B-105	7.40E+08	1.15E+02	9.92E-05		2.50E-17	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13				
B-106	3.70E+07	5.75E+00	1.30E-05		3.27E-18	1.90E+10	1.15E-01	2.60E-07		3.54E-13				
B-107	7.40E+08	1.15E+02	1.84E-04		4.64E-17	4.80E+11	2.91E+00	6.73E-07	mx	9.15E-13				
B-108	1.50E+09	2.33E+02	6.55E-04		1.65E-16	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13				
B-109	3.70E+08	5.75E+01	1.20E-04		3.01E-17	2.60E+11	1.58E+00	6.73E-07	mx	9.15E-13				
B-110	1.90E+10	2.95E+03	1.72E-03	mx	4.33E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13				
B-111	1.90E+11	2.95E+04	1.72E-03	mx	4.33E-16	7.80E+13	4.73E+02	6.73E-07	mx	9.15E-13				
B-112	1.10E+10	1.71E+03	1.72E-03	mx	4.33E-16	3.00E+12	1.82E+01	6.73E-07	mx	9.15E-13				
B-201														
B-202	1.43E+10	2.22E+03	1.72E-03	mx	4.33E-16						9.36E+01	9.16E-04		2.53E-18
B-203														
B-204														
BX-101	3.70E-09	5.75E-16	3.53E-21		8.90E-34	7.40E+11	4.48E+00	6.73E-07	mx	9.15E-13				
BX-102	3.70E+10	5.75E+03	1.72E-03	mx	4.33E-16	2.20E+13	1.33E+02	6.73E-07	mx	9.15E-13				
BX-103	3.70E-08	5.75E-15	2.30E-20		5.80E-33	3.30E+12	2.00E+01	6.73E-07	mx	9.15E-13				
BX-104	1.90E+11	2.95E+04	6.32E-04	dl	1.59E-16	3.70E+13	2.24E+02	1.88E-07	dl	2.56E-13				
BX-105	7.40E+10	1.15E+04	3.21E-04	sn	8.10E-17	3.00E+13	1.82E+02	1.31E-07	sn	1.78E-13				
BX-106	1.50E+11	2.33E+04	1.72E-03	mx	4.33E-16	6.30E+13	3.82E+02	6.73E-07	mx	9.15E-13				
BX-107	3.00E+08	4.66E+01	3.57E-05		8.99E-18	7.70E+09	4.67E-02	3.57E-08		4.86E-14				
BX-108	7.40E+06	1.15E+00	1.17E-05		2.94E-18	3.00E+09	1.82E-02	1.85E-07		2.51E-13				
BX-109	2.60E+08	4.04E+01	5.53E-05		1.39E-17	2.60E+11	1.58E+00	6.73E-07	mx	9.15E-13				
BX-110	1.90E+10	2.95E+03	1.72E-03	mx	4.33E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13				
BX-111	1.90E+10	2.95E+03	1.72E-03	mx	4.33E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13				
BX-112	1.10E+08	1.71E+01	2.73E-05		6.89E-18	1.10E+11	6.67E-01	6.73E-07	mx	9.15E-13				
BY-101	2.20E+10	3.42E+03	1.72E-03	mx	4.33E-16	7.40E+12	4.48E+01	6.73E-07	mx	9.15E-13				
BY-102	7.40E+09	1.15E+03	8.90E-04		2.24E-16	1.90E+12	1.15E+01	6.73E-07	mx	9.15E-13	9.99E+01	1.76E-06	sn	4.86E-21
BY-103	1.10E+09	1.71E+02	1.13E-04		2.84E-17	4.80E+11	2.91E+00	6.73E-07	mx	9.15E-13	7.36E+02	1.80E-06	dl	4.97E-21
BY-104	2.60E+10	4.04E+03	1.72E-03	mx	4.33E-16	7.50E+12	4.55E+01	6.73E-07	mx	9.15E-13				
BY-105	1.90E+10	2.95E+03	1.55E-03		3.91E-16	4.00E+12	2.42E+01	6.73E-07	mx	9.15E-13	6.61E+01	9.00E-08	dl	2.48E-22
BY-106	2.20E+10	3.42E+03	1.41E-03		3.54E-16	7.40E+12	4.48E+01	6.73E-07	mx	9.15E-13	1.78E+03	2.00E-03	dl	5.52E-18
BY-107	7.40E+09	1.15E+03	1.14E-03		2.88E-16	2.20E+12	1.33E+01	6.73E-07	mx	9.15E-13				
BY-108	1.10E+10	1.71E+03	1.72E-03	mx	4.33E-16	2.20E+12	1.33E+01	6.73E-07	mx	9.15E-13				
BY-109	7.40E+09	1.15E+03	7.18E-04		1.81E-16	1.90E+12	1.15E+01	6.73E-07	mx	9.15E-13	4.63E+01	7.20E-07	sn	1.99E-21
BY-110	2.20E+10	3.42E+03	1.72E-03	mx	4.33E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13				
BY-111	2.60E+10	4.04E+03	1.72E-03	mx	4.33E-16	7.50E+12	4.55E+01	6.73E-07	mx	9.15E-13				
BY-112	3.70E+09	5.75E+02	5.22E-04		1.31E-16	1.10E+12	6.67E+00	6.73E-07	mx	9.15E-13				
C-101	2.60E+09	4.04E+02	1.21E-03		3.05E-16	7.40E+11	4.48E+00	6.73E-07	mx	9.15E-13				
C-102	1.90E+00	2.95E-07	1.84E-13		4.64E-26	3.70E+07	2.24E-04	1.40E-10		1.90E-16	2.61E+01	2.30E-06	sn	6.35E-21
C-103	1.50E+00	2.33E-07	3.16E-13		7.95E-26	1.90E+13	1.15E+02	6.73E-07	mx	9.15E-13	6.04E+01	1.20E-07	sn	3.31E-22
C-104	3.70E-01	5.75E-08	5.15E-14		1.30E-26	3.34E+10	2.02E-01	2.98E-07	dl	4.06E-13				
C-105	7.40E+10	1.15E+04	1.55E-03	dl	3.91E-16	1.90E+13	1.15E+02	6.30E-07	dl	8.57E-13	2.95E+05	3.45E-01	mx	9.52E-16
C-106	3.23E+09	5.02E+02	8.04E-05	dl	2.03E-17	3.00E+10	1.82E-01	7.88E-08	dl	1.07E-13	4.68E+05	3.45E-01	mx	9.52E-16
C-107	1.10E+08	1.71E+01	1.64E-05		4.14E-18	1.10E+11	6.67E-01	6.40E-07		8.71E-13	6.44E+01	5.00E-07	dl	1.38E-21
C-108	7.40E+04	1.15E-02	4.60E-08		1.16E-20	1.10E+10	6.67E-02	2.67E-07		3.63E-13				
C-109	7.40E+07	1.15E+01	4.60E-05		1.16E-17	7.00E+10	4.24E-01	6.73E-07	mx	9.15E-13				
C-110	1.90E-02	2.95E-09	4.17E-15		1.05E-27	3.00E+00	1.82E-11	2.57E-17		3.49E-23	9.46E+00	5.00E-07	sn	1.38E-21
C-111	7.40E+07	1.15E+01	5.33E-05		1.34E-17	2.80E+10	1.70E-01	6.73E-07	mx	9.15E-13				
C-112	3.70E+07	5.75E+00	1.46E-05		3.68E-18	8.90E+10	5.39E-01	6.73E-07	mx	9.15E-13				
C-201	3.30E+04	5.12E-03	6.77E-07		1.71E-19	1.90E+06	1.15E-05	1.52E-09		2.07E-15				
C-202	1.10E-08	1.71E-15	4.51E-19		1.14E-31	1.10E+08	6.67E-04	1.76E-07		2.40E-13				
C-203	1.10E-01	1.71E-08	9.03E-13		2.27E-25	1.10E+07	6.67E-05	3.52E-09		4.79E-15				
C-204	1.50E+03	2.33E-04	2.05E-08		5.17E-21	7.40E+04	4.48E-07	3.95E-11		5.37E-17				
S-101	1.10E+10	1.71E+03	1.06E-03		2.66E-16	1.90E+12	1.15E+01	6.73E-07	mx	9.15E-13				
S-102	1.90E+01	2.95E-06	1.42E-12		3.58E-25	3.00E+03	1.82E-08	8.75E-15		1.19E-20				
S-103	2.60E+01	4.04E-06	4.34E-12		1.09E-24	7.50E+04	4.55E-07	4.88E-13		6.64E-19				
S-104	2.24E+12	3.48E+05	1.72E-03	mx	4.33E-16	1.90E+11	1.15E+00	6.73E-07	mx	9.15E-13				
S-105	1.90E+09	2.95E+02	1.71E-04		4.31E-17	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13				
S-106	3.30E+09	5.12E+02	2.83E-04		7.12E-17	1.10E+12	6.67E+00	6.73E-07	mx	9.15E-13				
S-107	2.60E+01	4.04E-06	2.84E-12		7.15E-25	3.70E+03	2.24E-08	1.58E-14		2.14E-20				
S-108	7.40E+09	1.15E+03	5.03E-04		1.27E-16	2.20E+12	1.33E+01	6.73E-07	mx	9.15E-13				

Table C2-6 (Continued). SST Threshold Leakage Values - Case 3/Carcinogenic

Tank	I-129 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	C-14 Bq	g	Solubility g/L	Basis Note 1	Sp. Risk R/L	As g	Solubility g/L	Basis Note 1	Sp. Risk R/L
S-109	3.30E+10	5.12E+03	1.72E-03	mx	4.33E-16	1.10E+13	6.67E+01	6.73E-07	mx	9.15E-13				
S-110	2.20E+10	3.42E+03	1.72E-03	mx	4.33E-16	7.40E+12	4.48E+01	6.73E-07	mx	9.15E-13				
S-111	1.90E+10	2.95E+03	1.31E-03		3.30E-16	7.40E+12	4.48E+01	6.73E-07	mx	9.15E-13				
S-112	1.50E+11	2.33E+04	1.72E-03	mx	4.33E-16	3.70E+13	2.24E+02	6.73E-07	mx	9.15E-13				
SX-101	7.40E-01	1.15E-07	6.66E-14		1.68E-26	2.20E+02	1.33E-09	7.73E-16		1.05E-21				
SX-102	7.40E+07	1.15E+01	5.59E-06		1.41E-18	1.10E+10	6.67E-02	3.24E-08		4.41E-14				
SX-103	1.10E+11	1.71E+04	1.72E-03	mx	4.33E-16	2.30E+13	1.39E+02	6.73E-07	mx	9.15E-13				
SX-104	1.90E+10	2.95E+03	1.27E-03		3.20E-16	2.60E+12	1.58E+01	6.73E-07	mx	9.15E-13				
SX-105	3.70E+10	5.75E+03	1.72E-03	mx	4.33E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13				
SX-106	1.50E+10	2.33E+03	1.15E-03		2.89E-16	7.70E+11	4.67E+00	6.73E-07	mx	9.15E-13				
SX-107	1.10E+02	1.71E-05	4.34E-11		1.09E-23	7.40E+04	4.48E-07	1.14E-12		1.55E-18				
SX-108	1.90E+02	2.95E-05	9.62E-11		2.43E-23	1.50E+05	9.09E-07	2.97E-12		4.03E-18				
SX-109	1.90E+02	2.95E-05	3.12E-11		7.86E-24	7.40E+04	4.48E-07	4.74E-13		6.45E-19				
SX-110	7.40E+00	1.15E-06	4.90E-12		1.23E-24	4.10E+04	2.48E-07	1.06E-12		1.44E-18				
SX-111	7.40E-06	1.15E-12	2.43E-18		6.12E-31	2.20E-03	1.33E-14	2.82E-20		3.83E-26				
SX-112	3.70E+07	5.75E+00	1.65E-05		4.16E-18	1.50E+10	9.09E-02	2.61E-07		3.55E-13				
SX-113	7.40E+09	1.15E+03	1.72E-03	mx	4.33E-16	2.60E+12	1.58E+01	6.73E-07	mx	9.15E-13				
SX-114	7.40E-06	1.15E-12	1.68E-18		4.23E-31	2.20E-03	1.33E-14	1.95E-20		2.65E-26				
SX-115	1.50E+10	2.33E+03	1.72E-03	mx	4.33E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13				
T-101	3.70E+09	5.75E+02	1.49E-03		3.75E-16	2.60E+12	1.58E+01	6.73E-07	mx	9.15E-13				
T-102	7.40E+07	1.15E+01	9.49E-05		2.39E-17	3.70E+10	2.24E-01	6.73E-07	mx	9.15E-13				
T-103	3.70E+08	5.75E+01	5.62E-04		1.42E-16	2.60E+11	1.58E+00	6.73E-07	mx	9.15E-13				
T-104	1.90E+08	2.95E+01	1.75E-05		4.41E-18	7.40E+09	4.48E-02	2.66E-08		3.62E-14				
T-105	1.90E-08	2.95E-15	8.12E-21		2.05E-33	7.40E-08	4.48E-19	1.23E-24		1.68E-30				
T-106	1.10E+07	1.71E+00	2.15E-05		5.42E-18	3.70E+09	2.24E-02	2.82E-07		3.84E-13				
T-107	1.10E-08	1.71E-15	2.51E-21		6.32E-34	1.10E+08	6.67E-04	9.79E-10		1.33E-15				
T-108	1.90E+07	2.95E+00	1.77E-05		4.46E-18	3.70E+09	2.24E-02	1.35E-07		1.83E-13				
T-109	1.10E+08	1.71E+01	7.78E-05		1.96E-17	3.70E+09	2.24E-02	1.02E-07		1.39E-13				
T-110	3.00E-03	4.66E-10	3.25E-16		8.18E-29	7.40E-02	4.48E-13	3.13E-19		4.25E-25				
T-111														
T-112	3.30E-28	5.12E-35	2.02E-40		5.09E-53	1.50E-26	9.09E-38	3.58E-43		4.88E-49				
T-201														
T-202														
T-203														
T-204														
TX-101	3.30E+00	5.12E-07	1.56E-12		3.92E-25	7.40E+11	4.48E+00	6.73E-07	mx	9.15E-13				
TX-102	7.40E+08	1.15E+02	1.40E-04		3.53E-17	1.10E+11	6.67E-01	6.73E-07	mx	9.15E-13				
TX-103	7.40E+07	1.15E+01	1.93E-05		4.87E-18	3.00E+10	1.82E-01	3.06E-07		4.16E-13				
TX-104	1.10E+02	1.71E-05	6.94E-11		1.75E-23	1.90E+04	1.15E-07	4.68E-13		6.37E-19				
TX-105	3.70E+09	5.75E+02	2.49E-04		6.28E-17	1.10E+12	6.67E+00	6.73E-07	mx	9.15E-13				
TX-106	3.70E+08	5.75E+01	3.35E-05		8.44E-18	1.90E+11	1.15E+00	6.72E-07		9.13E-13				
TX-107	1.90E+01	2.95E-06	2.17E-11		5.46E-24	3.70E+02	2.24E-09	1.65E-14		2.24E-20				
TX-108	2.20E+09	3.42E+02	6.74E-04		1.70E-16	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13				
TX-109	3.70E+10	5.75E+03	1.72E-03	mx	4.33E-16	1.10E+13	6.67E+01	6.73E-07	mx	9.15E-13				
TX-110	1.90E+10	2.95E+03	1.69E-03		4.25E-16	3.70E+12	2.24E+01	6.73E-07	mx	9.15E-13				
TX-111	2.60E+09	4.04E+02	2.88E-04		7.26E-17	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13				
TX-112	1.50E+09	2.33E+02	9.48E-05		2.39E-17	7.40E+10	4.48E-01	1.83E-07		2.48E-13				
TX-113	3.70E+08	5.75E+01	2.50E-05		6.30E-18	3.80E+11	2.30E+00	6.73E-07	mx	9.15E-13				
TX-114	1.10E+09	1.71E+02	8.44E-05		2.13E-17	1.20E+11	7.27E-01	3.59E-07		4.88E-13				
TX-115	7.40E+08	1.15E+02	4.74E-05		1.20E-17	2.60E+11	1.58E+00	6.50E-07		8.85E-13				
TX-116	3.00E+08	4.66E+01	1.95E-05		4.92E-18	3.70E+10	2.24E-01	9.39E-08		1.28E-13				
TX-117	1.10E+08	1.71E+01	7.21E-06		1.82E-18	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13				
TX-118	3.70E+10	5.75E+03	1.72E-03	mx	4.33E-16	3.70E+13	2.24E+02	6.73E-07	mx	9.15E-13				
TY-101	1.27E+09	1.97E+02	4.42E-04		1.11E-16	1.10E+11	6.67E-01	6.73E-07	mx	9.15E-13				
TY-102	1.50E+10	2.33E+03	1.72E-03	mx	4.33E-16	2.30E+12	1.39E+01	6.73E-07	mx	9.15E-13				
TY-103	1.83E+12	2.84E+05	1.72E-03	mx	4.33E-16	7.40E+12	4.48E+01	6.73E-07	mx	9.15E-13				
TY-104	5.26E+11	8.17E+04	1.72E-03	mx	4.33E-16	1.98E+10	1.20E-01	2.62E-07	sn	3.57E-13				
TY-105	1.70E+09	2.64E+02	3.02E-04		7.61E-17	4.40E+11	2.67E+00	6.73E-07	mx	9.15E-13				
TY-106	4.09E+11	6.35E+04	1.72E-03	mx	4.33E-16	3.70E+09	2.24E-02	3.49E-07		4.74E-13				
U-101	1.10E+09	1.71E+02	1.72E-03	mx	4.33E-16	3.70E+11	2.24E+00	6.73E-07	mx	9.15E-13				
U-102	2.60E+09	4.04E+02	2.85E-04		7.19E-17	1.10E+12	6.67E+00	6.73E-07	mx	9.15E-13				
U-103	3.70E+05	5.75E-02	3.24E-08		8.17E-21	1.50E+08	9.09E-04	5.13E-10		6.98E-16				
U-104	7.40E+00	1.15E-06	2.49E-12		6.27E-25	7.40E+01	4.48E-10	9.71E-16		1.32E-21				
U-105	7.40E+05	1.15E-01	7.26E-08		1.83E-20	2.60E+08	1.58E-03	9.96E-10		1.35E-15				
U-106	3.30E+00	5.12E-07	5.99E-13		1.51E-25	2.20E+03	1.33E-08	1.56E-14		2.12E-20				
U-107	3.70E+09	5.75E+02	3.74E-04		9.42E-17	3.00E+11	1.82E+00	6.73E-07	mx	9.15E-13				
U-108	1.10E+06	1.71E-01	9.68E-08		2.44E-20	3.70E+08	2.24E-03	1.27E-09		1.73E-15				
U-109	3.30E+08	5.12E+01	2.92E-05		7.37E-18	1.10E+11	6.67E-01	3.80E-07		5.17E-13				
U-110	1.90E+07	2.95E+00	4.19E-06		1.06E-18	9.30E+09	5.64E-02	8.01E-08		1.09E-13				
U-111	1.50E+09	2.33E+02	1.87E-04		4.71E-17	7.40E+10	4.48E-01	3.60E-07		4.90E-13				
U-112	1.90E+09	2.95E+02	1.59E-03		4.01E-16	7.40E+11	4.48E+00	6.73E-07	mx	9.15E-13				
U-201	3.00E+08	4.66E+01	1.72E-03	mx	4.33E-16	1.10E+11	6.67E-01	6.73E-07	mx	9.15E-13				
U-202	3.00E+08	4.66E+01	1.72E-03	mx	4.33E-16	1.10E+11	6.67E-01	6.73E-07	mx	9.15E-13				
U-203	2.60E+08	4.04E+01	1.72E-03	mx	4.33E-16	7.40E+10	4.48E-01	6.73E-07	mx	9.15E-13				
U-204	7.40E+07	1.15E+01	1.01E-03		2.55E-16	2.20E+10	1.33E-01	6.73E-07	mx	9.15E-13				

Table C2-6 (Continued). SST Threshold Leakage Values - Case 3/Carcinogenic

Tank	Cr g	Solubility g/L	Basis Note 1	Sp. Risk R/L
A-101	1.00E-02	2.77E-09		3.27E-25
A-102	2.10E+05	4.26E-02	sn	5.03E-18
A-103	2.79E+06	3.33E-01	dl	3.93E-17
A-104	2.60E-35	2.45E-40		2.89E-56
A-105	3.10E-17	4.31E-22		5.09E-38
A-106	3.87E+06	1.16E+00	dl	1.37E-16
AX-101	1.00E+06	3.53E-01		4.17E-17
AX-102	5.20E+05	2.08E-01	sn	2.45E-17
AX-103	5.20E+03	1.23E-02		1.45E-18
AX-104	4.70E+06	1.00E+01	mx	1.18E-15
B-101	3.60E+05	8.42E-01		9.93E-17
B-102	1.60E+04	1.32E-01		1.56E-17
B-103	2.10E+03	9.40E-03		1.11E-18
B-104	1.00E+06	7.12E-01		8.40E-17
B-105	1.00E+05	8.63E-02		1.02E-17
B-106	1.00E+04	2.26E-02		2.66E-18
B-107	5.20E+05	8.33E-01		9.83E-17
B-108	5.20E+04	1.46E-01		1.72E-17
B-109	5.20E+03	1.08E-02		1.28E-18
B-110	1.60E+06	1.72E+00		2.03E-16
B-111	4.20E+05	4.68E-01		5.52E-17
B-112	4.20E+04	3.36E-01		3.97E-17
B-201				
B-202	8.79E+04	8.60E-01		1.01E-16
B-203	2.10E+04	1.09E-01		1.28E-17
B-204	2.10E+05	1.11E+00		1.31E-16
BX-101	1.60E+01	9.83E-05		1.16E-20
BX-102	1.00E+00	2.75E-06		3.25E-22
BX-103	1.60E-04	6.40E-10		7.56E-26
BX-104	2.45E+06	9.25E-01	dl	1.09E-16
BX-105	8.11E+05	2.05E-01	sn	2.42E-17
BX-106	6.82E+04	1.20E+00	sn	1.42E-16
BX-107	5.20E+05	3.43E-01	sn	4.05E-17
BX-108	5.20E+04	5.28E-01		6.24E-17
BX-109	5.20E+03	1.03E-01	sn	1.22E-17
BX-110	3.60E+05	9.72E-01	sn	1.15E-16
BX-111	3.60E+04	4.75E-01	sn	5.61E-17
BX-112	2.10E+05	3.17E-01	sn	3.74E-17
BY-101	3.10E-11	2.23E-17		2.63E-33
BY-102	2.96E+04	5.21E-01	sn	6.15E-17
BY-103	1.53E+05	3.74E-01	dl	4.41E-17
BY-104	4.07E+07	1.00E+01	mx	1.18E-15
BY-105	2.60E+05	2.36E-01	dl	2.78E-17
BY-106	3.59E+05	4.04E-01	dl	4.77E-17
BY-107	1.00E+05	9.93E-02		1.17E-17
BY-108	1.00E+04	1.16E-02		1.37E-18
BY-109	3.52E+04	5.46E-01	sn	6.44E-17
BY-110	1.00E+05	6.67E-02		7.87E-18
BY-111	5.70E-11	3.28E-17		3.87E-33
BY-112	1.26E+05	1.14E-01		1.35E-17
C-101	5.20E-15	1.56E-20		1.84E-36
C-102	6.32E+02	5.57E-02	sn	6.57E-18
C-103	3.81E+04	7.57E-02	sn	8.93E-18
C-104	1.36E+06	1.22E+00		1.44E-16
C-105	1.29E+06	2.52E+00		2.98E-16
C-106	2.10E+06	2.42E+00		2.86E-16
C-107	4.70E+05	3.22E-01	dl	3.80E-17
C-108	5.20E+04	2.08E-01		2.46E-17
C-109	1.00E+04	4.00E-02		4.72E-18
C-110	5.20E+05	3.07E-01	sn	3.62E-17
C-111	5.20E+04	2.41E-01		2.84E-17
C-112	5.20E+03	1.32E-02		1.56E-18
C-201				
C-202				
C-203				
C-204				
S-101	4.20E+07	1.00E+01	mx	1.18E-15
S-102	4.20E+06	2.02E+00		2.39E-16
S-103	4.70E+05	5.05E-01		5.96E-17
S-104	4.70E+07	1.00E+01	mx	1.18E-15
S-105	4.20E+06	2.43E+00		2.87E-16
S-106	4.70E+05	2.59E-01		3.06E-17
S-107	3.60E+07	1.00E+01	mx	1.18E-15
S-108	3.60E+06	1.57E+00		1.86E-16

Table C2-6 (Continued). SST Threshold Leakage Values - Case 3/Carcinogenic

Tank	Cr g	Solubility g/L	Basis Note 1	Sp. Risk R/L
S-109	2.37E+06	1.24E+00		1.46E-16
S-110	3.60E+07	1.00E+01	mx	1.18E-15
S-111	3.96E+06	1.76E+00		2.07E-16
S-112	4.30E+05	2.17E-01		2.56E-17
SX-101	5.20E+07	3.33E-01	dl	3.93E-17
SX-102	5.20E+06	2.53E+00		2.99E-16
SX-103	1.70E+06	6.89E-01		8.13E-17
SX-104	5.20E+07	1.56E-01	dl	1.84E-17
SX-105	5.34E+06	2.07E+00		2.44E-16
SX-106	1.00E+03	4.93E-04		5.82E-20
SX-107	5.20E+07	1.00E+01	mx	1.18E-15
SX-108	5.20E+07	1.00E+01	mx	1.18E-15
SX-109	5.20E+07	1.00E+01	mx	1.18E-15
SX-110	3.60E+07	1.00E+01	mx	1.18E-15
SX-111	5.20E+07	1.00E+01	mx	1.18E-15
SX-112	4.70E+07	1.00E+01	mx	1.18E-15
SX-113	1.00E+07	1.00E+01	mx	1.18E-15
SX-114	5.20E+07	1.00E+01	mx	1.18E-15
SX-115	2.10E+07	1.00E+01	mx	1.18E-15
T-101	1.74E+05	1.53E+00	sn	1.81E-16
T-102	4.20E-12	3.47E-17		4.09E-33
T-103	5.20E-13	5.09E-18		6.00E-34
T-104	2.99E+06	1.78E+00		2.09E-16
T-105	3.60E+05	9.91E-01		1.17E-16
T-106	3.60E+04	4.53E-01		5.34E-17
T-107	5.20E+05	2.12E-01	sn	2.50E-17
T-108	5.20E+04	3.12E-01		3.68E-17
T-109	5.20E+03	2.37E-02		2.80E-18
T-110	1.00E+06	6.97E-01		8.23E-17
T-111	1.60E+06	9.33E-01		1.10E-16
T-112	1.60E+06	5.62E-01	sn	6.63E-17
T-201				
T-202	1.00E+04	1.26E-01		1.48E-17
T-203	1.00E+05	7.55E-01		8.91E-17
T-204	1.62E+04	1.07E+00	dl	1.26E-16
TX-101	1.60E-05	4.86E-11		5.73E-27
TX-102	3.70E-12	4.50E-18		5.32E-34
TX-103	1.60E-13	2.69E-19		3.18E-35
TX-104	2.10E-20	8.54E-26		1.01E-41
TX-105	2.60E-11	1.13E-17		1.33E-33
TX-106	2.10E-12	1.22E-18		1.45E-34
TX-107				
TX-108	2.60E-11	5.13E-17		6.05E-33
TX-109	1.60E+06	1.16E+00		1.37E-16
TX-110	1.60E+05	9.15E-02		1.08E-17
TX-111	1.60E+04	1.14E-02		1.35E-18
TX-112	1.00E+03	4.07E-04		4.80E-20
TX-113	5.20E+05	2.26E-01		2.67E-17
TX-114	5.20E+04	2.57E-02		3.03E-18
TX-115	1.00E+04	4.13E-03		4.87E-19
TX-116	2.60E-10	1.09E-16		1.28E-32
TX-117	2.60E-06	1.10E-12		1.29E-28
TX-118	5.20E+03	3.96E-03		4.67E-19
TY-101	6.15E+06	1.00E+01	mx	1.18E-15
TY-102	2.05E+04	8.46E-02		9.99E-18
TY-103	6.32E+05	1.03E+00		1.22E-16
TY-104	2.15E+04	1.89E+00	sn	2.23E-16
TY-105	1.60E-14	1.83E-20		2.16E-36
TY-106	7.22E+03	1.12E-01		1.32E-17
U-101	3.10E-04	3.28E-09		3.87E-25
U-102	9.69E+03	5.62E-03	sn	6.63E-19
U-103	5.09E+02	2.87E-04		3.39E-20
U-104				
U-105	4.20E-15	2.65E-21		3.13E-37
U-106	3.60E-13	4.21E-19		4.97E-35
U-107	4.20E+02	2.73E-04		3.23E-20
U-108	1.00E-15	5.67E-22		6.69E-38
U-109	2.60E-12	1.48E-18		1.75E-34
U-110	2.10E+07	1.00E+01	mx	1.18E-15
U-111	2.10E+06	1.69E+00		1.99E-16
U-112	2.60E+05	1.40E+00		1.65E-16
U-201	4.70E-11	2.48E-15		2.93E-31
U-202	4.10E-12	2.17E-16		2.56E-32
U-203	4.00E-12	3.52E-16		4.16E-32
U-204	2.98E+03	2.62E-01		3.10E-17

Table C2-7. SST Threshold Leakage Values - Case 3/Toxicant

Tank	Vol. (L)	Toxicant Threshold Leakage L	Toxicant Threshold Leakage Gal.	NO3 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	EDTA g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
A-101	3.61E+06	3.83E+04	1.01E+04	1.20E+09	2.02E+02	dl	1.55E-07	2.90E-36	8.04E-43		4.04E-49
A-102	1.55E+05	8.60E+04	2.27E+04	1.40E+09	1.29E+02	sn	9.92E-08	1.80E+07	2.81E-02	mx	1.41E-08
A-103	1.40E+06	5.86E+04	1.55E+04	3.26E+08	2.03E+02	dl	1.56E-07	1.80E+05	2.81E-02	mx	1.41E-08
A-104	1.06E+05	3.18E+04	8.39E+03	1.40E+09	4.09E+02	mx	3.15E-07				
A-105	7.19E+04	1.28E+05	3.39E+04	6.20E+06	8.62E+01		6.63E-08				
A-106	4.73E+05	6.67E+04	1.76E+04	1.90E+00	1.95E+02	dl	1.50E-07	1.80E-02	3.80E-08		1.91E-14
AX-101	2.83E+06	3.91E+04	1.03E+04	2.96E+08	2.07E+02	sn	1.59E-07	2.30E-05	8.12E-12		4.08E-18
AX-102	1.48E+05	4.26E+04	1.13E+04	2.61E+06	2.29E+02	sn	1.76E-07	2.60E-10	1.76E-15		8.84E-22
AX-103	4.24E+05	4.83E+04	1.28E+04	5.50E+08	1.60E+02	sn	1.23E-07	5.80E+05	2.81E-02	mx	1.41E-08
AX-104	2.65E+04	1.34E+04	3.54E+03	1.80E+07	4.09E+02	mx	3.15E-07				
B-101	4.28E+05	3.18E+04	8.40E+03	5.34E+08	4.09E+02	mx	3.15E-07				
B-102	1.21E+05	9.71E+04	2.57E+04	1.20E+07	1.14E+02	sn	8.77E-08				
B-103	2.23E+05	1.27E+05	3.36E+04	3.10E+07	6.57E+01	sn	5.05E-08	1.80E+05	2.81E-02	mx	1.41E-08
B-104	1.40E+06	3.00E+05	7.94E+04	5.00E+07	3.56E+01		2.74E-08				
B-105	1.16E+06	7.64E+04	2.02E+04	1.90E+08	1.64E+02		1.26E-07				
B-106	4.43E+05	6.62E+04	1.75E+04	4.30E+07	1.86E+02	sn	1.43E-07				
B-107	6.25E+05	3.06E+04	8.10E+03	2.40E+08	3.84E+02		2.96E-07				
B-108	3.56E+05	2.82E+04	7.44E+03	2.70E+08	4.09E+02	mx	3.15E-07				
B-109	4.81E+05	6.01E+04	1.59E+04	8.32E+07	1.54E+02	sn	1.18E-07	8.80E+01	1.83E-04		9.19E-11
B-110	9.31E+05	3.91E+04	1.03E+04	3.10E+08	3.33E+02		2.56E-07				
B-111	8.97E+05	2.84E+04	7.50E+03	1.40E+09	4.09E+02	mx	3.15E-07				
B-112	1.25E+05	2.23E+04	5.90E+03	4.30E+08	4.09E+02	mx	3.15E-07				
B-201	1.10E+05	2.22E+04	5.86E+03	4.96E+06	4.52E+01		3.47E-08				
B-202	1.02E+05	6.56E+04	1.73E+04	1.90E+07	1.86E+02		1.43E-07				
B-203	1.93E+05	1.67E+04	4.41E+03	4.26E+07	2.21E+02		1.70E-07				
B-204	1.89E+05	1.45E+05	3.82E+04	1.20E+07	6.34E+01		4.88E-08				
BX-101	1.63E+05	4.90E+04	1.29E+04	4.32E+07	2.65E+02		2.04E-07				
BX-102	3.63E+05	4.34E+04	1.15E+04	1.30E+09	1.81E+02	sn	1.39E-07				
BX-103	2.50E+05	2.90E+05	7.65E+04	3.10E+09	2.10E+01	sn	1.61E-08				
BX-104	3.75E+05	5.68E+04	1.50E+04	3.10E+09	9.92E+01	dl	7.63E-08				
BX-105	1.93E+05	6.84E+04	1.81E+04	2.70E+09	1.28E+02	sn	9.84E-08				
BX-106	1.74E+05	4.75E+04	1.25E+04	8.10E+09	1.62E+02	sn	1.25E-07	1.80E+06	2.81E-02	mx	1.41E-08
BX-107	1.31E+06	6.32E+04	1.67E+04	6.20E+07	1.64E+02	sn	1.26E-07				
BX-108	9.84E+04	6.37E+05	1.68E+05	1.20E+06	1.22E+01		9.38E-09				
BX-109	7.31E+05	3.85E+04	1.02E+04	6.20E+07	3.07E+02	sn	2.36E-07				
BX-110	7.49E+05	3.64E+04	9.61E+03	6.80E+08	3.13E+02	sn	2.41E-07				
BX-111	7.99E+05	5.45E+04	1.44E+04	6.80E+08	1.62E+02	sn	1.25E-07				
BX-112	6.25E+05	8.10E+04	2.14E+04	6.20E+07	1.24E+02	sn	9.54E-08				
BY-101	1.39E+06	2.31E+04	6.10E+03	1.10E+09	4.09E+02	mx	3.15E-07				
BY-102	1.29E+06	6.58E+04	1.74E+04	2.10E+09	1.27E+02	sn	9.77E-08				
BY-103	1.51E+06	6.91E+04	1.83E+04	5.00E+09	1.31E+02	dl	1.01E-07				
BY-104	1.54E+06	2.32E+04	6.14E+03	1.20E+09	4.09E+02	mx	3.15E-07				
BY-105	1.90E+06	4.58E+04	1.21E+04	6.20E+08	2.64E+02	dl	2.03E-07				
BY-106	2.43E+06	6.59E+04	1.74E+04	1.30E+09	1.18E+02	dl	9.07E-08				
BY-107	1.01E+06	2.73E+04	7.21E+03	3.70E+08	3.67E+02		2.83E-07				
BY-108	8.63E+05	2.42E+04	6.40E+03	5.40E+08	4.09E+02	mx	3.15E-07				
BY-109	1.60E+06	8.55E+04	2.26E+04	2.10E+09	1.01E+02	sn	7.77E-08				
BY-110	1.50E+06	2.35E+04	6.22E+03	6.20E+08	4.09E+02	mx	3.15E-07				
BY-111	1.74E+06	2.44E+04	6.45E+03	1.20E+09	4.09E+02	mx	3.15E-07				
BY-112	1.10E+06	7.55E+04	1.99E+04	8.10E+08	1.01E+02	sn	7.77E-08				
C-101	3.33E+05	3.17E+04	8.37E+03	2.70E+08	4.09E+02	mx	3.15E-07				
C-102	1.60E+06	1.87E+05	4.94E+04	4.05E+00	3.57E+01	sn	2.75E-08				
C-103	7.38E+05	3.02E+05	7.98E+04	3.70E+09	4.02E+00	sn	3.09E-09	5.80E-03	7.86E-09		3.94E-15
C-104	1.12E+06	4.68E+04	1.24E+04	3.10E+08	2.78E+02		2.14E-07	1.50E-03	1.34E-09		6.74E-16
C-105	5.11E+05	1.34E+04	3.54E+03	9.90E+08	4.09E+02	mx	3.15E-07	2.60E+05	2.81E-02	mx	1.41E-08
C-106	8.67E+05	1.85E+04	4.89E+03	1.90E+08	2.19E+02		1.69E-07				
C-107	1.04E+06	1.06E+05	2.80E+04	3.10E+07	3.68E+01	dl	2.83E-08	2.90E+05	2.81E-02	mx	1.41E-08
C-108	2.50E+05	1.37E+05	3.62E+04	2.50E+08	6.82E+01	dl	5.24E-08				
C-109	2.50E+05	6.02E+04	1.59E+04	2.50E+07	4.90E+01	dl	3.77E-08				
C-110	7.08E+05	9.48E+04	2.50E+04	2.14E+06	1.13E+02	sn	8.69E-08				
C-111	2.16E+05	1.02E+05	2.69E+04	2.06E+07	9.55E+01	sn	7.34E-08				
C-112	3.94E+05	6.91E+04	1.83E+04	1.90E+07	1.12E+02	dl	8.61E-08				
C-201	7.57E+03	7.09E+04	1.87E+04	6.67E+05	4.41E+01	sn	3.39E-08				
C-202	3.79E+03	5.98E+08	1.58E+08	1.20E-05	3.17E-09		2.44E-18				
C-203	1.89E+04	2.98E+10	7.89E+09	2.50E-03	1.32E-07		1.02E-16				
C-204	1.14E+04	8.53E+05	2.25E+05	1.77E+06	1.06E+01	sn	8.15E-09				
S-101	1.62E+06	2.62E+04	6.92E+03	7.40E+08	4.09E+02	mx	3.15E-07	8.80E+04	2.81E-02	mx	1.41E-08
S-102	2.08E+06	4.36E+04	1.15E+04	6.20E+08	2.98E+02		2.29E-07	1.80E-04	8.66E-11		4.35E-17
S-103	9.31E+05	1.08E+05	2.86E+04	3.70E+09	8.87E+01	sn	6.82E-08	1.80E-02	1.93E-08		9.70E-15
S-104	1.11E+06	2.87E+04	7.58E+03	1.40E+09	4.09E+02	mx	3.15E-07				
S-105	1.73E+06	3.13E+04	8.27E+03	1.10E+09	4.09E+02	mx	3.15E-07				
S-106	1.81E+06	3.05E+04	8.06E+03	1.50E+09	4.09E+02	mx	3.15E-07	5.80E+03	3.20E-03		1.61E-09
S-107	1.42E+06	4.06E+04	1.07E+04	6.20E+08	2.03E+02	sn	1.56E-07	5.80E-05	4.08E-11		2.05E-17
S-108	2.29E+06	4.65E+04	1.23E+04	5.80E+08	2.54E+02		1.95E-07	2.90E+05	2.81E-02	mx	1.41E-08

Table C2-7 (Continued). SST Threshold Leakage Values - Case 3/Toxicant

			Toxicant							Sp.					Sp.
			Threshold Leakage				NO3	Solubility	Basis	Risk		EDTA	Solubility	Basis	Risk
Tank	Vol. (L)		L	Gal.			g	g/L	Note 1	HI/L		g	g/L	Note 1	HI/L
S-109	1.92E+06		2.84E+04	7.50E+03			5.00E+09	4.09E+02	mx	3.15E-07		1.80E+06	2.81E-02	mx	1.41E-08
S-110	1.48E+06		2.96E+04	7.83E+03			6.60E+08	4.09E+02	mx	3.15E-07		1.20E+05	2.81E-02	mx	1.41E-08
S-111	2.26E+06		3.92E+04	1.04E+04			6.20E+08	2.75E+02		2.11E-07		1.20E+05	2.81E-02	mx	1.41E-08
S-112	1.98E+06		2.40E+04	6.35E+03			9.30E+09	4.09E+02	mx	3.15E-07		1.20E+06	2.81E-02	mx	1.41E-08
SX-101	1.73E+06		1.34E+05	3.54E+04			1.20E+09	8.99E+01	dl	6.91E-08		1.50E-05	8.69E-12		4.36E-18
SX-102	2.06E+06		2.61E+04	6.89E+03			3.70E+09	4.09E+02	mx	3.15E-07		2.30E+02	1.12E-04		5.62E-11
SX-103	2.47E+06		1.36E+04	3.59E+03			7.40E+09	4.09E+02	mx	3.15E-07		2.90E+06	2.81E-02	mx	1.41E-08
SX-104	2.32E+06		2.30E+04	6.08E+03			2.00E+09	4.09E+02	dl	3.15E-07		1.50E+05	2.81E-02	mx	1.41E-08
SX-105	2.59E+06		2.94E+04	7.77E+03			1.76E+09	4.09E+02	mx	3.15E-07		1.50E+05	2.81E-02	mx	1.41E-08
SX-106	2.03E+06		1.53E+05	4.03E+04			2.50E+08	4.44E+01	sn	3.41E-08		5.80E+06	2.81E-02	mx	1.41E-08
SX-107	3.94E+05		7.93E+04	2.10E+04			6.20E+08	1.12E+02	sn	8.61E-08					
SX-108	3.07E+05		3.18E+04	8.40E+03			1.90E+09	4.09E+02	mx	3.15E-07					
SX-109	9.46E+05		3.18E+04	8.40E+03			1.90E+09	4.09E+02	mx	3.15E-07					
SX-110	2.35E+05		3.18E+04	8.40E+03			3.10E+09	4.09E+02	mx	3.15E-07		8.80E-03	3.75E-08		1.88E-14
SX-111	4.73E+05		7.09E+04	1.87E+04			1.90E+09	1.67E+02	dl	1.28E-07					
SX-112	3.48E+05		3.18E+04	8.40E+03			5.10E+08	4.09E+02	mx	3.15E-07					
SX-113	9.84E+04		3.18E+04	8.39E+03			1.60E+09	4.09E+02	mx	3.15E-07					
SX-114	6.85E+05		3.18E+04	8.40E+03			2.50E+09	4.09E+02	mx	3.15E-07					
SX-115	4.54E+04		3.15E+04	8.32E+03			3.10E+09	4.09E+02	mx	3.15E-07					
T-101	3.86E+05		3.99E+04	1.05E+04			1.20E+08	3.11E+02		2.39E-07					
T-102	1.21E+05		7.42E+04	1.96E+04			2.50E+06	1.35E+02	sn	1.04E-07					
T-103	1.02E+05		9.19E+04	2.43E+04			1.20E+07	8.12E+01	sn	6.24E-08					
T-104	1.68E+06		7.92E+04	2.09E+04			2.50E+08	1.48E+02		1.14E-07					
T-105	3.63E+05		1.33E+05	3.52E+04			1.86E+08	9.75E+01	sn	7.50E-08					
T-106	7.95E+04		2.94E+04	7.78E+03			1.48E+08	4.09E+02	mx	3.15E-07					
T-107	6.81E+05		3.30E+05	8.71E+04			4.63E+06	6.80E+00		5.23E-09					
T-108	1.67E+05		1.20E+05	3.17E+04			1.20E+06	4.98E+01	sn	3.83E-08					
T-109	2.20E+05		1.11E+05	2.94E+04			1.90E+07	6.06E+01	sn	4.66E-08					
T-110	1.43E+06		2.08E+05	5.49E+04			1.90E+06	5.63E+01	sn	4.33E-08					
T-111	1.71E+06		4.00E+08	1.06E+08											
T-112	2.54E+05		1.68E+05	4.45E+04			6.39E+05	2.41E+01	sn	1.85E-08					
T-201	1.10E+05		1.74E+13	4.58E+12											
T-202	7.95E+04		1.57E+05	4.15E+04			6.20E+06	7.80E+01		6.00E-08					
T-203	1.32E+05		1.35E+05	3.56E+04			1.20E+07	9.06E+01		6.97E-08					
T-204	1.44E+05		1.00E+05	2.65E+04			8.59E+05	5.67E+01	sn	4.36E-08					
TX-101	3.29E+05		3.18E+04	8.40E+03			1.20E+09	4.09E+02	mx	3.15E-07		1.80E-05	5.47E-11		2.74E-17
TX-102	8.21E+05		3.05E+04	8.07E+03			1.65E+08	2.78E+02	dl	2.14E-07					
TX-103	5.94E+05		7.16E+04	1.89E+04			2.19E+08	1.24E+02	sn	9.54E-08					
TX-104	2.46E+05		2.77E+04	7.32E+03			7.37E+08	2.75E+02	sn	2.11E-07					
TX-105	2.31E+06		6.80E+04	1.80E+04			4.30E+08	1.87E+02		1.43E-07					
TX-106	1.71E+06		3.98E+05	1.05E+05			5.60E+07	3.27E+01		2.51E-08					
TX-107	1.36E+05		6.31E+04	1.67E+04			4.62E+08	1.76E+02	sn	1.35E-07					
TX-108	5.07E+05		2.72E+04	7.18E+03			6.20E+08	4.09E+02	mx	3.15E-07					
TX-109	1.38E+06		2.24E+04	5.91E+03			1.30E+09	4.09E+02	mx	3.15E-07					
TX-110	1.75E+06		5.03E+04	1.33E+04			6.20E+08	1.43E+02	sn	1.10E-07					
TX-111	1.40E+06		8.54E+04	2.26E+04			1.90E+08	1.36E+02		1.04E-07					
TX-112	2.46E+06		7.89E+04	2.08E+04			3.70E+08	1.51E+02		1.16E-07					
TX-113	2.30E+06		8.66E+04	2.29E+04			3.10E+08	1.35E+02		1.04E-07					
TX-114	2.02E+06		2.09E+05	5.53E+04			1.20E+08	5.93E+01		4.56E-08					
TX-115	2.42E+06		1.17E+05	3.10E+04			2.50E+08	1.03E+02		7.94E-08					
TX-116	2.39E+06		4.44E+04	1.17E+04			6.80E+08	2.85E+02		2.19E-07					
TX-117	2.37E+06		6.47E+04	1.71E+04			4.60E+08	1.94E+02		1.49E-07					
TX-118	1.31E+06		2.19E+04	5.78E+03			7.40E+09	4.09E+02	mx	3.15E-07		2.90E+07	2.81E-02	mx	1.41E-08
TY-101	4.47E+05		3.13E+04	8.26E+03			3.40E+08	4.09E+02	mx	3.15E-07					
TY-102	2.42E+05		3.56E+04	9.40E+03			1.95E+08	3.63E+02	dl	2.79E-07					
TY-103	6.13E+05		5.52E+04	1.46E+04			1.05E+08	2.19E+02	dl	1.68E-07					
TY-104	1.74E+05		1.06E+05	2.80E+04			1.20E+07	1.14E+02	sn	8.77E-08					
TY-105	8.74E+05		9.54E+04	2.52E+04			2.38E+08	1.28E+02	dl	9.84E-08					
TY-106	6.43E+04		7.09E+04	1.87E+04			1.18E+07	1.83E+02		1.41E-07					
U-101	9.46E+04		1.63E+07	4.32E+06			4.30E+04	4.54E-01		3.49E-10					
U-102	1.42E+06		5.35E+04	1.41E+04			3.70E+08	2.16E+02	sn	1.66E-07		2.30E+04	1.62E-02		8.16E-09
U-103	1.77E+06		3.87E+04	1.02E+04			5.60E+08	3.16E+02		2.43E-07					
U-104	4.62E+05		3.57E+08	9.44E+07			3.70E-02	8.01E-08		6.16E-17					
U-105	1.58E+06		4.11E+04	1.09E+04			3.94E+08	2.49E+02		1.92E-07					
U-106	8.55E+05		4.99E+04	1.32E+04			3.36E+08	2.54E+02	sn	1.95E-07		2.30E-03	2.69E-09		1.35E-15
U-107	1.54E+06		1.70E+05	4.48E+04			6.80E+07	4.43E+01		3.40E-08		2.00E+06	2.81E-02	mx	1.41E-08
U-108	1.76E+06		3.68E+04	9.71E+03			6.20E+08	3.52E+02		2.70E-07					
U-109	1.75E+06		1.81E+05	4.79E+04			1.20E+08	6.85E+01		5.27E-08					
U-110	7.04E+05		3.17E+04	8.37E+03			3.80E+08	4.09E+02	mx	3.15E-07					
U-111	1.25E+06		2.92E+04	7.71E+03			6.40E+08	4.09E+02	mx	3.15E-07		5.80E+05	2.81E-02	mx	1.41E-08
U-112	1.85E+05		2.74E+04	7.25E+03			8.70E+08	4.09E+02	mx	3.15E-07					
U-201	1.89E+04		2.24E+04	5.91E+03			1.10E+08	4.09E+02	mx	3.15E-07					
U-202	1.89E+04		1.25E+05	3.30E+04			1.10E+08	9.11E+01	sn	7.01E-08					
U-203	1.14E+04		1.16E+04	3.06E+03			9.90E+07	4.09E+02	mx	3.15E-07					
U-204	1.14E+04		1.79E+04	4.73E+03			3.10E+07	4.09E+02	mx	3.15E-07					

Table C2-7 (Continued). SST Threshold Leakage Values - Case 3/Toxicant

Tank	NO2 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	CN g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	F g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
A-101	1.82E+08	1.16E+02	dl	1.05E-07					1.90E-37	5.27E-44		3.96E-53
A-102	1.40E+07	1.98E+00	sn	1.80E-09					3.52E+05	1.29E+00	sn	9.70E-10
A-103	4.10E+05	2.93E-01		2.66E-10					9.50E+03	6.78E-03		5.10E-12
A-104	1.80E-12	1.70E-17		1.54E-26					1.90E-18	1.79E-23		1.35E-32
A-105	9.20E+05	1.28E+01		1.16E-08					5.70E-01	7.93E-06		5.96E-15
A-106	2.30E-02	4.86E-08		4.42E-17					3.80E-04	8.03E-10		6.04E-19
AX-101	1.52E+08	1.06E+02	sn	9.64E-08					7.60E-07	2.68E-13		2.02E-22
AX-102	7.31E+05	6.44E+01	sn	5.85E-08					3.80E-17	2.57E-22		1.94E-31
AX-103	2.64E+08	7.68E+01	sn	6.98E-08					1.90E+04	4.48E-02		3.37E-11
AX-104	3.70E+05	1.40E+01		1.27E-08					1.20E+05	4.53E+00		3.41E-09
B-101	9.20E-24	2.15E-29		1.96E-38					1.70E-26	3.97E-32		2.99E-41
B-102	1.51E+06	1.66E+01	sn	1.51E-08					1.90E+04	2.09E-01	sn	1.57E-10
B-103	2.27E+08	1.53E+01	sn	1.39E-08					3.80E+04	1.33E-01	sn	1.00E-10
B-104	2.30E+06	1.64E+00		1.49E-09					8.20E+06	5.84E+00		4.39E-09
B-105	1.80E+05	1.55E-01		1.41E-10					1.50E+07	6.02E+00	mx	4.53E-09
B-106	5.54E+05	8.60E+00	sn	7.82E-09					1.30E+06	1.86E-01	sn	1.40E-10
B-107	1.80E+07	2.88E+01		2.62E-08					1.30E+07	6.02E+00	mx	4.53E-09
B-108	1.40E+07	3.93E+01		3.58E-08					3.80E+07	6.02E+00	mx	4.53E-09
B-109	2.84E+07	5.25E+01	sn	4.77E-08					1.90E+07	4.64E-03	sn	3.49E-12
B-110									1.70E-36	1.83E-42		1.37E-51
B-111	3.70E+07	4.12E+01		3.75E-08					1.90E+03	2.12E-03		1.59E-12
B-112	9.20E+07	1.41E+02	mx	1.28E-07					1.30E+06	6.02E+00	mx	4.53E-09
B-201	6.02E+03	5.48E-02		4.99E-11								
B-202	3.40E+05	3.33E+00		3.02E-09	7.95E+02	7.78E-03		4.14E-10	1.04E+06	6.02E+00	mx	4.53E-09
B-203	1.95E+06	1.01E+01		9.18E-09					9.50E+05	4.92E+00		3.70E-09
B-204	5.96E+05	3.15E+00		2.86E-09					9.50E+05	5.02E+00		3.77E-09
BX-101	9.20E-13	5.65E-18		5.14E-27					7.60E-14	4.67E-19		3.51E-28
BX-102	9.20E+07	9.98E+01	sn	9.07E-08					1.30E+06	1.74E-01	sn	1.31E-10
BX-103	1.76E+07	1.99E+01	sn	1.81E-08					1.70E+07	7.30E-02	sn	5.49E-11
BX-104	4.10E+07	1.09E+02		9.95E-08					1.90E+01	5.07E-05		3.81E-14
BX-105	9.20E+06	4.77E+01		4.33E-08					1.10E+06	5.70E+00		4.29E-09
BX-106	3.20E+08	7.78E+01	sn	7.07E-08					9.50E+06	1.48E+00	sn	1.11E-09
BX-107	3.70E+06	3.42E+01	sn	3.11E-08					1.90E+06	1.42E+00	sn	1.07E-09
BX-108	3.70E+05	3.76E+00		3.42E-09					3.80E+05	3.86E+00		2.90E-09
BX-109	9.20E+06	2.41E+01	sn	2.19E-08					1.13E+04	1.49E+00	sn	1.12E-09
BX-110	1.40E+08	3.65E+01	sn	3.32E-08					1.90E+06	1.41E+00	sn	1.06E-09
BX-111	1.40E+08	6.35E+01	sn	5.77E-08					1.90E+06	1.46E+00	sn	1.10E-09
BX-112	4.60E+06	2.99E+01	sn	2.72E-08					9.50E+05	1.11E+00	sn	8.35E-10
BY-101	1.80E+08	1.30E+02		1.18E-07					1.90E+06	1.37E+00		1.03E-09
BY-102	4.60E+07	5.35E+01	sn	4.86E-08	1.18E+03	2.07E-02	sn	1.10E-09	2.00E+07	6.02E+00	mx	4.53E-09
BY-103	1.78E+07	4.34E+01	dl	3.95E-08					7.60E+07	6.02E+00	mx	4.53E-09
BY-104	1.80E+08	1.17E+02		1.06E-07	1.67E+05	9.13E-02	mx	4.86E-09	1.63E+07	6.02E+00	mx	4.53E-09
BY-105	1.40E+08	1.57E+01	dl	1.43E-08					1.90E+06	9.98E-01		7.50E-10
BY-106	1.80E+08	6.64E+01	dl	6.04E-08					2.00E+06	8.23E-01		6.19E-10
BY-107	9.20E+07	9.14E+01		8.31E-08					9.50E+05	9.44E-01		7.10E-10
BY-108	9.20E+07	1.07E+02		9.69E-08					1.70E+06	1.97E+00		1.48E-09
BY-109	4.60E+07	4.07E+01	sn	3.70E-08					4.80E+06	3.00E+00		2.25E-09
BY-110	1.80E+08	1.20E+02		1.09E-07					1.90E+06	1.27E+00		9.53E-10
BY-111	1.80E+08	1.04E+02		9.42E-08					1.90E+06	1.09E+00		8.22E-10
BY-112	3.70E+07	5.96E+01	sn	5.42E-08					7.60E+05	6.90E-01		5.19E-10
C-101	4.10E+05	1.23E+00		1.12E-09					9.50E+01	2.85E-04		2.14E-13
C-102	2.07E+05	1.83E+01	sn	1.66E-08	1.04E+03	9.13E-02	sn	4.86E-09	5.70E+07	6.02E+00	mx	4.53E-09
C-103	1.41E+07	2.80E+01	sn	2.55E-08					1.90E+08	6.02E+00	mx	4.53E-09
C-104	4.60E-04	4.12E-10		3.74E-19					1.70E-10	1.52E-16		1.14E-25
C-105	9.20E+04	1.80E-01		1.64E-10					5.70E+02	1.12E-03		8.39E-13
C-106	2.30E-36	2.65E-42		2.41E-51								
C-107	6.89E+06	5.35E+01	dl	4.86E-08	7.98E+03	6.20E-02	dl	3.30E-09	1.10E+04	1.06E-02		7.95E-12
C-108	3.40E+05	2.25E+01	dl	2.05E-08					1.90E+02	7.61E-04		5.72E-13
C-109	3.20E+06	1.41E+02	dl	1.28E-07					5.70E+04	2.28E-01		1.72E-10
C-110	3.57E+05	1.89E+01	sn	1.72E-08					7.60E-04	1.07E-09		8.07E-19
C-111	5.86E+06	2.71E+01	sn	2.46E-08					1.70E+04	7.88E-02		5.93E-11
C-112	3.17E+06	6.44E+01	dl	5.85E-08					1.90E+05	4.67E-02	dl	3.51E-11
C-201	1.76E+04	1.16E+00	sn	1.05E-09					8.78E+03	5.80E-01	sn	4.36E-10
C-202												
C-203												
C-204	6.55E+05	3.93E+00	sn	3.57E-09					1.89E+02	1.14E-03	sn	8.57E-13
S-101	9.43E+07	5.83E+01		5.30E-08					1.90E+05	1.18E-01		8.84E-11
S-102	2.80E-02	1.35E-08		1.22E-17					7.60E-04	3.66E-10		2.75E-19
S-103	1.58E+07	2.66E+01	sn	2.42E-08					3.48E-01	8.11E-02	sn	6.10E-11
S-104	9.20E+06	8.27E+00		7.52E-09								
S-105	9.20E+06	5.33E+00		4.85E-09								
S-106	2.30E+07	1.27E+01		1.15E-08					1.50E+03	8.27E-04		6.22E-13
S-107	1.27E+08	9.40E+01	sn	8.54E-08					9.50E+06	6.02E+00	mx	4.53E-09
S-108	1.40E+07	6.12E+00		5.57E-09					5.70E+05	2.49E-01		1.87E-10

Table C2-7 (Continued). SST Threshold Leakage Values - Case 3/Toxicant

Tank	NO2 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	CN g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	F g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
S-109	4.60E+07	2.40E+01		2.18E-08					3.80E+06	1.98E+00		1.49E-09
S-110	1.40E+07	9.48E+00		8.62E-09					1.10E+05	7.45E-02		5.60E-11
S-111	1.40E+07	6.21E+00		5.64E-09					1.88E+05	8.33E-02		6.27E-11
S-112	1.80E+08	9.09E+01		8.27E-08					1.30E+07	6.02E+00	mx	4.53E-09
SX-101	2.78E+06	5.06E+00	dl	4.60E-09					6.99E+05	1.27E+00	dl	9.55E-10
SX-102	1.56E+08	7.59E+01		6.90E-08					1.10E+03	5.35E-04		4.02E-13
SX-103	1.40E+08	5.67E+01		5.16E-08					1.90E+06	7.70E-01		5.79E-10
SX-104	1.09E+08	1.15E+02	dl	1.05E-07					1.80E+06	1.90E+00	dl	1.43E-09
SX-105	3.20E+07	1.24E+01		1.13E-08					7.60E+05	2.94E-01		2.21E-10
SX-106	4.60E+07	1.86E+01	sn	1.69E-08					9.50E+05	4.68E-01		3.52E-10
SX-107	2.80E-03	4.39E+01	sn	3.99E-08								
SX-108	1.80E-04	5.87E-10		5.34E-19								
SX-109												
SX-110	9.20E-02	3.92E-07		3.56E-16					1.90E-03	8.10E-09		6.09E-18
SX-111	4.29E+07	1.38E+01	dl	1.25E-08					9.50E-12	2.01E-17		1.51E-26
SX-112												
SX-113												
SX-114	4.60E-19	6.71E-25		6.10E-34					3.80E-20	5.55E-26		4.17E-35
SX-115	1.39E+05	3.06E+00		2.78E-09								
T-101	4.60E+06	1.19E+01		1.08E-08					3.00E+06	1.09E+00	sn	8.20E-10
T-102	9.20E+04	3.32E+01	sn	3.02E-08					5.70E+04	8.70E-01	sn	6.54E-10
T-103	4.60E+05	5.02E+01	sn	4.56E-08					1.10E+04	8.66E-01	sn	6.51E-10
T-104	1.40E+07	8.31E+00		7.56E-09					3.82E+07	6.02E+00	mx	4.53E-09
T-105	1.40E-10	3.85E-16		3.50E-25					1.45E+05	7.60E-02	sn	5.72E-11
T-106	1.80E+06	2.26E+01		2.06E-08					1.70E+07	6.02E+00	mx	4.53E-09
T-107	9.14E+05	2.68E+01	sn	2.44E-08					3.18E+04	9.33E-01	sn	7.02E-10
T-108	1.40E+04	4.88E+01	sn	4.44E-08						7.66E-01	sn	5.76E-10
T-109	9.20E+05	4.69E+01	sn	4.26E-08					1.90E+05	9.29E-01	sn	6.99E-10
T-110		2.95E-01	sn	2.68E-10					1.50E+05	6.02E+00	sn	4.53E-09
T-111									5.70E+04	3.32E-02		2.50E-11
T-112	1.18E+06	4.44E+01	sn	4.04E-08					5.70E+04	6.73E-01	sn	5.06E-10
T-201												
T-202									3.80E+05	4.78E+00		3.60E-09
T-203									9.50E+05	6.02E+00	mx	4.53E-09
T-204	9.72E+03	6.42E-01	dl	5.84E-10								
TX-101	4.60E-03	1.40E-08		1.27E-17					7.60E-05	2.31E-10		1.74E-19
TX-102	1.44E+08	1.25E+02	dl	1.14E-07					3.80E+03	4.63E-03		3.48E-12
TX-103	8.62E+07	4.88E+01	sn	4.44E-08					1.90E+04	3.20E-02		2.40E-11
TX-104	1.20E+08	4.49E+01	sn	4.08E-08					9.50E-03	3.86E-08		2.90E-17
TX-105	9.20E+06	3.99E+00		3.63E-09					5.70E+04	2.47E-02		1.86E-11
TX-106	3.20E-04	1.87E-10		1.70E-19								
TX-107	6.70E+07	2.55E+01	sn	2.32E-08								
TX-108	2.80E+07	5.52E+01		5.02E-08					2.10E+06	4.14E+00		3.11E-09
TX-109	3.20E+08	1.41E+02	mx	1.28E-07					9.50E+06	6.02E+00	mx	4.53E-09
TX-110	1.40E+08	9.39E+01	sn	8.54E-08					7.80E+06	4.46E+00		3.35E-09
TX-111	1.80E+07	1.29E+01		1.17E-08					1.90E+06	1.36E+00		1.02E-09
TX-112	2.80E+07	1.14E+01		1.04E-08					1.70E+06	6.92E-01		5.20E-10
TX-113	1.80E+07	7.83E+00		7.12E-09					2.30E+07	6.02E+00	mx	4.53E-09
TX-114	4.60E+06	2.27E+00		2.06E-09					1.90E+05	9.38E-02		7.06E-11
TX-115	9.20E+06	3.80E+00		3.45E-09					7.60E+06	3.14E+00		2.36E-09
TX-116	3.70E+06	1.55E+00		1.41E-09					3.80E+07	6.02E+00	mx	4.53E-09
TX-117	1.40E+06	5.91E-01		5.37E-10					5.70E+07	6.02E+00	mx	4.53E-09
TX-118	2.30E+08	1.41E+02	mx	1.28E-07					4.20E+07	1.54E-01	sn	1.16E-10
TY-101	4.60E+05	1.03E+00		9.36E-10					2.47E+06	5.53E+00		4.16E-09
TY-102	4.60E+06	1.52E+00	dl	1.38E-09					2.00E+05	5.51E-01	dl	4.14E-10
TY-103	1.40E+07	1.37E+01	dl	1.25E-08					1.38E+06	5.13E-01	dl	3.86E-10
TY-104	9.20E+05	6.90E+00	sn	6.27E-09					1.70E+05	5.89E-01	sn	4.43E-10
TY-105	3.20E+03	6.49E+00	dl	5.90E-09					1.70E+03	5.13E-01	dl	3.86E-10
TY-106	2.30E-05	3.57E-10		3.25E-19					9.50E-06	1.48E-10		1.11E-19
U-101	2.80E-15	2.96E-20		2.69E-29					1.10E-15	1.16E-20		8.74E-30
U-102	2.38E+07	1.38E+01	sn	1.25E-08					3.80E+05	2.68E-01		2.02E-10
U-103	5.09E+06	2.87E+00		2.61E-09					4.24E+03	2.39E-03		1.80E-12
U-104												
U-105	8.99E+07	5.68E+01		5.17E-08								
U-106	7.56E+06	5.71E+00	sn	5.19E-09					3.65E+04	2.75E-02	sn	2.07E-11
U-107	1.80E+07	1.17E+01		1.06E-08					3.80E+05	2.47E-01		1.86E-10
U-108	9.20E+04	5.22E-02		4.74E-11					3.80E+06	2.15E+00		1.62E-09
U-109	4.60E+06	2.62E+00		2.39E-09					1.90E+05	1.08E-01		8.15E-11
U-110	9.20E+05	1.31E+00		1.19E-09					3.80E+02	5.40E-04		4.06E-13
U-111	1.93E+07	1.55E+01		1.41E-08					9.50E+04	7.63E-02		5.74E-11
U-112	9.20E+06	4.96E+01		4.51E-08					2.10E+06	6.02E+00	mx	4.53E-09
U-201	4.60E+06	1.41E+02	mx	1.28E-07					1.10E+05	5.81E+00		4.37E-09
U-202	9.20E+06	1.09E+01	sn	9.91E-09					1.10E+05	1.81E-02	sn	1.36E-11
U-203	4.60E+06	1.41E+02	mx	1.28E-07					9.50E+04	6.02E+00	mx	4.53E-09
U-204	2.30E+06	1.41E+02	mx	1.28E-07					4.07E+04	3.58E+00		2.70E-09

Table C2-7 (Continued). SST Threshold Leakage Values - Case 3/Toxicant

Tank	Hg g	Solubility g/L	Basis Note 1	Sp. Risk Hl/L	Na g	Solubility g/L	Basis Note 1	Sp. Risk Hl/L	Sb g	Solubility g/L	Basis Note 1	Sp. Risk Hl/L
A-101					4.60E+08	1.28E+02		3.51E-11				
A-102					4.60E+08	2.00E+02	sn	5.50E-11				
A-103					4.64E+08	1.88E+02	dl	5.17E-11				
A-104					5.30E+08	3.56E+02	mx	9.79E-11				
A-105					4.62E+07	3.56E+02	mx	9.79E-11				
A-106					5.69E+07	2.55E+02	dl	7.01E-11				
AX-101					6.90E+03	2.44E-03		6.70E-16				
AX-102					1.91E+06	1.68E+02	sn	4.62E-11				
AX-103					6.90E+06	1.63E+01		4.48E-12				
AX-104	1.20E+07	3.20E-01	mx	4.16E-07	5.50E+06	2.08E+02		5.71E-11				
B-101					9.20E+06	2.15E+01		5.92E-12				
B-102					8.00E+06	6.44E+01	sn	1.77E-11				
B-103					1.60E+07	5.68E+01	sn	1.56E-11				
B-104					6.90E+07	4.91E+01		1.35E-11				
B-105					2.80E+08	2.42E+02		6.65E-11				
B-106					1.40E+08	9.20E+01	sn	2.53E-11				
B-107					1.10E+08	1.76E+02		4.84E-11				
B-108					2.30E+08	3.56E+02	mx	9.79E-11				
B-109					1.90E+08	1.10E+02	sn	3.03E-11				
B-110					1.20E+08	1.29E+02		3.54E-11				
B-111					7.40E+08	3.56E+02	mx	9.79E-11				
B-112					1.20E+08	3.56E+02	mx	9.79E-11				
B-201	7.52E+04	3.20E-01	mx	4.16E-07	4.21E+06	3.84E+01		1.05E-11				
B-202	1.17E+02	1.14E-03		1.49E-09	7.40E+06	7.24E+01		1.99E-11				
B-203	8.02E+06	3.20E-01	mx	4.16E-07	7.69E+07	3.56E+02	mx	9.79E-11				
B-204	1.99E+03	1.05E-02		1.37E-08	6.90E+06	3.65E+01		1.00E-11				
BX-101					4.60E+06	2.83E+01		7.77E-12				
BX-102					4.80E+08	2.62E+02	sn	7.21E-11				
BX-103					1.40E+09	3.56E+02	mx	9.79E-11				
BX-104					1.40E+09	1.02E+02	dl	2.81E-11				
BX-105					1.00E+09	1.20E+02	sn	3.30E-11				
BX-106					2.80E+09	1.62E+02	sn	4.46E-11				
BX-107					9.30E+07	9.70E+01	sn	2.67E-11				
BX-108					9.20E+05	9.35E+00		2.57E-12				
BX-109	1.87E+00	2.47E-04	sn	3.21E-10	2.80E+07	1.40E+02	sn	3.85E-11				
BX-110					1.80E+08	1.64E+02	sn	4.51E-11				
BX-111	1.88E+00	2.61E-05	sn	3.39E-11	2.10E+08	2.14E+02	sn	5.89E-11				
BX-112					3.40E+07	7.95E+01	sn	2.19E-11				
BY-101					3.90E+08	2.81E+02		7.72E-11				
BY-102					7.60E+08	1.28E+02	sn	3.52E-11				
BY-103					2.10E+09	1.37E+02	dl	3.77E-11				
BY-104					3.88E+08	2.52E+02		6.94E-11				
BY-105					2.30E+08	1.14E+02	dl	3.14E-11				
BY-106					2.50E+08	1.44E+02	dl	3.96E-11				
BY-107					9.90E+07	9.83E+01		2.70E-11				
BY-108					1.80E+08	2.09E+02		5.74E-11				
BY-109					7.40E+08	1.29E+02	sn	3.55E-11				
BY-110					2.30E+08	1.53E+02		4.22E-11				
BY-111					2.30E+08	1.32E+02		3.64E-11				
BY-112					2.80E+08	2.71E+02	sn	7.45E-11				
C-101					9.90E+07	2.97E+02		8.17E-11				
C-102					6.90E+07	6.17E+01	sn	1.70E-11				
C-103					1.80E+09	3.36E+01	sn	9.24E-12				
C-104					1.16E+08	1.04E+02		2.86E-11				
C-105					3.90E+08	3.56E+02	mx	9.79E-11	2.30E+06	4.50E+00		4.17E-07
C-106					1.87E+08	2.16E+02		5.93E-11	3.48E+06	4.01E+00		3.72E-07
C-107					1.20E+07	5.44E+01	dl	1.50E-11				
C-108					9.20E+07	3.56E+02	mx	9.79E-11				
C-109					9.40E+06	3.76E+01		1.03E-11				
C-110	1.99E+01	1.05E-03	sn	1.37E-09	1.32E+06	6.99E+01	sn	1.92E-11				
C-111					7.10E+06	3.29E+01		9.05E-12				
C-112					7.60E+06	6.16E+01	dl	1.69E-11				
C-201	1.23E+03	8.12E-02	sn	1.06E-07	4.74E+05	3.13E+01	sn	8.61E-12				
C-202					2.30E+05	6.08E+01		1.67E-11				
C-203					2.30E+04	1.22E+00		3.34E-13				
C-204					1.71E+06	1.03E+01	sn	2.83E-12				
S-101					2.80E+08	1.73E+02		4.76E-11				
S-102					2.30E+08	1.11E+02		3.04E-11				
S-103					1.40E+09	8.83E+01	sn	2.43E-11				
S-104					4.80E+08	3.56E+02	mx	9.79E-11	3.20E+05	2.88E-01		2.66E-08
S-105					3.20E+08	1.85E+02		5.10E-11				
S-106					5.50E+08	3.03E+02		8.34E-11				
S-107					2.30E+08	1.62E+02		4.44E-11				
S-108					1.40E+08	6.12E+01		1.68E-11				

Table C2-7 (Continued). SST Threshold Leakage Values - Case 3/Toxicant

Tank	Hg g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Na g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	Sb g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
S-109					1.40E+09	3.56E+02	mx	9.79E-11				
S-110					1.10E+08	7.45E+01		2.05E-11				
S-111	4.13E+04	1.83E-02		2.38E-08	9.20E+07	4.08E+01		1.12E-11				
S-112					2.50E+09	3.56E+02	mx	9.79E-11				
SX-101					4.60E+08	2.78E+01	dl	7.65E-12				
SX-102					1.40E+09	3.56E+02	mx	9.79E-11				
SX-103	6.72E+05	2.72E-01		3.54E-07	2.50E+09	3.56E+02	mx	9.79E-11				
SX-104					7.40E+08	3.56E+02	dl	9.79E-11				
SX-105					6.41E+08	2.48E+02		6.82E-11				
SX-106					8.36E+07	5.19E+01	sn	1.43E-11				
SX-107					4.60E+08	1.16E+02	sn	3.19E-11				
SX-108					6.90E+08	3.56E+02	mx	9.79E-11				
SX-109					6.90E+08	3.56E+02	mx	9.79E-11				
SX-110					1.10E+09	3.56E+02	mx	9.79E-11				
SX-111					6.90E+08	9.65E+01	dl	2.65E-11				
SX-112					1.90E+08	3.56E+02	mx	9.79E-11				
SX-113					4.60E+08	3.56E+02	mx	9.79E-11				
SX-114					9.20E+08	3.56E+02	mx	9.79E-11				
SX-115					9.20E+08	3.56E+02	mx	9.79E-11				
T-101					7.40E+07	5.91E+01	sn	1.63E-11				
T-102					1.10E+06	9.47E+01	sn	2.60E-11				
T-103					4.60E+06	9.03E+01	sn	2.48E-11				
T-104					1.10E+08	6.53E+01		1.80E-11				
T-105					1.11E+08	5.80E+01	sn	1.60E-11				
T-106					1.40E+08	3.56E+02	mx	9.79E-11				
T-107					1.84E+06	5.40E+01	sn	1.49E-11				
T-108					9.00E+06	7.20E+01	sn	1.98E-11				
T-109					2.30E+07	8.60E+01	sn	2.37E-11				
T-110					1.80E+06	4.30E+01	sn	1.18E-11				
T-111												
T-112					1.66E+06	6.28E+01	sn	1.73E-11				
T-201					2.30E+02	2.10E-03		5.76E-16				
T-202					4.60E+06	5.79E+01		1.59E-11				
T-203					6.90E+06	5.21E+01		1.43E-11				
T-204	6.48E+02	4.28E-02	dl	5.56E-08	4.68E+05	3.21E+01	dl	8.83E-12				
TX-101					4.60E+08	3.56E+02	mx	9.79E-11				
TX-102					2.81E+08	3.42E+02		9.41E-11				
TX-103					4.60E+06	7.74E+00		2.13E-12				
TX-104	2.24E+05	8.36E-02	sn	1.09E-07	5.80E+08	2.17E+02	sn	5.97E-11				
TX-105					1.80E+08	7.81E+01		2.15E-11				
TX-106					1.10E+07	6.42E+00		1.76E-12				
TX-107					2.30E+03	1.69E-02		4.64E-15				
TX-108					2.10E+08	3.56E+02	mx	9.79E-11				
TX-109					2.50E+08	1.81E+02		4.99E-11				
TX-110					2.30E+08	1.32E+02		3.62E-11				
TX-111					1.80E+08	1.29E+02		3.53E-11				
TX-112					2.40E+08	9.77E+01		2.69E-11				
TX-113					3.40E+08	2.23E+02	sn	6.13E-11				
TX-114					2.10E+08	1.04E+02		2.85E-11				
TX-115					1.40E+08	5.78E+01		1.59E-11				
TX-116					8.30E+08	3.48E+02		9.56E-11				
TX-117					7.40E+08	3.12E+02		8.59E-11				
TX-118					4.60E+09	9.82E+01	sn	2.70E-11				
TY-101					1.30E+08	2.91E+02		8.00E-11				
TY-102					9.20E+07	3.56E+02	mx	9.79E-11				
TY-103					8.34E+07	1.36E+02		3.74E-11				
TY-104					4.70E+06	7.48E+01	sn	2.06E-11				
TY-105					1.54E+08	1.76E+02		4.84E-11				
TY-106					2.80E+07	3.56E+02	mx	9.79E-11				
U-101					1.40E+08	3.56E+02	mx	9.79E-11				
U-102					4.60E+07	3.25E+01		8.94E-12				
U-103	1.70E+04	9.60E-03		1.25E-08	2.10E+08	1.19E+02		3.26E-11				
U-104					4.70E+07	1.02E+02		2.80E-11				
U-105					7.92E+08	3.56E+02	mx	9.79E-11				
U-106					1.75E+08	1.32E+02	sn	3.63E-11				
U-107					1.10E+07	7.16E+00		1.97E-12				
U-108					2.30E+08	1.30E+02		3.59E-11				
U-109					2.30E+07	1.31E+01		3.61E-12				
U-110					1.40E+08	1.99E+02		5.47E-11				
U-111					2.30E+08	1.85E+02		5.08E-11				
U-112					2.50E+08	3.56E+02	mx	9.79E-11				
U-201					2.40E+07	3.56E+02	mx	9.79E-11				
U-202					2.40E+07	8.99E+01	sn	2.47E-11				
U-203	3.63E+03	3.20E-01		4.16E-07	2.30E+07	3.56E+02	mx	9.79E-11				
U-204	9.92E+02	8.74E-02		1.14E-07	6.90E+06	3.56E+02	mx	9.79E-11				

Table C2-7 (Continued). SST Threshold Leakage Values - Case 3/Toxicant

Tank	SO4 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	V g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
A-101	4.80E+04	1.83E+01	dl	3.31E-11				
A-102	5.80E+07	9.70E+01	sn	1.76E-10				
A-103	3.00E+05	2.14E-01		3.88E-13				
A-104	6.80E+07	9.70E+01	mx	1.76E-10				
A-105								
A-106								
AX-101								
AX-102								
AX-103	7.70E+05	1.82E+00		3.29E-12				
AX-104	2.20E+05	8.30E+00		1.50E-11				
B-101	1.90E+06	4.44E+00		8.04E-12				
B-102	3.80E+06	3.14E+01		5.68E-11				
B-103	3.80E+06	1.70E+01		3.08E-11				
B-104	6.70E+06	4.77E+00		8.64E-12				
B-105	3.80E+07	3.28E+01		5.94E-11				
B-106	9.60E+05	2.17E+00		3.92E-12				
B-107	2.90E+06	4.64E+00		8.40E-12				
B-108	1.90E+06	5.34E+00		9.67E-12				
B-109	7.70E+05	1.60E+00		2.90E-12				
B-110	4.80E-06	5.16E-12		9.33E-24				
B-111	7.30E+07	8.14E+01		1.47E-10				
B-112	9.60E+06	7.69E+01		1.39E-10				
B-201								
B-202	5.80E+04	5.68E-01		1.03E-12				
B-203	6.70E+04	3.47E-01		6.28E-13				
B-204	6.70E+04	3.54E-01		6.41E-13				
BX-101	1.90E+05	1.17E+00		2.11E-12				
BX-102	2.00E+07	5.50E+01		9.96E-11				
BX-103	1.90E+07	7.61E+01		1.38E-10				
BX-104	9.60E+07	9.70E+01	mx	1.76E-10				
BX-105	2.90E+07	9.70E+01	mx	1.76E-10				
BX-106	1.40E+08	1.54E+01	sn	2.79E-11				
BX-107	1.90E+07	1.74E+01	sn	3.15E-11				
BX-108	3.90E+04	3.96E-01		7.17E-13				
BX-109	3.80E+06	2.36E+01	sn	4.27E-11				
BX-110	1.90E+07	1.46E+01	sn	2.64E-11				
BX-111	1.90E+07	1.52E+01	sn	2.75E-11				
BX-112	2.90E+06	7.86E+00	sn	1.42E-11				
BY-101	2.90E+07	2.09E+01		3.78E-11				
BY-102	7.70E+06	1.55E+01	sn	2.81E-11				
BY-103	7.70E+06	4.97E+00	dl	9.00E-12				
BY-104	2.90E+07	1.89E+01		3.42E-11				
BY-105	1.90E+07	2.00E+01	dl	3.62E-11				
BY-106	2.90E+07	3.29E+01	dl	5.95E-11				
BY-107	9.60E+06	9.54E+00		1.73E-11				
BY-108	9.60E+06	1.11E+01		2.01E-11				
BY-109	8.60E+06	3.93E+01	sn	7.11E-11				
BY-110	2.90E+07	1.93E+01		3.50E-11				
BY-111	2.90E+07	1.67E+01		3.02E-11				
BY-112	4.80E+06	4.36E+00		7.89E-12				
C-101	9.70E+05	2.91E+00		5.27E-12				
C-102	2.90E+02	7.49E-01	sn	1.36E-12				
C-103	9.60E+07	2.43E+01	sn	4.40E-11				
C-104	7.70E+02	6.90E-04		1.25E-15				
C-105	3.00E+05	5.87E-01		1.06E-12	5.52E+04	1.08E-01		4.63E-10
C-106	9.60E+03	1.11E-02		2.00E-14				
C-107	7.70E+05	9.65E+00	dl	1.75E-11				
C-108	3.20E+03	1.28E-02		2.32E-14				
C-109	4.80E+05	1.92E+00		3.48E-12				
C-110	5.80E+01	1.75E+01	sn	3.17E-11				
C-111	1.90E+05	8.81E-01		1.59E-12				
C-112	2.90E+05	7.37E-01		1.33E-12				
C-201	2.90E+03	1.39E+01	sn	2.52E-11				
C-202	7.70E+00	2.03E-03		3.68E-15				
C-203	7.70E+00	4.07E-04		7.36E-16				
C-204	9.60E+01	8.45E-03		1.53E-14				
S-101	4.80E+06	2.97E+00		5.38E-12				
S-102	1.90E+05	9.14E-02		1.65E-13				
S-103	2.90E+03	1.16E+00	sn	2.10E-12				
S-104	7.70E+05	6.92E-01		1.25E-12				
S-105	2.90E+06	1.68E+00		3.04E-12				
S-106	4.80E+06	2.65E+00		4.79E-12				
S-107	7.70E+02	5.41E-04		9.79E-16				
S-108	7.70E+06	3.37E+00		6.10E-12				

Table C2-7 (Continued). SST Threshold Leakage Values - Case 3/Toxicant

Tank	SO4 g	Solubility g/L	Basis Note 1	Sp. Risk HI/L	V g	Solubility g/L	Basis Note 1	Sp. Risk HI/L
S-109	3.80E+07	1.98E+01		3.59E-11				
S-110	1.90E+07	1.29E+01		2.33E-11				
S-111	1.59E+07	7.05E+00		1.28E-11				
S-112	1.90E+08	9.60E+01		1.74E-10				
SX-101	5.80E+05	7.01E+00	dl	1.27E-11				
SX-102	3.06E+07	1.49E+01		2.69E-11				
SX-103	6.70E+07	2.71E+01		4.91E-11				
SX-104	7.70E+06	2.88E+00	dl	5.21E-12				
SX-105	9.80E+06	3.79E+00		6.86E-12				
SX-106	3.90E+06	1.92E+00		3.48E-12				
SX-107	4.80E+03	1.22E-02		2.21E-14				
SX-108	3.80E+03	1.24E-02		2.24E-14				
SX-109	3.80E+03	4.02E-03		7.27E-15				
SX-110	9.60E+03	4.09E-02		7.40E-14				
SX-111	6.70E+03	1.42E-02		2.56E-14				
SX-112	5.10E+04	1.46E-01		2.65E-13				
SX-113	5.80E+06	5.89E+01		1.07E-10				
SX-114	7.70E+03	1.12E-02		2.03E-14				
SX-115	8.60E+06	9.70E+01	mx	1.76E-10				
T-101	6.70E+06	1.32E+01	sn	2.39E-11				
T-102	9.60E+04	9.80E+00	sn	1.77E-11				
T-103	9.60E+04	1.82E+01	sn	3.29E-11				
T-104	9.60E+06	5.70E+00		1.03E-11				
T-105	9.60E+01	2.64E-04		4.78E-16				
T-106	3.90E+04	4.91E-01		8.88E-13				
T-107	2.90E+02	1.63E+01	sn	2.95E-11				
T-108	2.90E+05	1.43E+01	sn	2.59E-11				
T-109	7.70E+06	1.58E+01	sn	2.86E-11				
T-110	2.00E-01	1.95E+00	sn	3.53E-12				
T-111								
T-112	5.80E-01	8.77E+00	sn	1.59E-11				
T-201								
T-202	2.90E+04	3.65E-01		6.60E-13				
T-203	6.70E+04	5.06E-01		9.15E-13				
T-204		1.07E+00	dl	1.94E-12				
TX-101	9.60E+05	2.92E+00		5.28E-12				
TX-102	3.90E+05	4.75E-01		8.59E-13				
TX-103	1.90E+06	2.02E+00	sn	3.66E-12				
TX-104	7.70E+02	1.77E+01	sn	3.20E-11				
TX-105	3.80E+06	1.65E+00		2.98E-12				
TX-106	3.80E+05	2.22E-01		4.01E-13				
TX-107	5.80E-01	4.26E-06		7.70E-18				
TX-108	2.90E+07	5.72E+01		1.03E-10				
TX-109	9.60E+07	6.97E+01		1.26E-10				
TX-110	7.70E+07	4.40E+01		7.97E-11				
TX-111	5.80E+07	4.14E+01		7.50E-11				
TX-112	8.60E+07	3.50E+01		6.34E-11				
TX-113	3.80E+07	1.65E+01		2.99E-11				
TX-114	6.70E+07	3.31E+01		5.99E-11				
TX-115	1.90E+07	7.84E+00		1.42E-11				
TX-116	1.90E+07	7.96E+00		1.44E-11				
TX-117	7.70E+06	3.25E+00		5.88E-12				
TX-118	3.80E+08	9.70E+01	mx	1.76E-10				
TY-101	4.80E+06	1.07E+01		1.95E-11				
TY-102	2.90E+07	2.06E+01	dl	3.73E-11				
TY-103	2.90E+07	1.10E+01	dl	1.99E-11				
TY-104	3.80E+05	6.24E+00	sn	1.13E-11				
TY-105	1.90E+07	8.36E+00	dl	1.51E-11				
TY-106	1.90E+02	2.95E-03		5.34E-15				
U-101	8.60E+06	9.09E+01		1.65E-10				
U-102	8.60E+06	6.08E+00		1.10E-11				
U-103	2.00E+03	1.13E-03		2.04E-15				
U-104	9.60E-02	2.08E-07		3.76E-19				
U-105	7.70E+02	4.87E-04		8.81E-16				
U-106	4.80E+02	2.02E+00	sn	3.66E-12				
U-107	9.60E+05	6.25E-01		1.13E-12				
U-108	7.70E+02	4.37E-04		7.90E-16				
U-109	2.90E+05	1.65E-01		3.00E-13				
U-110	2.40E+03	3.41E-03		6.17E-15				
U-111	3.90E+05	3.13E-01		5.67E-13				
U-112	7.70E+06	4.15E+01		7.51E-11				
U-201	7.70E+05	4.07E+01		7.36E-11				
U-202	6.70E+05	3.54E+01		6.41E-11				
U-203	6.70E+05	5.90E+01		1.07E-10				
U-204	1.90E+05	1.67E+01		3.03E-11				

Notes: (1) Symbols as follows: "dl" means solubility is based on drainable liquid sample as documented in Van Vleet (1993); "sn" means solubility is based on supernate liquid sample as documented in Van Vleet (1993); "mx" means that solubility was set at a maximum value based on Table C2-1 of this Appendix. It should be noted that the sample data shown in Van Vleet (1993) for tank SX-101 are incorrect. Page A-92 shows drainable liquid concentrations of 5.37E+11 (Tc99), 1.11E+09 (Pu239/240) and 2.96E+09 (Am241); these values are too high by a factor of 1.0E+06 (per telecon J. M. Cruse, WHC with D. Braun, WHC, dated February 24, 1995). The corrected values were used as the basis for this document.