

APPENDIX A

TECHNICAL BASELINE ASSUMPTIONS

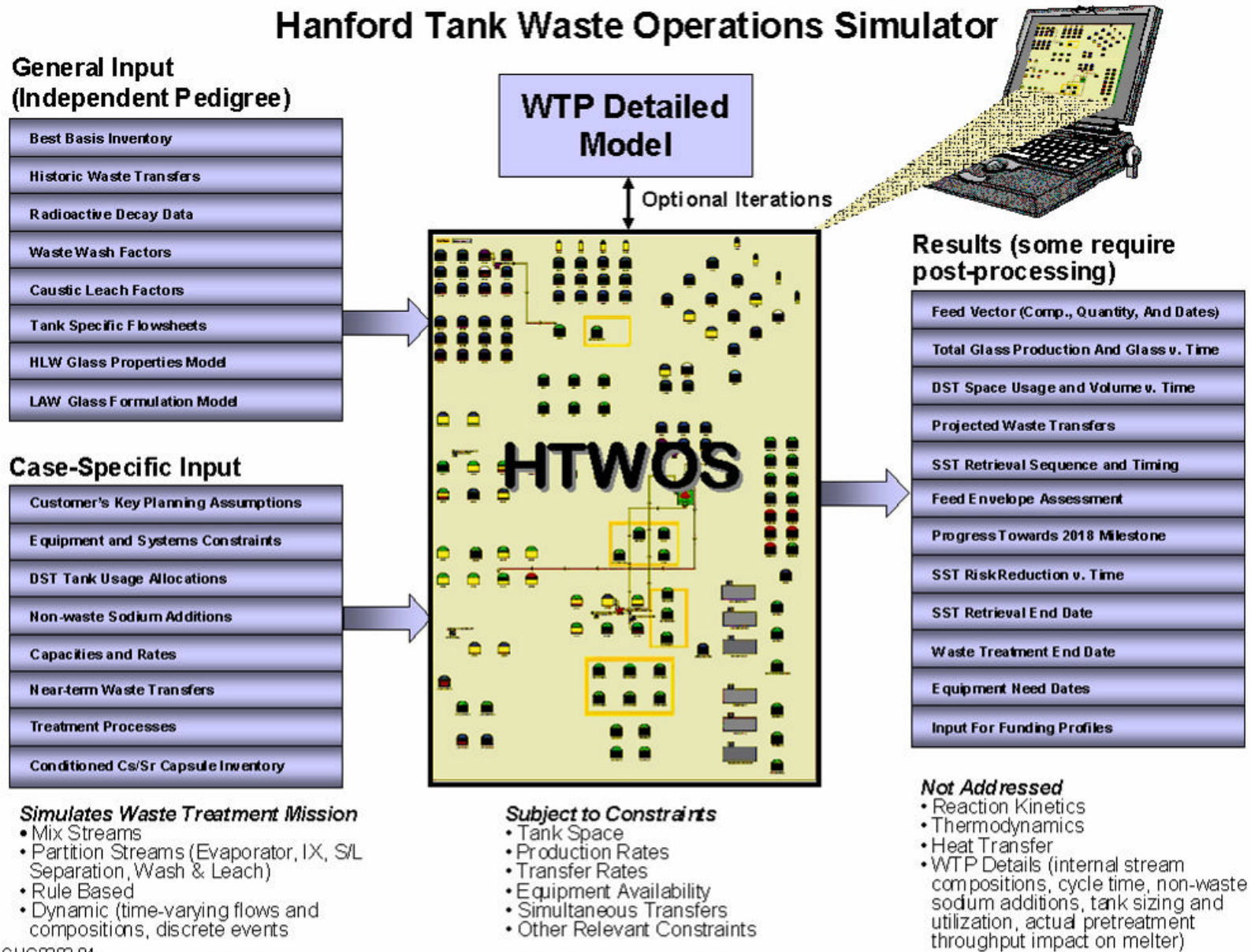
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Figure A-1 provides a graphical representation of how the technical baseline data are developed using the Hanford Tank Waste Operations Simulator (HTWOS).

The development uses various data sets, case and design assumptions, and projected operating characteristics of the major waste storage and treatment systems. HTWOS accesses site inventory databases, process performance models, tank farm configuration data, and the specific desired case conditions to produce a life-cycle vision of the retrievals, transfers, feed staging, waste treatment and immobilization, and ILAW disposal and IHLW storage requirements. The overall performance data projected by the model are then used along with more detailed cost estimating and scheduling tools to build the life-cycle operational and construction plans that form the technical basis of the cost and schedule baseline.

Table A-1 is a high-level summary of the technical data and assumptions set that was used by HTWOS to develop and formulate the preliminary cost and schedule data presented in this plan. At this time, our modeling shows that we physically can meet our contract baseline requirements with our current technical capabilities (retrieve and close 26 tanks). Substantial technical innovation will be required to approach the challenge to retrieve and close 40 tanks by 2006. Significant cost challenges also remain to meet the contract baseline and the aggressive IMAP planning.

Figure A-1. Hanford Tank Waste Operations Simulator Model.



A-2

March 2003

CHG0303-04

RPP-13678 REV 0

Item		Data (BCR Case)	Discussion/Comments	
	HTWOS model run (Ref)?	Confirmatory Run (BCR Case 2-27-2003)		
	BNI WTP detailed model?	No	May need a confirmatory run with the BNI WTP model to confirm viability of new feed vector as part of a future system plan revision.	
	Funding Constrained?	Yes	Available funding for FY 2003 – FY 2006 is 415, 360, 360 & 360 million dollars, respectively. However, cost profiles are expected to exceed these limits at this time.	
System Configuration	WTP	Initial WTP LAW Melters ¹	2	
		Initial WTP HLW Melters ¹	2	
		Expanded WTP LAW Melters ¹	2	This is the total melters in the WTP after expansion, if any, and includes the initial melters.
		Expanded WTP HLW Melters ¹	2	This is the total melters in the WTP after expansion, if any, and includes the initial melters.
		Technetium Ion Exchange in WTP	No	Recently, ORP decided not to remove Tc from the LAW fraction of the waste being treated by the WTP. This is acceptable from a performance assessment perspective for LAW glass disposed at the Integrated Disposal Facility site near PUREX. However, changes in waste form (such as from proposed supplemental LAW and LLW treatment process) or changes in disposal location (such as using the ERDF trench) will require additional funding to update the ILAW disposal performance assessment and disposal system design. Potential contract change.
		Lag storage at WTP for IHLW canisters – capacity in number of canisters	Yes – 45	Potential contract change needed for CH2M Hill to support hot commissioning rates – additional transport vehicles and infrastructure may be required.
		Lag storage at WTP for ILAW packages – capacity in number of packages	No	Lag storage of ILAW product at the WTP has been eliminated. Potential contract change needed for CH2M Hill to support hot commissioning rates and loss of lag storage – more robust transport vehicles and infrastructure may be required.
		HLW Canister style (thin or thick walled)	Thick	Baseline is Thick-walled. If CH2M Hill's calculations show that the thin-wall canister is viable and cost effective, then potential facility design changes may be required to facilitate receipt, handling, and storing of the canisters.
	WTP Supplemental LAW Treatment	Steam Reformer	Steam reformer is a placeholder for the WTP supplemental LAW treatment technology. A performance assessment on the assumed product will be required.	
	Non-WTP	Supplemental LAW Treatment	Steam Reformer No Pretreatment	Steam reformer is a placeholder for the Non-WTP supplemental LAW treatment technology. A demonstration of supplemental treatment on TY-102 (69,000 gallons) is included in the technical baseline model described here. No other non-WTP supplemental treatment is included.
		Supplemental LLW Sludge Treatment	"Dry" Retrieval and Packaging	
Supplemental TRU Sludge Treatment		SST – "Dry" Retrieval & Packaging DST – Dewater & Packaging	The TRU sludge from the DSTs is water-washed and consolidated before treatment.	

Item		Data (BCR Case)	Discussion/Comments	
System Configuration	Waste Receiver Facilities	<ul style="list-style-type: none"> WRFs are not required for retrieving SSTs for supplemental treatment. Need date for WRFs will be established by timing of 'bulk' SST retrievals. 	<p>WRFs are assumed to be capital projects. 'Bulk' SST retrieval sequence may need to be adjusted to insure that WRFs are built no earlier than needed.</p> <p>Tanks in TY-Farm (other than TY-102) require retrieval into the DST system using a method that does not require WRFs due to their early retrieval dates.</p>	
	Geologic Repository Available for HLW on...	2020 (2012 if only CSB)	The desired ship date to the geologic repository will be determined so that only the CSB and one new module with shipping facility will be required for interim storage.	
	242-A Evaporator	Available thru 2018	How are assumptions affected by transition? Is there a benefit to continued evaporator operation beyond 2018?	
	Effluent Treatment Facility & LERF	Available thru 20xx		
	Disposition of Cs and Sr capsules	RL Initiative for Disposal	The Performance Management Plan established the basis for disposal by RL. RL and ORP need to finalize arrangements.	
System Ramp-up & Throughput Capacity²	WTP	WTP Pretreatment Capacity - LAW (basis)	3,290 MT Na / yr (Output basis)	At 14-wt% Na ₂ O loading, a pretreatment capacity of 2,930 would support 77 MTG/d LAW; 3,290 supports 87 MTG/d. Smaller values would delay the treatment end date or require supplemental LAW/LLW treatment.
		WTP Pretreatment Capacity – HLW (To support # canisters / year or MTG/day)	Will support 6 MTG/day	
		WTP HLW Vitrification Capacity MT HLW Glass per day	11/2010 – 1/2011: 3 2/2011- end: 6	These rates, together with the pretreatment capacity, drive: <ul style="list-style-type: none"> The acceleration of projects for WFD, The treatment end date, and The amount of waste that must be handled by other means (WTP and Non-WTP supplemental treatment).
		WTP LAW Vitrification Capacity MT LAW Glass per day	11/2010 - 1/2011: <u>15</u> 2/2011 – end: <u>30</u>	The higher LAW and HLW processing rates may require modification to the feed delivery sequence.
		Supplemental LAW Treatment of WTP pretreated waste	8/2013 – end: Sized as Needed to finish in 2028	<ul style="list-style-type: none"> <u>Planning for alternative LAW treatment is included.</u> Steam reformer is a placeholder for both the WTP and Non-WTP supplemental LAW treatment technology (see below).
	Non-WTP	Supplemental LAW Treatment	Size to process at least 250 Kgal waste prior to end of FY 2006.	The baseline case will plan on processing 250 Kgal of waste prior to end of FY 2006. Three demonstration technologies will be evaluated for potential full scale deployment by ORP after 2006. Steam reformer is a placeholder technology.
		Supplemental LLW Sludge Treatment		
		Supplemental TRU Sludge Treatment	2004 – 2006: 9 SSTs, >=750 Kgal 2007 – 2009: 3 DSTs, 630 Kgal	
	LERF	Not limiting	Need to model the integrated demand that this mission scenario places upon the LERF and ETF.	
	IHLW Canister Storage Capacity (# of canisters) (CSB, Additional Modules)	880 (CSB) 2,640 (Additional modules)	Design to include a shipping facility for the CSB and additional modules.	

Item		Data (BCR Case)	Discussion/Comments													
Operating Modes	Incidental Blending in Tank Farms?	Yes														
	Allow time for Evaporator Feed Staging and Sampling	Yes (4 months)	This modeling assumption accounts for the RCRA sampling and feed staging logistics for the evaporator schedule. Will not exceed average evaporator boil-off capability of 500 Kgal per month.													
	SST Retrieval Priorities	7 TPA MS SSTs Up to a total of 26, space permitting.	The selection and timing of SSTs must balance overall budget and risk of continued storage while closing tanks and providing WTP with feed.													
	WTP Non-Emergency Process Returns (Pretreated LAW) from 2007 – 2010.	<ul style="list-style-type: none"> • Have physical capability for transfer • Reserve no DST space 														
Product Basis	WTP	Starting Tank Inventory MT Na – MT SO4 – MT waste oxides	48,000 – 3,600 – 33,000													
		HLW Water Wash Factors	Hendrickson	Existing water wash factors will be used until more refined values are developed and approved for use.												
		HLW Caustic Leach Factors	Hendrickson/Colton w/BNI	Updated caustic leach factors will be used when they are developed and approved. Solid/liquid partitioning assumptions and Glass Properties Model determine the amount of HLW glass.												
		HLW Oxidative Leach Factors	None	Will implement oxidative leaching when the updated caustic leach factors are used. Oxidative leaching may be a viable alternative for mitigating uncertainties and biases in water wash and caustic leach factors. Oxidative leach factors still need to be developed and approved.												
		HLW Glass Loading	Relaxed Glass Properties Model	Has Glass Properties Model been relaxed too much, reducing the life of the HLW melter? <table border="1"> <thead> <tr> <th>Item</th> <th>Limit</th> <th>Relaxed Limit</th> </tr> </thead> <tbody> <tr> <td>Cr₂O₃</td> <td>0.5 wt%</td> <td>1.0 wt%</td> </tr> <tr> <td>Spin. Liq. Temp</td> <td>1050°C</td> <td>1100°C</td> </tr> <tr> <td>Viscosity</td> <td>5.5 Pa-s</td> <td>10 Pa-s</td> </tr> </tbody> </table>	Item	Limit	Relaxed Limit	Cr ₂ O ₃	0.5 wt%	1.0 wt%	Spin. Liq. Temp	1050°C	1100°C	Viscosity	5.5 Pa-s	10 Pa-s
		Item	Limit	Relaxed Limit												
		Cr ₂ O ₃	0.5 wt%	1.0 wt%												
		Spin. Liq. Temp	1050°C	1100°C												
		Viscosity	5.5 Pa-s	10 Pa-s												
		HLW Canister Fill (MT Glass)	3.06													
		LAW Glass Loading	Gimpel (~14% Na ₂ O)													
LAW Package Fill (MT Glass)	6.0															
Supplemental LAW Treatment Product Loading	19.8% (Assuming Steam Reformer)	This is the weight percent of Na ₂ O in the product.														
Supplemental LAW Package Fill	2.3 MT	This is based upon a standard WTP LAW glass package, filled with 1.0 MT / m ² bulk product density.														
Supplemental LAW Treatment Product Loading	19.8% (Assuming Steam Reformer)	This is the weight percent of Na ₂ O in the product.														

Item		Data (BCR Case)	Discussion/Comments	
Product Basis	Non-WTP	Supplemental LAW Package Fill	2.3 MT	This is based upon a standard WTP LAW glass package, filled with 1.0 MT / m ³ bulk product density.
		Supplemental LLW Treatment Product Loading	Dry Sludge in Drums	Volume of dry sludge is assumed to equal the existing in-tank volume.
		Supplemental LLW Product Fill	Fill 50-Gallon Drum to 40-Gallons	
		Supplemental TRU Treatment Product Loading	SSTs: Dry Sludge in Drums DSTs: Washed sludge in Drums	For TRU from SSTs, volume of dry sludge is assumed to equal the existing in-tank volume. For TRU from DSTs, packaged bulk density of washed, dewatered, solids is assumed to be 1.5 MT / m ³ .
		Supplemental TRU Product Fill	Fill 50-Gallon Drum to 40-Gallons	
	SST Retrievals completed by		2/2027	
	Treatment Completed by...		11/2029	
	Number of CSB modules required		<u>CSB plus one module</u>	Storage requirement tied to production rate of HLW and shipping date to the geologic repository. <u>The new module will be assumed to be an expense funded project.</u>
Summary Results- Product	Number of HLW Glass Canisters		~9,400	Number of HLW canisters depends on canister fill limit (wall thickness), oxidative leach assumptions, water wash and caustic leach factors, the Glass Properties Model, and the degree of blending.
	Number of LAW Glass Packages		33,000	For Proposed BCR and BCR Case, this product represents about 40% of the sodium.
	Number of WTP Supplemental LAW Packages		99,700	For Proposed BCR and BCR Case, this product represents about 60% of the sodium.
	Number of Non-WTP Supplemental LAW Packages		260 WTP Packages (Outside of contract period)	For the IMAP, Proposed BCR and BCR Cases, this amount of supplemental treatment represents processing about 69 Kgal of waste from TY-102.
	Number of TRU Containers	Remote Handled	~3,400 55-Gallon Drums	For the IMAP, Proposed BCR, and BCR Cases - Based on 761 MT of washed TRU Solids from 102-SY, 103-AW, and 105-AW.
		Contact Handled	~18,300 55-Gallon Drums	For the IMAP, Proposed BCR, and BCR Cases - Based on packaging 731 Kgal of contact handled TRU from T-111, B-200's and T-200's.
	Number of LLW Containers		~ 9,200 55-Gallon Drums	For the IMAP, Proposed BCR, and BCR Cases - Based on Packaging of 370 Kgal of waste from T-110.

¹ The number of melters is included for a more complete description of system configuration. Please see the "System Ramp-Up & Throughput Capacity" section for the assumed processing rates of the various melter configurations.

² All capacities have already been derated to account for total operating efficiency.

APPENDIX B

MAJOR REGULATORY REQUIREMENTS

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Table B-1. Major Regulatory Requirements. (3 sheets)

Subject	Laws/Regulations	Applications
Hazardous and Mixed Waste	<ul style="list-style-type: none"> • WAC 173-303 • HSWA 1984 • Tri-Party Agreement • SST Interim Stabilization Consent Decree 	<p>The DST system will achieve compliance with final status standards in WAC 173-303 upon modification of the Hanford Site RCRA Permit to include the Part B Permit for this unit.</p> <p>The DST and SST systems will be required to close in accordance with WAC 173-303-610 standards and the Hanford Site RCRA Permit.</p> <p>The Hazardous and Solid Waste Amendments of 1984 (HSWA) to RCRA require corrective action for releases into the environment of hazardous waste and hazardous constituents from the DST and SST systems.</p> <p>The SST system will continue to be regulated under interim status requirements until closed.</p> <p>For the DST system, the Tri-Party Agreement lays out a compliance process and schedule. For SSTs, the Tri-Party Agreement (and associated Interim Stabilization Consent Decree) lays out a process and schedule to remove pumpable liquids, retrieve solids, and close the SST system in lieu of achieving full compliance with the regulations.</p> <p>Tri-Party Agreement milestones applicable to tank farms include ones in the following series: M-20 (ILAW and IHLW facility RCRA permitting), M-23 (SST leak detection and integrity), M-43 (DST upgrades), M-45 (SST retrieval and closure), M-46 (DST space), M-47 (waste feed delivery), M-48 (DST integrity), and M-90 (ILAW and IHLW facility design, construction, and operation).</p> <p>The Tri-Party Agreement also lays out the process for submittal, review, and approval of RCRA permit applications and closure plans.</p>

Table B-1. Major Regulatory Requirements. (3 sheets)

Subject	Laws/Regulations	Applications
Radioactive and Mixed Waste	<ul style="list-style-type: none"> • AEA • NWPA • 10 CFR 60 • 40 CFR 191 • DOE Order 435.1 	<p>The Atomic Energy Act (AEA) and NWPA provide authority to regulate radioactive waste and the radioactive constituents of mixed waste. In general, DOE has this regulatory authority.</p> <p>The U.S. Nuclear Regulatory Commission licenses the national HLW repository under Title 10 of the Code of Federal Regulations Part 60 (10 CFR 60).</p> <p>EPA establishes the radiation protection standards for the repository (40 CFR 191).</p> <p>DOE has established DOE Order 435.1 to regulate its radioactive waste. The order allows DOE to determine the category of its wastes (e.g., LLW, TRU Waste, or HLW.) The order allows DOE to determine that residuals from HLW are WIR and therefore can be disposed at other than the national HLW repository. The order also requires DOE to approve closure plans for radioactive waste disposal facilities.</p>
Air Emissions	<ul style="list-style-type: none"> • CAA • WAC 246-247 • WAC 173-400 • 40 CFR 61 • NESHAPS FFCA 	<p>The CAAs require NOCs for new or modified sources that may increase the emissions of radioactivity (under the Washington Department of Health per WAC 246-247) or toxic substances (under Ecology per WAC 173-400).</p> <p>Radioactive emissions monitoring must meet 40 CFR 61, Subparts H and I which requires the use of ANSI N13.1-1999 for all newly constructed or modified facilities. This may require upgrades to exhausters, stacks, and monitoring equipment.</p> <p>The FFCAA on NESHAPS requires that six non-compliant major stacks be upgraded or taken out of service by December 31, 2005.</p>

Table B-1. Major Regulatory Requirements. (3 sheets)

Subject	Laws/Regulations	Applications
Environmental Impacts	<ul style="list-style-type: none"> • NEPA • SEPA 	<p>The NEPA requires DOE to consider environmental impacts in major decision-making. The federal decision-maker uses the EIS process in determining what action to take in the ROD.</p> <p>The SEPA requires the state agencies to consider environmental impacts before issuing permits. The state decision-makers use an EIS or a SEPA checklist.</p>
Nuclear Safety	<ul style="list-style-type: none"> • AEA • 10 CFR 830 	<p>DOE regulates under the AEA the nuclear safety of its nuclear facilities through 10 CFR 830. Currently the tank farms operate under an FSAR and TSR. These are being updated under the Documented Safety Analysis.</p>
PCBs	<ul style="list-style-type: none"> • TSCA • 40 CFR 761 	<p>The TSCA provides EPA authority to regulate certain PCBs (40 CFR 761). DOE and EPA have signed a Framework Agreement that assumes certain DSTs contain TSCA-regulated PCBs. This agreement requires Risk-Based Approvals by the EPA to ensure that the storage, retrieval, treatment, and disposition of DST waste does not pose an undue risk to the workers, public, or environment.</p> <p>The agreement assumes that TSCA-regulated PCBs do not exist in SSTs. If regulated PCBs are discovered in SSTs, a compliance strategy will be developed with EPA.</p>

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APPENDIX C

MISSION ACCELERATION ACTION PLANS

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C1.0 SST RETRIEVAL AND CLOSURE

MAAP 1.1 – Initial Tank Selection Process.

MISSION ACCELERATION ACTION PLAN

Initiative: Initial Tank Selection Process - Retrieval Sequencing (40)

ORP Contact: A. Stevens

CH2M HILL Lead: R. Ni

End State Description:

Forty single-shell tanks have been identified for retrieval and interim closure between FY 2003 and FY 2006. This allows development of baseline schedules and initiation of field activities.

A process exists to update the sequence as new information is obtained. This provides a structured process to improve the plan as we learn.

Current Condition:

Seven tanks have been identified for retrieval by the end of FY 2009. Of those seven, three are scheduled to be retrieved by FY 2006 (C-106, S-112, S-102), one is schedule to have been retrieved by the end of FY 2007 (C-104), and three are scheduled to be retrieved by the end of FY 2009.

Strategy Outline: (high level)

Rank tanks for early retrieval based on (1) the degree of risk reduction achieved, (2) confidence level that the waste can be retrieved, and (3) the opportunity to process and dispose of the waste through supplemental treatment.

Action Plan: (Actions Required, By When, Assigned to Whom)

1. Establish the criteria for selecting and sequencing forty tanks for retrieval.
Date: 10/18/02 complete Assigned to: S. Eberlein
2. Develop list and review against available DST volume
Date: 10/23/02 complete Assigned to: S. Eberlein
3. Brief approach and list with Ecology
Date: 11/20/02 - complete Assigned to: M. Jarayssi
4. Confirm process to manage tank sequencing
Date: 3/13/03 - complete Assigned to: J. Honeyman

MAAP 1.2 – Tank Waste Storage Options (2 sheets)

MISSION ACCELERATION ACTION PLAN

Initiative: Define and Implement Tank Waste Storage Options

ORP Lead: C. Louie

CH2M HILL Lead: R. Ni

End State Description: (Objective and Improvement Gained)

There is enough usable space in the DST system to receive waste from the forty SSTs proposed for retrieval by the end of FY 2006.

Current Condition: (Status and Issues that must be Addressed)

Existing DST space and previously identified space gaining options will provide only enough additional space to retrieve the seven tanks identified for early retrieval in the consent decree.

Strategy Outline: (high level)

Past efforts to identify options to increase available tank space culminated in identification of enough space to pursue early retrieval of seven SSTs. Using the RPP-7702, *Tank Space Options Report*, Revision 0, re-evaluate options currently not being pursued to determine their viability. Identify additional options that allow retrieval without use of DST space. Implement viable options. *[Note: also refer to 1.4, 3.2, 3.3, and 3.4 for additional options that result in reduced waste storage requirements]*

Action Plan: (Actions Required, By When, Assigned to Whom)

1. Utilize restricted tank capacity. Currently some tanks are designated as feed for waste treatment and are not to be changed. Send letter to ORP indicating the merits of using this space and requesting that they withdraw previous direction restricting these tanks.

Date: 3/13/03

Assigned to: T. Crawford

2. Direct by letter the release of restricted tanks.

Date: 4/11/03

Assigned to: J. Swailes

3. Raise the specific gravity in waste supernate in targeted tanks, based on solubility and precipitation characteristics. Prepare engineering analysis and process memos, as required, to allow the evaporator to concentrate waste to greatest extent possible. Define the schedule and the needed evaporator sequence.

Raise SpG Limit (AP-107), prior to Evaporator Campaign 03-02

Date: 2/11/03 - Complete

Assigned to: N. Kirch

Raise SpG Limit (TBD), prior to Evaporator Campaign 03-03

Date: 5/10/03

Assigned to: N. Kirch

Raise SpG Limit (TBD), prior to Evaporator Campaign 03-04

Date: 7/11/03

Assigned to: N. Kirch

Raise SpG Limit (AP-104), prior to Evaporator Campaign 04-01

Date: 10/17/03

Assigned to: N. Kirch

MAAP 1.3 – Early Transition From Interim Stabilization to Retrieval

MISSION ACCELERATION ACTION PLAN

Initiative: Early Transition From Interim Stabilization to Retrieval

ORP Lead: A. Stevens

CH2M HILL Lead: T. Sams

End State Description:

For tanks still being Interim Stabilized, when fieldwork to support retrieval is ready to commence, Interim Stabilization of the associated tank would be declared “complete.”

The Interim Stabilization Consent Decree recognizes and approves this early transition from Interim Stabilization to Retrieval.

Current Condition:

Prior to commencing retrieval of tanks contained in the Interim Stabilization Consent Decree, Interim Stabilization must be complete.

Action Plan:

1. Identify tanks that would potentially require early transition from Interim Stabilization to Retrieval.
Due Date: 12/15/02 - complete Assigned To: R. Wilson
2. Obtain DOE and State initial concurrence of this early transition concept.
Due Date: 12/30/02 - complete Assigned To: M. Jarayssi
3. Submit proposed modifications to Interim Stabilization Consent Decree to DOE/Regulators for review.
Due Date: 12/30/02 - complete Assigned To: W. Dixon
4. Review proposed modifications.
Due Date: 2/28/03 - Complete Assigned To: A. Stevens (ORP)/Regulators
5. Revise and approve the Interim Stabilization Consent Decree to recognize and approve early transition from Interim Stabilization to Retrieval.
Due Date: 4/11/03 Assigned To: A. Stevens (ORP)
6. Transition Consent Decree decision into retrieval work planning.
Due Date: 4/30/03 Assigned To: T. Sams

MAAP 1.4 – Dry Retrieval and Waste Staging within SSTs.

MISSION ACCELERATION ACTION PLAN

Initiative: Implement Dry Retrieval and Waste Staging within SSTs

ORP Lead: A. Stevens

CH2M HILL Lead: T. Sams

End State Description:

Dry retrieval of SST waste technology is developed, tested, and approved.

Approval is received for staging of SST waste prior to transfer to the DST system or supplemental treatment within selected SSTs.

Current Condition:

Use of dry retrieval technology at Tank Farms is unproven. The system, including a vacuum retrieval system and mobile retrieval system (MRS), is being procured and designs are underway for field deployment.

Addition of wastes to SSTs is prohibited.

Action Plan:

1. Select tanks for application of dry retrieval
 Due Date: 1/31/03 - Complete Assigned to: W. Thompson
2. Select tanks for staging of SST waste.
 Due Date: 1/29/03 - Complete Assigned To: W. Thompson
3. Test Dry Retrieval System at the CTF.
 Due Date: 2/12/03 - Complete Assigned To: R. Wilson
4. Complete design for field deployment of system.
 Due Date: 4/15/03 Assigned To: W. Thompson
5. Conduct Cost Benefit, Risk, and Programmatic Analysis of the Dry Retrieval System.
 Due Date: 4/10/03 Assigned To: R. Wilson
6. Submit analysis and justification to ORP/Regulators for staging Dry Retrieval waste in SSTs.
 Due Date: 4/16/03 Assigned To: T. Sams
7. Review, evaluate, and update analysis and justification.
 Due Date: 5/20/03 Assigned To: T. Sams
8. Work with regulators regarding the use of SSTs to stage waste from SST Dry Retrievals.
 Due Date: 6/19/03 Assigned To: T. Sams
9. Transition SST Dry Retrieval decision into SST retrieval work planning
 Due Date: 6/30/03 Assigned To: T. Sams

MAAP 1.5 – Simplify WIR / Tier 1 Closure Plan Review and Approval Process (2 sheets)

MISSION ACCELERATION ACTION PLAN

Initiative: Simplify WIR / Tier 1 Closure Plan Review and Approval Process

ORP Lead: A. Stevens

CH2M HILL Lead: M. Jarayssi

End State Description: (Objective and Improvement Gained)

DOE/ORP will make 435.1 WIR determinations and Tier 1 Closure Plan approvals within an 8-month review and approval process timeframe.

Current Condition: (Status and Issues that must be Addressed)

- The processes being used by the DOE Complex that led to making final decisions on WIR determinations and Tier 1 Closure Plans have extended over lengthy periods of time.
- The WIR determinations to be made for Hanford Site tanks containing TRU waste may become contentious and legally cumbersome.
- ORP has committed to provide such determinations and approvals in 60 days after receiving the supporting documents from CH2M HILL.

Strategy Outline: (high level)

- Delegate the management of these processes from HQ to ORP.
- Develop a path forward to deal with the dispositioning of the SSTs containing TRU waste.

Action Plan: (Actions Required, By When, Assigned to Whom)

WIR Determinations

1. Conduct workshop with WIR review and approval parties to reduce process from 24 to 8 months.

Date: 1/28/03 - Complete

Assigned to: G. Wells

2. Assign the appropriate resources and expertise (ORP and CH2M HILL) to work on the path forward towards making WIR determinations for SSTs containing TRU waste.

Date: 1/14/03 - Complete

Assigned to: A. Stevens (ORP)/M. Jarayssi

3. CH2M HILL and ORP collaborate on establishing a 60-day approval process, as defined in the contract.

Date: 5/30/03

Assigned to: M. Jarayssi

4. CH2M HILL and ORP explore opportunities that are consistent with DOE O 435.1 and other regulatory requirements, e.g. risk-based processes, Appendix H, etc.

Date: 5/30/03

Assigned to: M. Jarayssi

5. Draft and issue information letter documenting agreement, implementation of new process, and intent to modify TPA as required.

Date: 6/2/03

Assigned to: W. Dixon

MAAP 1.6 – Standardize Retrieval/Closure/Permitting Documents and Review Cycles (2 sheets)

MISSION ACCELERATION ACTION PLAN

Initiative: Standardize Retrieval/Closure/Permitting Documents and Review Cycles

ORP Lead: A. Stevens

CH2M HILL Lead: M. Jarayssi

End State Description: (Objective and Improvement Gained)

Tri-Parties will use a “standardized” set of RCRA documents to support the retrieval and closure of SSTs. Accelerated review of standard documents allows for the acceleration of retrieval and closure work.

Current Condition: (Status and Issues that must be Addressed)

The process for the review and approval of Closure Plans and TSD Permits is described in the HFFACO. This process was designed to review closure plans and Part B and RD&D permit applications for the final closure and permitting of facilities going through final closure or facilities requiring treatment, storage, and/or disposal permits.

Strategy Outline: (high level)

The tank farm closure will be achieved in a phased process. The SSTs will be closed on a unit-by-unit basis under unit specific closure plans. These closure plans are much less elaborate and complex than typical closure plans of entire facilities, as envisioned for the HFFACO review and approval process. Also, the potential treatment and storage facilities that may be needed for the management of tank waste are temporary and basic in nature, requiring standard permitting conditions and provisions.

- Maintain a frequent and open dialogue with Ecology to resolve regulatory issues related to tank closure as they emerge, i.e., in process sampling during retrieval satisfies sampling requirement for final retrieval and interim closure.
- Agree on content of the F&R documents.
- Standardize both the Closure Plan and Part B and RD&D permit documents for a more streamlined review.
- Agree with Ecology on appropriate grouping of SSTs to be closed under one closure plan.
- Agreement with Ecology (to be added to the HFFACO) on an expedited review and approval cycle for Closure Plans and Part B permit applications.

Action Plan: (Actions Required, By When, Assigned to Whom)

Standardize Functions and Requirements Documents

1. Develop Draft Standardized F&R Document

Date: 1/15/03 - Complete

Assigned to: M. Jarayssi

MAAP 1.6 – Standardize Retrieval/Closure/Permitting Documents and Review Cycles (2 sheets)

MAAP 1.6 – Continued

2. Meet with review and approval parties and reach agreement on standardized F&R.

Date: 1/30/03 - Complete

Assigned to: M. Jarayssi

3. Submit first standardized F&R document (U-107)

Date: 8/5//03

Assigned to: M. Jarayssi

Streamline RCRA Closure Plan Review Cycle

1. Prepare review cycle proposal.

Date: 1/15/03 - Complete

Assigned to: J. Badden

2. Conduct workshop with Closure Plan review and approval parties and reach agreement on review cycle process and time frames.

Date: 1/15/03 - complete

Assigned to: M. Jarayssi / J. Badden

3. Draft and issue information letter documenting agreement, implementation of new process, and intent to modify TPA as required.

Date: 3/19/03

Assigned to: J. Badden

Standardize RCRA Closure Plan Documents

1. Develop Draft Standardized RCRA Closure Plan Document

Date: 3/14/03

Assigned to: J. Badden

2. Work with approval parties and reach agreement on standardized document

Date: 4/17/03

Assigned to: J. Badden

3. Draft and issue information letter documenting agreement, implementation of new process, and intent to modify TPA as required.

Date: 4/17/03

Assigned to: J. Badden

Streamline Part B / RD&D Permitting Cycle

1. Develop Draft review and approval process

Date: 3/14/03

Assigned to: J. Badden

2. Workshop with review and approval parties to reach agreement on streamlined process.

Date: 4/2/03

Assigned to: M. Jarayssi / J. Badden

3. Draft and issue information letter documenting agreement, implementation of new process, and intent to modify TPA as required.

Date: 4/17/03

Assigned to: J. Badden

4. Transition F&R and RCRA documentation and process changes into closure planning.

Date: 4/30/03

Assigned to: T. Sams

C2.0 WASTE FEED DELIVERY AND DISPOSAL**MAAP 2.1 – Optimize Schedule for Waste Feed Delivery****MISSION ACCELERATION ACTION PLAN****Initiative:** Optimize Schedule for Waste Feed Delivery**ORP Lead:** C. Louie**CH2M HILL Lead:** R. Popielarczyk**End State Description:**

A “just-in-time” TFC schedule for supplying waste feed from the DSTs to the WTP that meets funding constraints through FY 2006 with minimal impacts to planned WTP processing.

Current Condition:

The baseline schedule generally includes a minimum of one year of float in the chain of tasks from DST retrieval system construction to vitrification of the waste from the respective DST. This approach results in installation of pumps in the DSTs that will not be used for at least one year, and results in early expenditure of funds that could be applied to retrieval and closure of SSTs.

Strategy Outline:

Starting with the existing baseline schedule, remove float in the retrieval system design, procurement, construction, startup, waste certification schedules; except for the float related to the first three DSTs: AZ-101, AP-101, and AN-101. Compare the annual budgets associated with the resulting “just-in-time” schedule with the available funding targets. Optimize elements of the DST retrieval system construction cost estimates to minimize any differences between required and available funding. To eliminate any remaining funding-related issues, shift DST retrieval system schedules later in time to reduce funding needs through FY 2006. Assess acceptability of impacts to planned WTP processing scenario. Include recommended schedule in the IMAP. Gain ORP acceptance of the DST retrieval systems construction schedule and the resulting WTP processing scenario.

Action Plan:

1. Remove float in retrieval system schedules.
Date: 03/27/03 - Complete Assigned to: E. Nordquist
2. Optimize DST retrieval system construction estimates.
Date: 03/27/03 - Complete Assigned to: E. Nordquist
3. Shift retrieval system construction tasks later in time to reduce near term costs.
Date: 03/27/03 - Complete Assigned to: E. Nordquist
4. Assuming acceptable impacts to planned WTP processing, include resulting schedule for DST retrieval systems construction as Implementation Plan.
Date: 4/28/03 - Complete Assigned to: J. Van Beek
5. Gain ORP concurrence of Implementation Plan / DST retrieval system construction schedule.
Date: 6/26/03 Assigned to: J. Swailes (ORP)/D. Allen
6. Incorporate construction schedule changes into the execution schedule, as required.
Date: 7/30/03 Assigned to: T. D. Taylor

MAAP 2.2 – Align Waste Feed Versus Glass Production Basis**MISSION ACCELERATION ACTION PLAN****Initiative:** Align Waste Feed versus Glass Production Basis**ORP Lead:** D. Clark**CH2M HILL Lead:** R. Popielarczyk**End State Description:**

Technical assumptions regarding WTP hot start dates and processing rates are documented and agreed upon between ORP, BNI, and CH2M Hill. These technical assumptions are used as the basis to assess RPP life cycle waste treatment and disposal options, which provide the decision data to clarify RPP scope definition and requirements. These decisions are integrated into BNI and CH2M Hill baselines and contracts, as required.

Current Condition:

An increase in planned WTP processing capacity is being considered by ORP, as a basis for feed delivery planning. Technical assessments are in process regarding feed delivery requirements, potential rates of treatment, and production of final waste forms. The data from these assessments is required in order to make RPP life cycle decisions regarding LAW processing rates (including supplemental and alternative treatment processes), waste feed delivery schedules, waste disposal schedules, and how these rates and schedules may impact tank retrieval and closure schedules.

Strategy Outline:

- Update and model WTP technical assumptions.
- Assess impacts to LAW processing, waste feed delivery, waste disposal, and retrieval and closure.
- Resolve issues and finalize RPP technical basis

Action Plan:

1. Assess impacts of proposed WTP feed sequencing and schedules on TFC mission and CH2M HILL contract requirements.

Date: 1/24/03 - Complete

Assigned to: R. Popielarczyk

2. Develop and approve an integrated set of RPP technical assumptions, including WTP startup dates, ramp-up rates, processing rates, etc., to establish and document the RPP life cycle technical basis.

Date: 5/7/03

Assigned to: J. Swailes (ORP), D. Allen

3. Integrate RPP technical assumptions into the TFC baseline, as required.

Date: 6/30/03

Assigned to: R. Popielarczyk

4. Provide input to CH2M HILL Alternate LAW Processing assessment (MAAP 3.1).

Date: 7/7/03

Assigned to: R. Popielarczyk

MAAP 2.3 – SY-Farm Transfer Line Options

Mission Acceleration Action Plan

Initiative: SY-Farm Transfer Line Options

ORP Lead: B. Williams

CH2M HILL Lead: T. Moore

End State Description:

Use SY transfer lines in existing configuration.

Do not implement upgrading. Use compensatory testing to ensure integrity.

Current Condition:

SY Tank Farm transfer lines are a key element for SST to DST waste transfers. Six SY Tank Farm transfer lines remaining in service after June 2005 do not have secondary containment through the pit wall, contrary to RCRA technical specifications.

Compensatory testing is used on single wall transfer systems.

Strategy Outline:

Gain Ecology approval to test before first use and periodically thereafter in lieu of physically extending encasements through pit walls or replacing the lines for the SY Tank Farm transfer lines in question. Make a decision to replace the lines or perform compensatory testing based on the detailed cost, comparison of the two options, and Operations impacts.

Action Plan:

1. Gain Ecology approval of the testing option.
Date: 1/31/03 Assigned to: B. Dixon
2. Complete design of the transfer line replacement and associated construction cost estimate.
Date: 4/30/03 Assigned to: C. Shipler
3. Choose between two options: replacement or compensatory testing.
Date: 5/31/03 Assigned to: D. Amerine
4. Continue with construction of transfer line replacement or process BCR to reduce Project E-525 cost estimate.
Date: 2/19/04 Assigned to: C. Shipler

MAAP 2.5 – Integrate LAW / LLW / MLLW Disposal Options

MISSION ACCELERATION ACTION PLAN

Initiative: Integrate Disposal of ILAW, LLW, MLLW, and CERCLA Waste

ORP Lead: P. LaMont

CH2M HILL Lead: J. Kristofzski

End State Description:

Combine ILAW, LLW, and MLLW in a large, lined trench at the IDF Project site, or dispose of these wastes in ERDF.

Current Condition:

CERCLA wastes are disposed in ERDF; LLW and MLLW are disposed in separate disposal facilities, with ILAW disposal and failed melter disposal planned at a separate facilities constructed as part of IDF.

Strategy Outline:

Pursue integrated waste disposal at ERDF in parallel with design of an integrated ILAW, LLW, and MLLW disposal facility. At a future decision point choose the “all waste to ERDF” option and discontinue further efforts related to the integrated ILAW, LLW, and MLLW disposal facility, or choose to provide an integrated ILAW, LLW, and MLLW disposal facility for all non-CERCLA waste.

Action Plan:

1. Make an initial determination on pursuing only the all waste to ERDF option or pursue all waste to ERDF in parallel with designing an integrated ILAW, LLW, and MLLW disposal facility.
Date: 12/16/02 - complete Assigned to: R. Schepens (ORP)/K. Klein (RL)
2. Initiate design of an integrated ILAW, LLW, and MLLW disposal facility.
Date: 11/15/02 – complete Assigned to: G. Parsons
3. Prepare a Performance Risk Assessment of the integrated disposal facility.
Date: 6/12/03 Assigned to: G. Parsons
4. Issue a Solid Waste EIS Record of Decision.
Date: 8/13/03 Assigned to: L. Erickson (ORP)/RL
5. Develop Regulator/ORP/RL acceptance of the ERDF option.
Date: 8/13/03 Assigned to: L. Erickson (ORP)/RL
6. Issue decision on continuation of the integrated disposal facility effort.
Date: 8/13/03 Assigned to: R. Schepens (ORP)/K. Klein (RL)
7. Integrate IDF decision into the TFC baseline, as required.
Date: 8/30/03 Assigned to: J. Kristofzski

MAAP 2.7 – Coordinate with Yucca Mountain Regarding IHLW Shipping Schedule

MISSION ACCELERATION ACTION PLAN

Initiative: Coordinate with Yucca Mountain to Optimize IHLW Shipping Schedule

ORP Lead: P. LaMont

CH2M HILL Lead: J. Kristofzski

End State Description:

Establish an IHLW shipping schedule from the Hanford Site to Yucca Mountain that is early enough and at a rate matching the IHLW production rate, such that excessive IHLW interim storage facilities will not be required.

Current Condition:

The National HLW repository has just been authorized by Congress to begin design and construction at Yucca Mountain, Nevada. Current shipping plans contemplate shipments from Savannah River and West Valley prior to beginning shipping of Hanford Site IHLW. As a result the CSB and several follow-on interim storage facilities would be built at the Hanford Site.

Strategy Outline:

CH2M HILL will work with ORP and EM to support the development of a modified shipping schedule that will be early enough and at a satisfactory rate.

Action Plan:

1. Document an Alternative IHLW shipping schedule that implements accelerated shipping into the overall nation plan.
Date: 12/30/02 - complete Assigned to: G. Parsons
2. HQ HLW team to include shipping acceleration of Hanford Site IHLW in recommendations to EM-1.
Date: 1/15/03 - complete Assigned to: J. Case (C. Louie)
3. Obtain shipping schedule modification from EM-1.
Date: 10/10/03 Assigned to: L. Erickson (ORP)
4. Integrate shipping schedule modification into the TFC baseline.
Date: 10/30/03 Assigned to: J. Kristofzski

C3.0 SUPPLEMENTAL TREATMENT AND DISPOSAL SYSTEM

MAAP 3.1 – Alternate LAW Processing

MISSION ACCELERATION ACTION PLAN

Initiative: Alternate LAW Processing

ORP Lead: D. Clark

CH2M HILL Lead: R. Raymond

End State Description: (Objective and Improvement Gained)

The processing plan is defined for all LAW volumes, including any required pretreatment and final treatment.

The capacity of the processing systems will support completion of LAW processing by the required dates.

Current Condition: (Status and Issues that must be Addressed)

The current documented WTP LAW melters processing technical assumptions provide the capacity to process 40% of the LAW.

The current documented CH2M HILL Supplemental Treatment of LAW technical assumptions provide the capacity to process 30% of the LAW.

Planning for the remaining 30% (Alternate Treatment) has not been defined.

Assessments are in process (see MAAP 2.2) that may change the technical assumptions regarding WTP LAW processing rates.

Strategy Outline: (high level)

When the technical assumptions regarding WTP LAW processing rates are completed, reassess the need for, and if required, the options to process any remaining LAW volumes not addressed by WTP or current Supplemental Treatment.

Action Plan: (Actions Required, By When, Assigned to Whom)

1. Determine expected processing capacity, cost and technical assumptions for WTP LAW treatment (see MAAP 2.2)

Date: 7/7/03

Assigned To: R. Popielarczyk

2. Assess options to process remaining LAW volumes not addressed by WTP or current Supplemental Treatment, and provide recommendations to ORP regarding the path forward, via a BCR.

Date: 5/5/04

Assigned To: R. Raymond

3. Approve and provide direction regarding Alternate LAW processing path forward, via approval of BCR.

Date: 9/30/04

Assigned to: L. Erickson (ORP)

MAAP 3.2 – Supplemental LLW Processing

MISSION ACCELERATION ACTION PLAN

Initiative: Supplemental LLW Processing

ORP Lead: B. Mauss

CH2M HILL Lead: J. Kristofzski

End State Description: (Objective and Improvement Gained)

Provide proven technologies that accelerate the tank farm mission by providing LLW tank waste processing several years earlier than and in parallel to the waste treatment plant.

Current Condition: (Status and Issues that must be Addressed)

The regulatory activities required to support the supplemental LLW treatment pathway include NEPA, RCRA, NESHAPS permits, HFFACO, and determination that some of the tank waste is LLW based on a source definition. Preliminary review indicates the TWRS EIS does not include LLW processing.

Strategy Outline: (high level)

Experience at other sites (e.g., Rocky Flats) provides the basis for the supplemental LLW path forward. The strategy includes identification of potential LLW containing tanks, establishing the regulatory pathway to the onsite or offsite disposal location, process definition and procurement, design, permitting, construction, startup, WIPP certification and operations.

Action Plan: (Actions Required, By When, Assigned to Whom)

1. Provide draft LLW evaluation documentation to ORP.

Date: 4/4/03

Assigned To: J. Kristofzski

2. Provide determination on whether tanks contain LLW tank waste.

Date: 6/5/03

Assigned To: B. Mauss (ORP)

3. Integrate LLW determination into the TFC baseline.

Date: 6/30/03

Assigned To: J. Kristofzski

MAAP 3.3 – Supplemental TRU Processing**MISSION ACCELERATION ACTION PLAN****Initiative:** Supplemental TRU Processing**ORP LEAD:** B. Mauss**CH2M HILL Lead:** J. Kristofzski**End State Description:** (Objective and Improvement Gained)

Provide proven technologies that accelerate the tank farm mission by providing TRU tank waste processing several years earlier than and in parallel to the waste treatment plant.

Current Condition: (Status and Issues that must be Addressed)

The regulatory activities required to support the supplemental TRU treatment pathway include NEPA, RCRA, NESHAPS permits, HFFACO, and determination that some of the tank waste is TRU based on a source definition. Preliminary review indicates the TWRS EIS does not include TRU processing.

Strategy Outline: (high level)

Experience at other sites (e.g., Rocky Flats, FD) provides the basis for the supplemental TRU path forward. The strategy includes identification of potentially TRU containing tanks, establishing the regulatory pathway to WIPP, process definition and procurement, design, permitting, construction, startup, WIPP certification and operations.

Action Plan: (Actions Required, By When, Assigned to Whom)

1. Provide TRU baseline inventory data to ORP/RL for submittal to WIPP.
Date: 1/6/03 - Complete Assigned To: J. Kristofzski
2. Submit baseline inventory data to WIPP.
Date: 3/13/03 Assigned To: B. Mauss (ORP)
3. Obtain WIPP approval of baseline inventory data.
Date: 4/30/03 Assigned To: B. Mauss (ORP)
4. Integrate WIPP disposal path into the TFC baseline.
Date: 5/30/03 Assigned To: J. Kristofzski

MAAP 3.4 – Supplemental LAW Treatment (2 sheets)

MISSION ACCELERATION ACTION PLAN

Initiative: Supplemental LAW Treatment

ORP LEAD: B. Mauss

CH2M HILL Lead: R. Raymond

End State Description: (Objective and Improvement Gained)

Provide tailored application of applied technologies that accelerate the tank farm mission by providing LAW tank waste processing in parallel to the waste treatment plant.

Current Condition: (Status and Issues that must be Addressed)

The current TFC baseline does not include supplemental LAW treatment.

The regulatory activities required to support the supplemental LAW treatment pathway include NEPA, RCRA, NESHAPS permits, HFFACO, and determination that some of the tank waste is LAW based on a prior pre-treatment actions. Preliminary review indicates the TWRS EIS may bound the bulk vitrification and containerized grout applied technologies.

Strategy Outline: (high level)

The strategy begins with selection of tanks that may most beneficially be treated by tailored application of technologies applicable to the waste type to be processed. In parallel to this evaluation, the selected technologies (containerized grout, bulk vitrification, steam reforming) will be tested and evaluated with tank waste surrogates and actual waste samples. Finally, the technology will be implemented at pilot and/or production scale. The process evaluations and potential down selection process will be conducted taking advantage of the C3T process currently established with the regulatory community.

Action Plan: (Actions Required, By When, Assigned to Whom)

1. Issue RFP's for selected technologies.

Date: 1/03 - complete

Assigned To: R. Raymond

2. Select vendors to complete testing, evaluation, pilot scale, and production processing.

Date: 6/03

Assigned To: R. Raymond

3. Complete hot lab scale testing of Bulk Vitrification and Grout technologies and down select recommendations.

Date: 8/31/03

Assigned To: R. Raymond

4. Establish and conduct down select process.

Date: 8/19/03

Assigned To: R. Raymond

MAAP 3.4 – Supplemental LAW Treatment (2 sheets)

MAAP 3.4 – Continued

5. Approval of down select recommendation.

Date: 8/31/03

Assigned To: L. Erickson (ORP)

6. Provide recommendation to ORP on deployment of Steam Reforming.

Date: 7/9/04

Assigned To: R. Raymond

7. Decision on deployment of Steam Reforming.

Date: 8/6/04

Assigned To: L. Erickson (ORP)

8. Integrate Supplemental LAW Treatment decision into the TFC baseline.

Date: 8/30/04

Assigned To: R. Raymond

MAAP 4.2 – Permitting / Closure Plan Schedule and TPA Update (2 sheets)

MISSION ACCELERATION ACTION PLAN

Initiative: Permitting / Closure Plan Schedule and TPA Update

ORP Lead: J. Rasmussen

CH2M HILL Lead: M. Jarayssi

End State Description: (Objective and Improvement Gained)

A mutually agreed upon schedule for permitting and closure plan processing and approvals will enable all parties to assess and deploy the necessary resources to implement tank closure.

Current Condition: (Status and Issues that must be Addressed)

Currently there is no process to generate a permitting or closure plans schedule for the closure of tank farms. The proposed TPA milestones (M-45) mention only 7 SST tanks over the next four years.

Strategy Outline: (high level)

The tank farm closure will be achieved in a phased process. Although the TPA (HFFACO) lists the milestones aimed at the retrieval and closure of SST tanks, there needs to be a process that delineates the steps and requirements for the retrieval and closure of tanks and tank farms in the HFFACO. Such a process should be added to the HFFACO to include items such as:

- Process of tank selection for closure
- Major elements of a tank Component Closure Plan
- Design and content of a retrieval F&R Document
- Review cycles of interim component closure plan, and supplemental technology permits
- Risk Assessment approach for retrieval, tank closure, and tank farm closure
- Integration with Area Closure and Cleanup of land-based waste sites, and Water Protection plans.

Action Plan: (Actions Required, By When, Assigned to Whom)

Permitting / Closure Plan Schedule

1. Work with DOE and regulators to develop an annual and life cycle permitting and closure plan schedule based on decisions made regarding tank sequence, standardized documents, streamlined review cycles, risk assessment approach, and groundwater standards.

Date: 5/20/03

Assigned to: M. Jarayssi

2. Assess adequacy of ORP, CH2M HILL, Ecology, and WDOH resources to meet schedule requirements.

Date: 5/20/03

Assigned to: J. Rasmussen (ORP)/W. Dixon

3. Provide recommendations to senior management regarding resource vs. schedule constraints.

Date: 5/20/03

Assigned to: J. Rasmussen (ORP)/W. Dixon/M. Jarayssi

MAAP 4.2 – Permitting / Closure Plan Schedule and TPA Update (2 sheets)

MAAP 4.2 – Continued

4. Senior management decisions on resolving resource vs. schedule constraints

Date: 6/4/03

Assigned to: L. Erickson (ORP)/D. Allen

Integrate schedule process and update requirements into TPA Update.

- A. Develop “straw-man” layout for the HFFACO Update Section(s) and gain go ahead approval.

Date: 1/15/03 - Complete

Assigned to: S. Fowler

- B. Draft Section and hold technical workshops with affected parties.

Date: 3/28/03

Assigned to: S. Fowler

- C. Draft TPA Change Package and Submit for processing per TPA requirements.

Date: 4/15/03

Assigned to: S. Fowler

- D. Public Review

Date: 5/30/03

Assigned to: S. Fowler

- E. Responsiveness Summary to Public Comment

Date: 6/15/03

Assigned to: S. Fowler

- F. Prepare and Sign TPA Modification

Date: 6/30/03

Assigned to: S. Fowler / ORP/Tri-Parties

MAAP 4.3 – Risk Assessment Approach

MISSION ACCELERATION ACTION PLAN

Initiative: Risk Assessment Approach

ORP Lead: R. Lober

CH2M HILL Lead: M. Jarayssi

End State Description: (Objective and Improvement Gained)

Develop a Risk Assessment approach for tank closure that is applied consistently for the retrieval and closure of all tanks and tank farms

Integrate the Risk Assessments of tanks and tank farms with the risk assessments conducted for the closure of other waste sites on the Central Plateau.

Current Condition: (Status and Issues that must be Addressed)

The final risk assessment standards and parameters are still to be agreed to.

Strategy Outline: (high level)

Hold a technical discussion with Ecology to agree on risk assessment approach

- Evaluate the applicability of the Central Plateau Risk Framework to tank closure
- Add the Risk Assessment approach to the HFFACO Tank Closure section.

Action Plan: (Actions Required, By When, Assigned to Whom)

1. Meet with Ecology to discuss the parameters for conducting tank risk assessment

Date: 1/31/03 - Complete

Assigned to: T. Knepp

2. Develop a draft written risk assessment approach

Date: 1/31/03 - Complete

Assigned to: T. Knepp

3. Integrate tank risk approach with Central Plateau Risk Framework

Date: 3/14/03

Assigned to: T. Knepp / M. Jarayssi

4. Integrate tank risk approach into Closure Planning.

Date: 4/30/03

Assigned to: M. Jarayssi

MAAP 4.4 – NEPA EIS / ROD to Support Acceleration (2 sheets)**MISSION ACCELERATION ACTION PLAN****Initiative:** NEPA EIS and ROD to Support Acceleration**ORP Contact:** J. Rasmussen**CH2M HILL Lead:** M. Jarayssi**End State Description:**(Objective and Improvement Gained)

NEPA analysis and decision documents are completed to support execution of the accelerated mission.

Necessary data packages are developed to support the creation of an EIS/ROD that will support the long-term mission of the RPP. Data packages are developed for areas such as (1) retrieval and storage, (2) disposal, (3) Closure and D&D, (4) Current baseline, (5) Inventory, (6) Supplemental Treatment, (7) Safety, and (8) Cumulative Impacts.

Current Condition: (Status and Issues that must be Addressed)

NEPA documentation is not in place for all elements of the accelerated mission.

Strategy Outline: (high level)

Partnership between ORP, Regulators, and CH2M HILL to identify and collect necessary data to develop the EIS and ROD to support the accelerated mission. Assess the information within the data packages. Accelerate the analysis, review, and approval process to meet required schedules.

Action Plan: (Actions Required, By When, Assigned to Whom)

Many of the activities identified will occur concurrently (e.g., preparation of preliminary draft data packages will progress while data is being collected and data gaps and issues are being resolved).

1. Complete Internal Scoping Workshops
Date: 11/4/02– Complete Assigned to: L. Erickson (ORP)
2. Approve Draft NOI for submission to HQ for review/approval
Date: 11/27/02 – Complete Assigned to: G. Neath/M. Burandt (ORP) & M. Riess
3. Publish NOI in FR
Date: 1/3/03– Complete Assigned to: L. Erickson (ORP)
4. Complete public scoping meetings
Date: 1/20/03 Assigned to: L. Erickson (ORP)
5. Incorporate comments and submit final data packages to ORP
Date: 3/24/03 Assigned to: M. Riess
6. Prepare draft EIS
Date: 9/30/03 Assigned to: NEPA Contractor
7. Issue draft EIS (EPA and NOA)
Date: 9/30/03 Assigned to: L. Erickson (ORP)

MAAP 4.4 – NEPA EIS / ROD to Support Acceleration (2 sheets)

MAAP 4.4 – Continued

- | | |
|--|--------------------------------|
| 8. Prepare final EIS | |
| Date: 12/31/03 | Assigned to: NEPA Contractor |
| 9. Issue final EIS (EPA and NOA) | |
| Date: 12/31/03 | Assigned to: R. Schepens (ORP) |
| 10. Issue ROD | |
| Date: 4/14/04 | Assigned to: R. Schepens (ORP) |
| 11. Integrate closure EIS ROD into closure planning. | |
| Date: 4/30/04 | Assigned to: G. Mclellan |

C5.0 MISSION SUPPORT/WORK MANAGEMENT

MAAP 5.1 – Simplify the Safety Basis (2 sheets)

MISSION ACCELERATION ACTION PLAN

Initiative: Simplify the Safety Basis

ORP Lead: D. Irby

CH2M HILL Lead: R. Ni

Technical Contact: B. Smith/M. Hasty

End State Description: (Objective and Improvement Gained)

The DSA (due to ORP by 3/24/03) will have separate control sets for DST facilities (supporting feed delivery) and SST facilities (awaiting retrieval and closure). The DSA will appropriately minimize controls.

A subsequent amendment to the DSA (the focus of this action plan) will be prepared for retrieval and closure activities, which applies minimal required controls for these activities.

Current Condition: (Status and Issues that must be Addressed)

Current Authorization Basis and TSRs classify all tank farm facilities as hazard category 2, which require controls for all Tank Farm facilities.

The new DSA in work by CH2M HILL employs new accident analysis methodology.

Current Authorization Basis does not include retrieval, processing and closure activities. These would be treated as Authorization Basis amendments.

Other sites are accepting short time increases in risk in order to perform D&D work without extraordinary increases in controls.

Strategy Outline: (high level)

Reduce conservatism in new DSA.

Apply TSRs to specific types of work and when work is done, TSR is no longer applied.

Transition facilities out of the DSA controls when waste/hazards are reduced to a defined level.

Maintain decision authority at ORP (requires political attention to HQ and DNFSB).

Action Plan: (Actions Required, By When, Assigned to Whom)

1. Submit DSA to ORP

Date: 3/24/03

Assigned to: B. Smith

2. Submit an accelerated DSA implementation plan to ORP.

Date: 3/24/03

Assigned to: B. Smith

3. Submit accelerated implementation plan update, as required to reflect in-process comments from ORP review of the DSA.

Date: 7/31/03

Assigned to: B. Smith

MAAP 5.2 – Minimum Safe Operations

MISSION ACCELERATION ACTION PLAN

Initiative: Minimum Safe Operations

ORP Lead: D. Noyes

CH2M HILL Lead: C. Leach

End State Description: (Objective and Improvement Gained)

Provide essential operational services to meet nuclear and environmental requirements using a graded approach for the safe storage of the Hanford Site’s tank wastes through 2028 (25 year acceleration).

For required activities, the method of performance has been adjusted to take advantage of available cost and schedule improvements.

Activities that are not required have been deleted, or deferred to a later date if they will become necessary at some point in the future.

Cost reductions and schedule improvements allow for the acceleration of required retrieval, closure, treatment, and disposal initiatives.

Current Condition: (Status and Issues that must be Addressed)

Existing Baseline requires tank waste storage through 2053.

Operations, maintenance, upgrades, life extension, and tank integrity programs are based this on 50+ year remaining life cycle.

Existing baseline includes activities planned under more conservative methods of performance.

Strategy Outline: (high level)

- Re-plan to accelerate 2028 tank waste storage life cycle.
- Delete non-required work (even though some may be desired); defer work using “just-in-time” philosophy.
- Streamline requirements and work controls while maintaining safe operations
- Wherever feasible, redefine deliverables and methods of performance to save cost and schedule

Action Plan: (Actions Required, By When, Assigned to Whom)

1. Incorporate work efficiencies, deletions, and deferrals associated with minimum safe operations, environmental/TPA compliance, and mission support into the proposed Tank Farm baseline and review with ORP.

Date: 2/14/03 - Complete

Assigned to: C.E. Leach

2. Prepare and submit associated BCR

Date: 3/31/03

Assigned to: R. Millikin

MAAP 5.4 – Implement Schedule Accountability Meetings

MISSION ACCELERATION ACTION PLAN

Initiative: Implement Schedule Accountability Meetings

ORP Lead: D. Bryson

CH2M HILL Lead: W. Pettigrew

End State Description: (Objective and Improvement Gained)

A defined process exists, using the Integrated Mission Execution Schedule (IMES) as a tool, to anticipate problems and solve them prior to the problems becoming a roadblock to schedule adherence.

Involves decision makers at the Vice President (VP) and Director level to resolve schedule conflicts.

Separate meetings held to focus leadership on execution at the daily, short range and long-range perspectives.

Uses critical path analysis to focus management on the correct priorities.

Chaired by the VP Mission Controls to gain correct emphasis and priority.

Current Condition: (Status and Issues that must be Addressed)

IMES does not exist, nor do critical path schedules exist for contract priority work that must be executed.

Common forum for Schedule Accountability Meetings must be developed.

Strategy Outline: (high level)

Utilize experience from other sites to build CH2M HILL process for Schedule Accountability Meetings

Implement Schedule Accountability Meeting tool in November so that when IMES approved, the mechanics of the Schedule Accountability Meeting tool will have been worked out.

Action Plan: (Actions Required, By When, Assigned to Whom)

1. Develop draft CH2M HILL Schedule Accountability Meeting process
Date: 11/07/02 - complete Assigned to: W. Pettigrew
2. Implement first Schedule Accountability Meeting
Date: 11/11/02– complete Assigned to: W. Pettigrew
3. Issue Schedule Accountability Meeting Management Directive
Date: 12/12/02 - Complete Assigned to: W. Pettigrew

MAAP 5.5 – Streamline the Work Control Process (2 sheets)

MISSION ACCELERATION ACTION PLAN

Initiative: Streamline the Work Control Process

ORP Lead: M. Royack

CH2M HILL Lead: W. Pettigrew

End State Description: (Objective and Improvement Gained)

Work packages that remove current barriers resulting in excessive time and effort.

Tank Farms Emergent Work teams in place.

More efficient and timely development of work packages or other mechanisms that result in getting more work done.

Current Condition: (Status and Issues that must be Addressed)

Current work package planning based on degree of hazard vs. work complexity.

Development and review of work package takes too long, partially credited to serial versus parallel reviews and inefficient method to electronically route work packages in the review process.

Work package taken to field is cumbersome due to its bulk and size.

Construction work packages not differentiated from internal work packages, although a different process would be more appropriate.

Current system includes an inefficient method for using work packages that have identical or like work scope.

Allowing Routine Work Requests to be used on safety class systems requires ORP approval.

Strategy Outline: (high level)

Team formed of work package users, developers and review organizations to develop revised process.

Overview group formed consisting of involved organizations, HAMTC safety representatives, and ORP to guide development and sanction new process.

Formality of work instructions will be based on job complexity vs. degree of potential hazard. A graded approach will be used, starting at verbal instructions, then using Routine Work Requests, then allowing for use of Repeat Work Packages and finally requiring the development of formal work instructions with a Work Package.

Following procedure approval, all users will be trained on the new process to be implemented in January 2003.

Action Plan: (Actions Required, By When, Assigned to Whom)

1. Establish working group and overview team.

Date: 10/1/02 - Complete

Assigned to: D. Amerine

MAAP 5.5 – Streamline the Work Control Process (2 sheets)

MAAP 5.5 – Continued

2. New Work Control Procedure
Date: 11/15/02 - Complete Assigned to: W. Pettigrew
3. Complete training
Date: 12/30/02 - Complete Assigned to: W. Pettigrew
4. ORP approve revised work control process
Date: 1/16/03 - Complete Assigned to: J. Swailes
5. Implement new work control process
Date: 1/16/03 - Complete Assigned to: W. Pettigrew

MAAP 5.6 – Align ORP and CH2M HILL Organizations and Resources

MISSION ACCELERATION ACTION PLAN

Initiative: Align ORP and CH2M HILL Organizations and Resources

ORP Lead: D. Noyes

CH2M HILL Lead: P. Hickerson

End State Description: (Objective and Improvement Gained)

CH2M HILL organization is aligned with the accelerated mission.

ORP organization is aligned to provide oversight of the accelerated mission.

ORP and CH2M HILL roles and responsibilities as site owner and performing organization are well defined, understood and implemented.

Current Condition: (Status and Issues that must be Addressed)

CH2M HILL organization is not focused on key elements of mission acceleration.

ORP organization does not encompass mission acceleration.

Roles and responsibilities are not well understood. Differing visions exist regarding the level of oversight and day-to-day management that ORP should perform, and the level of decision-making and control that CH2M HILL should perform.

Strategy Outline: (high level)

CH2M HILL will complete organizational realignment to the accelerated mission.

ORP and CH2M HILL roles and responsibilities will be defined, disseminated, and implemented.

Decision authority will be at ORP, wherever possible (minimize management by HQ oversight groups).

Action Plan: (Actions Required, By When, Assigned to Whom)

1. Define organizational roles and responsibilities for ORP and CH2M HILL at the contract level

Date: 2/14/03 - Complete

Assigned To: D. Cartmell / ORP

2. Develop organizational interface alignment map representative of ORP and CH2M HILL.

Date: 4/30/03

Assigned To: T. D. Taylor

3. Complete CH2M HILL organizational realignment

Date: 5/16/03

Assigned To: W. Ross

MAAP 5.7 – Modify the Contract and Streamline Requirements (2 sheets)

MISSION ACCELERATION ACTION PLAN

Initiative: Modify Contract and Streamline Requirements

ORP Lead: J. O'Connor

CH2M HILL Lead: D. Cartmell

End State Description: (Objective and Improvement Gained)

WBS is aligned to support mission objectives.

Contract includes minimum applicable requirements – non-value-added Orders, DEARs, FARs are eliminated. Show that a requirement applies before invoking it.

Contract minimizes reporting requirements and frequency.

Contract allows maximum flexibility for procurement and outsourcing to complete work scope.

Contract allows use of affiliates equivalent to self-performance of work.

ORP responds to CH2M HILL required submittals within 30 days.

Current Condition: (Status and Issues that must be Addressed)

WBS reflects ongoing operation rather than closure acceleration mission.

SRIDS include more than minimum requirements for the current mission. A requirement is assumed to apply unless shown otherwise, rather than vice versa.

Reporting is excessive, often required in several formats without adding information.

Procurement process is complex, constraints on subcontracts, outsourcing, etc. often are designed to achieve goals other than effective and efficient completion of work scope.

Utilization of affiliates requires the same procurement process as other contracts.

Response period to submittals can be lengthy.

Strategy Outline: (high level)

Create new WBS based on acceleration mission.

In concert with DOE\HQ review of orders/requirements to minimize the compliance set, ORP and CH2M Hill will identify current requirements that do not add value in the completion of work.

Start with the need for reporting (what is achieved by a report). Identify minimum reporting requirements, format, and frequency. Use same report to meet several needs where possible.

Eliminate requirements and non-scope related goals associated with subcontracting and procurement.

Provide advance information on content of submittals to facilitate a rapid response.

MAAP 5.7 – Modify the Contract and Streamline Requirements (2 sheets)

MAAP 5.7 – Continued

Action Plan: (Actions Required, By When, Assigned to Whom)

1. Technical teams develop new WBS and associated baseline.
Date: 10/15/02 - Complete Assigned to: D. Noyes (ORP)/R. Millikin
2. Joint ORP/CH2M HILL team to identify appropriate subcontracting/procurement requirements.
Date: 12/13/02 - Complete Assigned to: J. O'Connor (ORP)/R. Wood
3. Simplify Affiliate contracting process
Date: **12/13/02** - Complete Assigned to: J. O'Connor (ORP)/R. Wood
4. Subject matter experts review and identify requirements that do not add value, as input to the DOE\HQ review process.
Date: 1/15/03 - Complete Assigned to: R. Wood
5. Modify the CH2M HILL contract to reflect changes.
Date: 4/4/03 Assigned to: D. Cartmell/L. Erickson (ORP)
6. Define process that will enable a 30-day response period for required submittals.
Date: 4/30/03 Assigned to: D. Cartmell/L. Erickson (ORP)

