S

AUG 22 2000 STA# 4

(4) ENGINEERING DATA TRANSMITTAL

1. EDT 630428

2. To: (Receiving Organization)	3. From: (Originating Organization)	4. Related EDT No.:
Distribution	RCRA & TSCA Services	N/A
5. Proj./Prog./Dept./Div.: Impacts, Compliance Implementation Plans, Required Deviations for TSCA Regulations/2RCRA & TSCA Services	6. Design Authority/ Design Agent/Cog. Engr.: C. H. Mulkey	7. Purchase Order No.: N/A
8. Originator Remarks: This document is being released into the supporting document system for retrievability purposes.		9. Equip./Component No.: N/A
		10. System/Bldg./Facility: N/A
11. Receiver Remarks: For release.	11A. Design Baseline Document? [] Yes [X] No	12. Major Assm. Dwg. No.: N/A
		13. Permit/Permit Application No.: N/A
		14. Required Response Date: 08/21/00

15. DATA TRANSMITTED

(A) Item No.	(B) Document/Drawing No.	(C) Sheet No.	(D) Rev. No.	(E) Title or Description of Data Transmitted	(F) Approval Designator	(G) Reason for Transmittal	(H) Originator Disposition	(I) Receiver Disposition
1	RPP-6802	N/A	0	Impacts, Compliance Implementation Plans, and Required Deviations for Toxic Substance Control Act Regulation of Double Shell Tanks.	NA	2	1	1

16. KEY

Approval Designator (F)	Reason for Transmittal (G)		Disposition (H) & (I)	
E, S, Q, D or N/A (see WHC-CM-3-5, Sec.12.7)	1. Approval 2. Release 3. Information	4. Review 5. Post-Review 6. Dist. (Receipt Acknow. Required)	1. Approved 2. Approved w/comment 3. Disapproved w/comment	4. Reviewed no/comment 5. Reviewed w/comment 6. Receipt acknowledged

17. SIGNATURE/DISTRIBUTION
(See Approval Designator for required signatures)

(G) Reason	(H) Disp.	(J) Name (K) Signature (L) Date (M) MSIN	(G) Reason	(H) Disp.	(J) Name (K) Signature (L) Date (M) MSIN
		Design Authority			
		Design Agent			
2	1	Cog.Eng. C. H. Mulkey	1	1	W. T. Dixon
2	1	Cog. Mgr. B. G. Erlandson			
		QA			
		Safety			
		Env.			

18.	19.	20.	21. DOE APPROVAL (if required)
L. R. Webb 8/21/00 Signature of EDT Originator / Date	NA Authorized Representative Date for Receiving Organization	B. G. Erlandson 8-21-00 Design Authority/ Cognizant Manager / Date	Ctrl. No. [] Approved [] Approved w/comments [] Disapproved w/comments

BD-7400-172-2 (05/96) GEF097

BD-7400-172-1

DISTRIBUTION SHEET

To	From	Page 1 of 1
Distribution	Process Control	Date 08/21/00
Project Title/Work Order		EDT No. EDT-630428
RPP-6802, Rev. 0, "Impact, Compliance Implementation Plans, and Required Deviations for Toxic Substance Control Act Regulations of Double-Shell Tanks."		ECN No. N/A

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
CH2M Hill Hanford Group, Inc.					
D. L. Banning	R2-12	X			
V. C. Boyles	R2-11	X			
C. DeFigh-Price	R2-12	X			
M. L. Dexter	R1-51	2			
W. T. Dixon	R1-51	X			
B. G. Erlandson	R1-51	X			
J. G. Field	R2-12	X			
K. D. Fowler	R2-11	X			
M. D. Hasty	S7-01	X			
J. W. Hunt	R2-12	X			
N. W. Kirch	R2-11	X			
J. A. Lechelt	R2-11	5			
S. G. McKinney	R2-12	X			
C. H. Mulkey	R1-51	4			
D. M. Nguyen	R2-12	X			
G. L. Parsons	R3-47	X			
M. J. Sutey	S5-07	X			
G. A. Stanton	S7-01	X			
D. J. Washenfelder	H6-18	X			
T.C.S.R.C.	R1-10	X			
CH2MHill Incorporated					
L. M. Johnson	H9-01	X			
Numatec Hanford Corporation					
J. S. Garfield	R3-73	X			
Waste Management Hanford					
C. M. Seidel	G1-32	X			

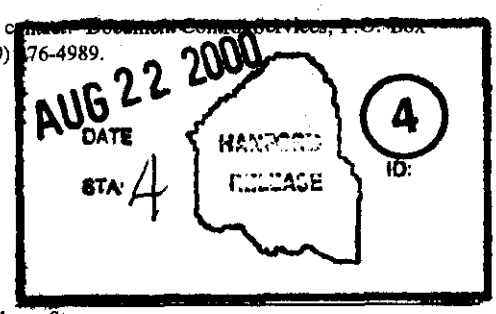
Impacts, Compliance Implementation Plans, and Required Deviations for Toxic Substance Control Act Regulation of Double-Shell Tanks

C. H. Mulkey
CH2M HILL Hanford Group, Inc., Richland, WA 99352
U.S. Department of Energy Contract DE-AC06-96RL13200

EDT/ECN: EDT-630428 UC: 2070
Org Code: 7B200 CACN/COA: 112978/CA10
B&R Code: EW 3120074 Total Pages: 98

Key Words: Polychlorinated Biphenyl Inventory, PCBs, Double-Shell Tank System, TSCA, Compliance, Toxic Substance Control Act

Abstract:
N/A



8/22/00

Release Approval Date Release Stamp

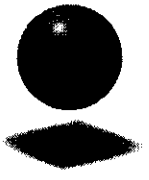
Approved for Public Release

RPP-6802
Revision 0

IMPACTS, COMPLIANCE IMPLEMENTATION PLANS, AND REQUIRED DEVIATIONS FOR TOXIC SUBSTANCE CONTROL ACT (TSCA) REGULATION OF DOUBLE-SHELL TANKS

C. H. Mulkey
CH2M HILL Hanford Group, Inc.

Date Published
August 2000



CH2MHILL
Hanford Group, Inc.

Prepared for the U.S. Department of Energy
Office of River Protection

EXECUTIVE SUMMARY

The impacts of *Toxic Substance Control Act* (TSCA) (40 CFR 761) regulation on the Tank Farm Contractor (TFC) will depend on the changes that will be required specific to TSCA. A number of key issues such as the anti-dilution, storage requirements, cleanup standards, and waste acceptance limits will have major impacts if present practices are deemed to be insufficient. The overall strategy for compliance is to take credit for existing programs such as *Resource Conservation and Recovery Act* (RCRA) and the *Atomic Energy Act of 1954* (AEA) to meet TSCA requirements. Appendix C contains a detailed listing of TSCA requirements and recommended compliance approach. This appendix also indicates where agreements with the U.S. Environmental Protection Agency (EPA) are required because a deviation from the regulation may be required. There are several options for demonstrating compliance with TSCA but EPA has proposed that their agreement for a polychlorinated biphenyl (PCB) management program be in the form of a risk-based approval.

TABLE OF CONTENTS

APPENDICES

LIST OF TERMS

AEA	Atomic Energy Act of 1954
ASTM	American Society for Testing and Materials
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CHG	CH2M HILL Hanford Group, Inc.
cm	centimeter
cm^2	square centimeters
cm^3	cubic centimeters
DCRT	double-contained receiver tank
DOE-ORP	U.S. Department of Energy, Office of River Protection
DOT	U.S. Department of Transportation
DQO	data quality objective
DST	double-shell tank
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
ft^2	square feet
lbs	pounds
IHLW	immobilized high-level waste
ILAW	Immobilized low-activity waste
IMUST	Inactive Miscellaneous Underground Storage Tank
kg	kilogram
mg/kg	milligrams per kilogram
M_L	as defined in 40 CFR 761, Subpart C
mm	millimeter
ORP	U.S. Department of Energy, Office of River Protection
OSHA	*Occupational Safety and Health Act of 1970*, 29 USC 651 et seq.
PCB	polychlorinated biphenyl
ppb	parts per billion
ppm	parts per million
psi	pounds per square inch
RCRA	Resource Conservation and Recovery Act
RPP	River Protection Project
SST	single-shell tank
TFC	tank farm contractor
TSCA	Toxic Substance Control Act
$\mu g/cm^2$	micrograms per square centimeters
µg/L	micrograms per liter
%	percent
°C	degrees Celsius

LIST OF FIGURES

LIST OF TABLES

This page intentionally left blank.

1.0 INTRODUCTION

In May 2000, the U.S. Department of Energy, Office of River Protection (DOE-ORP) and the U.S. Environmental Protection Agency (EPA) held meetings regarding the management of polychlorinated biphenyls (PCBs) in the Hanford tank waste. It was decided that the radioactive waste currently stored in the double-shell tanks (DSTs) contain waste which will become subject to the Toxic Substance Control Act (TSCA) (40 CFR 761). As a result, DOE-ORP directed the River Protection Project tank farm contractor (TFC) to prepare plans for managing the PCB inventory in the DSTs. Two components of the PCB management plans are this assessment of the operational impacts of TSCA regulation and the identifications of deviations from TSCA that are required to accommodate tank farm unique limitations.

2.0 PURPOSE

This plan provides ORP and CH2M HILL Hanford Group, Inc. (CHG) with an outline of TSCA PCB requirements and their applicability to tank farm activities, and recommends a compliance/implementation approach. Where strict compliance is not possible, the need for deviations from TSCA PCB requirements is identified. The purpose of assembling this information is to enhance the understanding of PCB management requirements, identify operational impacts and select impact mitigation strategies. This information should be useful in developing formal agreements with EPA where required.

3.0 COMPLIANCE AND OPERATIONAL ASSUMPTIONS

Compliance and operational assumptions were utilized in this evaluation to account for limited data on PCB concentrations in tanks and to address regulatory and operational uncertainties that may require specific agreements be reached with EPA and the Washington State Department of Ecology (Ecology). These assumptions are included as Appendix A. Some of the assumptions are subject to ongoing discussions with regulatory agencies and may be modified or deleted at a later date. Additional information such as the discovery of regulated levels of PCBs in the single-shell tanks (SSTs) could also change assumptions and TSCA requirements could expand beyond the DST system. Where possible, the impacts associated with potential changes in these assumptions are discussed under Section 6.0, Operational Impacts.

Changes in assumptions can significantly affect the cost and schedule associated with TSCA compliance for PCB management and, therefore, the overall waste treatment plant schedule. Appendix B summarizes the cost risk analysis and includes the risk matrix that was used to evaluate each of the assumptions. This analysis shows which assumptions

have the greatest impact and the implication costs may be useful in developing compliance approaches with regulatory agencies.

4.0 REQUIREMENT IDENTIFICATION AND COMPLIANCE APPROACH

CH2M HILL Hanford Group, Inc. first identified key TSCA requirements that were expected to influence management of PCB waste in tank farms and then assembled a diverse team of technical experts to prepare a qualitative analysis of operational impacts, mitigation approaches, and a rough order of magnitude cost estimate. The team included the following members: Bradley G. Erlandson, Richard D. Wojtasek, Charles H. Mulkey, Sandra H. Gilmore, Gregory L. Parsons, Cherri DeFigh-Price, Michael J. Sutey, Dennis J. Washenfelder, Richard R. McNulty, Linda M. Johnson, Jim G. Field, George A. Stanton, Jr. Arvid K. Larson, Vincent C. Mongar, Paul S. Schaus, and William T. Dixon. Following receipt of DOE-ORP direction, a baseline change request was prepared in order to provide DOE-ORP with 5 specific deliverables: These deliverables are (1) an inventory management plan, (2) a characterization plan, (3) an impact assessment and implementation plan, (4) documentation of required deviations from TSCA, and (5) identification of impacts external to tank farms that could impact tank farm operations.

In order to prepare this impact assessment, identify implementation approaches and identify the need for regulatory deviations, the list of key TSCA requirements used in the earlier qualitative assessment was expanded to include all the 40 CFR part 761 TSCA requirements. These requirements were then further compared to existing operations. The TSCA requirements were broken down into sections and entered into a table (see Appendix C) that contained the citation, a short paraphrase of the requirement, and a description of a recommended compliance approach. The approach also indicated whether or not a deviation from the requirement is needed. From the recommended approach a list of issues was developed when either strict compliance was not possible (deviation required) or clarification is needed from EPA. These issues are identified in Appendix C and are discussed in Section 6.

5.0 TOXIC SUBSTANCE CONTROL ACT (TSCA) REQUIREMENTS AND COMPLIANCE APPROACH

The table in Appendix C contains a listing of TSCA requirements as contained in 40 CFR 761. The citations and compliance strategy in the table vary as to the degree the citation is broken down. Where the regulations are particularly prescriptive and contained requirements that may apply to the TFC, they were broken down into smaller subsections. Where the citation is not likely to apply to the TFC or the requirement is more general, larger sections of the regulations are cited. For utility, the major regulation section titles have bold print, and bold print has been used in the "Compliance Approach" column to identify items that require further information or incorporation into other documents.

6.0 OPERATIONAL IMPACTS

The operational impacts will vary depending on the agreements that are reached between EPA and DOE-ORP. A brief discussion of the major technical (as opposed to cost/risk) issues identified in Appendix C and their impact follows.

6.1 MARKING

Citations: 761.1(5), 761.40, 761.45

The *Toxic Substance Control Act* (TSCA) requires the marking of PCB items that contain $\geq$ 50 ppm PCBs. Since the tanks are expected to contain < 50 ppm PCBs, the marking requirements may not be applicable. Marking could be required if the anti-dilution policy were strictly interpreted (because at least some waste was originally > 50 ppm) or if PCBs $\geq$ 50 ppm are accepted. Since most of the DST system is buried, agreement with EPA would be required as to how the tank systems will be marked. One alternative would be to place the PCB mark on the entrances to each affected tank farm. If this option were chosen, the impacts would be minimal.

Marking of waste generated, as the result of activities in the tank farms, will pose special problems. Based upon available data, DSTs and SSTs do not contain high concentrations of PCBs, therefore the concentration of PCBs on tank contacted equipment will be minimal and this type of waste and tank waste contacted equipment should not require labeling. If labeling is required the M_L mark could be placed with the RCRA labels.

6.2 REPRESENTATIVE SAMPLING

Citations: 761.61(a)(3), 761.61(a)(6), 761.79(f), 761.130

One of the key aspects of any sampling program is the ability to obtain a representative sample. Because of limited access, radiation, lack of mixing capability, cost, and other factors, it is not possible to obtain samples that meet normally accepted standards for being representative. This issue has been addressed a number of times under RCRA and other regulations, and the present sampling strategies have been deemed acceptable even though the samples representativeness can be challenged. It is not possible to obtain a representative sample per EPA procedures. Agreement of the resolution on this issue needs to be reached between EPA and DOE-ORP. Documentation of this agreement is expected to be included in the PCB specific Data Quality Objective (DQO) that was started in August 2000.

6.3 NUMBER OF SAMPLES

Citations: 761.61(a)(3), 761.79(f), 761.130

Where there is not a homogeneous mixture and/or results are close to a regulatory limit, the number of samples is normally increased to improve the confidence in the results. Because of radiation exposure issues and limited sampling access (see representative sampling section), it may not be feasible to collect the specified number of samples. The number of samples that are required will be documented in the PCB DQO.

6.4 SAMPLE ANALYSIS

Citations: 761.61(a)(3), 761.272

Analytical methods have been developed that closely follow *Test Methods for Evaluating Solid Waste Physical/Chemical Methods* (SW-846 methods, EPA 1997) but deviations from the methods may be required to address radiation issues. Because the tank waste is highly radioactive, there are limitations on sample size and in the exposure that personnel can receive during analytical procedures. The U.S. Environmental Protection Agency (EPA) agreement that existing methods are acceptable needs to be confirmed. Significant modifications to the existing analytical methods could result in substantial cost and schedule impacts.

6.5 DECONTAMINATION

Citations: 761.20(c), 761.35, 761.61, 761.79

During day-to-day tank farm operation, various tools and equipment come in contact with tank waste. Equipment that has contacted tank waste is decontaminated to address radiation issues and may be stored as reusable or disposed in accordance with RCRA mixed waste rules. Subpart P specifies the methodology for determining that the decontamination has been effective. One of the key requirements is the performance of a wipe test. It is not likely that this equipment will contain detectable concentrations of PCBs, and the requirement for a wipe test is unlikely to result in the detection of PCBs. Requiring a wipe test prior to reusing this equipment would increase personnel exposure to radiation and would increase costs without an incremental benefit. Confirmation that current decontamination practices are sufficient and that confirmation via wipe tests are not necessary needs to be obtained from EPA.

6.6 STORAGE REQUIREMENTS

Citations: 761.1(5), 761.50, 761.65

The *Toxic Substance Control Act* (TSCA) contains storage requirements that are very similar to those for RCRA. These requirements apply to both waste and to contaminated equipment that is going to be reused. Confirmation from EPA is needed that RCRA storage requirements are sufficient to address TSCA issues. If modification to existing practices and equipment is required, incurred additional costs could vary from negligible to substantial.

6.7 TREATMENT REQUIREMENTS

Citations: 761.1(5), 761.60, 761.61

Treatment requirements for remediation waste vary from no action required to incineration. Since the PCB content is expected to remain below 50 ppm and the waste will remain in "low occupancy areas," additional treatment should not be required as long as the waste has not been purposefully diluted to avoid regulation (unless otherwise provided by EPA) and remains < 50 ppm. Treatment requirements need to be discussed with EPA. Agreement on treatment requirements needs to be incorporated into the PCB management plan.

6.8 MANIFESTING

Citations: 761.180, 761.207 to 215

Most waste is shipped within the Hanford Site and should not be subject to the manifesting requirement. Currently, TFC tank contacted waste is not manifested since it is disposed of within the Hanford complex. Samples sent offsite for further analysis are also not manifested since they are not being sent for disposal. Confirmation that manifesting is not required for these activities is needed from EPA.

6.9 NOTIFICATION OF PCB ACTIVITY

Citations: 761.61(a)(3)(i), 761.205

The *Toxic Substance Control Act* (TSCA) contains some notification requirements. Hanford has previously notified EPA of its PCB management activities. This notification needs to be discussed with EPA to determine if a change to the previously submitted information is now required.

6.10 RECORDS AND DOCUMENTATION

Citations: 761.61(a)(3)(i), 761.79(f), 761.180, 761.202, Subpart J

Most of the documentation requirements are based on PCB concentration $\geq$ 50 ppm but may be placed on tank waste because of the anti-dilution issues. The required documentation may include maintaining records on the disposition of all PCBs, submittal of additional reports, and retention of all inspection records. The magnitude of this effort will depend on how much credit can be taken for compliance with other regulatory requirements such as RCRA.

6.11 CLOSURE

Citations: 761.1(5), 761.50(a), 761.60, 761.61, 761.62

At the time of closure compliance with TSCA, decontamination or disposal will be necessary. This could result in additional analysis. Irrespective of TSCA, cleanup standards for PCBs would be required by other regulations. The impacts of closure were not specifically assessed as part of the risk evaluation due to the long lead time involved.

7.0 IMPLEMENTATION PLAN

The present strategy is to determine the potential effect that TSCA regulation will have on the Tank Farms. Included in this determination is the identification of TSCA requirements and identification of any deviations that are required. This document is expected to be used in detailed discussions with EPA. These discussions are expected to culminate in a risk-based approval that takes advantage of other regulatory compliance activities. Once the impacts are understood, an effective date for TSCA regulation will be set, an implementation plan and schedule will be established, and funding will be identified.

8.0 U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) COMPLIANCE AGREEMENT

The U.S. Environmental Protection Agency (EPA) and DOE are currently negotiating an agreement on the approach for resolution of the PCB issue, which will be used as the basis for a compliance agreement. The form of the compliance agreement has not yet been chosen, but EPA has proposed that their approval of a TSCA management strategy will be based on a risk assessment that demonstrates that the PCBs in the waste are adequately controlled.

9.0 REFERENCES

40 CFR 761, "Polychlorinated Biphenyls (PCB) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions," Title 40, *Code of Federal Regulations*, Part 761, as amended, U.S. Environmental Protection Agency, Washington, D.C.

AEA, *Atomic Energy Act of 1954*

CERCLA, *Comprehensive Environmental Response, Compensation and Liability Act of 1980*, 42 USC 9601 et seq.

Clean Water Act, 33 USC 1251 et seq.

EPA, 1997, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*, SW-846, 34d Edition, as amended by Updates I (July 1992), IIA 1993), IIB (January 1995), and III (197), U.S. Environmental Protection Agency, Washington, D.C.

OSHA, *Occupational Safety and Health Act of 1970*, 29 USC 651 et seq.

RCRA, *Resource Conservation and Recovery Act of 1976*, as amended, 42 USC 6901 et seq.

TSCA, *Toxic Substances Control Act of 1976*, 15 USC 2601, et seq.

This page intentionally left blank.

APPENDIX A

ASSUMPTIONS USED FOR IMPACT ESTIMATION

Table A-1. Assumptions Used for Impact Estimation. (2 Sheets)

ID #	Assumption
A-1	All 28 DSTs contain mixed waste and in addition contain PCBs that will be subject to TSCA.
A-2	SSTs will not be TSCA regulated.
A-3	Incoming waste with detectable concentrations of PCBs will be assumed to be PCB remediation waste unless there is documentation that the PCBs are not TSCA regulated.
A-4	Only PCBs contained in future transfers of remediation waste that do not require further treatment (< 50 ppm for solids and < 200 ppb for liquids) or PCBs that are documented to not be subject to TSCA will be accepted from external generators.
A-5	Saltwell transfers from SSTs to DSTs are unregulated for TSCA purposes; therefore, sampling and analysis for PCBs is not required prior to transfer.
A-6	DOE-ORP will require a PCB management plan that controls PCB inventory.
A-7	Archive samples and scheduled characterization activities will be used to establish and maintain a PCB baseline for DSTs and SSTs. Samples solely for PCB analysis will not be taken.
A-8	PCB sampling and/or analysis will not be required prior to internal transfers (e.g., DSTs, salt wells, double-contained retainer tanks [DCRTs], catch tanks, etc.).
A-9	SSTs that have been saltwell pumped will be considered to contain no free liquids and, therefore, will qualify for the radioactive waste exemption.
A-10	TSCA waste will qualify for exclusion from the one year storage limit [§761.65(a)(1)]
A-11	A TSCA storage permit will not be required (i.e., not a commercial storage facility).
A-12	PCBs will be <50 ppm (dry weight basis) for solids and <200 ppb for liquids in SST and DST systems.
A-13	PCB waste acceptance limits on downstream facilities (including the Vitrification Plant) will not be more restrictive than those identified in the remediation waste limits.
A-14	Organic layers in tanks will not contain PCBs ≥2 ppm.
A-15	Compliance with existing RCRA and radiological controls will be sufficient to address TSCA requirements for storage, decontamination, spill clean up, and reporting.
A-16	Equipment that is to be stored and disposed will be managed under the radioactive waste provisions [§761.50(b)(7)]. This equipment will contain less than 50 ppm PCB, will be considered to contain no free liquids, and will be stored and disposed with regard only to the radioactive constituents.
A-17	Immobilized high-level waste received for storage will qualify for the radioactive waste exemption.
A-18	PCBs will be determined on a total basis and not per aroclor.
A-19	TSCA applicability to Inactive Miscellaneous Underground Storage Tanks (IMUSTs) will be addressed prior to closure and are not included in this assessment.
A-20	The only TSCA constituents that need to be addressed are PCBs.
A-21	PCB concentrations will be based upon the best available information whenever tank-specific PCB data are not available for tank transfers.

Table A-1. Assumptions Used for Impact Estimation. (2 Sheets)

ID #	Assumption
A-22	Tank Farm and downstream facilities (including the Vitrification Plant) represent a closed system. Therefore, the thresholds for PCB treatment are less than 50 ppm (dry weight basis) for solids and less than 200 ppb for liquids.
A-23	PCB compliance activities will be applied using a phased implementation approach.
A-24	Use of DST supernate for sluicing will not affect TSCA status of SSTs.
A-25	Closure requirements will be limited to additional analysis for PCBs.
A-26	Immobilized low activity waste received for disposal will qualify for the radioactive waste exemption.

APPENDIX B

TOXIC SUBSTANCE CONTROL ACT (TSCA) COST RISK ANALYSIS

This page intentionally left blank.

COST RISK ANALYSIS FOR IMPLEMENTATION OF TSCA REGULATIONS

A risk analysis for the proposed Toxic Substance Control Act (TSCA) implementation strategy was performed, based on the set of key assumptions that were drafted by the TSCA Task Team. Qualitative risk statements for each of these key assumptions identified the unwanted event(s) that might occur, if a key assumption subsequently proved to be invalid. While one or more risks were associated with each of the assumptions, several of them were subsequently excluded from the analysis for the following reasons:

- They were considered to be so fundamentally essential to the overall strategy that, if proven invalid, it would require the entire approach to be re-developed (i.e., a "show stopper") – Assumptions A-12, A-17, A-20, and A-23.
- They were related to tank closure (Assumptions A-9 and A-25) or IMUSTs (Assumption A-19) and were, therefore, considered to be outside scope of this analysis.
- Assumption A-6 was validated during the time period of this analysis by the letter of direction from the Office of River Protection.

Each of the remaining risk statements were then evaluated by a group of subject matter experts for both its likelihood of occurrence and the consequence in dollars, assuming that the unwanted event did occur. Both the likelihood and consequences were estimated as a range of values (minimum, most likely, maximum) for each risk in order to assess the potential cost impact of the cumulative risk. In several cases (Assumptions A-3, A-16, A-21 and A-24) it was concluded that the risk and its consequence had been previously covered in other assumptions. These assumptions are cross-referenced in the TSCA Risk Matrix.

The risk analysis took into account the variability of the cost estimates for the 18 TSCA implementation activities, as well as, the risks associated with each of the key assumptions. Because of time constraints, risks associated with the execution of the activities (i.e., work planning level risks) were not identified or assessed. However, risks at this level of planning typically have a second-order effect on the overall analysis and would not significantly change the results. Since this was considered to be a rough order of magnitude (ROM) risk analysis, the lack of these more detailed risk data was considered to be acceptable at this time. These risks can be included in subsequent, more detailed analyses, if desired.

Based on cumulative probability distributions (S-curves), the total estimated cost uncertainty (i.e., cost variability plus cost risk) is approximately $126 million (M) at the 80% probability of success level, in addition to the ROM cost estimate of slightly less than $8.9M. Of the $126M cost uncertainty, approximately $3M is attributed to the ROM cost variability for the activities. The remaining $123M is an indication of the high degree of cost risk associated with implementing the TSCA regulations using the proposed strategy without prior validation of the supporting assumptions. The high cost

risk exposure is understandable, since in the worst case for several of the risks the potential mitigation action would be to install PCB destruction capability for vitrification facilities' off-gas streams or to build additional waste storage tanks. Both of these mitigation actions would cost several hundred million dollars each.

More importantly, what this risk analysis points out to CHG, ORP, and regulatory agencies is the critical nature of establishing a reasonable TSCA implementation approach. Knowing which assumptions have the most impact on the overall implementation cost, will be quite useful in developing an agreed upon approach that meets the intent of the TSCA regulations and is also cost effective. The Pareto diagram shows there are four (4) assumptions (A-4, A-5, A-7 and A-13) that have significant risk (>$15M) associated with them, and three (3) additional assumptions (A-1, A-15, and A-22) with risk impacts in the $3 to 5M range. They are the primary contributors to successfully managing the risks associated with implementation of the TSCA regulations.

Table B-1. TSCA Cost Risk Matrix. (10 Sheets)

ID #	Associated Assumption	Risk Statement	Likelihood			Budget Consequence ($K)			Schedule Consequence (Calendar Days)			Notes
			Min	Most Likely	Max	Min	Most Likely	Max	Min	Most Likely	Max	
A-1	All 28 DSTs contain mixed waste and in addition contain PCBs that are subject to TSCA.	If only a portion of the DSTs are TSCA regulated, then the ability to manage waste volume through tank-to-tank transfers will be restricted.	0%	1%	10%	$ 250	$ 10,000	$ 200,000				min: administrative controls only max: 4 new low heat tanks at $50M each (2 in east area/2 in west area)
A-2	SSTs will not be TSCA regulated.	If SSTs are TSCA regulated, then the additional TSCA requirements for managing those wastes may result in cost and schedule impacts.	50%	80%	100%	$ 200	$ 250	$ 300				min/ml/max: twice (rounded) the "marking and posting" estimate which is based on 6 farms (12 SST farms) with estimate variability
A-3	Incoming waste with detectable concentrations of PCBs will be assumed to be PCB remediation waste, unless there is documentation that the PCBs are not TSCA regulated.	*The risk associated with this assumption is covered by Assumption A-4*										Covered by Assumption A-4

Table B-1. TSCA Cost Risk Matrix. (10 Sheets)

ID #	Associated Assumption	Risk Statement	Likelihood			Budget Consequence ($K)			Schedule Consequence (Calendar Days)			Notes
			Min	Most Likely	Max	Min	Most Likely	Max	Min	Most Likely	Max	
A-4	Only PCBs contained in future transfers of remediation waste that do not require further treatment (< 50 ppm for solids and < 200 ppb for liquids) or PCBs that are documented to not be subject to TSCA will be accepted from external generators.	If PCB waste requiring further treatment is accepted, then additional treatment may be required resulting in added costs to treat the waste.	0%	10%	25%	$ 500	$ 1,000	$ 300,000				min: negotiate and implement blending strategies (no changes to Vitrification Plant). most: min + retrieval and storage of specific tank waste in drums max: 2 afterburners on Vitrification plants at $300M ($100M for HLW, $200M for LAW)
		If PCB waste requiring further treatment is erroneously accepted as not requiring treatment, then added costs and delays may result.	0%	5%	15%	$ -	$ 500	$ 300,000				min: NOV against generator only most: negotiate and implement blending strategy max: 2 afterburners on Vitrification Plant at $300M ($100M for HLW, $200M for LAW)

Table B-1. TSCA Cost Risk Matrix. (10 Sheets)

ID #	Associated Assumption	Risk Statement	Likelihood			Budget Consequence ($K)			Schedule Consequence (Calendar Days)			Notes
			Min	Most Likely	Max	Min	Most Likely	Max	Min	Most Likely	Max	
A-5	Saltwell transfers from SSTs to DSTs are unregulated for TSCA purposes, therefore, sampling and analysis for PCBs is not required prior to transfer.	If PCBs in saltwell liquors exceed pre-established thresholds, then cost and schedule impacts may occur.	0%	10%	25%	$ -	$ 500	$ 300,000				min: no impact ml: negotiate and implement blending strategy max: 2 afterburners on Vitrification plants at $300M ($100M for HLW, $200M for LAW)
A-6	ORP will require a PCB management plan that controls PCB inventory.	*This assumption has been verified by ORP letter to CHG.*										This is a requirement, not an assumption.
A-7	Archive samples and scheduled characterization activities will be used to establish and maintain a PCB baseline for DSTs and SSTs. Samples solely for PCB analysis will not be taken.	If the number of archive samples and schedule characterization activities are not enough to establish PCB baselines, then additional costs may be incurred to perform PCB specific sampling and analysis.	0%	50%	90%	$ 175	$ 5,000.00	$ 50,000				min: 1 tank grab sample ($150K)+ analysis ($25K) most: 5 core samples plus analysis ($1M ea) for 5 separate tanks max: 50 core sample + analysis for 50 tanks
		If the archive samples are not suitable for analysis to establish the PCB baseline, then new samples will be required.	0%	10%	25%	$ 700	$ 7,000	$ 75,000				max: 70 core samples/analysis ($1M ea) and 30 grab samples/analysis ($175K ea)

Table B-1. TSCA Cost Risk Matrix. (10 Sheets)

ID #	Associated Assumption	Risk Statement	Likelihood			Budget Consequence ($K)			Schedule Consequence (Calendar Days)			Notes
			Min	Most Likely	Max	Min	Most Likely	Max	Min	Most Likely	Max	
A-8	PCB sampling and/or analysis will not be required prior to internal transfers (e.g., DSTs, saltwells, DCRTs, catch tanks, etc.).	If PCB analysis is required prior to internal transfers, then delays to accommodate sampling and analyses, as required for PCBs, may impact schedule.	0%	10%	25%	$ 1,000	$ 5,000	$ 10,000				min: 5 new grab samples ($150K ea) and 5 analyses with 50% laboratory overtime ($50K ea) max: 6 month delay in SW pumping (150 people at $60K each) plus minimum case costs
A-9	SSTs that have been saltwell pumped will be considered to contain no free liquids and thus will qualify for the radioactive waste exemption.	*This risk analysis does not address closure.*										There is currently no closure planned within the 5 year period of this assessment
A-10	TSCA waste will qualify for exclusion from the one year storage limit [§761.65(a)(1)]	If TSCA waste does not qualify for the one-year exclusion, then the RPP may be out of compliance and fines may result.	0%	1%	5%	$ -	$ -	$ 46,000				min/ml: no impact max: pay fines ($25K per day for 5 years)
A-11	A TSCA storage permit will not be required (i.e., not a commercial storage facility).	If a TSCA storage permit is required, then additional costs may be incurred.	0%	1%	5%	$ -	$ -	$ 500				min/ml: no impact max: write and approve a TSCA storage permit

Table B-1. TSCA Cost Risk Matrix. (10 Sheets)

ID #	Associated Assumption	Risk Statement	Likelihood			Budget Consequence ($K)			Schedule Consequence (Calendar Days)			Notes
			Min	Most Likely	Max	Min	Most Likely	Max	Min	Most Likely	Max	
A-12	PCBs will be <50 ppm (dry weight basis) for solids and <200 ppb for liquids in SST and DST systems.	If PCBs exceed the identified limits, then PCB treatment (i.e., incineration) may be required. *This assumption is fundamental to the strategy on which this estimate was developed. Therefore, if the assumption is not valid the entire approach must be re-developed.*										CAT 4 - showstopper
A-13	PCB waste acceptance limits on downstream facilities (including the Vitrification Plant) will not be more restrictive than those identified in the remediation waste limits.	If downstream facility limits on PCB waste acceptance are more restrictive than the remediation waste limits, then additional PCB management and/or treatment may be required prior to transfer, resulting in added cost and schedule delays.	0%	10%	25%	$ -	$ 5,000	$ 300,000				min: no impact most: blend tank wastes to reduce PCB concentration below treatment standards max: 2 afterburners on Vitrification Plant at $300M ($100M for HLW, $200M for LAW)

Table B-1. TSCA Cost Risk Matrix. (10 Sheets)

ID #	Associated Assumption	Risk Statement	Likelihood			Budget Consequence ($K)			Schedule Consequence (Calendar Days)			Notes
			Min	Most Likely	Max	Min	Most Likely	Max	Min	Most Likely	Max	
A-14	Organic layers in tanks will not contain PCBs ≥2 ppm.	If organic layers contain PCBs greater than 2 ppm, then PCB treatment may be required.	0%	1%	10%	$ 25.00	$ 175	$ 5,000				min: Analyze archive sample of C-103 ($25K) most: Grab sample and analysis of C-103 ($175K) max: Remove an inch of organics off the top, drum it, and send 50 drums to Oak Ridge for incineration
A-15	Compliance with existing RCRA and radiological controls will be sufficient to address TSCA requirements for storage, decontamination, spill clean up, and reporting.	If the existing RCRA and radiological controls are not sufficient to address TSCA requirements, then preparation, approval, and implementation of additional permits and procedures will result in added costs.	0%	10%	25%	$ 500.00	$ 5,000	$ 50,000				min: additional decontamination max: organic-based decontamination facility, additional storage buildings, 30-day movement of waste, etc.

Table B-1. TSCA Cost Risk Matrix. (10 Sheets)

ID #	Associated Assumption	Risk Statement	Likelihood			Budget Consequence ($K)			Schedule Consequence (Calendar Days)			Notes
			Min	Most Likely	Max	Min	Most Likely	Max	Min	Most Likely	Max	
A-16	Equipment that is to be stored and disposed will be managed under the radioactive waste provisions [§ 761.50(b)(7)]. This equipment will contain less than 50 ppm PCB, will be considered to contain no free liquids, and will be stored and disposed with regard only to the radioactive constituents.	*The risk associated with this assumption is covered by Assumption A-15*	[redacted]									Included in Assumption 15.
A-17	Immobilized high-level waste (IHLW) received for storage will qualify for the radioactive waste exemption.	If IHLW does not qualify for the radioactive waste exemption, then TSCA specific controls may be required and/or disposal options may be limited. *This assumption is fundamental to the strategy on which this estimate was developed. Therefore, if the assumption is not valid the entire approach must be re-developed.*										Category 4 risk for IHLW
A-18	PCBs will be determined on a total basis and not per aroclor.	If PCB content needs to be determined on a per aroclor basis, then additional costs due to increased analysis may result.	0%	1%	10%	$ 250	$ 1,000	$ 5,000				min: 5 additional analyses $50k per analysis most: 20 new analyses ($50K ea) max: 100 new analyses ($50K ea)

Table B-1. TSCA Cost Risk Matrix. (10 Sheets)

ID #	Associated Assumption	Risk Statement	Likelihood			Budget Consequence ($K)			Schedule Consequence (Calendar Days)			Notes
			Min	Most Likely	Max	Min	Most Likely	Max	Min	Most Likely	Max	
A-19	TSCA applicability to Inactive Miscellaneous Underground Storage Tanks (IMUSTs) will be addressed prior to closure and are not included in this assessment.	*This risk analysis does not address IMUSTs.*										Excluded from scope of analysis.
A-20	The only TSCA constituents that need to be addressed are PCBs.	If TSCA requirements beyond those identified in section 761 are imposed, then additional analysis, storage, treatment, and disposal may be required. *This assumption is fundamental to the strategy on which this estimate was developed. Therefore, if the assumption is not valid the entire approach must be re-developed.*										CAT 4 - showstopper
A-21	PCB concentrations will be based upon the best available information whenever tank specific PCB data are not available for tank transfers.	*The risk associated with this assumption is covered in Assumption A-8.*										Likelihood and cost of this risk is captured in A-5

Table B-1. TSCA Cost Risk Matrix. (10 Sheets)

ID #	Associated Assumption	Risk Statement	Likelihood			Budget Consequence ($K)			Schedule Consequence (Calendar Days)			Notes
			Min	Most Likely	Max	Min	Most Likely	Max	Min	Most Likely	Max	
A-22	Tank Farm and downstream facilities (including the Vitrification Plant) represent a closed system. Therefore, the thresholds for PCB treatment are less than 50 ppm (dry weight basis) for solids and less than 200 ppb for liquids.	If the EPA does not concur with the proposed RPP treatment standards, then treatment may be required resulting in additional costs and delays.	25%	50%	75%	$ 1,000	$ 9,500	$ 18,000				min: assume a 3 ppb standard with minimal laboratory upgrades ($1M) and archives are sufficient. most: requires new laboratory equipment ($1M) + 5 core samples/analyses ($1M ea) and 20 grab samples/analyses ($175K ea) . max: requires new laboratory equipment ($1M) + 10 core samples/analyses ($1m ea) and 40 grab samples/analyses ($175K ea).
A-23	PCB compliance activities will be applied using a phased implementation approach.	*This assumption is fundamental to the strategy on which this estimate was developed. Therefore, if the assumption is not valid the entire approach must be re-developed.*										CAT-4 showstopper (do not use in risk analysis)

Table B-1. TSCA Cost Risk Matrix. (10 Sheets)

ID #	Associated Assumption	Risk Statement	Likelihood			Budget Consequence ($K)			Schedule Consequence (Calendar Days)			Notes
			Min	Most Likely	Max	Min	Most Likely	Max	Min	Most Likely	Max	
A-24	Use of DST supernate for sluicing will not affect TSCA status of SSTs.	*The risk associated with this assumption is covered in Assumptions A-2, A-15.*										Likelihood and cost of this risk is captured in A-2, A-15.
A-25	Closure requirements will be limited to additional analysis for PCBs.	*This risk analysis does not address closure.*										There is no closure planned within the 5 year period of this assessment
A-26	Immobilized low activity waste (ILAW) received for disposal will qualify for the radioactive waste exemption.	If ILAW does not qualify for the radioactive waste exemption, then TSCA specific controls may be required and/or disposal options may be limited.	1%	2%	10%	$ 450	$ 450	$ 850				min/ml: $100K permit + $350K increased analysis max:$200K permit + $350K increased analysis + $300K clay liner

Notes:

CAT-4 = category that requires re-evaluation prior to proceeding (show stopper)
ea = each
HLW = high-level waste
K = thousand
LAW = low-activity waste
M = million
min = minimum
max = maximum
min/ml =minimum/most likely
min/ml/max = minimum/most likely/maximum
NOV = notice of violation
SW = saltwell

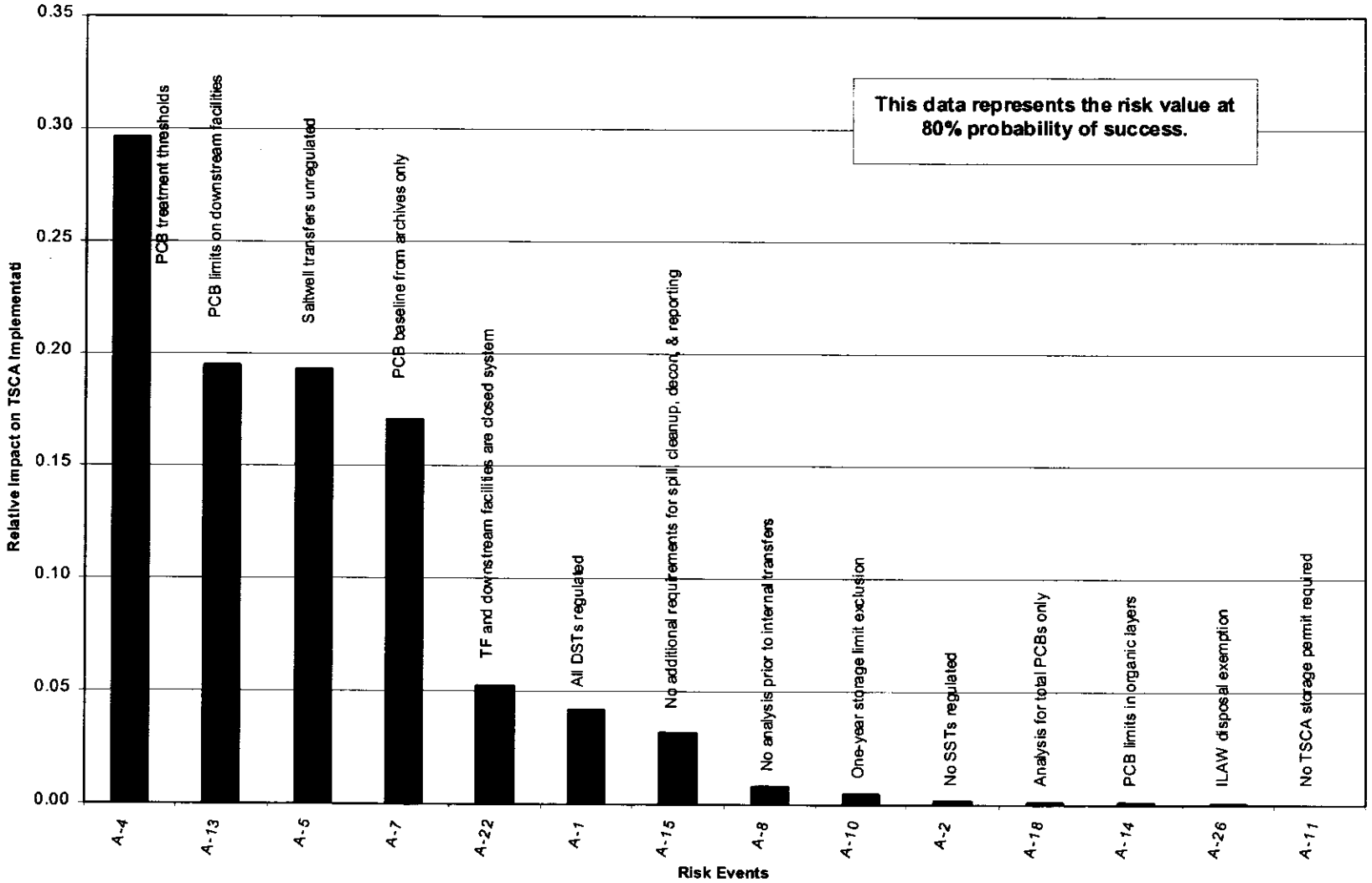


Figure B-1. Risk Value at 80% Probability of Success

This page intentionally left blank.

APPENDIX C

TOXIC SUBSTANCE CONTROL ACT (TSCA) REQUIREMENTS AND COMPLIANCE STRATEGY

This page intentionally left blank.

Table C-1. TSCA Requirements

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
Subpart A General		
§761.1	**Applicability**	
§761.1 (b)(2)	Concentrations determined on a weight per weight basis for solids and a weight per volume basis for liquids.	Waste acceptance criteria and analytical protocols will specify that PCB concentrations will be determined per these requirements. No deviation required
§761.1 (4)(i)	Non-liquids must be determined on a dry weight basis	Same as above.
§761.1 (4)(ii)	Liquid PCBs containing > 0.5 % by weight non-dissolved materials shall be analyzed as multi-phasic non-liquid/liquid mixtures	Same as above
§761.1 (4)(iii)	Requires separation and PCB analysis of each layer of multi-phasic mixtures	Same as above
§761.1 (4)(iv)	Requires disposal according to the requirements for the highest phase	Disposal requirements will be determined by the highest phase unless the phases are separated as allowed by EPA policy. If the phases are separated, then disposal requirements will be determined by the PCB concentration of each phase. No deviation required

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.1 (5)	Antidilution No person may avoid any provision specifying a PCB concentration by diluting, unless otherwise specifically provided	**Anti-dilution issues need to be discussed with EPA** so that a determination can be made as to whether or not there are anti-dilution issues that need to be resolved. This issue affects requirements pertaining to labeling, record keeping, and disposal requirements. Present plans are to manage waste according to the "as found concentration" in the tanks.
§761.2	**PCB Assumptions for use** These are for transformers and capacitors and are not relevant to tank waste	Not applicable
§761.3	**Definitions** Key definitions are for remediation Waste	No action to comply is required
§761.19	**References** Incorporates American Society for Testing and Materials (ASTM) methods by reference	No action to comply is required
Subpart B Manufacturing, Processing, Distribution in Commerce		
§761.20	**Prohibitions**	
§761.20 (a)	Prohibits the use of PCBs in other than a totally enclosed manner except as authorized by §761.30	PCBs are not used in tank farms. PCBs are contained in tank waste that has been classified as remediation waste.
§761.20 (b)	Manufacturing prohibition	No action to comply is required. We do not manufacture PCBs.
§761.20 (c)	Prohibits the distribution in commerce except as exempted	This specifies exemptions to the general prohibition against the distribution of PCBs in commerce. No specific action to comply is required.
§761.20 (c)(2)(i)	Exempts processing activities that are primarily associated with and facilitate storage or transportation for disposal from the requirement to obtain a TSCA PCB storage or disposal approval.	No action is required. This allows the shipment of waste and samples without having to meet all the storage requirements.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.20 (c)(2)(ii)	Processing activities primarily associated with and facilitating treatment as defined in §261.10 require a disposal approval unless it is part of a self-implementing activity under §761.61(a) or §761.79(b).	Discussions on compliance with TSCA are being held with EPA. These discussions are expected to culminate in EPA's approval of the tank PCB management plan.
§761.20 (c)(4)	Allows the distribution in commerce for disposal of PCBs < 50 ppm	No action to comply is required
§761.20 (c)(5)	Allows the distribution in commerce of decontaminated PCB items.	No action to comply is required
§761.20 (d)	Prohibits the use of waste oil containing detectable concentrations of PCBs for coatings, sealants or dust control agent	No action to comply is required. No use of waste oil containing PCBs for these purposes is anticipated.
§761.20 (e)	Requirements for burning oil containing PCBs	No action to comply is required. The TFC does not burn used oil.
§761.30	**Authorizations**	
§761.30 (a)	Authorizes the servicing of transformers if specific conditions are met.	No action to comply is required. The TFC does not service transformers
§761.30 (b)	Authorizes the use of PCBs in railroad transformers	No action to comply is required
§761.30 (c)	Authorizes the use of PCBs < 50 ppm in mining equipment	No action to comply is required
§761.30 (d)	Authorizes the use of PCB < 50 ppm in heat transfer systems	No action to comply is required
§761.30 (e)	Authorizes the use of PCB < 50 ppm in hydraulic systems	No action to comply is required
§761.30 (f)	Authorizes the use of PCB in carbonless copy paper	No action to comply is required
§761.30 (h)	Authorizes the use of PCB in electromagnets subject to specified conditions	No action to comply is required
§761.30 (i)	Authorizes the use of PCBs in natural gas pipelines	No action to comply is required
§761.30 (j)	Authorizes the use of PCB in research and development activities	No action to comply is required
§761.30 (k)	Authorizes the use of PCBs in scientific instruments.	No action to comply is required
§761.30 (l), (m)	Authorizes the use of PCBs in capacitors and circuit breakers	No action to comply is required
§761.30 (p)	Authorizes the use of porous surfaces contaminated with PCBs provided specified conditions are met.	No action to comply is required
§761.30 (r)	Authorizes the use of PCBs in rectifiers.	No action to comply is required

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.30 (s)	Authorizes the use of PCBs < 50 ppm in air compressor systems	No action to comply is required
§761.30 (t)	Authorizes the use of PCBs < 50 in intact and non-leaking gas or liquid transmission systems.	No action to comply is required
§761.30 (u)	Authorizes the use of decontaminated material	No action to comply is required
§761.35	**Storage for reuse** Specifies requirements for storing PCB Articles for reuse	No action required. The TFC does not have PCB equipment that is being stored for reuse. The assumption has been made that contaminated equipment being stored for reuse is not considered a PCB Article. **This assumption needs to be verified with EPA.**
Subpart C Marking of PCBs and PCB Items		
§761.40	**Marking requirements**	
§761.40 (a)	Requires the marking of PCB containers, transformers, capacitors, electric motors, hydraulic systems, heat transfer systems, article containers, and storage areas.	Section 761.1(b) could be interpreted as not requiring marking of remediation waste that is < 50 ppm PCB. Waste in the tanks is expected to be < 50 ppm and therefore marking is not required. **Because of the anti-dilution issue, the applicability of the marking requirements for items that are < 50 ppm need to be discussed with EPA.**
§761.40 (b)	Requires the marking of transport vehicles containing > 45 kg of PCBs at concentrations ≥ 50 ppm.	See above
§761.40 (c), (d)	Requires the marking of capacitors	No action required. The TFC does not have PCB capacitors.
§761.40 (e)	Requires the marking of PCB items with concentrations of 50 to 500 ppm	Will comply with this requirement if PCB items > 50 ppm are discovered. Expected concentrations are < 50 ppm and, therefore, this requirement is not likely to be applicable.
§761.40 (f)	Allows alternate labeling for small items	Will comply if small items need to be labeled.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.40 (h)	Requires all marks to be placed in a position exterior of the PCB item, storage units, transport vehicles	Will comply if labeling is required.
§761.40 (i)	Requires the marking of manufactured substances or mixtures containing PCBs < 500 ppm.	No action required. The TFC will not manufacture items containing PCBs.
§761.40 (j)	Requirements for marking PCB transformer locations	No action required. The TFC does not have any transformers subject to these requirements.
§761.40 (k)	Requires the marking of various electrical equipment	No action required. The TFC does not have equipment subject to these requirements.
§761.45	**Marking formats** Specifies marking formats	If marking is required, the specified marking formats will be used.
Subpart D - Storage and Disposal		
§761.50	**Applicability**	
§761.50 (a)	Requires that any person storing or disposing of PCB waste must do so in accordance with this part.	**A number of clarifications are needed before the impact of complying with these requirements can be finalized**. It is anticipated that adherence to RCRA requirements will meet or exceed these requirements. Storage and disposal of PCBs will be conducted per the agreements that are reached between ORP and EPA.
§761.50 (a)(2)	Prohibits the conversion of liquid PCBs that are subject to the incineration requirements from being converted into non-liquid forms	Waste requiring incineration is not expected to be sent to the TFC. If it is received, then any conversion to a non-liquid form will be in accordance with agreements between ORP and EPA.
§761.50 (a)(3)	Prohibits the discharge of water containing PCBs to a treatment works unless they are < 3 µg/L (3 ppb)	No action required. The TFC will not discharge waste containing PCBs > 3 ppb to a treatment works. **This may be an issue for the vitrification plant and for waste sent to the 242-A evaporator since they do have discharges that go to a Clean Water Act facility.**

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.50 (a)(4)	Spill and other uncontrolled discharges of PCB ≥ 50 ppm are disposal	No action required. PCBs in the tank system are not "in use" and therefore have already been disposed. Any new spills would be subject to cleanup standards.
§761.50 (a)(5)	Provides an exception to the sampling requirements for non-liquid PCBs if the presumption is made that they are > 500 ppm.	Sampling will be conducted per the EPA-ORP agreement.
§761.50 (b)(1)	Anyone removing liquid PCBs from use (i.e. not remediation waste) must dispose of them per §761.60(a) or decontaminate them per §761.79.	No action required. The TFC does not have any PCBs in use that would be subject to these requirements
§761.50 (b)(2)	Intact non-leaking PCB Articles must be disposed of in accordance with §761.60(a) or decontaminate them per §761.79. Leaking or PCB Articles that are not intact must be disposed of as PCB bulk product waste under §761.62(a) or (c).	No action required
§761.50 (b)(3)	Remediation waste is regulated for cleanup and disposal in accordance with §761.61	No action required
§761.50(b) (3)(i)	PCB waste > 50 ppm disposed prior to April 18, 1978 is presumed not to pose an unreasonable risk unless the EPA Regional Administrator finds otherwise. Voluntary cleanup of these wastes does not have to be in accordance with §761.61.	No action required
§761.50 (b)(3)(ii) §761.50	Waste placed in a land disposal facility, spilled, or otherwise released into the environment on or after April 18, 1978, must dispose of the waste as follows: A. In accordance with the PCB Spill Cleanup Policy at Subpart G for those remediation wastes that meet the criteria of the policy. B. In accordance with §761.61.	Waste will be disposed per the agreement between ORP and EPA.
(b)(4)(i) §761.50	PCB Bulk Product waste must be disposed in accordance with §761.62. PCB Bulk Product waste is waste as defined in §761.3 that was ≥ 50 ppm when originally removed from service even if it is presently < 50 ppm.	Will comply if PCB bulk product waste is generated.
§761.50 (b)(4)(ii)	Metal surfaces in contact with PCBs may be decontaminated in accordance with §761.79(c)(6).	Decontamination will follow the agreements reached between EPA and ORP.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.50 (b)(5)	PCB household waste must be stored and disposed in accordance with §761.63.	No action required. The TFC does not have PCB household waste.
§761.50 (b)(6)	PCB research and development waste generated for use under §761.30(j) must be stored and disposed in accordance with §761.64.	Storage and disposal of research and development waste will follow the agreements reached between EPA and ORP.
§761.50 (b)(7)(i)	PCB/Radioactive waste storage $\geq$ 50 ppm, must be conducted by taking into account both its PCB concentration and its radioactive properties, except as provided in §761.65(a)(1), (b)(1)(ii), and (c)(6)(i).	Will Comply
(b)(7)(ii) §761.50	PCB/Radioactive waste that meets the disposal requirements for disposal in a municipal or non-municipal landfill if only the PCB content is considered, can be disposed of without regard to the PCB content.	No action required. No requirement that must be met. The vitrified waste is expected to quality for this exemption.
§761.50 (b)(8)	Porous surfaces must be disposed of in accordance with §761.61(a)(5)(iii). Concrete may be decontaminated according to §761.79(b)(4), if the decontamination is commenced within 72 hours of the spill.	See the referenced section in this table for compliance details
§761.50 (c)	Storage for disposal must be in accordance with §761.65.	See the referenced section in this table for compliance details
§761.50 (d)(4)	Chemical waste landfills used for the disposal of PCBs must meet the requirements of §761.75.	See the referenced section in this table for compliance details
§761.50 (e)	Any person seeking a TSCA PCB Coordinated Approval must follow the procedures in §761.77.	Will comply if such an approval is necessary.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.60	**Disposal Requirements**	See subsections
§761.60 (a)	PCB liquids ≥ 50 ppm must be disposed in an incinerator that complies with §761.70 except that PCB liquids ≥ 50 and < 500 ppm may be disposed as follows: A. Mineral or dielectric oil may be disposed of in a high efficiency boiler according to §761.71(a). B. Other liquids in a high efficiency boiler according to §761.71(b) C. Liquids from incidental sources, such as precipitation, condensation and leachate, in a chemical landfill that complies with §761.75 if: • Disposal does not violate §268.32(a)(2) or §268.42(a)(1) of this chapter. • The liquids do not exceed 500 ppm and are not an ignitable waste as described in §761.75(b)(8)(iii)	Waste in the DST System is expected to be below 50 ppm and, hence, would not be subject to this requirement. Present plans are to just accept waste with PCBs < 50 ppm. If PCBs ≥ 50 ppm are found or are accepted into the DST system, then treatment in the DST System and/or the Vitrification Plant will need to be evaluated. An acceptable level for PCBs in the Vitrification Plant will be determined upon completion of a risk evaluation. This result can be used to determine if it is acceptable to receive PCBs Upon completion of the evaluation, they will be disposed of per the EPA-ORP agreement.
§761.60 (b)	Disposal and storage requirements for transformers, capacitors, hydraulic machines, PCB Contaminated electrical Equipment, Natural gas Pipelines, and PCB Articles	Not applicable. The TFC does not have any electrical equipment that is subject to these requirements.
§761.60 (c)(1)	PCB containers with PCB > 500 ppm must be disposed of in an incinerator or chemical waste landfill. Any liquids must be drained and properly disposed of prior to disposal in a chemical landfill.	Not applicable. The TFC should not have any PCB containers > 500 ppm. If such a container is identified, it will be disposed of per these requirements unless approved otherwise by EPA
§761.60 (c)(2)	PCB containers with PCBs < 500 ppm must be disposed of as municipal solid wastes after any liquids have been drained and disposed of according to §761.60(a).	Such containers will be disposed of per the requirements of the AEA and RCRA. It is expected that they will be disposed of as mixed waste. As required by RCRA, any free liquids will be drained and/or absorbent material will be added. Specific actions will be discussed with EPA.
§761.60 (e)	Specifies the approval process for obtaining approval to use alternate disposal methods for PCBs that would otherwise have to be incinerated. .	Not applicable. PCBs requiring incineration are not expected to be received into the DST System.
§761.60 (f)	Requirements for written notices for alternative approvals granted under §761.60(e).	Will comply if a specified approval is requested.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.60 (g)(1)	Contains testing requirements for dielectric fluid in electrical equipment. It also specifies the use of gas chromatography for determining PCB concentration in dielectric fluids.	Not applicable. The TFC does not have any electrical equipment that is subject to these requirements.
§761.60 (g)(2)	Contains guidance for determining PCB concentration in waste oils	No action required. Waste oils needing verification of PCB content are not expected to be handled by the TFC and this section does not require the use of the stated procedure.
§761.60 (i)	Specifies approval authorities for disposal methods	No action required. This is a requirement for EPA
§761.60 (j)	Requirements for the self-implementation for research and development for PCB disposal	If a self-implementing PCB disposal is chosen, the requirements will be met unless approved otherwise by EPA.
§761.61	**PCB Remediation Waste**	
§761.61 (a)	Self-implementing on-site cleanup and disposal of PCB remediation waste.	The planned cleanup and disposal is expected to be conducted under a risk-based approval and would not be subject to these requirements. This approval is expected to contain requirements very similar to those for the self-implementation procedure. **This approval is expected to address what is necessary for adequate characterization and agreement is needed from EPA as to adequacy of characterization.**
§761.61 (a)(1)(i)	The self-implementing procedures cannot be used for cleanup of surface or ground waters, marine sediments, freshwater ecosystems, sewer systems, drinking water systems, grazing lands, or vegetable gardens.	No action required if self-implementing option is not chosen. See §761.61 (a). The TFC does not operate near these types of systems.
§761.61 (a)(1)(ii)	The self-implementing procedures are not binding on other types of cleanup such as Comprehensive Environmental Response Compensation and Liability Act (CERCLA).	No action required if self-implementing option is not chosen. See §761.61 (a). This is just a statement that indicates that TSCA does not supercede other types of cleanup actions such as those conducted under RCRA.
§761.61 (a)(2)	Self-implementing cleanup must include adequate characterization of the site that is sufficient to provide the information in §761.61 (a)(3). The method in Subpart N can be used for this purpose..	No action required if self-implementing option is not chosen. See §761.61 (a). Because of various issues, the methods in Subpart N cannot be used for some TFC cleanups.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.61 (a)(3)(i)	Notification and certification to EPA is required at least 30 days prior to the date that cleanup begins. The notice must include: A. Nature of the contamination B. A summary of the procedures used to sample the site and a map showing the PCB concentration measured in all pre-cleanup samples. The summary must also include sample collection and analysis dates. C. Topographic maps showing the location and extent of contaminated areas that are cross-referenced to the summary required in B above. D. Cleanup plan E. Written certification signed by the property owner and the person conducting the cleanup	No action required if self-implementing option is not chosen. See §761.61 (a). These issues are expected to be included in the approval that is obtained from EPA.
§761.61 (a)(3)(ii)	The EPA must respond to the request in writing within 30 days. If EPA fails to respond the plan within 30 days, cleanup can proceed. EPA must be notified of any changes to the plan.	No action required. This is a requirement for EPA.
§761.61 (a)(4)(i)	Bulk PCB remediation waste includes soil, sediment, and industrial sludge. Cleanup levels are as follows: A. High occupancy levels, • $\leq$ 1 ppm without further controls, > 1 ppm • < 10 ppm if a cap meeting the requirements of section (a)(7) and (a) (8) is placed over the area. B. Low occupancy areas, • $\leq$ 25 ppm unless otherwise specified • > 25 ppm and $\leq$ 50 ppm if secured with a fence and marked by a sign with the M_L mark • > 50 ppm and $\leq$ 100 ppm if the site is covered with a cap meeting the requirements of section (a)(7) and (a) (8)	No action required if self-implementing option is not chosen. See §761.61 (a). Tank sludge is expected to be considered Bulk PCB remediation waste. The cleanup standard for low occupancy areas is being used as an interim cleanup level for solids. The cleanup level for liquids has been chosen as that for use in closed systems. **These limits will change to reflect the result of the risk assessment and approvals by EPA.**

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.61 (a)(4)(ii)	Non-porous surfaces must be cleaned up as follows; A. High occupancy areas, ≤ 10 µg/100 cm^2 of surface area B. Low occupancy areas, < 100 µg/100cm^2 of surface area.	No action required if self-implementing option is not chosen. See §761.61 (a). Cleanup of surfaces will be conducted as necessary to meet AEA and RCRA standards. Upon completion of the risk assessment, these limits may be modified. **Agreement with EPA is needed to address decontamination requirements.**
§761.61 (a)(4)(iii)	Porous surfaces in both high and low occupancy areas must be cleaned to the levels in §761.79(b)(4) or §761.30(p)	See above
§761.61 (a)(4)(iv)	Liquids must be cleaned up in accordance with §761.79(b)(1) and (b)(2).	See §761.61 (a)(4)(i).
(a)(4)(v)	Where there is an actual or proposed change in land use of a site cleaned up to the low occupancy levels and the exposure of people or animal life could increase, the site must be cleaned up to the high occupancy area standard.	No action required if self-implementing option is not chosen. See §761.61 (a). Due to radiation issues, such land use is not foreseen.
§761.61 (a)(4)(vi)	The EPA Regional Administrator can impose more stringent cleanup standards.	No action required if self-implementing option is not chosen. This just allows EPA to impose more stringent cleanup standards.
§761.61 (a)(5)	PCB disposal technologies approved under §761.60 and §761.70 can also be used for self-implemented cleanup.	No action required if self-implementing option is not chosen. This allows the use of other disposal technologies if desired.
§761.61 (a)(5)(i)	Bulk PCB remediation waste must be cleaned up to the levels specified in §761.61(a)(4)(i). On-site cleanup using soil washing can be conducted without a permit if the specified conditions are satisfied.	No action required if self-implementing option is not chosen. See §761.61 (a). Also see §761.61 (a)(4)(i). It is not anticipated that the TFC will use soil washing to address PCB issues.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.61 (a)(5)(ii)	Non-porous surfaces must be cleaned up as follows: A. For on-site disposal • Procedures approved under §761.79 • Technologies approved under §761.60(e) • Procedures or technologies approved under §761.61(c) B. For off-site disposal • For surface concentrations < 100μg/ 100cm^{2,} in accordance with §761.61(a)(5)(i)(B)(2)(ii) • For surface contamination > 100μg/ 100 cm^2, in accordance with §761.61(a)(5)(i)(B)(2)(iii) C. For use either on-site or off-site: • Decontaminated to the standards specified in §761.79(b)(3) • Decontaminated in accordance with §761.79(c)	No action required if self-implementing option is not chosen. See §761.61 (a). Also see §761.61 (a)(4)(i) See the specified section for more detail.. These requirements would apply to the interior of tanks and pipelines. Equipment that is placed in tanks that is composed of metal or non-porous plastic is also expected to be subject to these requirements.
§761.61 (a)(5)(iii)	Porous surfaces must be disposed of as bulk PCB remediation waste according to §761.61(a)(5)(i) or decontaminated according to §761.79(b)(4)	No action required if self-implementing option is not chosen. See §761.61 (a). Also see §761.61(a)(4)(i). Contaminated clothing and other material that could absorb or adsorb tank waste may be subject to these requirements.
§761.61 (a)(5)(iv)	Liquid PCB remediation waste must be: A. Decontaminated according to §761.79(b)(1) or (b)(2) B. Disposed of according to §76.61(b) or (c)	No action required if self-implementing option is not chosen. See §761.61 (a). Also see §761.61(a)(4)(i). See the individual sections for additional information.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.61 (a)(5)(v)	Cleanup waste must be disposed or reused using one of the following methods: A. Non-liquid waste must be (1) disposed in a RCRA subtitle C landfill or a PCB disposal facility, or (2) decontaminated in accordance with §761.79(b)(1) or (b)(2) B. Cleaning solvents, abrasives, and equipment can be reused after decontamination according to §761.79.	No action required if self-implementing option is not chosen. See §761.61 (a). Also see §761.61(a)(4)(i). Personal protective equipment (PPE) and other waste generated from decontamination activities would be subject to these requirements. It is expected that in most cases this waste would be disposed as mixed waste in a subtitle C landfill that is permitted to accept radioactive waste. **The laundering of PPE is an issue that needs to be discussed with EPA. The risk-based approval is expected to address these issues**
§761.61 (a)(6)(i)	Sampling and analysis for cleanup verification of bulk PCB remediation waste and porous surfaces must be in accordance with Subpart O. Sampling and analysis of non-porous surfaces must be in accordance with Subpart P.	Decontamination to meet RCRA and AEA requirements is expected to be sufficient to address TSCA issues. The specific requirements in Subpart O and P cannot be met due to equipment design and radiation issues. **Agreement of an acceptable level of decontamination needs to be reached with EPA.**
§761.61 (a)(6)(ii)	Cleanup is complete when sample analysis shows that PCB levels are at or below the levels in §761.61(a)(4)	No action required. This just specifies when cleanup is complete and does not specify that cleanup is required.
§761.61 (a)(7)	Contains specification for caps	No action required if self-implementing option is not chosen. At this time the placement of caps on TFC equipment is not anticipated. Caps may be installed during closure but they would be designed to meet RCRA standards and should be sufficient to address TSCA issues.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.61 (a)(8)	Deed restrictions for caps, fences, and low occupancy areas must be kept in perpetuity. Additional requirements are also specified	No action required if self-implementing option is not chosen. Because of the hazard posed by high radiation, it is not anticipated that ownership will be transferred. If such transfer ever occurs, the land will be cleaned up to a level that would pose minimal hazard to any authorized use.
§761.61 (a)(9)	Record keeping for §761.61 (a)(3), (a)(4), and (a)(5) must be done in accordance with §761.125(c)(5)	No action required if self-implementing option is not chosen. See the specific sections for more details.
§761.61 (b)(1)	Liquid PCB remediation waste must disposed according to §761.60(a) or (e), or decontaminate it in accordance with §761.79.	No action required. This is the performance-based approval.. It is anticipated that the approval for PCB management will be a risk-based approval. See the specific section for information about specific requirements.
§761.61 (b)(2)	Non-liquid PCB remediation waste must be: A. Disposed of in a high temperature incinerator approved under §761.70(b) method approved under §761.60(e), a chemical waste landfill approved under §761.75, or a facility with a coordinated approval issued under §761.77. B. Decontaminated in accordance with §761.79	See above.
§761.61 (b)(3)	Contains requirements for dredged material	Not applicable. The TFC should not have dredged material.
§761.61 (c)	Sets forth the requirements for obtaining a risk-based approval. Some of the key requirements are: A. EPA must approve the risk based method prior to commencing cleanup B. Application must contain the information required by §761.61(a)(3)	The approved PCB management and disposal plan is expected to be a risk-based approval that meets the requirements of this section.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.62	**Disposal of PCB bulk product waste** Requires that the disposal of PCB bulk product waste be disposed according to paragraph 9(a), (b), or (c) of this section. Section (c) allows for a risk-based approval similar to that allowed for remediation waste. Requires the use of the procedures in Subpart R if sampling for analysis is required.	**The risk-based approval obtained under §761.61 is expected to also meet the risk based approval requirements in §761.629(c).** The requirements in Subpart R cannot be met due to equipment configuration and radiation issues. Disposal per RCRA and AEA requirements is expected to meet the intent of the TSCA requirements.
§761.62(a)	PCB bulk product waste Allows the disposal or decontamination of PCB bulk product waste in: 1. An incinerator approved under §761.70 2. Chemical waste landfill approved under §761.75 3. A hazardous waste landfill approved under RCRA 4. An alternate disposal approved under §761.60(e) 5. Decontaminated under §761.79 6. Thermal decontamination of metal surfaces in contact with PCBs 7. In accordance with a TSCA PCB coordinated approval issued under §761.77	It is expected that PCB bulk product waste will be disposed in a subtitle C landfill that is permitted to accept radioactive waste.
§761.62(b)	PCB bulk product waste Allows for the disposal of certain PCB bulk product waste in a municipal landfill	See above. Disposal in a municipal landfill is not expected to be an option due to radiation issues.
§761.62(c)	PCB bulk product waste, risk-based approval Sets forth the requirements for obtaining a risk-based approval if a method other than those in paragraphs (a) or (b) is desired for the disposal of PCB bulk product waste.	**A risk-based approval is expected to be obtained that meets the requirements in this part.**
§761.63	**PCB household waste** Allows for the management of PCB household waste in a facility permitted by a state to handle municipal or industrial solid waste	Not applicable. The TFC will not handle PCB household waste.
§761.64	**Disposal of waste from research and development activities authorized under §761.30(j)**	See the following subsections.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.64(a)	Exempts portions of samples that extracted for PCB analysis from disposal requirements.	No action required as this specifies an exemption.
§761.64(b)	Disposal of all other wastes are regulated for disposal according to the concentrations at the time of disposal. These requirements are: 1. Liquid wastes must be disposed of per §761.61(a)(5)(iv). 2. Non-liquid wastes must be disposed of in the same manner as non-liquid cleaning materials and personal protective equipment waste according to §761.61(a)(5)(v)(A).	See the referenced sections for more information.
§761.65	**Storage for disposal** Applies to the disposal of PCBs at concentrations of 50 ppm or greater and PCB items with PCB concentrations of 50 ppm or greater	The concentration of PCBs in the DSTs is expected to be < 50 ppm and these requirements should not be applicable unless waste ≥ 50 ppm is accepted into the DST system. **This needs to be confirmed with EPA in order to avoid anti-dilution issues.**
§761.65 (a) (1)	Storage limit Limits storage of PCB waste to 1 year. Contains an exemption to the storage limitation for radioactive waste	Limits storage of non-radioactive waste to one year. All TFC waste subject to these requirements is expected to be radioactive and, therefore, qualify for the exemption for radioactive wastes.
§761.65 (a) (2)	Allows for an automatic one-year extension of the storage time upon notification to EPA and providing specified actions are taken.	No action required. This is an opportunity and not a requirement unless non-radioactive waste is stored for more than one year.
§761.65 (a) (3)	Allows for requests of additional extensions of the one-year storage limit. This requires EPA approval of such extensions.	No action required. This is an opportunity and not a requirement unless non-radioactive waste is stored for more than two years.
§761.65 (a) (4)	Increased time for storage may be granted as a condition of any TSCA PCB storage or disposal approval	No action required. This just allows longer storage time for approved storage.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.65 (b) (1)	Except as provided by (b)(2), (c)(1), (c)(7), (c)(9), and (c)(10), storage facilities must meet the following: 1. Roof and walls that prevent rain water from reaching the stored waste 2. Floor with continuous curbing that provides containment for two times the size of the largest container or 25% of the total internal volume of all containers stored there, whichever is greater. Curbing for non-rad waste must be at least 6 inches high. 3. No drain valves, floor drains, expansion joints, sewer lines, or other openings that would permit liquids to flow from the curbed areas. 4. Floors and curbing must be constructed of Portland cement, concrete, or a continuous, smooth, non-porous surface as defined in §761.3, that prevents or minimizes penetration of PCBs. 5. Not located at a site below the 100-year floodwater elevation.	See the following citation. Storage areas may not meet all of these requirements but the waste will be stored in units subject to RCRA interim or final storage requirements and meet the exception in §761.65(b)(2)
§761.65 (b) (2)	Exceptions to the storage design requirements are made for: 1. Facilities permitted by section 3004 of RCRA to manage hazardous waste in containers, and spills of PCBs are cleaned up according to Subpart G. 2. Facilities that qualify for interim status under section 3004 of RCRA to manage hazardous waste in containers, meets the containment requirements specified in §264.175 of 40 CFR, and spills are cleaned up in accordance with Subpart G. 3. Facilities permitted by a state authorized under §3004 of RCRA to mange hazardous wastes in containers, and PCB spills are cleaned up in accordance with Subpart G. 4. Facility approved pursuant to a state PCB waste management program that is not less stringent than the applicable TSCA requirements. 5. Facility subject to a TSCA coordinated approval that includes storage provisions pursuant to §761.77. 6. Facility that has a TSCA PCB waste management approval that includes provisions for storage issued pursuant to §761.61(c) or §761.62(c).	All waste subject to these requirements is expected to also be mixed waste. The DSTs are currently under RCRA Interim Status but will be going for final status.. it may not be possible to clean up all spills according to Subpart G but any spill cleanup would be conducted according to RCRA and AEA requirements. **This issue needs to be discussed with EPA.**

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.65 (c) (1)	Temporary storage Some PCB items may be stored temporarily for up to 30 days in a facility that does not meet the storage requirements of §761.65(a). A spill prevention, control, and countermeasure plan is required if liquid PCB (≥ 50 ppm) are stored in such an area.	Depending on the concentration of waste accepted and the resolution of anti-dilution issues, compliance with this provision could significantly increased costs by requiring movement within a 30 day as opposed to a 90-day time frame. Since al waste will be subject to RCRA, compliance with RCRA should adequately address TSCA issues. **This needs to be discussed with EPA.**
§761.65 (c) (2)	Some electrical equipment can be stored outside a PCB storage facility provided certain conditions are met.	Not applicable. The TFC does not have electrical equipment subject to these regulations.
§761.65 (c) (3)	Storage areas subject to the requirements of paragraph (b) or (c)(1) must be marked as required in Subpart C-§761.40(a)(10)	See the referenced sections. **Marking requirements need to be discussed with EPA**. The storage areas are already posted with a number of signs that warn of danger and additional signs for PCBs would add little value.
§761.65 (c) (4)	Requires the decontamination as specified in §761.79 of all movable equipment that is used for handling PCBs or PCB items.	Deviation may be required for movable equipment such as sampling trucks. This type of equipment is decontaminated to address AEA and RCRA issues. **Decontamination for these standards should be sufficient but this needs to be verified with EPA.**
§761.65 (c) (5)	Requires checking PCB items in storage for leaks every 30 days. Any spilled or leaked material must be immediately cleaned up. Inspection records must be maintained in accordance with §761.180(a) and (b).	Inspection and spill cleanup will be conducted as required by RCRA and the AEA. This should be sufficient to address TSCA issues **but this needs to be confirmed with EPA.**
§761.65 (c) (6)	Requires that PCBs be stored in U.S. Department of Transportation (DOT) approved containers. Provides for an exception of this requirement for PCB radioactive waste if: • The containers are non-leaking • Designed to prevent the buildup of liquids • Containers must meet the nuclear criticality standards	TFC waste should meet the exemption for radioactive waste. **Agreement needs to be reached with EPA that this is sufficient.**

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.65 (c) (7)	Stationary storage containers for liquid PCBs can be larger than those specified in §761.65(c)(6) if: • They are designed, constructed, and operated in compliance with *Occupational Safety and Health Act of 1970* (OSHA) standards, 29 CFR 1910.106, *Flammable and combustible liquids*. • There is a Spill Prevention Contingency and Countermeasure (SPCC) plan for the storage	See above
§761.65 (c) (8)	PCB items must be dated when they are removed from service. Storage must be managed such that PCB items can be located by this date. Containers provided per §761.65(c)(7) must have a record that includes each batch of PCBs, the quantity of the batch, date of the batch was added o the container, and the date, quantity and disposition of any PCBs removed from the container.	The tank PCB inventory control should address these requirements. Adherence with this requirement could severely impact satellite accumulation areas as there would be a thirty-day time limit place on the movement of such waste. **This issue needs to be discussed with EPA.**
§761.65 (c) (9)	Provides for the storage of bulk PCB remediation waste for up to 180 days provided certain conditions are met.	This citation would require that bulk PCB remediation waste be placed in piles. This would increase the danger to human health due to the radioactive nature of this waste. See other citations in this section for proposed methods of complying with these requirements.
§761.65 (c) (10)	Records must be maintained as provided in §761.180	See the reference section.
§761.65 (d) to (h)	Requirements for commercial storage facilities	No action required. The TFC does not operate a commercial storage facility.
§761.65(i)	Exempts laboratories from the commercial storage requirements provided certain requirements are met	No action required. The TFC does not operate a laboratory, and this is just an exemption that does not have to be used.
§761.70	**Incineration** Requirements for PCB incinerators	No action required. The TFC does not operate an incinerator.
§761.71	**High efficiency boilers** Requirements for high efficiency boilers	No action required. The TFC does not operate high efficiency boilers used for PCB destruction.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.72	**Scrap metal recovery ovens** Requirements for scrap metal recovery ovens	No action required. The TFC does not operate scrap metal recovery ovens.
§761.75	**Chemical waste landfills** Requirements for chemical waste landfills	No action required. The TFC does not operate a chemical waste landfill.
§761.77	**Coordinated Approval**	This is one of the alternate PCB disposal options that are available for remediation waste. The chosen approval is likely to be a risk-based approval but may also contain some elements of this type of approval since compliance strategies are primarily based on meeting other regulatory requirements
§761.77 (a)(1)(i)	Requests for a coordinated approval must be made by certified mail. Request for a new PCB activity must be done at the same time as approvals required by any other Federal or State authority. The request must: 1. Contain a copy of the letter from EPA confirming the EPA identification number 2. Name, organization, and telephone number of the contact 3. Copy of the permit and plans specified in (b) and (c) of this section. Including a description of the waste management activities 4. Certification that compliance with the reporting and record keeping requirements of Subparts J and K will be met.	No action required. See §761.77
§761.77 (a)(1)(ii)	EPA can ask for additional information or can grant or deny the request	No action required. See §761.77
§761.77 (a)(2)	EPA revokes the approval or begins enforcement action approval conditions are not met or the facility is operated in a manner that creates an unreasonable risk.	No action required. See §761.77
§761.77 (a)(3)	EPA must be notified within 5 days of any changes to the non-TSCA waste management document or permit.	No action required. See §761.77

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.77(b)	A coordinated approval can be granted if: 1. The facility has a waste management document issued by EPA or an authorized state that exercises control over waste management activities. 2. The facility complies with the conditions of the above document 3. Facility complies with §761.75(b), §761.70(a)(1) through (a)(9), (b)(1), and (b)(2), and (c); or the storage requirements at §761.65(a)(c), and (d)(2), as appropriate. EPA may waive or modify some of these requirements.	No action required. This is a requirement for EPA. See §761.77
§761.77(c)	Allows a person conducting a research and development activity to obtain a coordinated approval	Not applicable. The TFC will not be conducting research and development activities for PCBs.
§761.79	**Decontamination standards and procedures** Establishes decontamination standards and procedures for removing PCBs from water, organic liquids, non-porous surfaces, concrete, and non-porous surfaces covered with a porous surface such as paint on metal.	See the discussion in the following paragraphs.
§761.79 (a)(1)	Decontamination according to this section does not require a disposal approval under Subpart D	Allows decontamination using the specified methods without approval from EPA. It is anticipated that the methods used will deviate from the specified methods and that **approval will be obtained from EPA**.
§761.79 (a)(2)	Decontaminated equipment can be distributed in commerce in accordance with §761.20(c).	See §761.79(a)(1). Allows decontaminated equipment to be distributed in commerce. Although it is not likely that much decontaminated equipment will be distributed in commerce, some items such as scrap metal may be recycled.
§761.79 (a)(3)	Materials from which PCBs have been removed by decontamination in accordance with this section may be used or reused in accordance with §761.30(u)	No action required. See §761.79(a)(1). This allows the reuse of decontaminated equipment.
§761.79 (a)(4)	Materials from which PCBs have been removed by decontamination in accordance with this part are unregulated for disposal. Decontamination waste and residuals are still regulated.	No action required. See §761.79(a)(1). This allows decontaminated equipment to exit TSCA regulation.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.79 (a)(5)	Decontamination of porous surfaces Decontamination of porous surfaces other than concrete those covering a non-porous surface must obtain an alternative decontamination approval under paragraph (h) of this section.	See §761.79(a)(1). **Decontamination of tank waste is going to be one of the components of the risk-based approval.**
§761.79 (a)(6)	Decontamination procedures must also follow other applicable laws	See §761.79(a)(1). Will comply with applicable laws.
§761.79(b)	Chopping, distilling, filtering, oil/water separation, spraying, wiping, scraping, solvents, etc. can be used to remove or separate PCBs.	See §761.79(a)(1). No action required. See §761.79(a)(1) This allows a number of methods to separate PCBs from contaminated substances. .
§761.79 (b)(1)	Decontamination standard for water containing PCBs is: 1. Less than 200 µg/L for non-contact use in a closed system where there are no releases 2. Water discharged to a treatment works (defined in §503.9(aa)) or to navigable waters is < 3 ppb. Higher levels are allowed if the discharge limit includes a limit for PCBs 3. Less than 0.5 ppb for unrestricted use.	See §761.79(a)(1). Present strategy is to use the 200-µg/L limit as the cleanup standard for liquid remediation waste.
§761.79 (b)(2)	Decontamination standard for organic liquids and non-aqueous inorganic liquids is < 2 mg/kg	Not applicable. The TFC is not expected to have such fluids.
§761.79 (b)(3)	Decontamination standard for unrestricted use of non-porous surfaces is: 1. Less than or equal to 10 micrograms per 100 square centimeters by a wipe test if no liquids are present 2. Non-porous surfaces in contact with non-liquid PCBs must be cleaned to a visual standard No. 2. This must be visually verified.	Due to radiation issues, the use of any equipment is expected to be restricted. Equipment is expected to be disposed as mixed waste.
§761.79 (b)(4)	Decontamination of concrete is $\leq$ 10 µg/100 cm^2 as measured by a wipe test	Contaminated concrete is expected to be disposed of as mixed waste.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.79(c)	Self-implementing decontamination procedures are available as an alternative to measurement-based decontamination methods specified in §761.79(b)	No action required. These procedures specify procedures that must be followed if self-implementing decontamination is chosen. Decontamination can also be based a measurement based method as specified in §761.79(b) or a risk –based standard as specified in §761.79(h). .
§761.79 (c)(1)	PCB containers can be decontaminated by triple rinsing the internal sides of a container with a solvent containing < 50 ppm PCB. Each rinse must use a volume equal to 10% of the container capacity	No action required. This is an optional decontamination method. See §761.79(c).
§761.79 (c)(2)	Movable equipment, tools, and sampling can be decontaminated by 1. Swabbing surfaces that may have contacted PCB with a solvent 2. Double/wash rinse method in Subpart S 3. Another decontamination procedure in this section.	No action required. This is an optional decontamination method. See §761.79(c).
§761.79 (c)(3)	Contains decontamination procedures for equipment in contact with free-flowing mineral oil at levels ≤ 10,000 ppm.	No action required. This is an optional decontamination method. See §761.79(c).
§761.79 (c)(4)	Contains decontamination procedures for surfaces in contact PCBs > 10,000 ppm.	No action required. This is an optional decontamination method. See §761.79(c).
§761.79 (c)(5)	Decontamination requirements for piping and air lines. Specific requirements are: 1. Ensure there is no leakage by pressuring up to 100 lbs. The pressure drop has to be less than 5 psi in 30 minutes. 2. Fill the line with a solvent such as KOH with a pH between 9 and 12, or a 5% aqueous NaOH solution. 3. Then circulate the solvent to achieve turbulent flow until volume of solvent is at least equal to 10 times the pipe volume. Turbulent flow means a Reynolds number from 20,000 to 43,000. 4. Drain the solvent and repeat steps 2 and 3 with clean solvent.	No action required. This is an optional decontamination method. See §761.79(c).
§761.79 (c)(6)	Contains requirements for thermal decontamination of metal	No action required. . This is an optional decontamination method. See §761.79(c).

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.79(d)	The following are requirements used for decontamination of PCBs 1. PCB solubility of solvents used for decontamination must be at least 5%. 2. The solvent can be used as long as the PCB content is < 50 ppm. 3. The solvent must be disposed as required in §761.79(g). 4. Subpart T can be used to validate the solvents performance.	Contains requirements for solvents used for decontamination as specified in §761.79(c)(3) to ©(5). If solvents are used for decontamination, they will meet these requirements or be approved by EPA.
§761.79(e)	Measures must be taken to prevent direct releases of PCBs to the environment when decontamination activities take place. People performing decontamination must wear protective clothing that prevents against dermal contact and inhalation of PCBs or materials containing PCBs.	Measures and procedures used will ensure that adequate protective measures are taken.
§761.79(f)	Sampling and record keeping must meet the following requirements: 1. Sampling of liquids as required by §761.79(b)(1) and (b)(2) must be done according to §761.269 and §761.272 2. Sampling of non-porous surfaces and concrete as required by §761.79(b)(3) and (b)(4) must be sampled per Subpart P. 3. Written records of sampling must be retained for three years from the decontamination activity. The record must show sampling locations and analytical results and must be retained at the site and be made available to EPA. 4. Records documenting the self-implementing procedures under §761.79(c) must be maintained at the site for three years.	See the specified sections for more information.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.79(g)	Decontamination waste and residues must be disposed of at their existing concentration unless otherwise specified. Some specific requirements are: 1. Distillation bottoms or residues are regulated for disposal as remediation waste. 2. PCBs physical separated from waste during decontamination (such as by chopping, shredding, or oil/water separation) other than those in #1 above, are regulated for disposal at their original PCB concentration. 3. Hydrocarbon solvent used for decontamination that is < 50 ppm PCB, must be burned and marketed in accordance with the requirements for used oil in §761.20(e), disposed in accordance with §761.60(a) or (e), or decontaminated pursuant to §761.79. 4. Chlorinated solvent at any PCB concentration used for decontamination must be incinerated per §761.70 or be decontaminated according to this section (§761.79). 5. Solvents ≥ 50 ppm must be decontaminated according to §761.79 or incinerated in accordance with §761.60(a). 6. Non-liquid cleaning materials and protective clothing at any PCB concentration must be disposed of per §761.61(a)(5)(v).	**Disposal of PCB waste will be accordance with the EPA approval.**
§761.79(h)	Specifies how requests for alternative sampling and decontamination approvals can be requested and approved by EPA.	EPA approval of alternate methods is expected to be obtained as part of the risk-based approval. **The approval is expected to comply with these requirements.**
Subpart E Exemptions		
§761.80	**Manufacturing, processing and distribution in commerce exemption** Specifies exemptions for manufacturing, processing, and distribution in commerce that have been granted by EPA.	No action required Specifies exemptions

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
Subpart F Transboundary Shipments of PCBs for Disposal		
§761.91	**Applicability** Specifies that this subpart is applicable to transboundary shipments of PCBs into and out of the U.S.	No action required Do not intend to ship PCBs out of the U.S. or import any PCBs.
§761.97	**Export for disposal** Specifies provisions for the export of PCBs	No action required No export for disposal is intended
§761.99	**Other transboundary shipments** Specifies certain shipments as not being transboundary shipments	No action required Does not specify a requirement that must be met for our activities.
Subpart G PCB Spill Cleanup Policy		
§761.120	**Scope** Specifies that this policy is applicable to spills resulting from the release of PCBs at concentrations of 50 ppm or greater that occur after May 4, 1987.	No action required since materials accepted and handled in tank farms should be < 50 ppm. This could change if higher concentrations of PCBs are accepted into or discovered in the DST system. Spill cleanup requirements are expected to be contained in the risk-based approval. If these procedures are mandated, deviations in cleanup, sampling and analysis will be required to address Hanford issues. **Clarification that there are no anti-dilution issues needs to be obtained from EPA.**
§761.123	**Definitions** Definitions for the spill cleanup policy	No action required. These are just definitions.
§761.125	**Requirements for PCB spill cleanup** Requirements to cleanup per the spill cleanup policy	No action required. See §761.120
§761.130	**Sampling requirements** Sampling requirements to verify cleanup met the standards	No action required. See §761.120

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.135	**Effect of compliance with this policy and enforcement** Precludes enforcement action if spills are cleaned up according to the spill cleanup policy.	No action required. See §761.120
Subparts H & I		Reserved. Contain no requirements.
Subpart J General Records and Reports		
§761.180	**Records and monitoring** Establishes record keeping and reporting requirements.	Substantial records are already being retained as required by RCRA and the AEA. Adherence to these requirements should substantially meet these requirements. Manifesting and retention of manifest records needs to be discussed in particular. **Identification of any additional information needs to be discussed with EPA.**
§761.180(a)	Facilities using or storing more than 45 kg (99.4 lbs) of PCBs must develop and maintain records on the disposition of all PCBs at the facility and the written annual document log of the disposition of the PCBs.	See §761.180.
§761.180 (a)(1)	Annual records must include: 1. All signed manifests for the year 2. All Certificates of Disposal that have been received during the calendar year 3. Records of the inspections required per §761.65(c)(5).	See §761.180.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.180 (a)(2)	The written annual document log must include the following: 1. The name, address, and EPA number of the facility and year covered by the annual document log. 2. The unique manifest number and the following information for each manifested and unmanifested waste stored at the facility: • For bulk PCB waste (e.g. tanker or truck) its weight in kilograms, date it was first removed from service for disposal, the date it was place in transport for off-site storage or disposal, and the date of disposal if known. • The serial number or other means of identifying each PCB Article (e.g., transformer or capacitor), the date it was removed from service for disposal, weight in kg of the PCBs it contains, the date it was place in transport for off-site storage or disposal, and the date of disposal, if known. • For each PCB container the following must be recorded: unique identification number, description of contents, total weight in kg of material in each container, the date material was first removed from service for disposal, the date place date it was place in transport for off-site storage or disposal, and the date of disposal, if known. • For each PCB article container the following must be recorded: unique number, description of contents, total weight in kg of material in each container, the date material was first removed from service for disposal, the date place date it was place in transport for off-site storage or disposal, and the date of disposal, if known.	See §761.180.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
	3. The total number by specific type of PCB articles and the total weight in kilograms of PCBs in PCB Articles, the total number of PCB Article Containers and total weight in kg of the contents of PCB Article Containers, total number of PCB Containers and the total weight in kg of the contents of PCB Article Containers, the total number of PCB Containers and the total weight of the their contents, and the total weight in kg of bulk PCB waste that was place in storage for disposal or disposed during the calendar year. 4. The total number of transformers and capacitors remaining in service at the end of the calendar year. 5. The total weight in kg of any PCBs and PCB Items in PCB Containers remaining in service at the end of the calendar year. This includes information on the container. 6. For any PCBs or PCB items received from or shipped to another facility owned or operated by the same generator, the information required under paragraph (a)(2)(ii)(D) of this section. 7. A record of each phone call or other means of verification agreed to by both parties, made to designate each commercial storer or disposer to confirm receipt of the waste as required by §761.208 8. The name, address, and phone number of any person that received a PCB item for reuse.	
§761.180(b)	Disposers and commercial storers Requirements for commercial storers and disposers	No action required. The TFC is not a commercial facility. See §761.180.
§761.180(c)	Incineration facilities Requirements for incineration facilities	No action required. The TFC is not an incineration facility
§761.180(d)	Chemical waste landfill facilities Requirements for Chemical waste landfill facilities	No action required. The TFC does not operate landfills.
§761.180(e)	High efficiency boilers Requirements for High efficiency boilers High efficiency boilers	No action required. The TFC does not operate high efficiency boilers used for PCB destruction.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.180(f)	Retention of special records Requirements for retention of records for commercial storers, disposers, incinerators, chemical waste landfills, and high efficiency boilers.	No action required. The TFC does not operate any of this type of facility.
§761.185	**Certification program and retention of records by importers and persons generating PCBs in excluded manufacturing processes** Contains requirements for manufacturers and importers of PCBs	Not Applicable. PCBs are not being manufactured or imported.
§761.187	**Reporting importers and by persons generating PCBs in excluded manufacturing processes** Additional requirements for importers and manufacturers of PCBs	Not Applicable. PCBs are not being manufactured or imported
§ 761.193	**Maintenance of monitoring records for inadvertently generated PCBs.** Requires the retention of records for three to seven years for items containing inadvertently generated PCBs. Specific required monitoring data requirements include: analysis methods, results, name of analyst, sample matrix, Quality Assurance Plan, date and time of analysis, and lot identification.	Not applicable since PCBs are not manufactured.
Subpart K - PCB Waste Disposal Records and Reports		
§761.202	**EPA Identification Number**	
§761.202(a)	General Requires that generators, storers, transporters and disposer obtain an EPA identification number using the form in § 761.205.	The Hanford Site obtained an EPA identification number for RCRA. The Notification of PCB Activity will be completed and submitted as required.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.202(b)	Prohibitions 1. Prohibits a PCB waste generator processing, storing, transporting, or offering for transport, PCB waste without having received an EPA identification number. 2. Prohibits a transporter from accepting PCB waste unless an EPA identification number has been obtained. 3. Prohibits a commercial storer of PCBs from accepting any PCB waste unless an EPA identification number has been obtained. 4. Prohibits a disposer from accepting PCB waste unless an EPA identification number has been obtained.	In compliance. Hanford has received an EPA identification number. The Notification of PCB Activity will be completed and submitted.
§761.202(c)	Exempts generators, commercial storers, transporters, and disposers of the requirement to have an EPA identification number who were involved in PCB waste handling activities prior to 2/5/90 if they have applied for an identification number.	Not applicable. An EPA identification number has been obtained. The Notification of PCB Activity will be completed and submitted.
§761.202(d)	States that generators, commercial storers, transporters, and disposers who first engage in PCB management activities after 2/5/90 are subject to the prohibition in §761.202(b).	Not applicable. An EPA identification number has been obtained. The Notification of PCB Activity will be completed and submitted.
§761.205	**Notification of PCB waste activity**	
§761.205(a)	Requires the filing of form 7710-53 for PCB management activities by 4/4/90 or prior to engaging in waste handling activities.	The Notification of PCB Activity will be completed and submitted.
§761.205(b)	Requires notification of PCB management activities by generators, commercial storers, disposers, and transporters who have previously notified EPA or a state under RCRA on form 7710-53 by 4/4/90.	Need to verify if this was done for Hanford.
§761.205(c)	Contains exemptions from the requirements to notify EPA of PCB waste handling activities.	No action required. No requirement to meet.
§761.205(d)	Specifies the address to mail the notification form.	**Need to verify if form was sent and possibly send an update.**
§761.205(e)	Notification requirements cannot be used as an excuse from the one-year *storage limitation.*	No action required. No requirement to meet.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.205(f)	Requires resubmittal of the notification form if PCB management activities change.	**See §761.205(d)**
§761.207	**The manifest – general requirements** Requires the use of a manifest when shipping to an off-site storer or disposer. Specifies what manifest to use and where to obtain them. Contains other requirements for such shipments.	PCB shipments will be on-site shipments and are not subject to manifest requirements. PCB waste will not be received from off-site facilities. **The vitrified tank waste should have met any TSCA associated treatment and should not require a manifest.** An exception to the off-site shipment or receipt of PCBs may be that analytical samples could be sent or received from off-site. Manifests are not required for sample shipments.
§761.208	**Use of the manifest** Specifies information and responsibilities associated with manifests.	See §761.207
§761.209	**Retention of manifest records** Specifies retention requirements associated with manifests.	See §761.207
§761.210	**Manifest discrepancies** Identifies requirements associated with investigating and reporting manifest discrepancies.	See §761.207
§761.211	**Unmanifested waste report** Specifies reporting requirements associated commercial storage or disposal activities receiving unmanifested PCB waste.	No action required. The TFC is not a commercial PCB storage or disposal facility.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.215	**Exception reporting** Reporting requirements associated with: 1. Not receiving a copy of a signed off manifest. 2. Disposer submittal of a one-year Exception report when waste is received more than 9 months after it was generated. 3. Generator or commercial storer submittal of a one-year Exception report when waste is sent to a disposer more than 9 months after the removal from service date or if they have not received the disposal certificate within 13 months from the removal from service date. 4. Content of the exception reports.	See §761.207
§761.218	**Certificate of disposal** Requires disposers to issue a certificate of disposal for manifested PCB shipments	No action required. Manifested loads will not be sent, and the TFC will not receive manifested PCB waste.
Subpart L		Reserved contains no requirements
Subpart M - Determining a PCB Concentration for Purposes of Abandonment or Disposal of Natural Gas Pipeline		
§761.240	**Scope and definition** Defines that the scope of this section pertains to natural gas pipelines	No action required. The TFC will not operate a natural gas pipeline. This information may be useful in determining decontamination requirements for equipment.
§761.243	**Standard wipe sample method and size** Specifies the method to use to obtain a wipe sample	No action required. See §761.240. Some of this may be useful if the TFC needs to sample or decontaminate PCB equipment.
§761.247	**Sample site selection for pipe segment removal** Specifies requirements for sample site selection	No action required. See §761.243.
§761.250	**Sample site selection for pipeline section abandonment** Specifies site selection and other requirements for sampling natural gas pipelines that are to be abandoned	See §761.243.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.257	**Determining the regulatory status of sampled pipe.** Contains information on how to apply sampling results obtained in §761.250 to the natural gas pipeline	See §761.243.
Subpart N- Cleanup Site Characterization Sampling for PCB Remediation Waste in Accordance with §761.61(a)(2)		
§761.260	**Applicability** Provides a method for collecting new data for characterizing a PCB remediation site for cleanup or for assessing the sufficiency of existing site characterization data as required by §761.61(a)(2).	No action required. Does not contain a requirement
§761.265	**Sampling bulk PCB remediation waste and porous surfaces**	This would apply to tank sludge and porous surfaces that contact tank waste
§761.265(a)	For sampling, porous surfaces that are not containerized: Use a three-meter grid interval and the procedures in §761.283 and §761.286 to sample bulk PCB remediation waste and porous surfaces that are not containerized.	Sampling is conducted as specified in DQOs that address specific sampling needs. A DQO is going to be prepared for PCB issue and sampling requirements will be addressed in that document. **Deviations from this requirement will probably be required.**
§761.265(b)	For sampling single containers: Use the following to sample bulk PCB remediation waste and porous surfaces in single containers. 1. Use a core sampler to collect a minimum of one core sample for the entire depth of waste at the center of the container. Collect a minimum of 50 cm^3 of waste for analysis 2. If more than one core is taken, thoroughly mix all samples into a single composite sample. Take a sub sample of at least 50 cm^3 from the mixed composite for analysis.	See §761.265(a).

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.265(c)	For sampling, multiple containers: Use the following to sample bulk PCB remediation waste and porous surfaces in multiple containers. 1. Segregate the containers by type. 2. For fewer than three containers, sample all containers. 3. For more than three containers of the same type, list the containers and assign each a unique sequential number. Use a random number generator to select a minimum of 10% of the containers from the list, or select three containers, whichever is greater. 4. Sample the containers according to §761.265(b).	See §761.265(a).
§761.267	**Sampling non-porous surfaces** Sample large, nearly flat, non-porous surfaces by dividing the surface into roughly square portions approximately 2 meters on each side. Follow the procedures in §761.302(a). It is not necessary to sample small or irregularly shaped surfaces.	These requirements would be applicable metallic and other non-porous surfaces that have contacted tank waste. See §761.265(a).
§761.269	**Sampling liquid PCB remediation waste** Use the following to sample liquid PCB remediation waste: 1. If the liquid is single phase, collect and analyze one sample. There are no required procedures for collecting the sample. 2. If the liquid is multi-phasic, separate the phases, and collect and analyze a sample from each liquid phase. There are no requirements for collecting a sample from each liquid phase. 3. If the liquid has a non-liquid phase that is >0.5% percent by total weight of the waste, separate the non-liquid phase from the liquid phase and sample it separately as a non-liquid in accordance with §761.265.	These requirements will be applicable to the liquid portion of tank waste. See §761.265(a).

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.272	**Chemical extraction and analysis of samples** Requires the use of Method 3500B/3540C or Method 3500B/3550B from EPA's SW-846, *Test Methods for Evaluating Solid Waste* (EPA 1997), or a method validated under Subpart Q of this par, for chemical extraction of PCBs. Method 8082 from SW-846 (EPA 1997) or a method validated under Subpart Q of this part to analyze the PCB extracts.	**Analytical methods will be specified in the PCB DQO that will be prepared.**
§761.274	**Reporting PCB concentrations in samples** Non-liquid PCBs must be reported on a dry weight basis. Surface sampling results must be reported as micrograms/100 cm^2. Liquid PCBs must be reported on a wet weight basis as micrograms of PCBs per gram of sample (ppm by weight).	**Will specify this in the DQO.**
Subpart O – Sampling to verify Completion of Self-Implementing Cleanup and On-Site Disposal of Bulk PCB Remediation Waste and Porous Surfaces in Accordance with §761.61(a)(6).		
§761.280	***Applicability and Scope*** This subpart applies to sampling to verify completion for self-implementing, on-site disposal of bulk PCB remediation waste and porous surfaces. The purpose is not to search for additional contamination but to verify that an area has been sufficiently decontaminated.	The PCB approval is expected to be a risk-based approval and these requirements are not expected to apply. Decontamination to meet RCRA and AEA requirements should be sufficient and verification sampling should not be required. **This needs to be confirmed with EPA**
§761.283	**Determination of the number of samples to collect and sample collection locations** The section addresses how to determine the number of samples to be collected and how to determine sampling locations for bulk PCB remediation waste and porous surfaces destined to remain at cleanup site after cleanup.	See §761.280.
§761.283(a)	A *minimum of three samples* must be taken at each cleanup site regardless of the amount of each waste type that is present.	See §761.280.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.283(b)	Sample locations are to be determined as follows: 1. Use a square-based grid system oriented to magnetic north/south line. And an east/west line perpendicular to the north/south line. (If the site is to be recleaned based on the results of cleanup verification in accordance with §761.61(a)(6), move the origin one meter north and one meter east.) 2. Mark a series of sampling points 1.5 meters apart oriented to the grid axes. The sampling points must proceed in every direction to the extent sufficient to result in a two-dimensional grid completely overlaying the sampling area. 3. Collect a sample t each point if the grid falls in the cleanup area. Analyze all samples either individually or according to a compositing scheme provided in the procedures at §761.289. So long as every sample is analyzed either individually or as part of a composite sample, there are no other restrictions on how many samples are analyzed.	See §761.280.
§761.283(c)	Cleanup sites that are irregularly shaped or small enough that a grid interval of 1.5 meters will not result in at least three samples for each type of PCB bulk product waste may be sampled by: 1. Using a smaller grid interval and the procedures in §761.283(b). 2. Following a coordinate-based random sampling scheme as specified in §761.283(c)(2).	See §761.280.
§761.283(d)	Area of inference Analytical results for an individual sample apply to the sample point and to an area of inference extending to four imaginary lines parallel to the grid axes and one half-grid interval distant from the sample point in four different directions. The area of inference forms a square with the sampling point in the middle of the square. The area of inference of a composite sample is the total of the areas of the individual samples collected in the composite.	See §761.280.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.286	Sample size and procedure for collecting a sample At each selected sampling location, collect at least 20 milliliters of waste, or a portion sufficient to weight for the chemical analysis to measure the PCB concentration at the levels in §761.61(a)(4). Use a core sampler with a diameter $\geq$ 3 cm and $\leq$ 3 cm to collect waste to a maximum depth of 7.5 cm.	See §761.280.
§761.289	**Compositing samples** Contains specific requirements that must be met if samples are composited.	See §761.280.
§761.292	**Chemical extraction and analysis of individual and composite samples** Use either Method 3500B/3500C or method 3500B/3550B from SW-846 (EPA 1997). Alternatively, a method that has been validated according to Subpart Q may be used. Use Method 8082 from SW-846 (EPA 1997) or a method validated under Subpart Q, to analyze these extracts for PCBs.	See §761.280.
§761.295	**Reporting and recordkeeping of the PCB concentrations in samples.** 1. Report all sample concentrations of bulk remediation waste and porous surfaces on a dry weight basis and as micrograms of PCBs per gram of sample (ppm by weight). 2. Records of all sample results must be kept for three years.	Will comply.
§761.298	**Decisions based on PCB concentration measurements resulted from sampling** 1. Grid sample results that are analyzed individually apply to the area of inference as described in §761.283(d). 2. Grid sample results analyzed as part of a composite sample apply to the area of inference as described in §761.283(d). 3. Coordinate pair samples results taken in accordance with §761.283)(c)(2) and §761.289(b)(2)(ii), apply to the entire cleanup site.	See §761.280.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
Subpart P – Sampling Non-Porous Surfaces for Measurement-Based Use, Reuse, and On-Site or Off-Site Disposal under §761.61(a)(6) and Decontamination under §761.79(b)(3)		
§761.300	**Applicability** This subpart applies to sample site selection and analysis of large, nearly flat non-porous surfaces, and for small irregularly shaped non-porous surfaces. These methods must be followed to verify cleanup under§761.61(a)(6) or §761.79(b)(3).	Decontamination to meet RCRA and AEA requirements should be sufficient to address TSCA issues and verification should not be required. **This needs to be confirmed with EPA..**
§761.302	**Proportion of the total surface area to sample**	See §761.300.
§761.302(a)	For large nearly flat areas: 1. Divide the area into 1-meter square areas and mark the areas so that they are clearly identified. 2. For large areas contaminated from a single source that has a uniform concentration: sample the greater of 10% of the squares or 3 squares. If there are more than three squares, use a random number generator to select the squares. 3. For other areas, sample all the squares.	See §761.300.
§761.302(b)	For small or irregularly shaped surfaces: 1. Small surfaces such as hand tools, valves, and machine tools, sample the entire surface 2. An alternative is to sample in accordance with §761.308 with the exception that the maximum area to be sampled is < 1 meter square.	See §761.300.
§761.302(c)	Surfaces to be sampled should be prepared by draining all free-flowing liquids and brushing off dust or loose grit.	See §761.300.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.304	**Determining sample location** 1. For 1 square meter non-porous surface areas having the same size and shape, it is permissible to sample the same 10cm by 10 cm square area in each identical 1 square meter area. This location or position is determined in accordance with §761.306 or §761.308. 2. If some 1 square meter surfaces have different sizes and shapes, separately select the 10 cm by 10 cm area in accordance with §761.308. 3. If non-porous surfaces have been cleaned and the cleaned surfaces do not meet the applicable standards or levels, surfaces may be recleaned and resampled. When verifying that the recleaning is sufficient, a sample location other than the original verification sample location must be selected..	See §761.300.
§761.306	**Sampling 1 meter square surfaces by random selection of halves** Specifies the procedure to be used to determine the exact sampling location by progressively dividing the area into halves that are closest in shape to a circle until the final sample location size is ≥ 100 cm^2 and < 200 cm^2. An example is given in §761.306(e). After the sample location has been determined a standard wipe test must be taken.	See §761.300.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.308	**Sample selection by random number generation on any two-dimensional square grid.** 1. Divide the area into rectangular or square areas having a maximum area of 1 meter and a minimum dimension of 10 cm. 2. Measure the length and width, in cm of each area created and round of the number of cm of the length and width to the nearest cm. 3. Select a random number for the length and one for the width . Eligible numbers can be from zero up to the total width minus 10 cm. 4. To select the sample point • Orient the 1-meter square surface area so that when you are facing the area, the length is left to right and width is top to bottom. The origin or reference point is the lower left corner. • Mark the random number selected for the length distance, in cm from the origin. • From the marked length distance on the bottom of the area, move perpendicularly up from the bottom into the area selected for the width. • Use this point as the lower left-hand corner of the 10 cm^2 by 10-cm^2-sample area. .	See §761.300.
§761.310	**Collecting the sample** Use the standard wipe test as defined in §761.123 to sample a 10-cm2 by 10-cm^2 area to represent surface area PCB concentrations of each square meter. For small areas, sample the entire surface.	See §761.300.
§761.312	**Compositing of samples** For surfaces originally contaminated by a single source of PCBs with a uniform concentration, composite surface wipe tests can be used. The composite measurement represents an arithmetic mean of the composited samples. This section contains additional specific procedures.	See §761.300.
§761.314	**Chemical analysis of standard wipe test samples** Perform the chemical analysis of the standard wipe tests in accordance with §761.272. Report the results in micrograms per 100 cm^2.	See §761.300.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.316	**Interpreting PCB concentration measurements resulting from this sampling scheme.** The sample result applies to the entire 1-meter square area and not just to the sampled spot. In the case of composite samples, the result applies to the entire area represented by the composite. For small surface areas (< 100 cm^2), convert the results to 100 cm^2 equivalents.	See §761.300.
Subpart Q – Self-implementing Alternative Extraction and Chemical Analysis procedures for Non-liquid PCB remediation waste samples.		
§761.320	**Applicability** This subpart describes the self-implementing comparison testing requirements for chemical extraction and chemical analysis methods used as an alternative to the methods required in §761.272 or §761.292. Any comparison testing must comply with the requirements of §761.80(i), including notification. Alternate methods can only be used after successful completion of and documentation of the results of the testing.	No action should be required. Analytical methods will be specified in the PCB-specific DQO. Analytical methods used at Hanford have been reviewed by EPA and previously found acceptable. **EPA concurrence that these methods are still acceptable should be obtained.**
§761.323	**Sample preparation**	See §761.320.
§761.323(a)	The comparison study requires a minimum of 10 samples weighing at least 300 grams each. Samples must meet the following three requirements: 1. The samples must be taken from the remediation site, or must be the same kind of material as that waste. 2. The PCB remediation samples must contain any interfering compounds that are expected to be found in the waste to be tested 3. The interfering compounds must be at the highest levels that are expected to be in the waste.	See §761.320.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.323(b)	Prior to initiating the comparison study, confirm the following PCB concentrations using the methods specified in §761.292. All samples must have PCB concentrations between 0.1 and 150 ppm. 1. A minimum of three samples must have PCB concentrations above the specified cleanup level (see §761.61(a)(4). 2. At least one sample must have a PCB concentration ≥ 90% and ≤ 100 of the cleanup level. 3. At least one comparison study sample must have a PCB concentration ≥ 100% and ≤ 110% of the cleanup level.	See §761.320.
§761.323(c)	If the comparison study samples do not have the concentrations or concentration ranges required by §761.323(b),dilution may be used to adjust the PCB concentration.	See §761.320.
§761.326	**Conducting the comparison study** Extract or analyze the comparison study samples using the alternative method. For the alternative to be valid, the following conditions must be met: 1. All samples having a PCB concentration greater or equal to the level of concern, as measured by the methods required in §761.292, are found to be greater than or equal to the level of concern as measured by the alternative method (no false negatives). 2. Only one sample which contains PCBs at a level less than the level of concern, as measured by the methods required in §761.292, is found to have a PCB concentration greater than the level of concern as measured by the alternate method (false positive); and all other samples which contain PCBs at levels less than the level of concern, as measured by §761..292, are found by the alternative method to have PCBs less than the level of concern (there are no additional false positives).	See §761.320.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
Subpart R – Sampling Non-Liquid, Non-Metal PCB Bulk Product Waste for Purposes of Characterization for PCB Disposal in Accordance With §761.62, and Sampling PCB Remediation Waste Destined for Off-site Disposal, in Accordance with §761.61		
§761.340	**Applicability** Use these procedures to sample the following types of waste when it is necessary to analyze the waste to determine PCB concentration or leaching characteristics for storage or disposal: 1. Existing accumulations of non-liquid, non-metal PCB bulk product waste. 2. Non-liquid, non-metal PCB bulk product waste	The TFC does handle other non-liquid and non-metallic waste such as capacitors in light ballasts but these are not considered PCB Bulk Product Waste since they fall under §761.60(b). The only RPP waste that may be subject to these requirements would be the vitrified waste and waste from spill cleanups. Both of these types of waste are likely to involve highly radioactive compounds and materials already regulated by RCRA and the AEA. This material will be sampled as required by the other applicable regulations and this analysis should be sufficient to address TSCA issues. Small spills from non-radioactive material such as light ballast may occur but the spill would be too small to be addressed under this subpart. **EPA concurrence on this approach should be obtained.**
§761.345	**Form of waste to be sampled** PCB bulk product waste and PCB remediation waste destined for off-site disposal must be in the form of either flattened or roughly conical piles. This subpart also contains a procedure for contemporaneous sampling of waste as it is being generated.	Material generated by the TFC will not be suitable for placement in piles. See §761.340.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.346	**Three levels of sampling** There are three levels of random sampling required for sample selection. 1. First select a single 19-liter (5-gallon) portion from a composite accumulated either contemporaneously with the generation of the waste or by sampling an existing pile of waste. Collection procedures for the first level of sampling from existing piles are in §761.3478. Compositing requirements and requirements for subsamples are in §761.350. Send the 19-liter sample to the laboratory for the second and third levels of sampling. 2. Second, at the laboratory, select one quarter of the 19-liter sample. Procedures that the laboratory must use for the second level selection are in §761.355. 3. Third, select a 100-gram subsample from the second level subsample.. Procedures the laboratory must use are in §761.355.	See §761.340.
§761.347	**First level sampling – waste from existing piles** Contains a very detailed description of how the samples are to be selected and composited. The process involves repeatedly dividing the area into smaller sections until the appropriate sized sample is left. See the actual regulation for the details.	See §761.340.
§761.348	**Contemporaneous sampling** Contemporaneous sampling is possible when there is active generation of waste and it is possible to sample the waste stream as it is generated. Collect eight 19-liter samples as follows: Collect each sample by filling a 19-liter container at a location where the PCB bulk product waste is released from the waste generator onto a pile or into a receptacle	See §761.340.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.350	**Subsampling from composite samples** Composite the samples (eight from a flattened pile or from waste that is continuously generated, and eight or more from a conical pile) and select a 19-liter subsample for shipment to the chemical extraction and analysis for further subsampling. The composite can be made by: 1. Placing all the contents of the samples into a 209-liter drum. Completely close the container, and roll it 10 or more complete revolutions to mix the contents. Or 2. Add the 19-liter samples one at a time to a 209-liter container. Between the addition of each 19-liter sample, stir the sample using a broom handle or similar long narrow sturdy rod that reaches the bottom of the container. Stir the mixture for a minimum of 10 complete revolutions of the stirring instrument around the container at a distance of about half way between the outside and center of the container. 3. Once the composite is mixed, pour the mixture of waste onto a plastic sheet and either divide it into 19-liter sized piles or make one large pile. 4. Use a random number generator to select the 19-liter samples or divide the large pile into quarters and use a random number generator to select the quarter that is further divided into halves. A random number generator is then used to select the individual sample. 5. The selected 19-liter sample is then placed in a container and sent to the laboratory for the next sample selection step in accordance with §761.353.	See §761.340.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.353	**Second level of sample selection** The second level of sampling reduces the size of the sample that was collected in the first level. The purpose is to limit the time required to manually cut up larger particles of waste to pass through a 9.5-mm screen. 1. Pour the 19-liter sample onto a plastic sheet or pan and divide the sample into quarters. Use a random number generator to select one of the quarters. 2. Collect the material in the quarter and shake them in a 9.5-mm screen. Separate the material that passes through the screen from the waste that will not manually cut up all pieces that would not pass through the screen into sizes that will pass through the screen by shaking. 3. Dry al the material by baking it in an oven from 10 to 15 hours at 100 ° C and cool to room temperature. 4. Place all the material resulting from the drying and place them in a 19-liter pail or similar sized, cylinder-shaped container. Mix the contents by • Completely closing the cylinder and rolling it a minimum of 10 complete revolutions. Or • Using a sturdy stirring rod, such a broom handle or other device that reaches the bottom of the container, to stir the waste for a minimum of ten complete revolutions around the container at a distance approximately halfway between the center and the outside.	See §761.340.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.355	**Third level of sample selection** Perform the final sample selection in the following manner: 1. Divide the sample from §761.355 into 100-gram sample sizes. 2. Use a random number generators to select one 100-gram sample for a procedure to simulate leachate generation. 3. Dry the 100-gram sample in a drying oven for 10 to 15 hours at 100 °C and cool to room temperature. The sample was dried previously but in a larger sample size. The cooled sample must weigh at least 50 grams. 4. If the dried and cooled sample weigh < 50 grams, select an additional 100 gram portion one at a time by repeating the directions above until at least 50 grams of dried material is in the sample to be used to simulate leachate generation.	See §761.340.
§761.356	**Conducting a leach test** No method is specified	If a leach test is needed, the leach test per RCRA will be used. See §761.340
§761.357	**Reporting the results of the procedure used to simulate leachate generation** Report the results of the leachate procedure as micrograms PCBs per liter of extract from a 100-gram sample of dry bulk product waste. Divide 100 grams by the grams in the sample and multiply this quotient by the number of micrograms PCBs per liter of extract to obtain the equivalent measurement from a 100-gram sample.	See above.
§761.358	**Determining the PCB concentration of samples of waste** Use either Method 3500B/3540C or Method 3500B/3550B from EPA's SW-846, *Test Methods for Evaluating Solid Waste* (EPA 1997), or a method validated under Subpart Q of this part, for chemical extraction of PCBs from individual or composite samples of PCB bulk product waste. Use Method 8082 from SW-846 (EPA 1997) or a method validated under Subpart Q to analyze these extracts for PCBs.	Hanford analytical methods based upon these methods will be used. Modifications to the referenced methods have been made to reflect the radioactive element of Hanford's waste. See §761.340

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.359	**Reporting the PCB concentrations in samples** Report all sample concentrations as ppm by weight on a dry basis.	Will comply. See §761.340.
Subpart S – Double Wash/Rinse Method for Decontaminating Non-Porous Surfaces		
§761.360	***Background*** The double wash/rinse procedure is used to quickly and effectively remove PCBs on surfaces. It is important to select and use the proper cleanup equipment so as to not redistribute the PCBs and to comply with disposal requirements.	A determination needs to be conducted to determine if it is feasible to use this decontamination method. Decontamination as required by RCRA and the AEA should be sufficient. If it is feasible to use this method, some deviations to this procedure may be necessary in order to address ALARA. **EPA concurrence on any deviations should be obtained if this method of decontamination is used.**
§761.363	**Applicability** The double wash/rinse procedure includes two washing steps and two rinsing steps. The two washing and rinsing steps are slightly different depending on a contaminated surface was relatively clean before the spill or if it was coated or covered with dust, grime, grease or another absorbent material (see §761.375).	See §761.360.
§761.366	**Cleanup equipment** Use scrubbers and pads that are not dissolved by the solvents or cleaners used, and do not shred, crumble, or leave visible fragments on the surface. Scrubbers and absorbent pads used to wash contaminated surfaces may not be reused. Scrubbers and pads for rinsing must not contain $\geq$ 2 ppm PCBs. Scrubbers and absorbent pads used in the second rinse of contaminated surfaces may be reused to wash contaminated surfaces. All solvents and cleaners must be captured for reuse, decontamination, or disposal. Clean organic solvents contain < 2 ppm PCBs. Clean water contains < ppb PCBs.	See §761.360.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.369	**Pre-cleaning the surface** If visible PCB-containing liquid is present on the surface to be cleaned, thoroughly wipe or mop the entire surface with absorbent paper or cloth until no liquid is visible on the surface.	See §761.360.
§761.372	**Specific requirements for relatively clean surfaces** For surfaces that do not appear dusty or grimy before the spill, use the following double wash/rinse procedure: 1. First wash: Cover the entire surface with an organic solvent in which PCBs are soluble to at least 5 percent by weight. Contain and collect any runoff solvent for disposal. Scrub rough surfaces with a scrub brush or disposable scrubbing pad and solvent such that each 900 cm^2 (1 ft^2) of the surface area is always wet for 1 minute. Wipe smooth surfaces with a solvent-soaked, disposable absorbent pad such that each 900 cm^2 is wiped for 1 minute. Any surface < 1 square foot must also be wiped for 1 minute. Wipe, mop and/or sorb the solvent onto absorbent material until no visible traces of the solvent remain. 2. First rinse: Wet the surface with clean rinse solvent such that the entire surfaces are very wet for 1 minute. Drain and contain the solvent from the surface. Wipe the residual solvent off the drained surface using a clean, disposable pad until no liquid is visible on the surface. 3. Second wash: Repeat #1. The rinse from step # 2 may be used. 4. Second rinse: Repeat the procedures in step #2.	See §761.360.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.375	**Specific requirements for surfaces coated or covered with rust, dirt, grime, grease, or another absorbent material** For surfaces coated or covered with dirt, dust, grime, grease or another absorbent material: 1. First wash: Cover the entire surface with concentrated or industrial strength detergent or non-ionic surfactant solution. Contain and collect any runoff solution for disposal. Scrub rough surfaces with a scrub brush or disposable scrubbing pad and solvent such that each 900 cm^2 (1 ft^2) of the surface area is always wet for 1 minute. Wipe smooth surfaces with a solvent-soaked, disposable absorbent pad such that each 900 cm^2 is wiped for 1 minute. Any surface < 1 square foot must also be wiped for 1 minute. Wipe, mop and/or sorb the solvent onto absorbent material until no visible traces of the solvent remain. 2. First rinse: Rinse off the wash solution with 1 gallon of clean water per square foot and capture the rinse water. Mop up the wet surface with a clean, disposable, absorbent pad until the surface appears dry. 3. Second wash: Follow the procedure in §761.372(a). 4. Second rinse: Follow the procedure in §761.372(b).	See §761.360.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.378	**Decontamination, reuse, and disposal of solvents, cleaners, and equipment** 1. Decontamination: Decontaminate solvents and non-porous surfaces on equipment in accordance with the standards and procedures in §761.79(b) and (c). 2. Reuse: Solvent may be reused so long as its PCB concentration is < 50 ppm. Decontaminated equipment may be reused in accordance with §761.30(u). Store solvents and equipment for reuse in accordance with §761.35. 3. Disposal: Dispose of all solvents, cleaners, and absorbent material in accordance with §761.79(g). Dispose of equipment in accordance with §761.61(a)(5)(v)(A), or decontaminate in accordance with §761.79(b) or (c). Store for disposal equipment, solvents, cleaners, and absorbent materials in accordance with §761.65.	See §761.360.
Subpart T - Comparison Study for Validating a New Performance-Based Decontamination Solvent under §761.79(d)(4)		
§761.380	**Background** This subpart provides self-implementing criteria for validating the conditions for use in performance based decontamination of solvents other than those listed in §761.79(c)(3) and (c)(4). Any person may use this subpart for validating either a chemical formulation or a product with a trade name whether or not the constituents of the product are proprietary.(iii) and (c)(3)(iv) and (c)(4)(iii), (c)(4),(iv), and (c)(4)(vii) may be revised to contain parameters validated in accordance with this subpart.	Development of new performance based standards using solvents is not anticipated at this time. If such an alternative decontamination method becomes desirable, EPA will be informed

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.383	**Applicability** Use the self-implementing decontamination procedure only on smooth, non-porous surfaces that were once in contact with liquid PCBs. Decontamination procedures under this subpart must exactly parallel §761.79(c)(3) and §761.79(c)(4), except that the procedures described in §761.79(c)(3)(iii) and (c)(3)(iv) and (c)(4)(iii), (c)(4),(iv), and (c)(4)(vii) may be revised to contain parameters validated in accordance with this subpart.	See §761.380.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.386	**Required experimental conditions for the validation study and subsequent use during decontamination** The following experimental conditions apply for any solvent. 1. Temperature and pressure: Conduct the validation study and perform decontamination at room temperature (from ≥15 °C to ≤ 30 °C) and at atmospheric pressure. 2. Agitation: Limit the movement in the solvent to the short-term movement from placing the contaminated surface into the soak solvent and from removing the surface from the soak solvent. 3. Time to soak: Soak the surface for a minimum of 1 hour. 4. Surface conditions for the validation study: Prior to beginning the validation study, ensure that there are no free flowing liquids on surfaces and that surfaces are dry (no visible liquid). Also ensure surfaces are virtually free from non-liquid residues, corrosion, and other defects which would prevent the solvent from freely circulating over the surface. 5. Confirmatory sampling for the validation study: Select surface sample locations using representative sampling or a census. Sample a minimum area of 100 cm^2 on each individual surface in the validation study. Measure the surface concentrations using the standard wipe test, as defined in §761.123, from which a standard wipe sample is generated for chemical analysis. Guidance for wipe sampling appears in a document entitled "Wipe Sampling and Double- Wash/Rinse Cleanup as Recommended by the Environmental Protection Agency PCB Spill Cleanup Policy" that is available from EPA. 6. Concentration of PCBs: The method validated may be used only to decontaminate surfaces containing PCBs at concentrations on which the validation study was performed and lower concentrations.	See §761.380.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.389	**Testing parameter requirements** There are no restrictions on the variable testing parameters that may be used in the validation study. The conditions demonstrated in the validation study will become the required conditions for decontamination and will replace the comparable conditions in §761.79(b)(3) through (b)(6).. If more than one parameter is changed a new validation study is required. The soak time must remain at least a 1-hour minimum.	See §761.380.
§761.392	**Preparing validation study samples** 1. To validate a procedure to decontaminate a surface contaminated from a spill from a liquid of a known concentration, contaminate (spike) the surface to be used as follows: • Use a spiking solution made of PCBs mixed with a solvent to contaminate clean surfaces. Clean surfaces are surfaces having PCB concentrations < 1 microgram/100 cm^2 before intentionally contaminating the surface. • Prior to contaminating the surface for the validation study, mark the surface sampling area to assure that it is completely covered with spiking solution. • Deliver the spiking solution onto the surface, covering all the sampling area. Contain any liquids that spill or flow off the surface. Allow the spiking solution to drip drain off into a container and then evaporate the spiking solution off the contaminated surface area prior to beginning the validation study. Contaminate a minimum of eight surfaces for a complete validation study. • As a quality control step, test at least one contaminated surface to determine the PCB concentration to verify that there are measurable surface levels of PCBs resulting from the contamination before soaking the surface in the decontamination solvent. The surface levels of PCBs on the contaminated surfaces must be ≥ 20 micrograms/100 cm^2	See §761.380.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
	2. To validate a procedure to decontaminate a specified surface concentration of PCBs as measured by a standard wipe sample, contaminate a minimum of 10 surfaces. Contaminate all surfaces identically following the procedures above and measure the PCB concentrations of at least three of the surfaces using a standard wipe test. The surface levels of PCBs on the contaminated surfaces must be $\geq$ 20 micrograms/100 cm^2.	
§761.395	**A validation study** 1. Decontaminate the following prepared sample surfaces using the selected testing parameters and experimental conditions. Take a standard wipe sample of the decontaminated surface. • At least one uncontaminated surface. The surface levels of PCBs on the uncontaminated surface must be < 1 microgram/100 cm^2. • At least seven contaminated surfaces 2. Use SW-846 Test Methods for Evaluating Concentrations (EPA 1997). Specifically use Method 3500B/3540C or Method 3500B/3550B for the extraction, 8082 for the chemical analysis, or methods validated per Subpart Q. Report all surface sample concentrations on the basis of micrograms of PCBs per 100 cm^2 of surface sampled. 3. Following completion of the validation study, measurements from the contaminated surfaces must have an arithmetic mean of < 10 micrograms/ 100 cm2. If the mean is $\geq$10 micrograms/100 cm^2, the validation study failed and the method cannot be used for decontamination.	See §761.380.

Table C-1. TSCA Requirements

Citation	Section Title and short description of Requirement	Compliance Approach and Deviations if Required
§761.398	**Reporting and recordkeeping** Validation study results must be submitted to the EPA at the address in the regulations. A new solvent can be used after the results of the validation study are sent to EPA. Record all testing parameters and experimental conditions from the successful validation study into a standard operating procedure (SOP) for reference whenever the procedure is used. Include in the SOP, the identity of the solvent, soak time, and ratio of the soak solvent to contaminated surface area. Also include in the SOP, the maximum PCB concentration in the spilled material and the identity of the spilled material, and/or the measured maximum surface concentration... Record and keep the results of the validation study as an appendix to the SOP.	See §761.380.

Notes:

TFC Tank Farm Contractor
SOP standard operating procedure

This page intentionally left blank.