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Tank Waste Remediation System Fiscal Year 1999 Multi-Year Work Plan WBS 1.1

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Assistant Secretary for Environmental Management

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B.4 Retrieval (RL-TW04)

B.4.1.0 Retrieval Technical Baseline

This section describes the technical baseline for this project. It identifies the mission, the end point targets, the site major facilities, technical logic, functions, requirements, and forecasts for this project.

B.4.1.1 Retrieval Mission

The mission of the Retrieval Project is, "in an environmentally sound, safe, secure, and cost-effective manner, to:

1. Retrieve wastes from single-shell tanks, double-shell tanks, and designated miscellaneous underground storage tanks;
2. Provide waste to privatization contractors for processing; and
3. Close those tanks in accordance with regulatory requirements."

The Retrieval Project will establish the functions and requirements and install the equipment needed to deliver the proper waste feed on schedule to the private immobilization contractors for Phase I Privatization, and transition the waste retrieval and treatment to private contractors for Phase II Privatization.

The Tank Waste Remediation System (TWRS) Environmental Impact Statement Record of Decision calls for retrieval of wastes from all 149 single-shell tanks (SSTs), 28 double-shell tanks (DSTs), and miscellaneous underground storage tanks (MUSTs) and to close these tanks in accordance with regulatory requirements. Until all waste is retrieved, the DSTs must function to store and prepare waste retrieved from SSTs and MUSTs for waste disposal facilities.

B.4.1.2 Retrieval End Point Targets from Hanford Strategic Plan

- Remove Central Plateau (200 Area) non-essential, surplus buildings and facilities that don't have identified post-cleanup uses.
- Retrieve tank wastes to the extent needed for tank closure, divide into high level and low activity fractions and immobilize.
- After the waste has been retrieved from the tanks, the tank farms (including the tanks) will be closed.

B.4.1.3 Retrieval Major Facilities

B.4.1.3.1 Tank Farm System Facility

B.4.1.3.1.1 Tank Farm System Facility Description

The Tank Farm System consists of the new and existing equipment required to operate the SST farms and DST

farms for the entire tank farm mission. The Tank Farm System is comprised of the following systems located in the 200 Area Central Plateau of the Hanford Site:

- Double Shell Tanks (DSTs) grouped as follows:
  (a) 25 tanks in five separate tank farms located in the 200 East Area (AN, AP, AW, AY & AZ);
  (b) 3 tanks in one tank farm located in the 200 West Area (SY);
  (c) Double Contained Receiver Tanks (DCRTs) in various 200 Area locations (244-TX, 244-BX, 244-U, 244-S, 244-A);
  (d) 200 Area vaults (244-AR, 244-CR, 209-E);
  (e) The cross-site transfer system Vent Station Catch Tank (241-EW-151); and

- Single Shell Tanks (SSTs) grouped as follows:
  (a) 67 tanks in six separate tank farms located in the 200 East Area (A, AX, B, BX, BY & C);
  (b) 82 tanks in six separate tank farms located in the 200 West Area (S, SX, T, TX, TY and U);
  (c) Miscellaneous Underground Storage Tanks; and
  (d) SST retrieval support facilities
  (e) Future Waste Receiver Facilities (WRFs) to support retrieval

- Waste Transfer System network that includes:
  (a) Underground waste transfer network including the cross-site transfer system; and
  (b) Low activity waste receiving and unloading facility (204-AR)

- Retrieval Systems which includes the hardware required to mobilize/alter the wastes stored in SSTs and DSTs such that the stored wastes can be transferred to the DSTs and on to the treatment facilities.

- SST and DST Closure Systems which include any hardware required to complete closure actions.

- Utilities Distribution System inside tank farms which includes the hardware required to distribute electrical power, service/raw water, steam and potable water.

- Monitoring and control systems in support of tank farm operations and closure including vadose zone.

B.4.1.3.1.2 Tank Farm System Facility Technical Logic:

The Department of Energy (DOE), in partnership with its contractors, shall plan, acquire, operate, maintain, and dispose of physical assets as valuable national resources. Stewardship of these physical assets shall be accomplished in a cost-effective manner to meet the DOE mission. This shall incorporate industry standards, a graded approach, and performance objectives.

This diagram displays the primary work activities (functions) that are performed in each life cycle phase of the facility. The diagram also reflects the technical logic (functional flow) for the facility through its remaining life cycle phases.

Project responsibility for the life cycle phases of the Tank Farm System components are assigned as follows:

Table B.4-1 Responsibility Assignment Matrix for Tank Farm System

Facility	Life Cycle Phase *								
	Program Planning	Pre Conceptual	Conceptual	Execute			O&M	Close Out	
				Design	Construction	Turnover		Post Ops	D&D
Tank Farm System	(tbd)						**RL-TW03** RL-TW01 RL-TW02 RL-TW04	**RL-TW03**	**RL-TW04**

* RL PBS Identifier Index:

RL-TW01 - Tank Waste Characterization
RL-TW02 - Tank Safety Issue Resolution
RL-TW03 - Tank Farm Operations
RL-TW04 - Retrieval

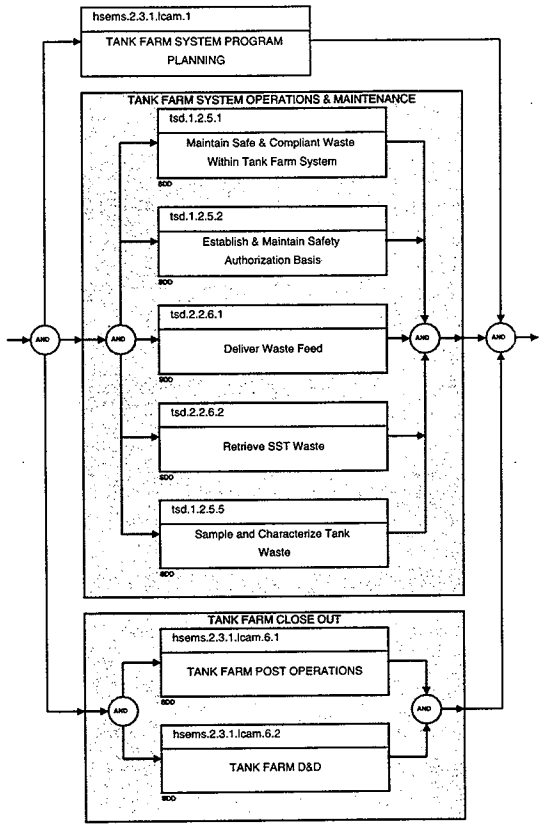

Figure B.4_1 TANK FARM

B.4.1.3.1.3 Tank Farm System Life Cycle Functional Descriptions and Requirements

The Life Cycle Functional Descriptions table describes the life cycle phases and the functions performed during each phase. The Life Cycle Requirements table describes the requirements that trace to the functions listed in the Life Cycle Functional Descriptions table.

Table B.4-2 Tank Farm System Life Cycle Functional Descriptions

hsems.2.3.1.icam.5 TANK FARM SYSTEM OPERATIONS & MAINTENANCE

tsd.2.2.6.1 Deliver Waste Feed

Delivery of Waste Feed includes the activities:

Waste feed delivery system definition, verification of existing components, deployment/startup of new components, preparation (e.g., adjustments, etc.), qualification, removal, and transfers of waste from the Tank Farm System to a treatment facility. Removal of waste includes preparation and qualification of waste for transfer to the private contractor, verification that the waste is compatible with waste in the destination tank, control of the transfer route, containment of waste during transfer, cleaning of the route when the transfer is complete, and material accountability during transfer. Starts with selection of the feeds and the feed tanks. The delivery of waste feed will continue until the DST mission is complete and they are sufficiently cleaned out to allow closure.

DELIVER WASTE FEED (1.01.04.01.01) SCOPE OF WORK:

Scope includes Waste feed delivery system definition, verification of existing components, deployment/startup of new components, preparation (e.g., adjustments, etc.), qualification, removal, and transfers of waste from theTank Farm System to a treatment facility. Removal of waste includes preparation and qualification of waste for transfer to the private contractor, verification that the waste is compatible with waste in the destination tank, control of the transfer route, containment of waste during transfer, cleaning of the route when the transfer is complete, and material accountability during transfer. Starts with selection of the feeds and the feed tanks. The delivery of waste feed will continue until the DST mission is complete and they are sufficiently cleaned out to allow closure.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:
· Central Plateau tank waste shall be retrieved to the extent needed for tank closure
· Tank waste shall be separated into High Level and Low Activity fractions.
· Start construction of HLW pretreatment facility. Due Date: 07/2001

Deliver Waste Feed includes the following activities: WFD Project Management; WFD Feed/Process System Definition; WFD Retrieval System Definition; Project W-151 (AZ-101 Mixer Pump Test); Project W-211 (ITRS); Project W-521 (AZ-101, AN-102, AN-107 Retrieval); Project W-522 (Phase 1 DST Retrieval Systems); Project W-TBD-102-C and 104-C Retrieval; Future DST Retrieval and Transfer Projects; Phase 1 Retrieval Operations and C-106 Sluicing; Phase 2 DST Retrieval Operations; Phase 1 Safety Basis; and Phase 1 Characterization.

The detailed analysis required to assure 80% confidence in achieving the schedules will be performed for the rebaselining being done in FY 99. In the interim, the $248M for risk reduction identified in the Readiness to Proceed was added to the schedule.

WFD Project Management (1.01.04.01.01.01) Scope Includes:

Preparation of strategy documents and plans; development and maintenance of cost account plans and schedules; monthly status of schedules and monitoring cost, and monthly reporting of cost/schedule performance; preparation and presentation of monthly TWR status briefings to FDH and RL; participation in various external reviews, e.g. safety reviews, regulators and oversight groups; interaction with the privatization contractor(s) as necessary to ensure TWRS is an integrated, life-cycle program and coordination of construction plans, including conducting reviews of program deliverables, i.e. reports, engineering studies, and other milestone media.

WFD Feed/Process System Definition (1.01.04.01.01.02) Scope Includes:

Developing waste feed staging requirements and plans, and developing the bases for project definition and criteria and includes:

Table B.4-2 Tank Farm System Life Cycle Functional Descriptions (Continued)

Technical Management Support
Privatization Interface Support
Process Testing
Updating Feed Staging Operation and Utilization Plan
Developing System Design Concept

WFD Retrieval System Definition (1.01.04.01.01.03) Scope Includes:

Preparation and maintenance of tank retrieval specification documents and plans for use by retrieval projects; defining and development of Project Design Criteria; and developing the technical bases for Phase 1 operations; implementation of System Engineering activities, support the retrieval systems technical management and integration; and preparation of feasibility studies for new projects, which will be supported by various technical analyses, alternative generation analysis, pump optimization activities and support for new technologies.

Project W-151 (AZ-101 Mixer Pump Test) (1.01.04.01.01.04) Scope Includes:

All activities associated the completion of Project W-151, Tank 101-AZ Waste Retrieval System, and the subsequent 101-AZ mixer pump test. The project has installed two 300-hp mixer pumps, supporting system, and associated monitoring systems to demonstrate solids mobilization in this double-shell tank. There are three major sub-elements with this work; (1) completion of all readiness activities, (2) the installation of the radiation-sensitive components and engineering closeout of Project W-151, and (3) performance of the mixer pump test.

Project W-211 (ITRS) (1.01.04.01.01.05) Scope Includes:

Initial Tank Retrieval Systems (ITRS), is a fiscal year (FY) 1994 Major Systems Acquisition that will provide systems for retrieval of radioactive wastes from selected double-shell tanks (DST). The contents of these tanks are a combination of supernatant liquids and settled solids. To retrieve waste from the tanks, it is first necessary to mix the liquid and solids prior to transferring the waste to other DSTs, from which the waste will be delivered to the privatization contractor. The ITRS will provide systems to mobilize the settled solids and transfer the wastes out of the tanks. In so doing, ITRS provides feed for the privatization contractor, allows for consolidation of tank solids to manage space within existing DST storage capacity, and supports continued safe storage of tank waste.

Project W-521 (AZ-101, AN-102, AN-107 Retrieval) (1.01.04.01.01.06) Scope Includes:

This project is an expense and CENRTC funded project that will provide high-level waste slurry transfer capability from 101-AZ, and low waste supernate transfer capabilities from 102-AN and 107-AN. Mixing for tank 101-AZ to suspend the sludge into a slurry is provided by the Project W-151 mixer pumps, which are currently installed in the tank and are awaiting testing.

Project W-522 (Phase I DST Retrieval Systems) (1.01.04.01.01.07) Scope Includes:

This project is a fiscal year 2005 Line Item that will provide complete systems for the retrieval of waste from tanks 101-SY and 101-AW. The contents of the tanks are a mixture of supernate and settled solids. To retrieve waste form the tanks, it is first necessary to suspend the solids by mixing. Once mixed the waste will then be delivered to the privatization contractor. Project W-522 will provide systems to mobilize and transfer the wastes from these tanks to the next step in the Waste Feed Delivery System.

W-TBD 102-C and 104-C Retrieval (1.01.04.01.01.08) Scope Includes:

This project will provide the systems and equipment to mobilize the waste, transfer the waste through the temporary pipe line to 102-AY installed by project W-320, and detect, minimize, and respond to any tank leakage. These tanks contain high level waste sludges to provide HLW feed to the privatization contractor.

An assumption was made that this will be an expense funded project rather than a capital line item. There is

Table B.4-2 Tank Farm System Life Cycle Functional Descriptions (Continued)

significant schedule risk if it is determined that this is not appropriate.

Future DST Retrieval and Transfer Projects (1.01.04.01.01.09) Scope Includes:

This placeholder project is reserved for any work scope which is not currently identified, but which may be identified in work underway to define the Waste Feed Delivery System.

Phase 1 Retrieval Operations and C-106 Sluicing (1.01.04.01.01.10) Scope Includes:

Operating the Waste Retrieval Sluicing System (WRSS) to remove the soft sludge in single shell tank 241-C-106 (C-106) in two campaigns. The WRSS will retrieve and transfer high-heat sludge from C-106 to double shell tank 241-AY-102 (AY-102), which is designed for high-heat waste storage. Removal of the first two feet (Campaign number 1) will remove enough heat generating material from C-106, and reduce the sludge thickness, such that the remaining waste in C-106 will not over-heat the tank sufficiently to cause structural failure as is currently possible if approximately 6,000 gallons of water is not added to the tank each month for evaporative cooling.

Phase 2 DST Retrieval Operations (1.01.04.01.01.11) Scope Includes:

Operation of the DST System during Phase 2 by a private contractor.

Phase 1 Safety Basis (1.01.04.01.01.12) Scope Includes:

Developing an Authorization Basis amendment that encompasses Waste Feed Delivery Phase 1B activities. HNF-1722, Tank Waste Remediation System Retrieval Authorization Basis Amendment Task Plan, identifies the scope of work, tasks and deliverables, responsibilities, and schedule for this Authorization Basis amendment.

Phase 1 Characterization (1.01.04.01.01.13) Scope Includes:

This scope is described in Waste Characterization Project (TW01).

tsd.2.2.6.2 Retrieve SST Waste

This function retrieves and transfers wastes from the SSTs to the DSTs for further waste processing. This function starts with system definition and includes design, construction and startup and operation of SST retrieval systems. This function is complete when tank wastes from the SSTs and MUSTs have been removed and transferred to the DSTs leaving the SSTs and MUSTs sufficiently cleaned out to permit closure.

Retrieval of wastes from SSTs in accordance with the listed technical baseline requirements assumes that DST receiver facility storage space is available to accept retrieved wastes in accordance with the required SST retrieval schedule. This assumption imposes significant risk to the program's ability to comply with the listed technical baseline requirements. The SST Program has initiated action in FY99 to resolve the uncertainities associated with this assumption by the end of the fiscal year

hsems.2.3.1.lcam.6 TANK FARM CLOSE OUT

Table B.4-2 Tank Farm System Life Cycle Functional Descriptions (Continued)

hsems.2.3.1.lcam.6.2 TANK FARM D&D

tsd.2.2.5.2.1 D&D Tank Farm Facility

At the completion of the Operational mission (post transition) of the Tank Farm System, system elements are decontaminated/stabilized removing/fixing remaining radioactive and/or hazardous contamination from the facilities, equipment or soils by washing, heating, chemical action, mechanical cleaning or other techniques to meet requirements. Tank Farm operable units will be closed in an approved manner and all remaining Tank Farm System elements will be dispositioned appropriately, by dismantling, demolition, disposal, stabilization or reuse. Post closure monitoring will be initiated following closure of the Tank Farms.

Decisions on how tank farms will be closed will be reached through a NEPA process (62FR 8693, Feb 1997). Closure decisions will address tanks (including how much waste must be removed for closure), ancillary equipment, and tank farm soils. Closure decisions for TWRS tank farms must be made in the context of final decisions on the end state for the Hanford Site. Accordingly, TWRS closure has interfaces with the Hanford Site Environmental Restoration Program (ER) which has responsibility for cleanup of contaminated sites outside tank farm boundaries, and cleanup/monitoring of groundwater beneath tank farms. Although final decisions on closure of TWRS facilities have not been made, the baseline planning assumption is that tank farms will be closed as "landfill" under RCRA regulations (i.e. with residual contamination in tanks ancillary equipment, and soils), and that DOE will have regulatory responsibility for stabilization of the radioactive constituents, under its waste management rules and DOE Orders. Per the Record of Decision for the TWRS EIS (62FR 8693) additional vadose zone characterization and closure technology development will be required prior to initiating the NEPA process for final decisions on closure.

Table B.4-3 Tank Farm System Life Cycle Requirements

Requirement	Function
Central Plateau facilities other than processing facilities shall be dismantled	tsd.2.2.5.2.1
Central Plateau tank farms shall be closed	tsd.2.2.5.2.1
Single Shell Tank farms shall be closed by Sep 30, 2024	tsd.2.2.5.2.1
Central Plateau tank waste shall be retrieved to the extent needed for tank closure	tsd.2.2.6.1 tsd.2.2.6.2
Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment	tsd.2.2.5.2.1
Tank waste shall be separated into High Level and Low Activity fractions.	tsd.2.2.6.1
Complete SST waste retrieval demonstration. Due Date: 9/30/2003	tsd.2.2.6.2
Initiate final retrieval demonstration of C-106. Due Date: 6/30/2002	tsd.2.2.6.2
Provide initial single-shell tank retrieval systems. Due Date: 11/30/2003	tsd.2.2.6.2
Complete construction for the initial SST retrieval systems. Due Date: 6/30/2003	tsd.2.2.6.2
Retrieve waste from all remaining single-shell tanks. Due Date: 9/30/2018	tsd.2.2.6.2
Initiate tank waste retrieval from one single-shell tank. Due Date: 12/31/2003	tsd.2.2.6.2
Initiate tank waste retrieval from two additional single-shell tanks. Due Date: 9/30/2004	tsd.2.2.6.2
Initiate tank waste retrieval from three additional single-shell tanks. Due Date: 9/30/2005	tsd.2.2.6.2
Initiate tank waste retrieval from four additional single-shell tanks. Due Date: 9/30/2006	tsd.2.2.6.2
Initiate tank waste retrieval from five additional single-shell tanks. Due Date: 9/30/2007	tsd.2.2.6.2
Initiate tank waste retrieval from five additional single-shell tanks. Due Date: 9/30/2008	tsd.2.2.6.2
Initiate tank waste retrieval from seven additional single-shell tanks. Due Date: 9/30/2009	tsd.2.2.6.2
Initiate tank waste retrieval from eight additional single-shell tanks. Due Date: 9/30/2010	tsd.2.2.6.2
Initiate tank waste retrieval from ten additional single-shell tanks. Due Date: 9/30/2011	tsd.2.2.6.2
Initiate tank waste retrieval from 12 additional single-shell tanks. Due Date: 9/30/2012	tsd.2.2.6.2
Initiate tank waste retrieval from 14 additional single-shell tanks. Due Date: 9/30/2013	tsd.2.2.6.2
Initiate tank waste retrieval from 17 additional single-shell tanks. Due Date: 9/30/2014	tsd.2.2.6.2
Initiate tank waste retrieval from 20 additional single-shell tanks. Due Date: 9/30/2015	tsd.2.2.6.2
Initiate tank waste retrieval from 20 additional single-shell tanks. Due Date: 9/30/2016	tsd.2.2.6.2
Initiate tank waste retrieval from 20 additional single-shell tanks. Due Date: 9/30/2017	tsd.2.2.6.2

Table B.4-3 Tank Farm System Life Cycle Requirements (Continued)

Requirement	Function
Initiate closure actions on an operable unit or tank farm basis. Closure shall follow completion of the retrieval actions under proposed milestone M-45-05. Closure will be defined in an approved closure plan for the demonstration farm. Final closure is defined as regulatory approval of completion of closure actions. Due Date: 3/31/2012.	tsd.2.2.5.2.1
Complete closure actions on one operable unit or tank farm. Due Date: 3/31/2014	tsd.2.2.5.2.1
Establish full scale capability for mitigation of waste tank leakage during retrieval sluicing operations. Due Date: 6/30/2003	tsd.2.2.6.2
Complete demonstration and installation of leak monitoring and mitigation systems for initial SST retrieval. Due Date: 6/30/2003	tsd.2.2.6.2
Start construction of HLW pretreatment facility. Due Date: 6/30/2001	tsd.2.2.6.1

B.4.1.3.1.4 Tank Farm System Boundary Diagram

This section identifies the other facilities (onsite and offsite) that have an interface (either input or output) with this facility.

Table B.4-4 Tank Farm System Boundary Diagram

Major Input Interfaces	Facility	Major Output Interfaces
External Interfaces -None- Hanford Site Environmental System Interfaces Water System	Tank Farm System	External Interfaces -None- Hanford Site Environmental System Interfaces Central Waste Complex LAW Treatment Facility, Phase 2 LAW/HLW Plant, Phase 1 Low-Level Waste Burial Grounds

B.4.1.3.1.5 Tank Farm System Interface Descriptions and Summary Level Forecasts

This section contains the material, waste, and infrastructure forecasts for this facility. It identifies the interface type, the period of time for the forecasts, the life cycle total forecast value, and the execution year forecast quantity.

OFFSITE INPUTS

-None-

ONSITE INPUTS

Table B.4-5 Onsite Inputs for Tank Farm System

Stream	Category	Period	Total	FY99	Units
hsems.5.1.2 Water System					
Raw Water for SST Retrieval	HLW	1999 - 20018	280000	2530.0	cubic meters
Raw Water for Deliver Waste Feed	HLW	2004 - 2016	23100		cubic meters

OFFSITE OUTPUTS

-None-

ONSITE OUTPUTS

Table B.4-6 Onsite Outputs for Tank Farm System

Stream	Category	Period	Total	FY99	Units
hsems.2.2.2 LAW/HLW Plant, Phase 1					
LAW/HLW Plant, Phase I HLW Feed	HLW	2007 - 2018	14000		cubic meters
LAW/HLW Plant, Phase I LAW Feed	HLW	2008 - 2018	32200		cubic meters
hsems.2.2.3 LAW Treatment Facility, Phase 2					
LAW Treatment Facility, Phase II Feed	HLW	2012 - 2028	531000		cubic meters
hsems.2.3.5.1 Central Waste Complex					
SST LLE, RH-TRUM	RH TRUM	2001 - 2003	491.0		cubic meters
SST RET, CH-LLMW-III	CH LLMW III	2004 - 2017	506.0		cubic meters
SST LLE, RH-LLMW-III	RH LLMW III	2001 - 2017	22500		cubic meters
SST RET, CH-LLMW-I	CH LLMW I	2004 - 2017	385.0		cubic meters
SST RET, CH-LLW-I	CH LLW I	2004 - 2017	603.0		cubic meters
TWP W211, CH-LLMW-III	CH LLMW III	1999 - 2005	193.0	19.7	cubic meters
SST RET, RH-LLMW-III	RH LLMW III	2004 - 2017	232.0		cubic meters
SST RET, RH-LLMW-I	RH LLMW I	2004 - 2017	154.0		cubic meters
SST LLE, CH-TRUM	CH TRUM	2001 - 2003	491.0		cubic meters
DST RET, CH-LLMW-I	CH LLMW I	2009 - 2018	1140		cubic meters
TWP W211, RH-LLMW-III	RH LLMW III	1999 - 2028	2820	144.0	cubic meters
DST RET, RH-LLMW-III	RH LLMW III	2009 - 2021	1760		cubic meters
TWP W211, RH-TRUM	RH TRUM	2005 - 2015	183.0		cubic meters
TWP W211, CH-LLMW-I	CH LLMW I	1999 - 2005	612.0	49.0	cubic meters
hsems.2.4.1.1 Low-Level Waste Burial Grounds					
SST D&D Closure CH-LLW-I	CH LLW I	2012 - 2024	8590		cubic meters
DST D&D Closure CH-LLW-I	CH LLW I	2026 - 2035	8590		cubic meters
SST RET, CH-LLW-I	CH LLW I	2004 - 2017	603.0		cubic meters

B.4.1.4 Drivers for Retrieval

Table B.4-7 Source Documents for Retrieval

Name	Title
DE-AC06-96RL13200	Project Hanford Management Contract, Fluor Daniel Hanford, Inc.
DOE/EIS-0222D	Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan
DOE/RL-89-10	Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)
DOE/RL-96-92	Hanford Strategic Plan
DOE/RL-97-55	Hanford Site Environmental Management Specification

B.4.2.0 Retrieval Work Breakdown Structure (WBS)

B.4.2.1 Retrieval WBS Hierarchy

RL PBS	RL WBS	Title
RL-TW04	1.01.04	Retrieval
	1.01.04.01	Tank Farm System
	1.01.04.01.01	Deliver Waste Feed
	1.01.04.01.02	Retrieve SST Waste
	1.01.04.01.03	D&D Tank Farm Facility

B.4.2.2 Retrieval WBS Dictionary

The following pages contain the WBS dictionary for RL-TW04

B.4-8 WBS Dictionary for Deliver Waste Feed

1. Dictionary Title Deliver Waste Feed		2. Date 9 November 1998	3. PBS Number RL-TW04	4. Dict Rev
5. WBS No. 1.01.04.01.01	6. B & R No. EW02J119		7. Baseline CR No.	
8. Organization Name Retrieval				

9. Scope of Work

Delivery of Waste Feed includes the activities:

Waste feed delivery system definition, verification of existing components, deployment/startup of new components, preparation (e.g., adjustments, etc.), qualification, removal, and transfers of waste from the Tank Farm System to a treatment facility. Removal of waste includes preparation and qualification of waste for transfer to the private contractor, verification that the waste is compatible with waste in the destination tank, control of the transfer route, containment of waste during transfer, cleaning of the route when the transfer is complete, and material accountability during transfer. Starts with selection of the feeds and the feed tanks. The delivery of waste feed will continue until the DST mission is complete and they are sufficiently cleaned out to allow closure.

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- Tank waste shall be separated into High Level and Low Activity fractions.
- Start construction of HLW pretreatment facility. Due Date: 07/2001

Deliver Waste Feed includes the following activities: WFD Project Management; WFD Feed/Process System Definition; WFD Retrieval System Definition; Project W-151 (AZ-101 Mixer Pump Test); Project W-211 (ITRS); Project W-521 (AZ-101, AN-102, AN-107 Retrieval); Project W-522 (Phase 1 DST Retrieval Systems); Project W-TBD-102-C and 104-C Retrieval; Future DST Retrieval and Transfer Projects; Phase 1 Retrieval Operations and C-106 Sluicing; Phase 2 DST Retrieval Operations; Phase 1 Safety Basis; and Phase 1 Characterization.

The detailed analysis required to assure 80% confidence in achieving the schedules will be performed for the rebaselining being done in FY 99. In the interim, the $248M for risk reduction identified in the Readiness to Proceed was added to the schedule.

WFD Project Management (1.01.04.01.01.01) Scope Includes:

Preparation of strategy documents and plans; development and maintenance of cost account plans and schedules;

B.4-8 WBS Dictionary for Deliver Waste Feed (Continued)

1. Dictionary Title Deliver Waste Feed		2. Date 9 November 1998	3. PBS Number RL-TW04	4. Dict Rev
5. WBS No. 1.01.04.01.01	6. B & R No. EW02J119		7. Baseline CR No.	
8. Organization Name Retrieval				

monthly status of schedules and monitoring cost, and monthly reporting of cost/schedule performance; preparation and presentation of monthly TWR status briefings to FDH and RL; participation in various external reviews, e.g. safety reviews, regulators and oversight groups; interaction with the privatization contractor(s) as necessary to ensure TWRS is an integrated, life-cycle program and coordination of construction plans, including conducting reviews of program deliverables, i.e. reports, engineering studies, and other milestone media.

WFD Feed/Process System Definition (1.01.04.01.01.02) Scope Includes:

Developing waste feed staging requirements and plans, and developing the bases for project definition and criteria and includes:

Technical Management Support
Privatization Interface Support
Process Testing
Updating Feed Staging Operation and Utilization Plan
Developing System Design Concept

WFD Retrieval System Definition (1.01.04.01.01.03) Scope Includes:

Preparation and maintenance of tank retrieval specification documents and plans for use by retrieval projects; defining and development of Project Design Criteria; and developing the technical bases for Phase 1 operations; implementation of System Engineering activities, support the retrieval systems technical management and integration; and preparation of feasibility studies for new projects, which will be supported by various technical analyses, alternative generation analysis, pump optimization activities and support for new technologies.

Project W-151 (AZ-101 Mixer Pump Test) (1.01.04.01.01.04) Scope Includes:

All activities associated the completion of Project W-151, Tank 101-AZ Waste Retrieval System, and the subsequent 101-AZ mixer pump test. The project has installed two 300-hp mixer pumps, supporting system, and associated monitoring systems to demonstrate solids mobilization in this double-shell tank. There are three major sub-elements with this work; (1) completion of all readiness activities, (2) the installation of the radiation-sensitive components and engineering closeout of Project W-151, and (3) performance of the mixer pump test.

Project W-211 (ITRS) (1.01.04.01.01.05) Scope Includes:

Initial Tank Retrieval Systems (ITRS), is a fiscal year (FY) 1994 Major Systems Acquisition that will provide systems for retrieval of radioactive wastes from selected double-shell tanks (DST). The contents of these tanks are a combination of supernatant liquids and settled solids. To retrieve waste from the tanks, it is first necessary to mix the liquid and solids prior to transferring the waste to other DSTs, from which the waste will be delivered to the privatization contractor. The ITRS will provide systems to mobilize the settled solids and transfer the wastes out of the tanks. In so doing, ITRS provides feed for the privatization contractor, allows for consolidation of tank solids to manage space within existing DST storage capacity, and supports continued safe storage of tank waste.

B.4-8 WBS Dictionary for Deliver Waste Feed (Continued)

1. Dictionary Title Deliver Waste Feed		2. Date 9 November 1998	3. PBS Number RL-TW04	4. Dict Rev
5. WBS No. 1.01.04.01.01	6. B & R No. EW02J119		7. Baseline CR No.	
8. Organization Name Retrieval				

Project W-521 (AZ-101, AN-102, AN-107 Retrieval) (1.01.04.01.01.06) Scope Includes:

This project is an expense and CENRTC funded project that will provide high-level waste slurry transfer capability from 101-AZ, and low waste supernate transfer capabilities from 102-AN and 107-AN. Mixing for tank 101-AZ to suspend the sludge into a slurry is provided by the Project W-151 mixer pumps, which are currently installed in the tank and are awaiting testing.

Project W-522 (Phase I DST Retrieval Systems) (1.01.04.01.01.07) Scope Includes:

This project is a fiscal year 2005 Line Item that will provide complete systems for the retrieval of waste from tanks 101-SY and 101-AW. The contents of the tanks are a mixture of supernate and settled solids. To retrieve waste form the tanks, it is first necessary to suspend the solids by mixing. Once mixed the waste will then be delivered to the privatization contractor. Project W-522 will provide systems to mobilize and transfer the wastes from these tanks to the next step in the Waste Feed Delivery System.

W-TBD 102-C and 104-C Retrieval (1.01.04.01.01.08) Scope Includes:

This project will provide the systems and equipment to mobilize the waste, transfer the waste through the temporary pipe line to 102-AY installed by project W-320, and detect, minimize, and respond to any tank leakage. These tanks contain high level waste sludges to provide HLW feed to the privatization contractor.

An assumption was made that this will be an expense funded project rather than a capital line item. There is significant schedule risk if it is determined that this is not appropriate.

Future DST Retrieval and Transfer Projects (1.01.04.01.01.09) Scope Includes:

This placeholder project is reserved for any work scope which is not currently identified, but which may be identified in work underway to define the Waste Feed Delivery System.

Phase 1 Retrieval Operations and C-106 Sluicing (1.01.04.01.01.10) Scope Includes:

Operating the Waste Retrieval Sluicing System (WRSS) to remove the soft sludge in single shell tank 241-C-106 (C-106) in two campaigns. The WRSS will retrieve and transfer high-heat sludge from C-106 to double shell tank 241-AY-102 (AY-102), which is designed for high-heat waste storage. Removal of the first two feet (Campaign number 1) will remove enough heat generating material from C-106, and reduce the sludge thickness, such that the remaining waste in C-106 will not over-heat the tank sufficiently to cause structural failure as is currently possible if approximately 6,000 gallons of water is not added to the tank each month for evaporative cooling.

Phase 2 DST Retrieval Operations (1.01.04.01.01.11) Scope Includes:

Operation of the DST System during Phase 2 by a private contractor.

B.4-8 WBS Dictionary for Deliver Waste Feed (Continued)

1. Dictionary Title Deliver Waste Feed		2. Date 9 November 1998	3. PBS Number RL-TW04	4. Dict Rev
5. WBS No. 1.01.04.01.01	6. B & R No. EW02J119		7. Baseline CR No.	
8. Organization Name Retrieval				

Phase 1 Safety Basis (1.01.04.01.01.12) Scope Includes:

Developing an Authorization Basis amendment that encompasses Waste Feed Delivery Phase 1B activities. HNF-1722, Tank Waste Remediation System Retrieval Authorization Basis Amendment Task Plan, identifies the scope of work, tasks and deliverables, responsibilities, and schedule for this Authorization Basis amendment.

Phase 1 Characterization (1.01.04.01.01.13) Scope Includes:

This scope is described in Waste Characterization Project (TW01).

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau tank waste shall be retrieved to the extent needed for tank closure
- Tank waste shall be separated into High Level and Low Activity fractions.
- Start construction of HLW pretreatment facility. Due Date: 6/30/2001

B.4-9 WBS Dictionary for Retrieve SST Waste

1. Dictionary Title Retrieve SST Waste		2. Date 30 September 1998	3. PBS Number RL-TW04	4. Dict Rev
5. WBS No. 1.01.04.01.02	6. B & R No. EW02J119		7. Baseline CR No.	
8. Organization Name Retrieval				

9. Scope of Work

This function retrieves and transfers wastes from the SSTs to the DSTs for further waste processing. This function starts with system definition and includes design, construction and startup and operation of SST retrieval systems. This function is complete when tank wastes from the SSTs and MUSTs have been removed and transferred to the DSTs leaving the SSTs and MUSTs sufficiently cleaned out to permit closure.

Retrieval of wastes from SSTs in accordance with the listed technical baseline requirements assumes that DST receiver facility storage space is available to accept retrieved wastes in accordance with the required SST retrieval schedule. This assumption imposes significant risk to the program's ability to comply with the listed technical baseline requirements. The SST Program has initiated action in FY99 to resolve the uncertainities associated with this assumption by the end of the fiscal year

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau tank waste shall be retrieved to the extent needed for tank closure
- Complete SST waste retrieval demonstration. Due Date: 9/30/2003
- Initiate final retrieval demonstration of C-106. Due Date: 6/30/2002
- Provide initial single-shell tank retrieval systems. Due Date: 11/30/2003
- Complete construction for the initial SST retrieval systems. Due Date: 6/30/2003
- Retrieve waste from all remaining single-shell tanks. Due Date: 9/30/2018
- Initiate tank waste retrieval from one single-shell tank. Due Date: 12/31/2003
- Initiate tank waste retrieval from two additional single-shell tanks. Due Date: 9/30/2004
- Initiate tank waste retrieval from three additional single-shell tanks. Due Date: 9/30/2005
- Initiate tank waste retrieval from four additional single-shell tanks. Due Date: 9/30/2006
- Initiate tank waste retrieval from five additional single-shell tanks. Due Date: 9/30/2007
- Initiate tank waste retrieval from five additional single-shell tanks. Due Date: 9/30/2008
- Initiate tank waste retrieval from seven additional single-shell tanks. Due Date: 9/30/2009
- Initiate tank waste retrieval from eight additional single-shell tanks. Due Date: 9/30/2010
- Initiate tank waste retrieval from ten additional single-shell tanks. Due Date: 9/30/2011
- Initiate tank waste retrieval from 12 additional single-shell tanks. Due Date: 9/30/2012
- Initiate tank waste retrieval from 14 additional single-shell tanks. Due Date: 9/30/2013
- Initiate tank waste retrieval from 17 additional single-shell tanks. Due Date: 9/30/2014
- Initiate tank waste retrieval from 20 additional single-shell tanks. Due Date: 9/30/2015
- Initiate tank waste retrieval from 20 additional single-shell tanks. Due Date: 9/30/2016
- Initiate tank waste retrieval from 20 additional single-shell tanks. Due Date: 9/30/2017
- Establish full scale capability for mitigation of waste tank leakage during retrieval sluicing operations. Due Date: 6/30/2003

B.4-9 WBS Dictionary for Retrieve SST Waste (Continued)

1. Dictionary Title Retrieve SST Waste		2. Date 30 September 1998	3. PBS Number RL-TW04	4. Dict Rev
5. WBS No. 1.01.04.01.02	6. B & R No. EW02J119		7. Baseline CR No.	
8. Organization Name Retrieval				

- Complete demonstration and installation of leak monitoring and mitigation systems for initial SST retrieval.
  Due Date: 6/30/2003

B.4-10 WBS Dictionary for D&D Tank Farm Facility

1. Dictionary Title D&D Tank Farm Facility		2. Date 28 October 1998	3. PBS Number RL-TW04	4. Dict Rev
5. WBS No. 1.01.04.01.03	6. B & R No. EW02J119		7. Baseline CR No.	
8. Organization Name Retrieval				

9. Scope of Work

At the completion of the Operational mission (post transition) of the Tank Farm System, system elements are decontaminated/stabilized removing/fixing remaining radioactive and/or hazardous contamination from the facilities, equipment or soils by washing, heating, chemical action, mechanical cleaning or other techniques to meet requirements. Tank Farm operable units will be closed in an approved manner and all remaining Tank Farm System elements will be dispositioned appropriately, by dismantling, demolition, disposal, stabilization or reuse. Post closure monitoring will be initiated following closure of the Tank Farms.

Decisions on how tank farms will be closed will be reached through a NEPA process (62FR 8693, Feb 1997). Closure decisions will address tanks (including how much waste must be removed for closure), ancillary equipment, and tank farm soils. Closure decisions for TWRS tank farms must be made in the context of final decisions on the end state for the Hanford Site. Accordingly, TWRS closure has interfaces with the Hanford Site Environmental Restoration Program (ER) which has responsibility for cleanup of contaminated sites outside tank farm boundaries, and cleanup/monitoring of groundwater beneath tank farms. Although final decisions on closure of TWRS facilities have not been made, the baseline planning assumption is that tank farms will be closed as "landfill" under RCRA regulations (i.e. with residual contamination in tanks ancillary equipment, and soils), and that DOE will have regulatory responsibility for stabilization of the radioactive constituents, under its waste management rules and DOE Orders. Per the Record of Decision for the TWRS EIS (62FR 8693) additional vadose zone characterization and closure technology development will be required prior to initiating the NEPA process for final decisions on closure.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau facilities other than processing facilities shall be dismantled
- Central Plateau tank farms shall be closed
- Single Shell Tank farms shall be closed by Sep 30, 2024
- Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment
- Initiate closure actions on an operable unit or tank farm basis. Closure shall follow completion of the retrieval actions under proposed milestone M-45-05. Closure will be defined in an approved closure plan for the demonstration farm. Final closure is defined as regulatory approval of completion of closure actions. Due Date: 3/31/2012.
- Complete closure actions on one operable unit or tank farm. Due Date: 3/31/2014

B.4.3.1 Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	
1			Hanford Site
1.01			TWRS
1.01.04			Waste Retrieval Project
1.01.04.01			Tank Farm System (Waste Retrieval)
1.01.04.01.01			Deliver Waste Feed
1.01.04.01.01.01			Project Mgmt & Admin
130.B65	01OCT03*	11DEC03	TWRS Management Assessment (LAW)
130.B70	02JAN03*	15MAY03	Prepare Plan/Document for Mgmt Assessment (LAW)
150.704	01OCT98*	30SEP16	Manage Waste Feed Delivery Management
150.715	01OCT98*	30SEP16	WFD Engineering Management Support
150.725	01OCT98*	30SEP16	Prog Engineering Mgmt Support
160.A13	11MAY01*	25SEP01	Prepare Plan/Document for Mgmt Assessment (HLW)
160.A18	21NOV01*	07MAR02	TWRS Management Assessment (HLW)
620.097	01OCT99*	30SEP11	Update WFD Technical Baseline Summary
720.100	01SEP99*	30SEP99	TW04 3161 Costs
720.702	01OCT98*	30SEP16	Manage TWRS Waste Retrieval Division
720.722	01OCT98*	30SEP16	TWR Business Management

FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67

ct Start	01OCT98
ct Finish	08JAN66
Date	01OCT98
Date	17NOV98

Early Bar
Progress Bar
Critical Activity

4BP2

Sheet 1 of 43

Tank Waste Remediation System
PMBS - Life of Project
TW04 - Retrieval

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Activity ID	Early Start	Early Finish	Activity
720.724	01OCT98*	30SEP16	Waste Retrieval Program Analysis & Control
720.740	01OCT98*	28SEP18	TWR/TWRS Integration
720.740LA		30JUL99*	TWR 1.3.5 -Issue Ph 1B Unconstrained Integ Sched T04-99-A41
720.740LB		30SEP99*	TWR 1.3.5 - Issue Ph 1B Constrained Integ Sched T04-99-A42
720.750	01OCT98*	30SEP16	Maintain TWR QA Program
720.760	01OCT98*	30SEP16	TWR CM & Doc Control/Program Improvement
720.900	01OCT98*	28FEB18	TWRS Disposal RL Support
1.01.04.01.01.02			Feed/Process System Definition
120.D34	01OCT98*	28SEP99	Perform Waste Feed Delivery Trade Studies
120.D35	01OCT99*	29FEB00	Perf Max Implied Radionuclide Concentrate Study
120.D38	01OCT98*	30SEP99	Issue WFD O&M Concept Document
120.D38M1		30AUG99*	TWR 1.3.3 O&M CONCEPT VOL IV 08/30/99 T04-99-B91
120.D42	01OCT98*	22SEP99	Issue the WFD O&M Concept Risk Assessment
120.D42D2		30SEP99*	TWR 1.3.3 RISK ASSESSMENT OF O&M CNCPT 9/30/99 T04-99-B92
120.G10	01OCT98*	31MAR99	Estab Dilution Reqmnts/Diss Behav for AW-101
120.J05	02DEC99*	12JAN00	Evaluate AN-103 Samples for Adequate Matls

FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67

Activity ID	Early Start	Early Finish	FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67
120.J10	29DEC99*	30OCT00	Estab Dilution Reqmnts/Diss Behav for AN-103
120.J15	01OCT99*	28DEC99	Review AN-103 Historical Data
120.J20	13JAN00*	12JUN00	Characterize AN-103
120.J25	13JUN00*	03AUG00	Update Best Basis Inventory and TCR for AN-103
120.K10	01DEC98*	30JUN99	Estab Dilution Reqmnts/Diss Behav for AN-107
120.K15	01OCT99*	28DEC99	Review AN-107 Historical Data
120.K20	01OCT99*	14FEB00	Characterize AN-107
120.K25	15FEB00*	05APR00	Update Best Basis Inventory and TCR for AN-107
120.L10	19MAY99*	24JAN00	Estab Dilution Reqmnts/Diss Behav for AN-102
120.L15	01OCT99*	03NOV99	Review AN-102 Historical Data
120.L20	01OCT99*	14FEB00	Characterize AN-102
120.L25	15FEB00*	05APR00	Update Best Basis Inventory and TCR for AN-102
120.R05	02DEC99*	12JAN00	Evaluate SY-101 Samples for Adequate Matls
120.R10	29DEC99*	07NOV00	Estab Dilution Reqmnts/Diss Behav for SY-101
120.R15	01OCT99*	28DEC99	Review SY-101 Historical Data

Activity ID	Early Start	Early Finish	
120.R20	13JAN00*	04AUG00	Characterize SY-101
120.R25	07AUG00*	26SEP00	Update Best Basis Inventory and TCR for SY-101
130.010	01OCT99*	30SEP11	Phase I Tank Waste Transfer Control
130.028	01OCT98*	30SEP99	Perform Special Cases and Studies
130.033	01OCT98*	30SEP99	Support DOE/BNFL Proposals and Studies
130.044	01OCT98*	30SEP11	Waste Feed Delivery Information Needs
130.B05	09JUN00*	09FEB01	ID Reqd Spares WFD 1st Batches LAW & LAW
130.B45	01OCT99*	10JUL02	Prepare for Sampling During LAW Feed Staging
130.B80	01OCT99*	07OCT99	Assess Sec. Waste Util & Samp Anly Agnst Plans
130.N10	01OCT99*	22NOV99	Prep for Sampling During HLW Feed Staging AZ-101
150.726	01OCT98*	28FEB18	WFD Process Development
150.B22	01OCT98*	29SEP17	Maintain Operations Utilization Plan
150.B22A3A		28SEP01*	M-45-02F Annual Update SST Retrieval Sequence T04-01-241
150.B22A4A		30SEP02*	M-45-02G Annual Update SST Retrieval Sequence T04-02-241
150.B22A5A		30SEP03*	M-45-02H Annual Update SST Retrieval Sequence T04-03-241

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TW04-24

Activity ID	Early Start	Early Finish	Milestone
150.B22A6A		30SEP04*	M-45-02I Annual Update SST Retrieval Sequence T04-04-241
150.B22A7A		30SEP05*	M-45-02J Annual Update SST Retrieval Sequence T04-05-241
150.B22A8A		29SEP06*	M-45-02K Annual Update SST Retrieval Sequence T04-06-241
150.B22A9A		28SEP07*	M-45-02L Annual Update SST Retrieval Sequence T04-07-241
150.B22AAA		30SEP08*	M-45-02M Annual Update SST Retrieval Sequence T04-08-241
150.B22ABA		30SEP09*	M-45-02N Annual Update SST Retrieval Sequence T04-09-241
150.B22ACA		30SEP10*	M-45-02O Annual Update SST Retrieval Sequence T04-10-241
150.B22ADA		30SEP11*	M-45-02P Annual Update SST Retrieval Sequence T04-11-241
150.B22AEA		28SEP12*	M-45-02Q Annual Update SST Retrieval Sequence T04-12-241
150.B22AGA		30SEP13*	M-45-02R Annual Update SST Retrieval Sequence T04-13-241
150.B22AHA		30SEP14*	M-45-02S Annual Update SST Retrieval Sequence T04-14-241
150.B22AJA		30SEP15*	M-45-02T Annual Update SST Retrieval Sequence T04-15-241
150.B22AKA		29SEP16*	M-45-02U Annual Update SST Retrieval Sequence T04-16-241
150.B22ALA		29SEP17*	M-45-02V Annual Update SST Retrieval Sequence T04-17-241
150.B22ALB		29SEP17*	M-45-02 Annual Update SST Retrieval Sequence T04-17-245

FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67

Activity ID	Early Start	Early Finish	Activity
150.B22E1B		05MAY99*	TWR 1.3.4 Update TWRS O&UP & Deliver to RL
			T04-99-B81
150.B22E1C		30SEP99*	M-45-02D Annual Update SST Retrieval Sequence
			T04-99-241
150.B22H1		30SEP99*	TWR 1.3.4 V&V the HTWOS Model Against OWVP
			T04-99-B84
150.B22H2A		29SEP00*	M-45-02E Annual Update SST Retrieval Sequence
			T04-00-241
150.B26	01OCT98*	30SEP03	Maintain WFD ICDs
160.A17	11MAY01*	17MAY01	Compare RAM/O&M Concept w/ OTP Results (HLW)
160.A25	01OCT99*	19NOV99	Update BBI & TCR to Reflect Process Test AZ-101
160.A44	01OCT99*	03DEC99	Deter if Existing Data Meets DQO Needs - AZ-101
160.A46	06DEC99*	21JAN00	Take Additional Grab Samples from AZ-101
160.A70	09JUL03*	19AUG03	PC Conduct Waste Form Qualification - AZ-101
160.F00	01OCT99*	19NOV99	Deter if Existing Data Meets DQO Needs - AZ-102
160.F05	22NOV99*	30JUN00	Obtain Core Smpls/Prep Subsmpls/Comp for AZ-102
160.F10	25OCT99*	02FEB01	Perf/Doc Smpl Analysis/SldgWash Testing - AZ-102
160.F12	05FEB01*	27MAR01	Update BBI and TCR for AZ-102
160.F80	26APR05*	07JUN05	PC Conduct Waste Form Qual Confirmation-AZ-102

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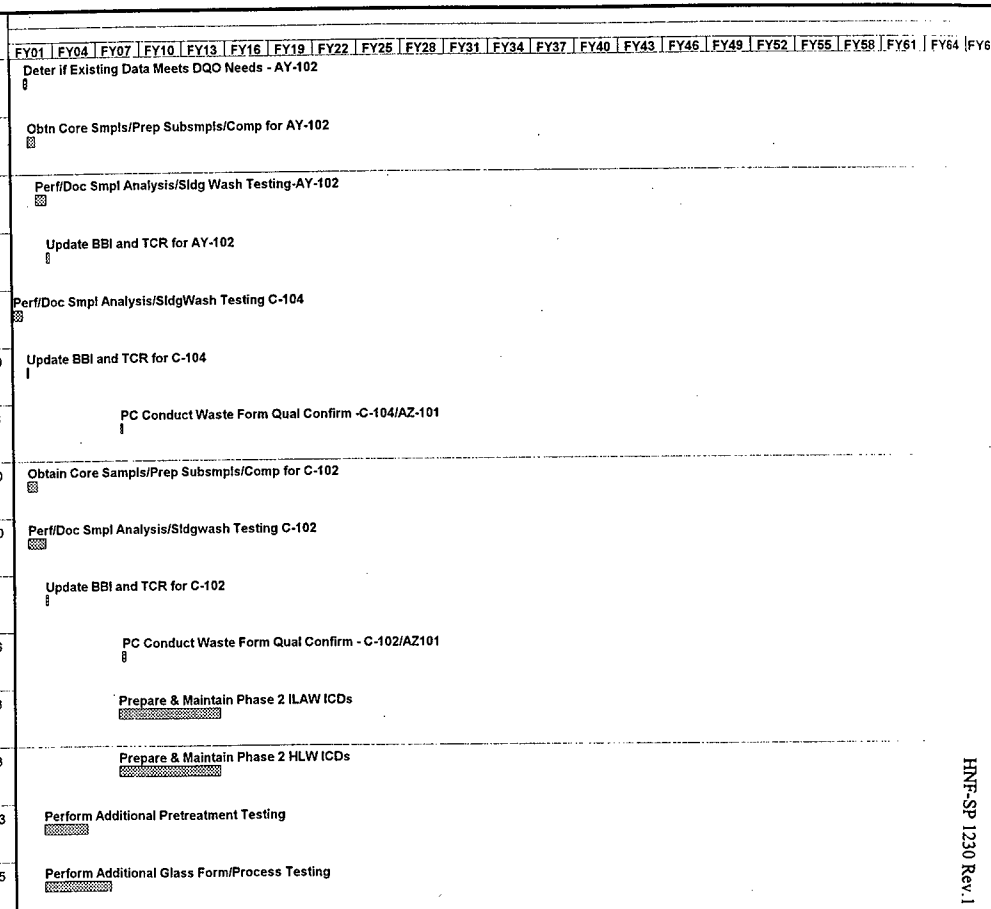
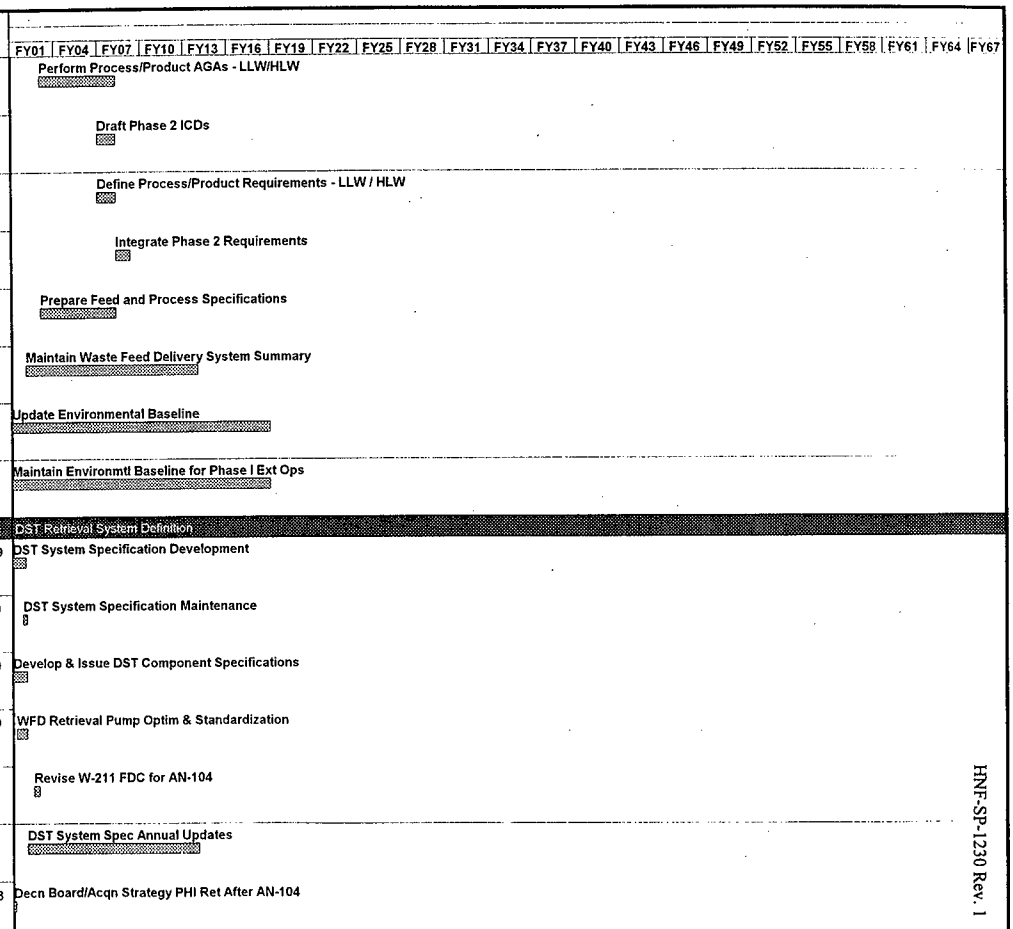
Activity ID	Early Start	Early Finish	Activity
160.H00	01OCT99*	23NOV99	Deter if Existing Data Meets DQO Needs - AY-102
160.H05	24NOV99*	06JUL00	Obtn Core Smpls/Prep Subsmpls/Comp for AY-102
160.H20	07JUL00*	22MAR01	Perf/Doc Smpl Analysis/Sldg Wash Testing-AY-102
160.H22	23MAR01*	11MAY01	Update BBI and TCR for AY-102
160.J10	02NOV98*	15JUN99	Perf/Doc Smpl Analysis/SldgWash Testing C-104
160.J12	01OCT99*	19NOV99	Update BBI and TCR for C-104
160.J80	02MAY06*	13JUN06	PC Conduct Waste Form Qual Confirm -C-104/AZ-101
160.Z05	01OCT99*	10MAY00	Obtain Core Samples/Prep Subsmpls/Comp for C-102
160.Z10	01OCT99*	13DEC00	Perf/Doc Smpl Analysis/Sldgwash Testing C-102
160.Z12	14DEC00*	06FEB01	Update BBI and TCR for C-102
160.Z80	10MAY06*	21JUN06	PC Conduct Waste Form Qual Confirm - C-102/AZ101
400.040	02FEB06*	01FEB13	Prepare & Maintain Phase 2 ILAW ICDs
410.020	02FEB06*	01FEB13	Prepare & Maintain Phase 2 HLW ICDs
490.030	02OCT00*	01OCT03	Perform Additional Pretreatment Testing
490.040	02OCT00*	31MAY05	Perform Additional Glass Form/Process Testing



Activity ID	Early Start	Early Finish	Activity
490.070	02OCT00*	01FEB06	Perform Process/Product AGAs - LLW/HLW
490.080	01OCT04*	01FEB06	Draft Phase 2 ICDs
490.100	30SEP04*	01FEB06	Define Process/Product Requirements - LLW / HLW
490.105	02FEB06*	01FEB07	Integrate Phase 2 Requirements
490.110	02OCT00*	01FEB06	Prepare Feed and Process Specifications
620.020	01OCT99*	30SEP11	Maintain Waste Feed Delivery System Summary
620.070	01OCT98*	30SEP16	Update Environmental Baseline
620.090	01OCT98*	30SEP16	Maintain Environmtl Baseline for Phase I Ext Ops
1.01.04.01.01.03			DST Retrieval System Definition
120.005	01OCT98*	30AUG99	DST System Specification Development
120.010	07JUL99*	20SEP99	DST System Specification Maintenance
120.015	01OCT98*	30SEP99	Develop & Issue DST Component Specifications
120.D19	04JAN99*	30SEP99	WFD Retrieval Pump Optim & Standardization
120.E40	01MAR00*	17JUL00	Revise W-211 FDC for AN-104
120.F15	01OCT99*	30SEP11	DST System Spec Annual Updates
120.G38	01OCT98*	04DEC98	Decn Board/Acqn Strategy PHI Ret After AN-104



Activity ID	Early Start	Early Finish	Activity
120.G39	01OCT99*	30SEP05	Adjust Acquistion Strategy WFD System
120.G39A3		28SEP01*	RL-WT014 DST Mixing Pump Technology T04-01-C10
120.G40	01OCT01*	20FEB02	Revise W-521 FDC for AW-101
120.J40	31OCT00*	21MAR01	Revise W-211 FDC for AN-103
120.K40	01MAR00*	17JUL00	Revise W-521 FDC for AN-107
120.L36	12NOV01*	21JAN02	Approve FDC for Project W-TBD
120.L37	12NOV01*	02AUG02	Provide Documentation for W-TBD Validation
120.L39	02OCT00*	01JUN06	Define Project Management for W-TBD
120.L40	02OCT00*	09NOV01	Prep W-522 Prj Definition/Tech Basis/FDC
120.L41	15JAN01*	01AUG01	241-AN-102 Upgrades: Prep Tech Rqmnts & CDR
120.P32	01OCT99*	01DEC99	Validate SY-102 Design to DST Specification
120.R40	04NOV03*	24MAR04	Revise W-TBD Design Specifications for SY-101
150.702	01OCT98*	30SEP02	Operational Readiness Planning & Implementation
150.718	01OCT98*	27SEP11	Manage Retrieval Project Definition
150.B18	01OCT99*	13JUL00	Determine Equipment Needed to Retrieve DSTs

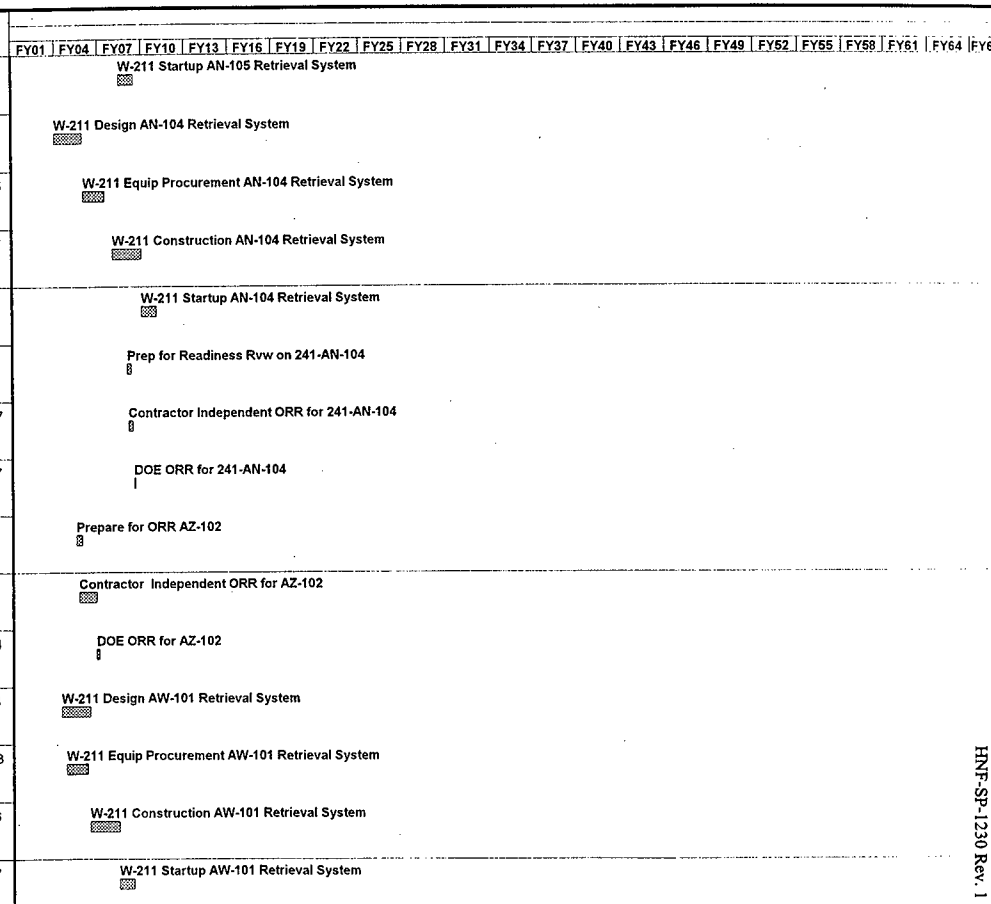
FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67

Activity ID	Early Start	Early Finish	
160.005	01OCT98*	30SEP99	SST System & Subsystem Spec Developmt
160.A57	22NOV99*	29SEP00	W-521 Provide Documents for Project Validation
160.A59	01OCT98*	03DEC02	Define Proj Management for W-521
160.A60	01OCT98*	30SEP99	Prep Proj Defin , Tech Basis, PDC for W-521
160.B01	01OCT98*	08APR99	Issue HLW Tank Selection AGA
160.B01JN		31MAY99*	TWR 1.3.2 Issue Ph 1 Tank Source Sel AGA T04-99-CA1
160.H17	04APR00*	18AUG00	Revise W-211 FDC for AY-102
160.J57	29NOV99*	29SEP00	C-102/C-104 Project Provide Docs for Validation
160.J59	01OCT98*	30SEP99	Define Proj Mgmt for W-??? (C-102/104)
160.J61	01OCT98*	30SEP99	Prep Proj Defin, Tech Basis, PDC for C-102/104
720.711	01OCT98*	30SEP99	WFD Tech Insertion Point Support
720.720	01OCT98*	28FEB18	Waste Retrieval Proj Development & Implementatio
720.725	01OCT98*	30SEP16	WFD Program Technical Analysis
720.727	14OCT98*	30SEP11	Support WFD Prog System Eng Implementation
720.730	01OCT98*	30SEP16	WFD Program Engineering

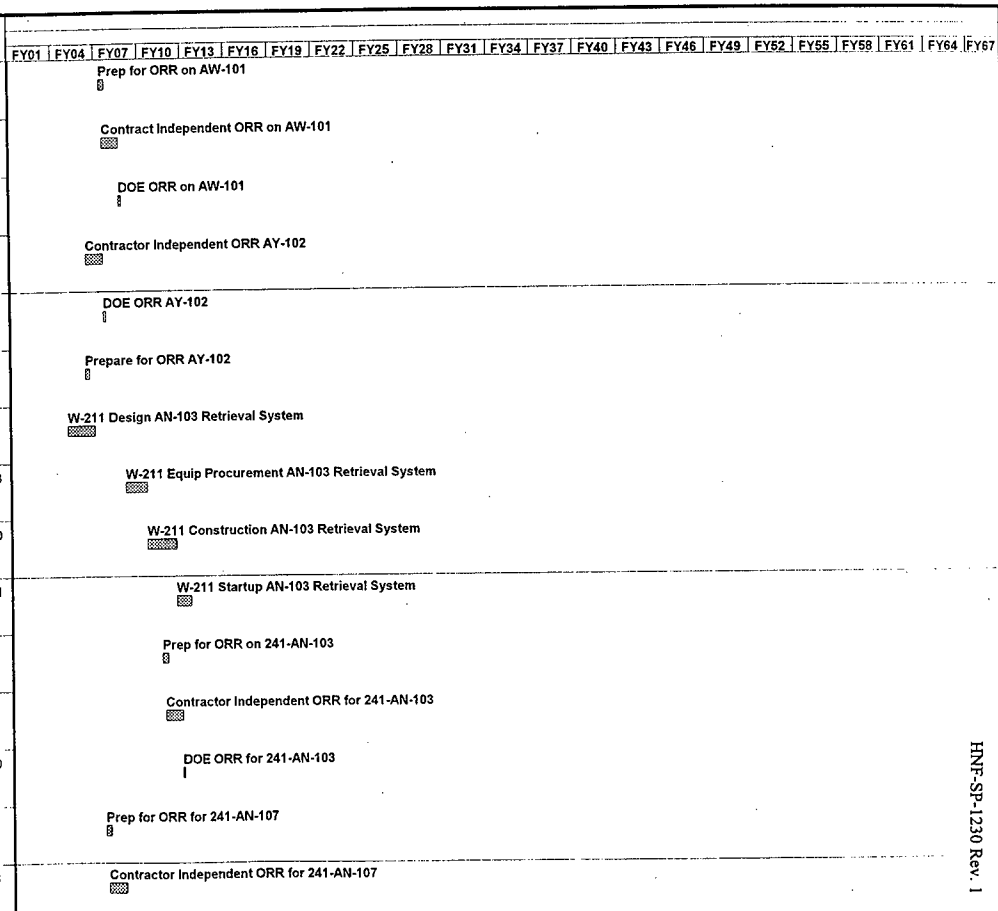
FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67

Activity ID	Early Start	Early Finish	FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67
1.01.04.01.01.04			W-151 (AZ-101 Retrieval)
110.010	01OCT98*	30SEP99	W-151 Project Management
110.050	01OCT98*	02JUL99	Conduct LMHC Readiness Assessment
110.070	07JUL99*	27JAN00	Perform Mixer Pump Test (W-151)
1.01.04.01.01.05			W-211 (ITRS)
120.A00	01OCT98*	31MAR11	W-211 Project Management
120.B35	01APR99*	30SEP99	W-211 Design AP-102/AP-104 Retrieval Systems
120.B45	02OCT00*	30SEP02	W-211 Construct AP-102/AP-104 Retrieval Systems
120.B50	01OCT02*	30SEP03	W-211 Startup AP-102/AP-104 Retrieval Systems
120.B58	01OCT01*	19FEB02	Prep for ORR on AP-102 & 104
120.B60	28NOV01*	30JAN03	Contract Independent ORR on AP-102 & 104
120.B65	31JAN03*	01APR03	DOE ORR on AP-102 & 104
120.D65	01OCT98*	30APR99	W-211 Design AN-105 Retrieval System
120.D65D1		30APR99*	TWR 1.3.1 Complete Design - AN-105 T04-99-152
120.D72	01OCT02*	30MAR04	W-211 Equip Procurement AN-105 Retrieval System
120.D75	01APR04*	31MAR06	W-211 Construction AN-105 Retrieval System

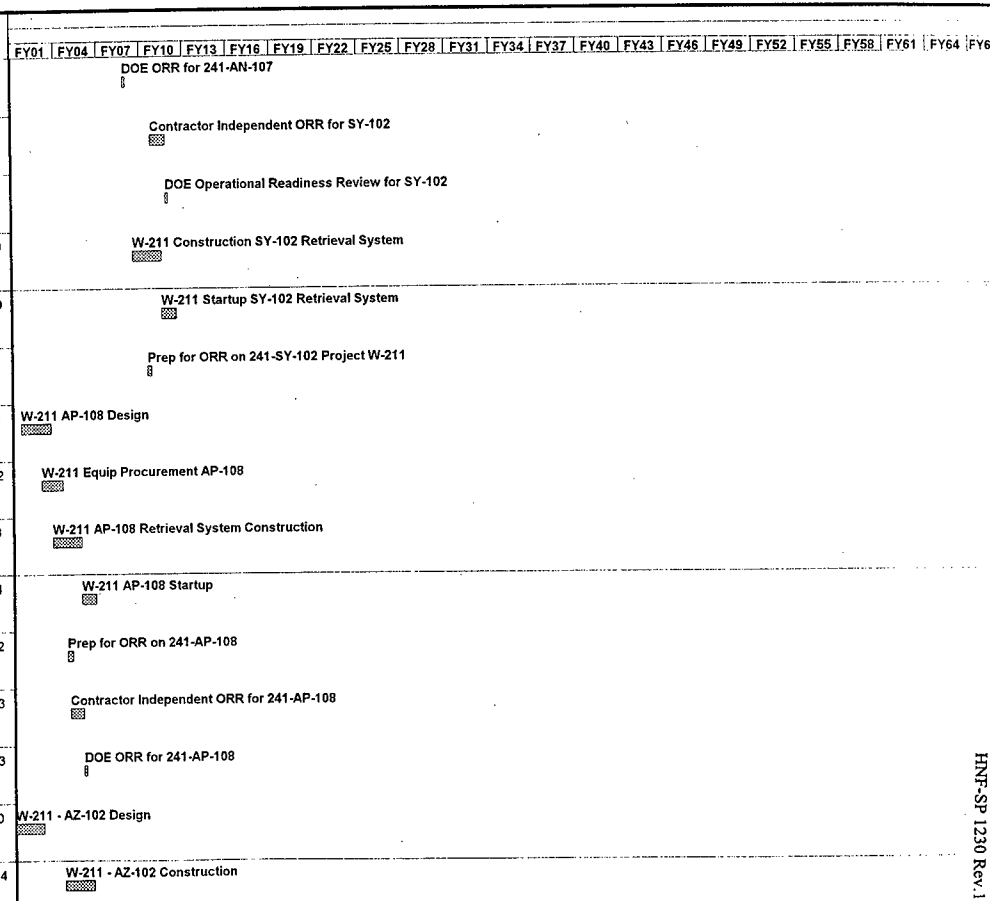
Activity ID	Early Start	Early Finish	Activity
120.D80	03APR06*	29MAR07	W-211 Startup AN-105 Retrieval System
120.E50	01OCT01*	02SEP03	W-211 Design AN-104 Retrieval System
120.E52	30SEP03*	30MAR05	W-211 Equip Procurement AN-104 Retrieval System
120.E55	30SEP05*	01OCT07	W-211 Construction AN-104 Retrieval System
120.E65	02OCT07*	30SEP08	W-211 Startup AN-104 Retrieval System
120.E68	02OCT06*	01FEB07	Prep for Readiness Rvw on 241-AN-104
120.E70	29NOV06*	09MAR07	Contractor Independent ORR for 241-AN-104
120.E75	12MAR07*	08MAY07	DOE ORR for 241-AN-104
120.F68	02APR03*	31JUL03	Prepare for ORR AZ-102
120.F80	29MAY03*	29JUL04	Contractor Independent ORR for AZ-102
120.F90	30JUL04*	28SEP04	DOE ORR for AZ-102
120.G50	21FEB02*	18FEB04	W-211 Design AW-101 Retrieval System
120.G52	21JUN02*	18DEC03	W-211 Equip Procurement AW-101 Retrieval System
120.G55	19FEB04*	14FEB06	W-211 Construction AW-101 Retrieval System
120.G60	15FEB06*	13FEB07	W-211 Startup AW-101 Retrieval System



Activity ID	Early Start	Early Finish
120.G68	17FEB05*	16JUN05
120.G70	15APR05*	13JUN06
120.G75	14JUN06*	14AUG06
120.H50	01MAR04*	29APR05
120.H60	02MAY05*	29JUN05
120.H68	02JAN04*	29APR04
120.J50	01OCT02*	31AUG04
120.J52	02OCT06*	31MAR08
120.J55	02APR08*	31MAR10
120.J65	01APR10*	31MAR11
120.J68	02APR09*	31JUL09
120.J70	29MAY09*	29JUL10
120.J75	30JUL10*	28SEP10
120.K68	01APR05*	19JUL05
120.K70	27MAY05*	31JUL06



Activity ID	Early Start	Early Finish	Activity
120.K75	01AUG06*	28SEP06	DOE ORR for 241-AN-107
120.P22	18JUL08*	21JUL09	Contractor Independent ORR for SY-102
120.P25	22JUL09*	18SEP09	DOE Operational Readiness Review for SY-102
120.P60	02APR07*	30MAR09	W-211 Construction SY-102 Retrieval System
120.P70	31MAR09*	31MAR10	W-211 Startup SY-102 Retrieval System
120.P90	01APR08*	17JUL08	Prep for ORR on 241-SY-102 Project W-211
120.Y50	03MAY99*	31MAY01	W-211 AP-108 Design
120.Y52	02OCT00*	29MAR02	W-211 Equip Procurement AP-108
120.Y55	02JUL01*	30JUN03	W-211 AP-108 Retrieval System Construction
120.Y60	01JUL03*	30JUN04	W-211 AP-108 Startup
120.Y68	02JUL02*	30OCT02	Prep for ORR on 241-AP-108
120.Y70	29AUG02*	06AUG03	Contractor Independent ORR for 241-AP-108
120.Y75	07AUG03*	06OCT03	DOE ORR for 241-AP-108
160.F40	01OCT98*	29SEP00	W-211 - AZ-102 Design
160.F502	02APR02*	30MAR04	W-211 - AZ-102 Construction



Activity ID	Early Start	Early Finish	FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67
160.F52	02OCT00*	27MAR02	W-211 AZ-102 Equipment Procurement
160.F60	01APR04*	30MAR05	W-21I - AZ-102 Startup
160.H40	02OCT00*	03SEP02	W-211 - AY-102 Design
160.H52	01OCT01*	31MAR03	W-211 AY-102 Equipment Procurement
1.01.04.01.01.06			W-521 (Sluice Equip in AZ-101)
120.A88	10AUG01*	28DEC01	Prepare for ORR AZ-101
160.A32	02OCT00*	07DEC01	Redesign Addl Eqpt Req'd for Sludge Wash-AZ-101
160.A36	30OCT00*	10JUN02	Construct Equip Req'd for Sludge Washing-AZ-101
160.A38	12FEB01*	07AUG02	Upgrade AZ-101 W-xxx
160.A40	01OCT99*	12SEP02	Contractor Independent ORR for AZ-101
160.A42	13SEP02*	21NOV02	DOE ORR for AZ-101
1.01.04.01.01.07			W-522 (Phase 1 DST Retrieval System)
120.L38	05AUG02*	01NOV02	Validate Project W-TBD
120.L50	04JAN01*	09OCT02	241-AN-102 Upgrades: Design & Enviro. Permits
120.L55	17NOV03*	17DEC04	241-AN-102 Upgrades: Construction
120.L60	22APR04*	28MAR05	241-AN-102 Upgrades: Startup/OTP/Ops Documents

Activity ID	Early Start	Early Finish	
120.L68	20DEC04*	16MAY05	Prep for ORR for 241-AN-102
120.L70	17FEB05*	21JUN05	Contractor Independent ORR for 241-AN-102
120.L75	22JUN05*	22AUG05	DOE ORR for 241-AN-102
120.R50	25MAR04*	24MAR06	Design Upgrade W-TBD for SY-101
120.R52	26JUL04*	17NOV05	Equipment Procurement for SY-101
120.R55	27MAR06*	25MAR08	Construct/Test/Project Turnover of SY-101
120.R60	26MAR08*	25MAR09	Startup for SY-101 (W-TBD) Mixing & Retr Sys
120.R68	27MAR07*	11JUL07	Prep for ORR on 241-SY-101
120.R70	26MAR09*	20MAY09	Contract Independent ORR on 241-SY-101
120.R75	21MAY09*	22JUL09	DOE ORR on 241-SY-101
130.B62	01OCT99*	14MAR02	Upgrd Valve Pits AW-A&B - W-454-Replace Jumpers
1.01.04.01.01.08			ISSTRS - Phase 1
270.J99	02OCT00*	05APR06	ISSTRS Prj 1st Tank C-104 & Retrieve to AN-105
270.J99BM		05APR05*	M-45-04-T01 Provide Initial SST Retrieval System T04-04-K10
270.J99BN		28FEB02*	M-45-04-T02 Complete Design For ISSTRS T04-01-K10
270.J99BP		05APR05*	M-45-04-T03 Comp Construction For ISSTRS T04-03-K10

FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67

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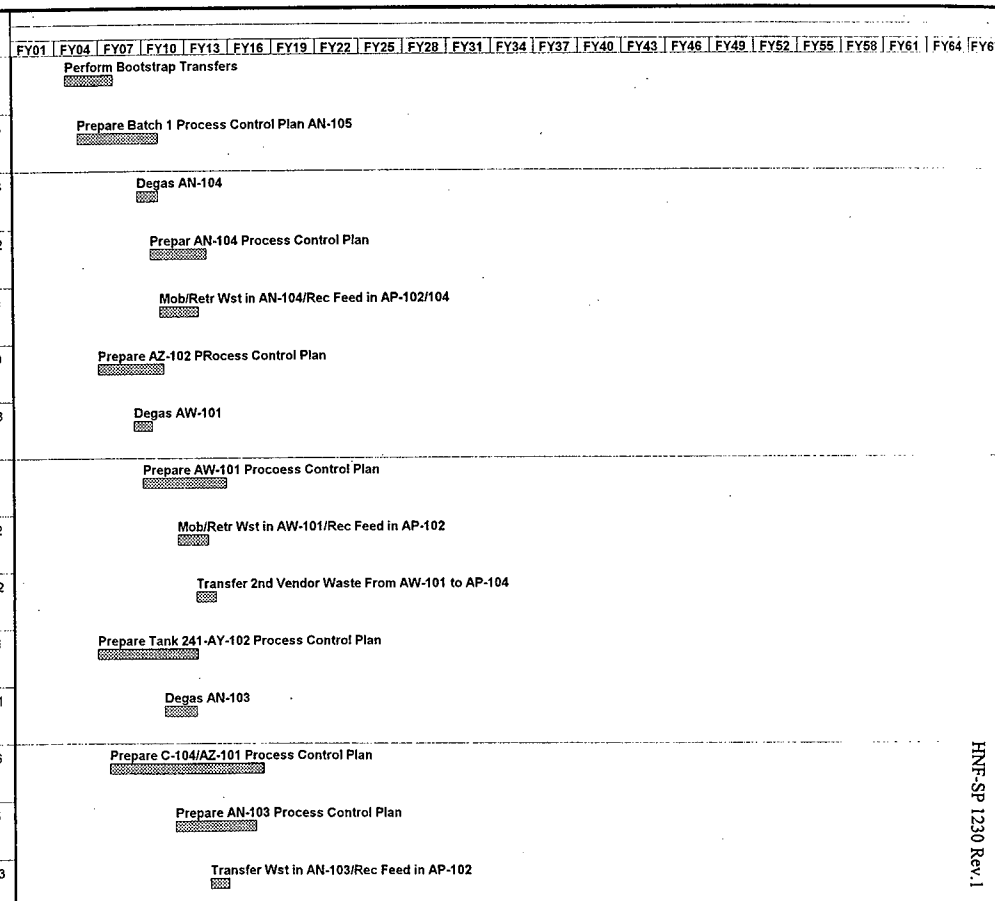
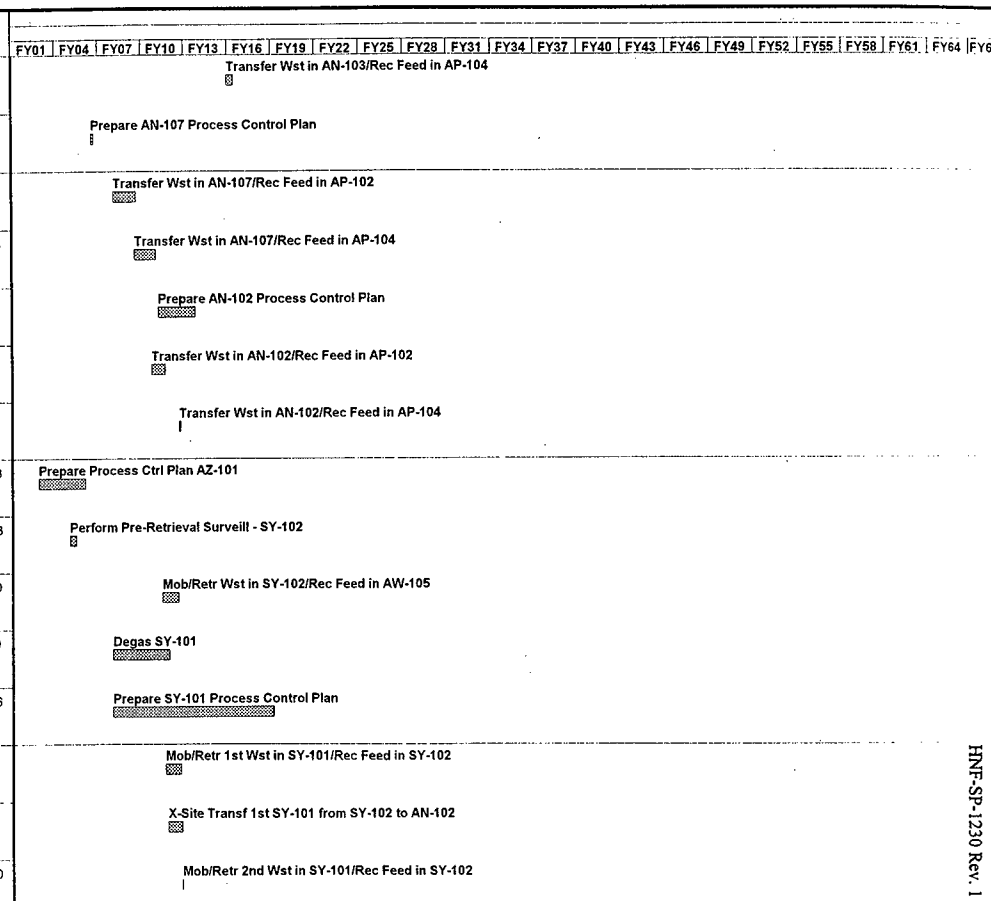
Activity ID	Early Start	Early Finish	FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67
270.J99CM	06APR05*		M-45-05-T01 Initiate Ret from 1 SST T04-04-A10
270.Z99	10OCT00*	13APR06	Design/Const/Retreive ISSTRS Tk 2 - C-102
1.01.04.01.01.10			Phase 1 DST Retrieval Operations
050.010	01OCT98*	30SEP99	Project Management C-106 Sluicing
050.090	01OCT98*	19JAN00	Sluic Sludge Into AY-102 - W-320
050.090P1		30APR99*	TWR 1.2.1 SLUICING OF 2 FEET COMPLETE T04-99-A11
050.090P2		30SEP99*	TWR 1.2.1 SLUICING OF 4 FEET COMPLETE T04-99-A13
050.130	01OCT98*	30SEP99	Process Control Document - W-320
050.140	01SEP99*	30SEP99	C-106 Sluicing Contingency
120.B10	01OCT99*	30APR01	Dsn/Install Central Control Room/Shift Ofc Facl
130.015	01OCT99*	03MAY02	Manage Waste Transfer System During Xfer Sys Upg
130.B10	02OCT00*	09AUG01	Procure WFD Spare Equip (Operations)
130.B15	02OCT00*	09JAN02	Prep to Maintain the WFD Sys Operable
130.B16	10AUG01*	09AUG12	Maintain WFD Sys Operable
130.B25	04FEB05*	25MAY07	Degas AN-105
130.B30	05FEB04*	09SEP05	Mob/Retr Wst in AN-105/Rec Feed in AP-102/AP-104

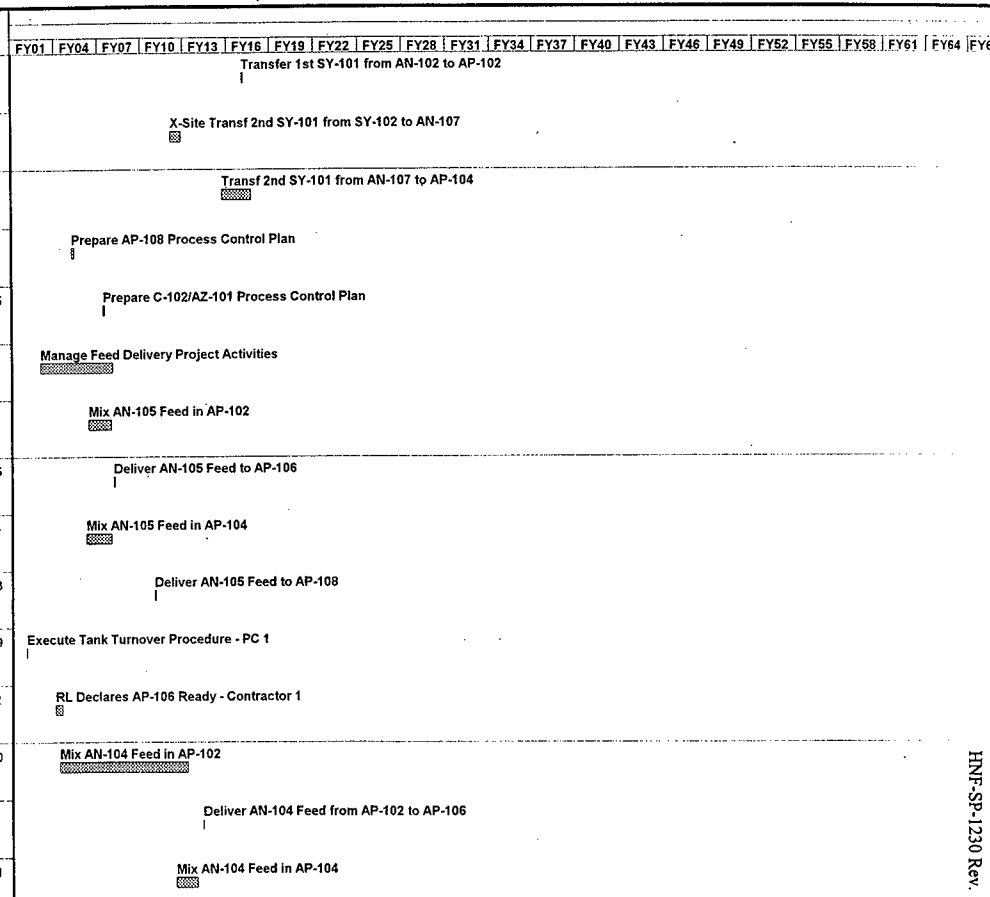
Activity ID	Early Start	Early Finish	Activity
130.B40	08JUL02*	03OCT05	Perform Bootstrap Transfers
130.B55	24APR03*	31OCT08	Prepare Batch 1 Process Control Plan AN-105
130.E10	04JUN07*	26NOV08	Degas AN-104
130.E25	28APR08*	12MAR12	Prepar AN-104 Process Control Plan
130.E30	05JAN09*	04AUG11	Mob/Retr Wst in AN-104/Rec Feed in AP-102/104
130.F20	24AUG04*	07APR09	Prepare AZ-102 PRocess Control Plan
130.G10	05MAR07*	23MAY08	Degas AW-101
130.G25	28SEP07*	16JUL13	Prepare AW-101 Procoess Control Plan
130.G30	02MAR10*	04APR12	Mob/Retr Wst in AW-101/Rec Feed in AP-102
130.G40	06JUN11*	19OCT12	Transfer 2nd Vendor Waste From AW-101 to AP-104
130.H20	19JUL04*	30JUN11	Prepare Tank 241-AY-102 Process Control Plan
130.J10	03APR09*	27MAY11	Degas AN-103
130.J20	01JUN05*	09FEB16	Prepare C-104/AZ-101 Process Control Plan
130.J25	23DEC09*	21JUL15	Prepare AN-103 Process Control Plan
130.J30	08MAY12*	07AUG13	Transfer Wst in AN-103/Rec Feed in AP-102



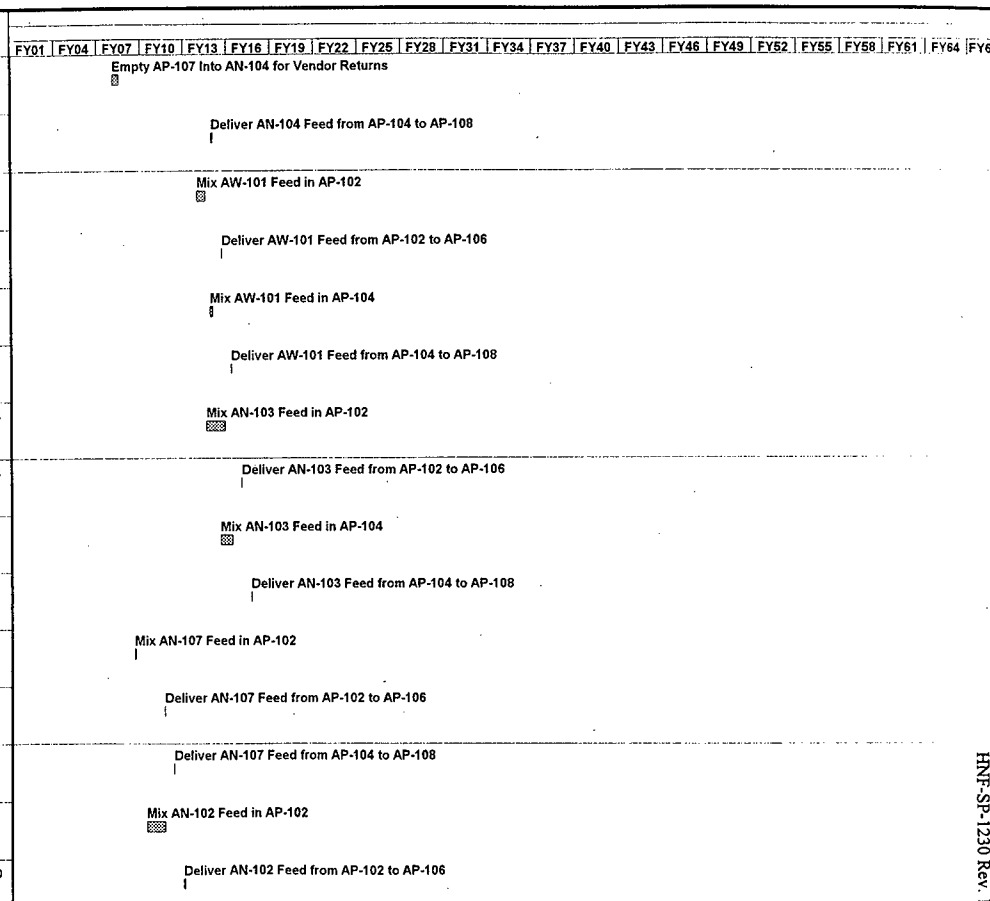
Activity ID	Early Start	Early Finish	Activity
130.J40	04SEP13*	21FEB14	Transfer Wst in AN-103/Rec Feed in AP-104
130.K20	28APR04*	29JUN04	Prepare AN-107 Process Control Plan
130.K30	01NOV05*	07JUN07	Transfer Wst in AN-107/Rec Feed in AP-102
130.K40	10MAY07*	10OCT08	Transfer Wst in AN-107/Rec Feed in AP-104
130.L20	29DEC08*	12JUL11	Prepare AN-102 Process Control Plan
130.L30	07JUL08*	12JUN09	Transfer Wst in AN-102/Rec Feed in AP-102
130.L40	08JUN10*	16JUL10	Transfer Wst in AN-102/Rec Feed in AP-104
130.N20	31JUL00*	03NOV03	Prepare Process Ctrl Plan AZ-101
130.P10	01OCT02*	05MAR03	Perform Pre-Retrieval Surveill - SY-102
130.P50	13APR09*	05MAY10	Mob/Retr Wst in SY-102/Rec Feed in AW-105
130.R10	03OCT05*	18SEP09	Degas SY-101
130.R25	13OCT05*	18NOV16	Prepare SY-101 Process Control Plan
130.R30	04JUN09*	09JUL10	Mob/Retr 1st Wst in SY-101/Rec Feed in SY-102
130.R35	27JUL09*	30JUL10	X-Site Transf 1st SY-101 from SY-102 to AN-102
130.R40	02AUG10*	09AUG10	Mob/Retr 2nd Wst in SY-101/Rec Feed in SY-102



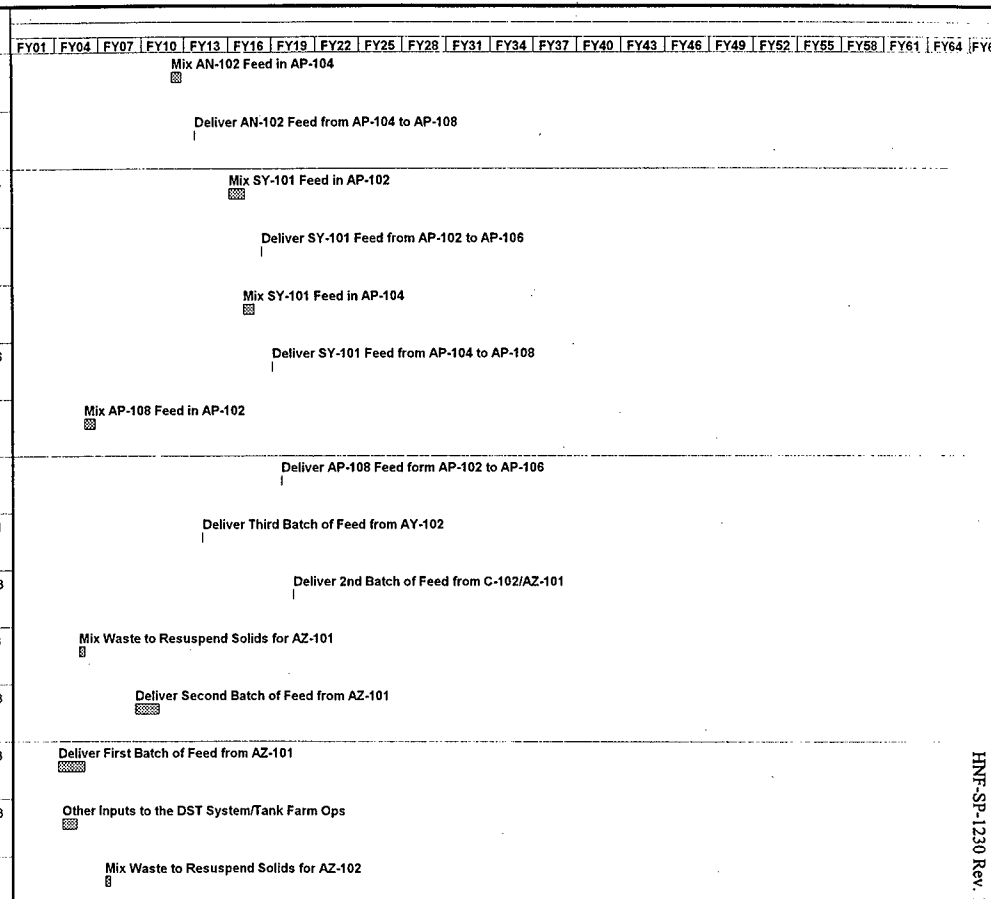
Activity ID	Early Start	Early Finish
130.R45	16OCT14*	21NOV14
130.R50	23NOV09*	27AUG10
130.R55	26JUN13*	26JUN15
130.Y25	23DEC02*	26FEB03
130.Z20	01MAR05*	30MAR05
150.B02	02OCT00*	29SEP05
150.B32	02MAR04*	08SEP05
150.B44	28NOV05*	02DEC05
150.B48	02DEC03*	16SEP05
150.B60	23SEP08*	01OCT08
150.B78	01OCT99*	01OCT99
150.B80	02OCT01*	04APR02
150.E05	02JAN02*	09DEC10
150.E35	31JAN12*	08FEB12
150.E40	02MAR10*	09AUG11



Activity ID	Early Start	Early Finish
150.E64	01NOV05*	11MAY06
150.E70	02OCT12*	10OCT12
150.G05	26SEP11*	09APR12
150.G35	04JUN13*	12JUN13
150.G40	01AUG12*	25OCT12
150.G70	04FEB14*	12FEB14
150.J05	01MAY12*	12AUG13
150.J35	07OCT14*	15OCT14
150.J40	03MAY13*	27FEB14
150.J70	09JUN15*	17JUN15
150.K05	07MAY07*	12JUN07
150.K35	26MAY09*	03JUN09
150.K70	26JAN10*	03FEB10
150.L05	03MAR08*	18JUN09
150.L35	28SEP10*	06OCT10



Activity ID	Early Start	Early Finish
150.L40	10NOV09*	22JUL10
150.L70	31MAY11*	08JUN11
150.R05	17OCT13*	26NOV14
150.R35	09FEB16*	17FEB16
150.R40	21OCT14*	01JUL15
150.R70	11OCT16*	19OCT16
150.Y05	01OCT03*	02JUL04
150.Y35	13JUN17*	21JUN17
160.0.H85	28DEC11*	23DEC11
160.0.Z97	02APR18*	30MAR18
160.A64	11JUN03*	30SEP03
160.A72	11MAY07*	24DEC08
160.A78	03DEC01*	02OCT03
160.F35	01APR02*	28MAR03
160.F75	31MAR05*	28JUL05



Activity ID	Early Start	Early Finish	
160.F95	04AUG03*	06MAR09	Deliver First Batch of Feed from AZ-102
160.F99	20MAY09*	18MAR11	Deliver Second Batch of Feed from AZ-102
160.H42	29MAR04*	06JAN06	Transfer Waste AZ-101 to AY-101
160.H47	09JAN06*	08MAY06	Mix Waste to Resuspend Solids for AY-102
160.H75	08MAR10*	31MAY11	Deliver First Batch of Feed from AY-102
160.H80	12OCT11*	13OCT11	Deliver Second Batch of Feed from AY-102
160.H90	08MAR12*	09MAR12	Deliver Fourth Batch of Feed from AY-102
160.H95	21MAY12*	03JAN14	Deliver Fifth Batch of Feed from AY-102
160.J75	06APR06*	03AUG06	Mix Waste to Resuspend Solids for C-104/AZ-101
160.J95	07DEC15*	08JAN16	Deliver 1st Batch of Feed from C-104/AZ-101
160.J97	21MAR16*	22MAR16	Deliver 2nd Batch of Feed from C-104/AZ-101
160.J99	03JUN16*	03NOV17	Deliver 3rd Batch of Feed from C-104/AZ-101
160.X40	01OCT98*	30SEP99	Other Inputs to the DST System/Tank Farm Ops
160.Z75	14APR06*	11AUG06	Mix Waste to Resuspend Solids for C-102/AZ-101
160.Z95	08SEP15*	17JAN18	Deliver 1st Batch of Feed from C-102/AZ-101

FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67

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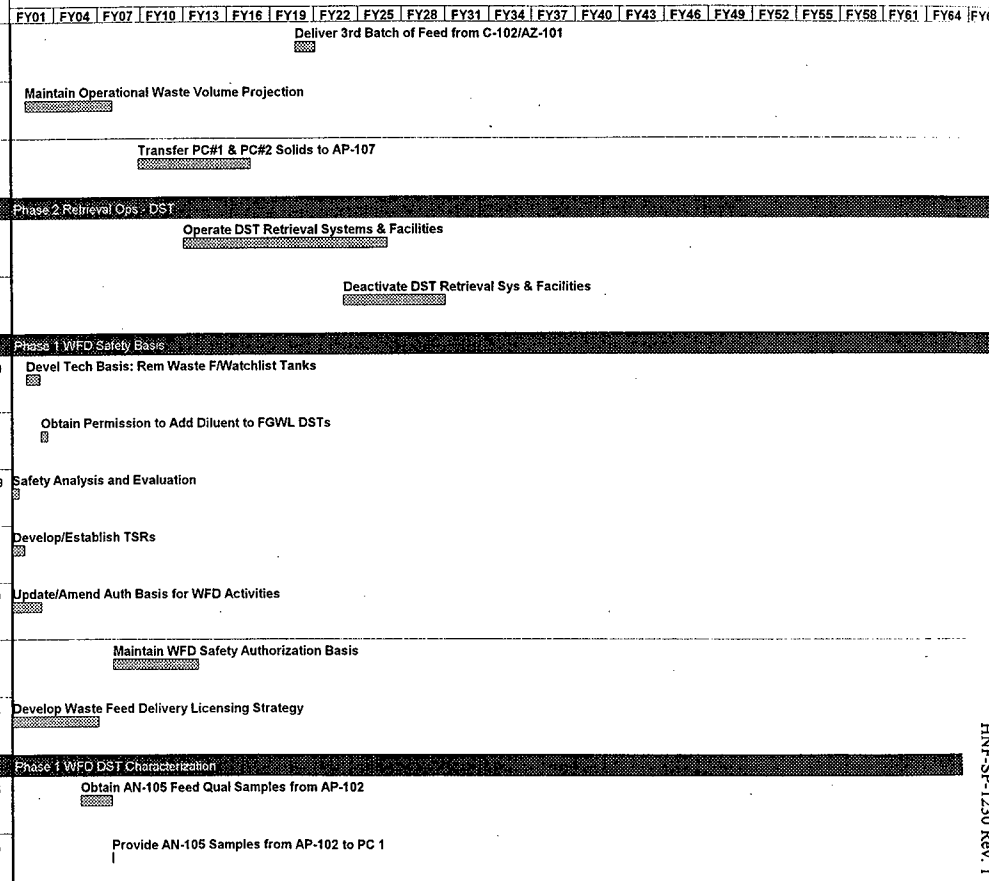
Activity ID	Early Start	Early Finish	Activity
160.Z99	13JUN18*	14NOV19	Deliver 3rd Batch of Feed from C-102/AZ-101
320.080	01OCT99*	29SEP05	Maintain Operational Waste Volume Projection
350.X05	09AUG07*	26MAY15	Transfer PC#1 & PC#2 Solids to AP-107
1.01.04.01.01.11			Phase 2 Retrieval Ops : DST
380.040	01OCT10*	30SEP24	Operate DST Retrieval Systems & Facilities
380.050	01OCT21*	29SEP28	Deactivate DST Retrieval Sys & Facilities
1.01.04.01.01.12			Phase 1 WFD Safety Basis
130.B17	01OCT99*	25AUG00	Devel Tech Basis: Rem Waste F/Watchlist Tanks
130.B20	02OCT00*	02APR01	Obtain Permission to Add Diluent to FGWL DSTs
150.B10	01OCT98*	15MAR99	Safety Analysis and Evaluation
150.B14	01OCT98*	12JUL99	Develop/Establish TSRs
150.B16	01OCT98*	29SEP00	Update/Amend Auth Basis for WFD Activities
180.000	03OCT05*	30SEP11	Maintain WFD Safety Authorization Basis
620.050	01OCT98*	27SEP04	Develop Waste Feed Delivery Licensing Strategy
1.01.04.01.01.13			Phase 1 WFD DST Characterization
150.B34	30JUN03*	15SEP05	Obtain AN-105 Feed Qual Samples from AP-102
150.B36	16SEP05*	26SEP05	Provide AN-105 Samples from AP-102 to PC 1



Activity ID	Early Start	Early Finish	Activity
150.B38	16SEP05*	08NOV05	Analy AN-105 Smpls/Interpret Results from AP-102
150.B40	09NOV05*	23NOV05	Prov AN-105 Feed Batch Info from AP-102 to PC 1
150.B50	11JUL01*	23SEP05	Obtain AN-105 Feed Qual Samples from AP-104
150.B52	26SEP05*	04OCT05	Provide AN-105 Samples from AP-104 to PC 2
150.B54	26SEP05*	15NOV05	Analy AN-105 Smpls/Interpret Results from AP-104
150.B56	16NOV05*	02DEC05	Provide AN-105 Feed Batch Info to PC 2
150.E10	28DEC01*	16DEC10	Obtain AN-104 Feed Qual Samples from AP-102
150.E15	17DEC10*	29DEC10	Provide AN-104 Samples from AP-102 to PC 1
150.E20	17DEC10*	08FEB11	Analy AN-104 Smpls/Interpret Results from AP-102
150.E25	09FEB11*	24FEB11	Provide AN-104 Feed Batch Info to PC 1
150.E45	24JAN02*	16AUG11	Obtain AN-104 Feed Qual Samples from AP-104
150.E50	17AUG11*	25AUG11	Provide AN-104 Samples from AP-104 to PC 2
150.E55	17AUG11*	07OCT11	Analy AN-104 Smpls/Interpret Results from AP-104
150.E60	10OCT11*	24OCT11	Prov AN-104 Feed Batch Info from AP-104 to PC 2
150.G10	27FEB03*	16APR12	Obtain AW-101 Feed Qual Samples from AP-102

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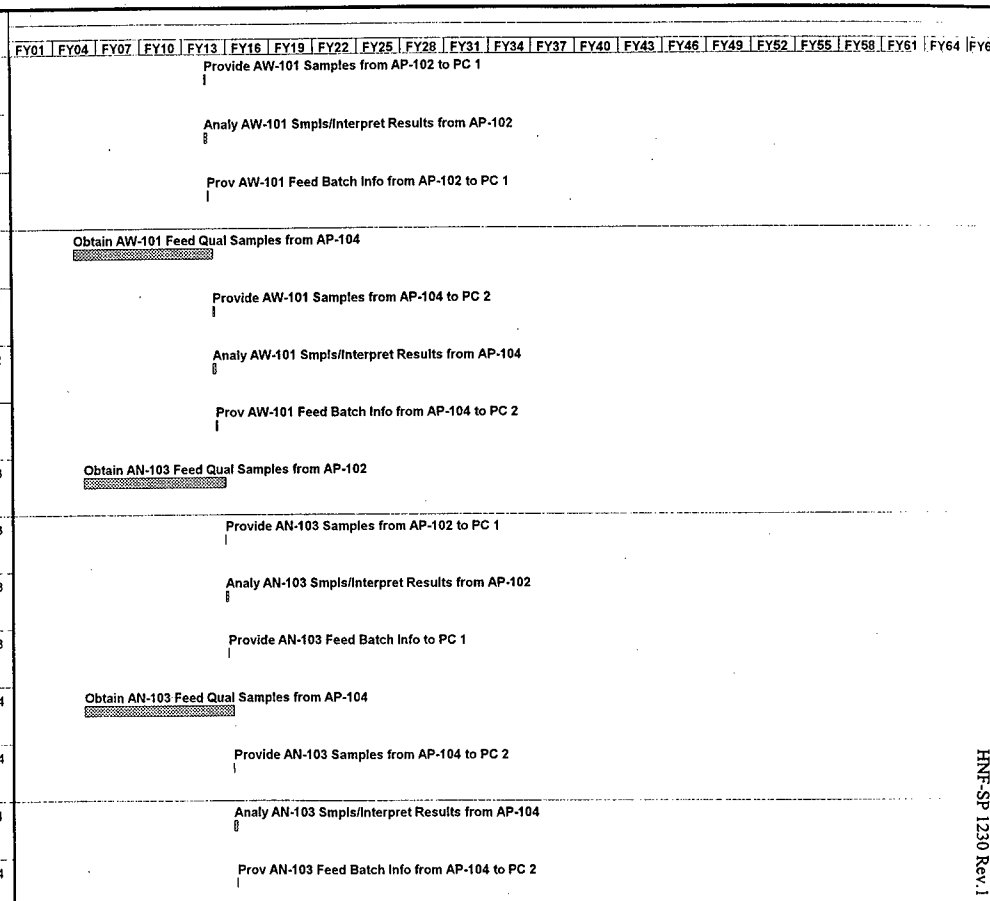
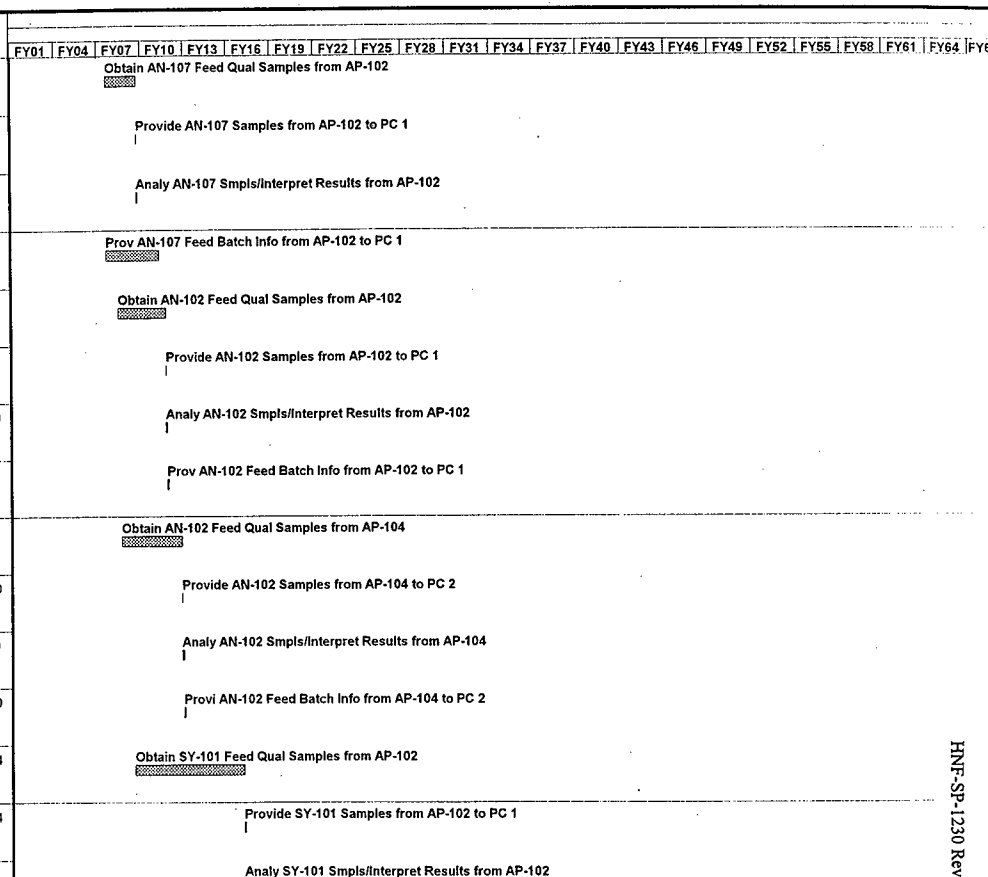
Activity ID	Early Start	Early Finish
150.G15	17APR12*	25APR12
150.G20	17APR12*	08JUN12
150.G25	11JUN12*	25JUN12
150.G45	03MAR03*	01NOV12
150.G50	02NOV12*	12NOV12
150.G55	02NOV12*	28DEC12
150.G60	31DEC12*	15JAN13
150.J10	29SEP03*	19AUG13
150.J15	20AUG13*	28AUG13
150.J20	20AUG13*	10OCT13
150.J25	11OCT13*	25OCT13
150.J45	02OCT03*	06MAR14
150.J50	07MAR14*	17MAR14
150.J55	07MAR14*	29APR14
150.J60	30APR14*	14MAY14



Activity ID	Early Start	Early Finish	Activity
150.K10	16MAY05*	19JUN07	Obtain AN-107 Feed Qual Samples from AP-102
150.K15	20JUN07*	28JUN07	Provide AN-107 Samples from AP-102 to PC 1
150.K20	20JUN07*	10AUG07	Analy AN-107 Smpls/Interpret Results from AP-102
150.K25	16MAY05*	07JAN09	Prov AN-107 Feed Batch Info from AP-102 to PC 1
150.L10	30MAR06*	25JUN09	Obtain AN-102 Feed Qual Samples from AP-102
150.L15	26JUN09*	08JUL09	Provide AN-102 Samples from AP-102 to PC 1
150.L20	26JUN09*	18AUG09	Analy AN-102 Smpls/Interpret Results from AP-102
150.L25	19AUG09*	02SEP09	Prov AN-102 Feed Batch Info from AP-102 to PC 1
150.L45	02JUN06*	29JUL10	Obtain AN-102 Feed Qual Samples from AP-104
150.L50	30JUL10*	09AUG10	Provide AN-102 Samples from AP-104 to PC 2
150.L55	30JUL10*	22SEP10	Analy AN-102 Smpls/Interpret Results from AP-104
150.L60	23SEP10*	07OCT10	Provi AN-102 Feed Batch Info from AP-104 to PC 2
150.R10	10MAY07*	05DEC14	Obtain SY-101 Feed Qual Samples from AP-102
150.R15	08DEC14*	16DEC14	Provide SY-101 Samples from AP-102 to PC 1
150.R20	08DEC14*	28JAN15	Analy SY-101 Smpls/Interpret Results from AP-102



Activity ID	Early Start	Early Finish	Activity
150.R25	29JAN15*	12FEB15	Prov SY-101 Feed Batch Info from AP-102 to PC 1
150.R45	13JUL07*	10JUL15	Obtain SY-101 Feed Qual Samples from AP-104
150.R50	13JUL15*	21JUL15	Provide SY-101 Samples from AP-104 to PC 2
150.R55	13JUL15*	01SEP15	Analy SY-101 Smpls/Interpret Results from AP-104
150.R60	02SEP15*	17SEP15	Prov SY-101 Feed Batch Info from AP-104 to PC 2
150.Y10	29SEP03*	13JUL04	Obtain AP-108 Feed Qual Samples form Ap-102
150.Y15	14JUL04*	22JUL04	Provide AP-108 Samples from AP_102
150.Y20	14JUL04*	03SEP04	Analy AP-108 Smpls/Interpret Results form AP-102
150.Y25	07SEP04*	21SEP04	Provide AP-108 Feed Batch to PC1
160.A66	02APR01*	20JUN03	Obtain HLW Feed Qual Grab Samples AZ-101 Solids
160.A68	23JUN03*	12AUG03	Eval Samples/Establish MT for AZ-101
160.A74	23JUN03*	08JUL03	Provide Separate Samples to the PC - AZ-101
160.A76	13AUG03*	27AUG03	Prov MT Non-Volatile Oxides Exclude Na/Si-AZ-101
160.F501	03SEP02*	11APR05	Obtain HLW Feed Qual Grab Samples AZ-102 Solids
160.F55	12APR05*	03JUN05	Eval Smpls/Estab MTof Non-Volatile for AZ-102

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Activity ID	Early Start	Early Finish	Activity
160.F85	12APR05*	25APR05	Provide Separate Samples to Private Contractor
160.F90	06JUN05*	20JUN05	Provide MT Non-Volatile Oxides Excluding Na/Si
160.H50	02JAN03*	20JAN06	Obtain HLW Feed Qual Grab Samples AY-102 Solids
160.H55	23JAN06*	15MAR06	Eval Smpls/Estab MT of Non-Volatile for AY-102
160.H60	04JAN05*	20MAR06	PC Conduct Waste Form Qual/Confirmation-AY-102
160.H65	16MAR06*	30MAR06	Provide MT Non-Volatile Oxides Excluding Na/Si
160.H70	23JAN06*	03FEB06	Provide Separate Samples to PC - AY-102
160.J50	24OCT05*	17APR06	Obtain HLW Feed Qual Grab Samp C-104/AZ-101
160.J55	18APR06*	09JUN06	Eval Smpls/Estab MT of Non-Volatile for C-104
160.J85	18APR06*	01MAY06	Provide Separate Samples to Private Contractor
160.J90	12JUN06*	26JUN06	Provide MT Non-Volatile Oxides Excluding Na/Si
160.Z50	24OCT05*	25APR06	Obtain HLW Feed Qual Grab Samp C-102
160.Z55	26APR06*	19JUN06	Eval Smpls/Estab MT of Non-Volatile for C-102
160.Z85	26APR06*	09MAY06	Provide Separate Samples to Private Contractor
160.Z90	20JUN06*	06JUL06	Provide MT Non-Volatile Oxides Excluding Na/Si

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Activity ID	Early Start	Early Finish	FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67
1.01.04.01.02			Retrieval SST Waste
1.01.04.01.02.01			SST/Closure Project Mgmt & Admin
720.716	01OCT98*	29SEP00	SST Program Management
1.01.04.01.02.02			SST Retrieval System Definition
270.210	01OCT98*	29SEP00	SST Program Plan
290.015	01OCT99*	30SEP11	SST System Spec
290.020	01OCT01*	28SEP12	Maintain SST System Spec
290.020CA		30SEP05*	RL-WT013 Select Retrvl Tech For SST Farm T04-04-221
1.01.04.01.02.03			ISSTRS - Tanks 3 & 4
270.A10	01OCT99*	01OCT02	ISSTRS Project Management
270.A50	01OCT99*	29SEP00	Prepare ISSTRS Detailed Design
270.A50AM		29DEC00*	M-45-08A Comp ISSTRS Leak Detection Design T04-00-731
270.A60	30MAY03*	27MAY05	Update Authorization Basis
270.C20	30MAY03*	31MAY05	Construct ISSTRS System 3
270.D20	30MAY03*	31MAY06	Construct ISSTRS System 4
270.D20AM		30JUN03*	M-45-08 Estab Capabil for Leakage Mitigation T04-03-791
270.D20AN		30JUN03*	M-45-08B Comp Demo/Install of Leak Monit/Mitigtn T04-03-792
290.010	03JUL01*	02JUL13	SSSTRS Project Management/Maintenance/Services

Activity ID	Early Start	Early Finish	
1.01.04.01.02.04			SSSTRS
290.050	03JUL01*	30JUN04	Prepare SSSTRS CDR
290.060	03JUL01*	30JUN04	Prepare ICDs
290.070	02JUL03*	01JUL08	Design SSSTRS Systems
290.080	02JUL03*	01JUL08	Obtain Permits
290.090	03JUL07*	02JUL12	Amend Authorization Basis
290.100	02JUL03*	30DEC04	Prepare DSTs to Receive Wastes
290.110	01JUL04*	02JUL12	Construct SSSTRS Systems
290.120	02JUL08*	04JAN13	Conduct SSSTRS OTP/ORR
1.01.04.01.02.05			Hanford Tank Initiative
060.020	01OCT98*	29SEP00	HTI Characterization
060.020E06		30SEP99*	Issue LDUA Sample Validated Data Report ◇ T04-98-531
060.020M11		30JUN99*	TWR 1.1.1 Cmplt AX-104 LDUA Sampling Campaign ◇ T04-98-511
060.020R09		30SEP99*	TWR 1.1.1 Cmplt CP Verification Pushes ◇ T04-99-526
060.020R24		31MAR99*	Complete CP Demo Pushes at AX-104 ◇ T04-99-525
060.040	01OCT98*	29SEP00	HTI Closure

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Activity ID	Early Start	Early Finish	
060.040N0F		29SEP00*	TIP - Vadose Zone Contaminants Distribution
			T04-00-545
060.040N15		29APR99*	Issue Final Conclu/Recom Rpt-AX Tk Fm Closure
			T04-99-517
060.060	01OCT98*	30SEP02	HTI Retrieval System Supply
060.060V10		30NOV98*	Complete C-106 Retrieval Vendors 1 & 2 Sys Def.
			T04-98-514
060.060Y01		01MAR99*	Select C-106 Retrieval Vendor
			T04-99-506
060.070	01OCT98*	29MAR02	HTI Site Upgrades
060.070D04		29SEP00*	Complete Site Upgrades Design
			T04-00-513
060.080	01OCT98*	30SEP02	HTI Startup
060.090	02OCT01*	30SEP02	Characterize Tank C-106
060.090B30	28JUN02*		M-45-03-T02 Initiate Final Retrieval Demo C-106
			T04-02-503
060.090B31		30SEP03*	M-45-03-T01 Complete SST Waste Retrieval Demo
			T04-03-500
720.710	01OCT98*	28SEP01	HTI Proj Mgmt, Sys Eng, Permits/Safety
1.01.04.01.02.06			SST Technology and Assessments
270.620	01OCT98*	30SEP03	SST Leak Detection Evaluation
270.620BN		30SEP99*	M-45-09D: Submit Annual LDMM Progress Reports
			T04-99-341
270.630	01OCT98*	29SEP00	SST Tank Conditions Assessment

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Activity ID	Early Start	Early Finish	Activity
270.650	01OCT98*	29SEP00	SST Retrieval Risk Studies
270.A32AM		29SEP00*	M-45-09E Sub Annual Prog Rpt on Leak Mtr and Det T04-00-341
270.A35AM		27SEP01*	M-45-09F Sub Annual Prog Rpt on Leak Mtr and Det T04-01-341
270.A36AM		30SEP02*	M-45-09G LDMM Progress Report Complete T04-02-341
270.A37AM		30SEP03*	M-45-09H LDMM Progress Report Complete T04-03-341
290.025	01OCT99*	28SEP01	Perform SST AGA/Trade Studies
290.030	03FEB00*	29AUG02	Evaluate Technology (i.e, Demonstrate LVDG)
1.01.04.01.02.08			Retrieval Privatization
370.080	01OCT10*	27SEP18	Operate SST/MUST Retrieval Systems & Facilities
370.080AM	30SEP11*		M-45-05-T09 Initiate Ret from 10 Additional SSTs T04-11-1B1
370.080CM	28SEP12*		M-45-05-T10 Initiate Ret from 12 Additional SSTs T04-12-1B1
370.080EM	30SEP13*		M-45-05-T11 Initiate Ret from 14 Additional SSTs T04-13-1B1
370.080GM	30SEP14*		M-45-05-T12 Initiate Ret from 17 Additional SSTs T04-14-1B1
370.080IM	30SEP15*		M-45-05-T13 Initiate Ret from 20 Additional SSTs T04-15-1B1
370.080KM	30SEP16*		M-45-05-T14 Initiate Ret from 20 Additional SSTs T04-16-1B1
370.080LM	30SEP17*		M-45-05-T15 Initiate Ret from 20 Additional SSTs T04-17-1B1

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Activity ID	Early Start	Early Finish	Activity
370.080NM		28SEP18*	M-45-05 Retrieve Waste from All SSTs (T04-18-1B1)
370.090	01OCT14*	30DEC21	Deactivate SST/MUST Retrieval Sys & Facilities
1.01.04.01.02.09			Phase 2 SST Retrieval Ops
280.A10	01OCT02*	30SEP11	Project Management/Administration
280.A90	01JUN06*	31MAY12	ISSTRS Intrusion Prevention - System 1
280.C10	01JUN05*	31MAY06	ISSTRS Pre-Retrieval Surveil/Readiness Rev Sys 3
280.C20	01JUN05*	31MAY06	Conduct ISSTRS OTP/ORR System 3
280.C30	01JUN05*	31MAY06	Prepare ISSTRS Procedures/Conduct Training Sys 3
280.C40	01JUN06*	30MAY07	Retrieve Tank Waste ISSTRS System 3
280.C40AM	01JUN06*		M-45-05-T02 Initiate Ret From 2 SSTs (T04-04-920)
280.C50	31MAY07*	28MAY08	Perform ISSTRS Post-Retrieval Surveil - Sys 3
280.C60	31MAY07*	28MAY08	Remove ISSTRS Equipment - System 3
280.C70	31MAY07*	28MAY08	ISSTRS Retrieval Validation - System 3
280.C80	31MAY07*	28MAY08	ISSTRS Intrusion Prevention - System 3
280.D10	01JUN06*	30MAY07	ISSTRS Pre-Retrieval Surveil/Readiness Rev Sys 4
280.D20	01JUN06*	30MAY07	Conduct ISSTRS OTP/ORR System 4

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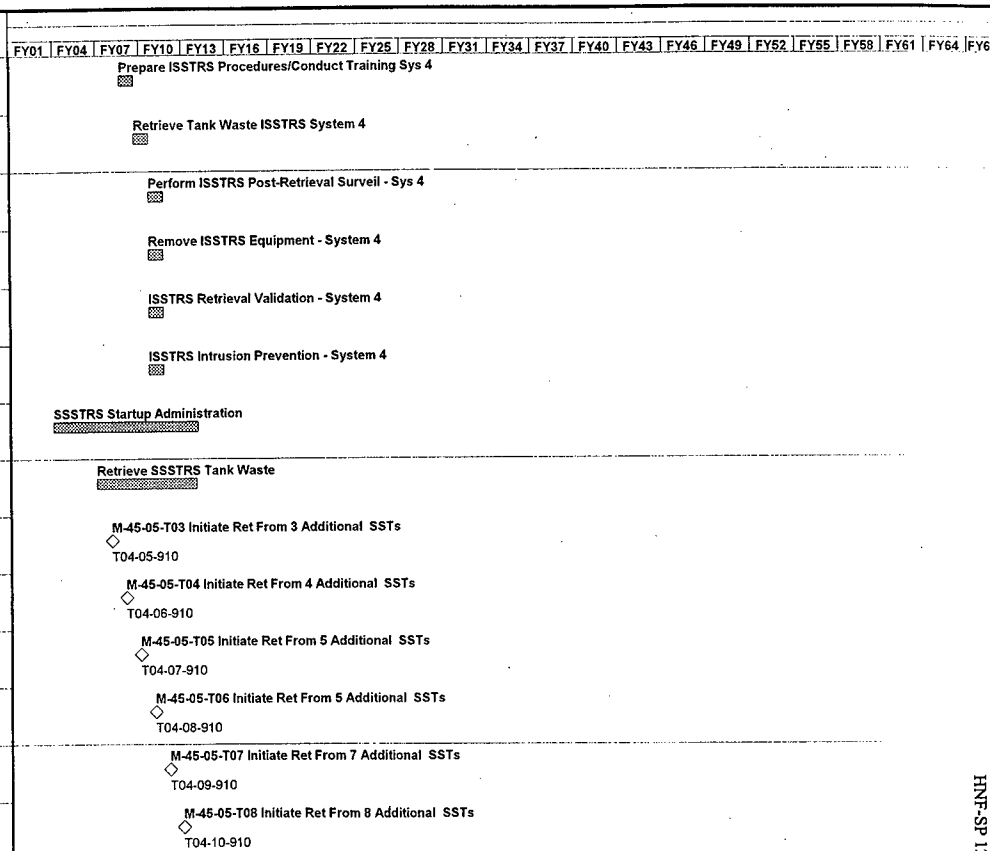
Activity ID	Early Start	Early Finish
280.D30	01JUN06*	30MAY07
280.D40	31MAY07*	28MAY08
280.D50	29MAY08*	29MAY09
280.D60	29MAY08*	29MAY09
280.D70	29MAY08*	29MAY09
280.D80	29MAY08*	29MAY09
300.010	01OCT01*	03OCT11
300.040	01OCT04*	30SEP11
300.040A1	30SEP05*	
300.040A2	29SEP06*	
300.040A3	28SEP07*	
300.040A4	30SEP08*	
300.040A5	30SEP09*	
300.040A6	30SEP10*	



Activity ID	Early Start	Early Finish	FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67
1.01.04.01.03			D&D Tank Farm Facility
1.01.04.01.03.01			Closure/Vadose Zone Proj Mgmt
510.010	01OCT99*	29SEP34	SST Closure Management
540.010	01OCT14*	29SEP34	Close DSTs Program Management
720.712	01OCT98*	29SEP99	Manage Closure/Vadose Zone Activities
1.01.04.01.03.02			Closure System Definition
510.030	02APR04*	02APR07	Prepare Closure EIS
510.040	03APR07*	27SEP07	Issue Closure ROD
510.040B1		27SEP07*	TIP - Decision on IMUST Retrieval and Closure T04-07-U10
510.110	01OCT99*	30SEP14	Closure Systems Definition
520.040	01OCT14*	30SEP15	Conduct NEPA Supplemental Analysis for Closure
1.01.04.01.03.03			Vadose Zone Activities
650.105	01OCT99*	29SEP00	Vadose Zone - Test Water Lines
650.110	02NOV98*	29SEP00	Seal Abandoned Wells & Cap Boreholes
650.115	01OCT99*	29SEP00	Vadose Zone - Gather TF Data on Surface Water
650.120	02OCT00*	28SEP01	Vadose Zone - Define Drainage Control Remedies
650.125	01OCT02*	30SEP03	Vadose Zone - Implement Surface Drainage Control
650 130	02NOV98*	28SEP01	Conduct Study & Field Test Interim Surf Barrior

Activity ID	Early Start	Early Finish	Activity
650.135	01OCT02*	30SEP03	Vadose Zone - Provide Interim Surface Barriers
650.140	01OCT98*	29SEP99	Corrective Measures Study
650.205	01OCT98*	27MAY99	Prepare Detailed Characterization Work Plan
650.205DB		31JAN99*	TWR 1.1.2 Complete Detailed Char. Plan T04-99-W61
650.210	02NOV98*	29SEP00	Analyze Historic Gross Gamma Logging Data
650.215	01OCT98*	29SEP99	Characterization Campaign
650.220	04JAN99*	29SEP00	Characterize 1st 3 (Most Impacted) Locations
650.220JB		30JUN99*	TWR 1.1.2 Cmplt Characterization of Borehole T04-99-W91
650.220JC		30SEP99*	TWR 1.1.2 Submit Report with Results of Char. T04-99-W92
650.225	01OCT99*	28SEP01	Vadose Zone - Characterize 5 Leak Sites
650.230	02NOV98*	26APR99	Borehole 41-09-39 Decommissioning & Samp
650.301	01OCT99*	28SEP01	Complile Vadose Zone Data
650.305	02OCT00*	30SEP02	Vadose Zone - Prepare Characterization Work Plan
650.310	01OCT99*	28SEP00	Vadose Zone - Develop System Model
650.315	01OCT99*	29SEP00	Vadose Zone Assess Need for Major Correct. Meas

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Activity ID	Early Start	Early Finish	
650.320	02OCT00*	28SEP01	Vadose Zone Characterization
650.325	02OCT00*	28SEP01	Vadose Zone - Assess Retrieval Leak Impacts
650.330	01OCT01*	30SEP02	Vadose Zone - Update Characterization Work Plan
650.335	01OCT01*	30SEP03	Vadose Zone - Continue Characterization
650.340	01OCT01*	30SEP02	Vadose Zone - Assure Readiness for NEPA Closure
650.345	01OCT02*	30SEP03	Vadose Zone - Update Work Plan for NEPA Closure
650.350	01OCT02*	01APR04	Vadose Zone - Conduct NEPA Characterization
650.405	01OCT98*	29SEP00	Cmplt Baseline Logging & Issue Final Rpt
650.410	01OCT99*	30SEP05	Vadose Zone - Conduct Baseline Surveillance
650.415	01OCT99*	30SEP05	Vadose Zone - TWRS Monitor Well Network
650.505	01OCT99*	30SEP04	Vadose Zone - Develop/Deploy Improved Technology
650.510	02NOV98*	30SEP04	Conduct External Scientific Peer Reviews
1.01.04.01.03.04			SST/MUST Closure
510.050	30SEP09*	23NOV10	Obtain Air Permit to Close 1st Farm
510.060	02APR07*	31MAR08	Characterize Residual Waste in 1st Farm
510.070	04DEC07*	07JAN09	Obtain Non-HLW Classification for 1st Farm

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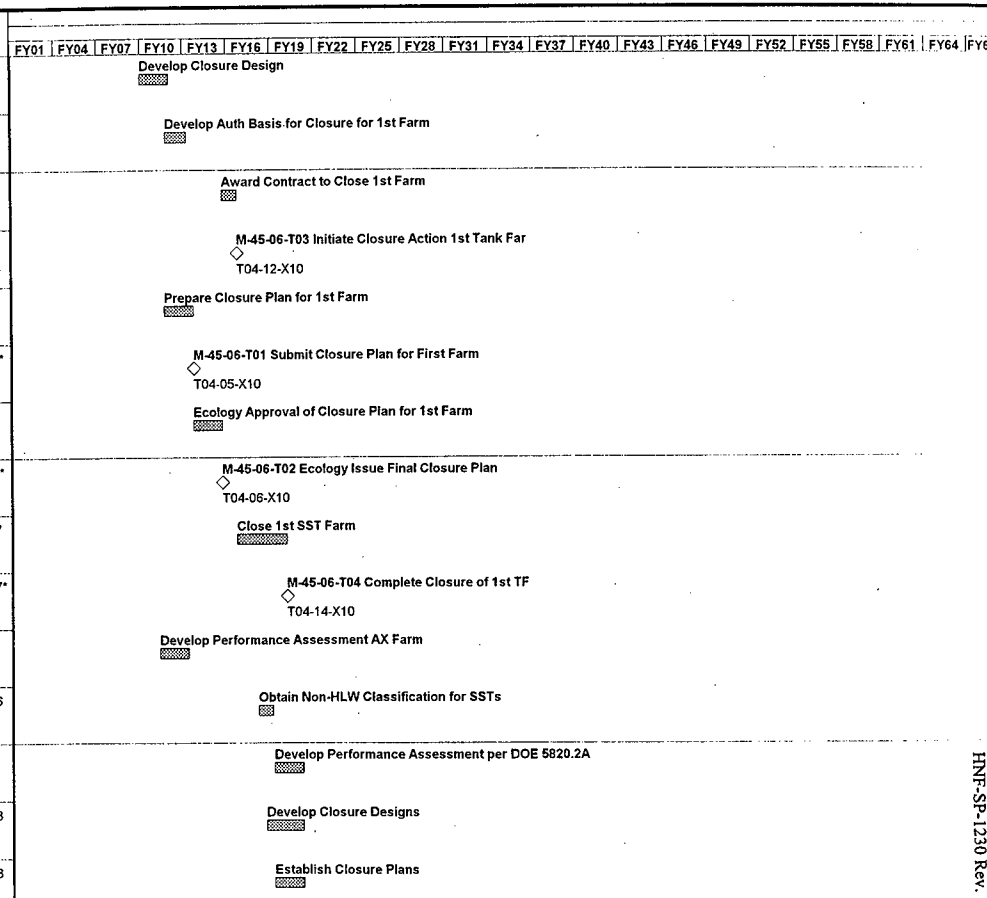
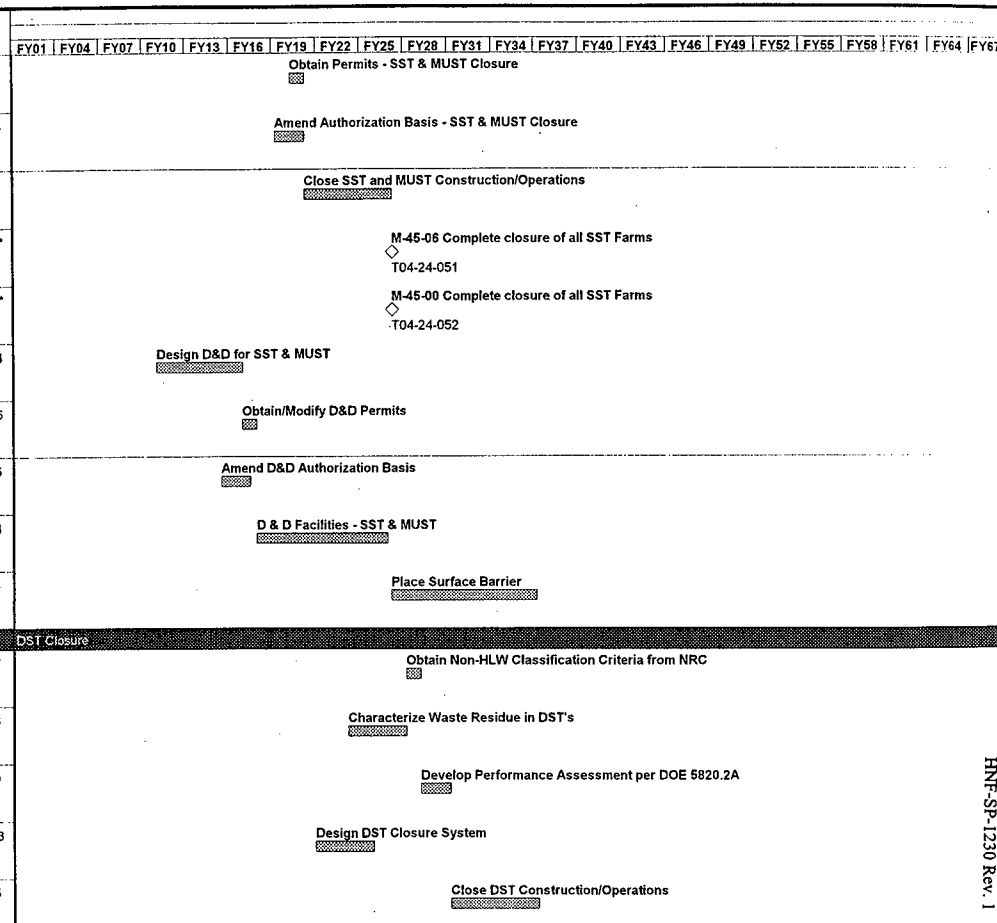
Activity ID	Early Start	Early Finish
510.080	28SEP07*	29SEP09
510.090	29JUN09*	28DEC10
510.100	17JUN13*	16JUN14
510.100AM1	17JUN14*	
510.120	17JUN09*	15JUN11
510.120AM		15JUN11*
510.130	16JUN11*	14JUN13
510.130AM		14JUN13*
510.140	17JUN14*	11DEC17
510.140AM		11DEC17*
510.160	05FEB09*	02FEB11
520.050	07DEC15*	05DEC16
520.060	06JAN17*	07JAN19
520.070	29JUN16*	27DEC18
520.080	30DEC16*	31DEC18



Activity ID	Early Start	Early Finish
520.090	28DEC17*	27DEC18
520.100	30DEC16*	31DEC18
520.110	08JAN19*	07JAN25
520.110CN		07JAN25*
520.110CP		07JAN25*
520.140	01OCT08*	01OCT14
520.150	02OCT14*	01OCT15
520.160	03APR13*	02APR15
520.170	02OCT15*	30SEP24
520.180	08JAN25*	08JAN35
1.01.04.01.03.05		DST Closure
540.020	14JAN26*	13JAN27
540.030	13JAN22*	13JAN26
540.040	14JAN27*	11JAN29
540.050	02OCT19*	02OCT23
540.080	12JAN29*	11JAN35



Activity ID	Early Start	Early Finish	Activity
540.140	01OCT26*	30SEP30	D&D DST Facilities
540.150	09JAN32*	09JAN36	Place Surface Barriers
550.060	01OCT20*	29SEP22	Amend DST Closure Safety Basis Authorization
550.070	03OCT23*	30SEP25	Modify Closure Permits (Part B)
550.110	03OCT23*	30SEP25	Design DST Farm D & D
550.120	01OCT25*	30SEP26	Obatin/Modify DST D&D Permits
550.130	02OCT24*	30SEP26	Amend Authorization Basis for DST D&D
1.01.04.01.03.06			Post-Closure Monitoring
550.010	10JAN36*	08JAN66	Initiate Post-Closure Monitoring
1.01.06			Privatization Phase 1
350.040	04OCT99*	01OCT01	Modify AP-106 As Needed/Tie-In - PC 1
350.090	31JAN08*	03JUN09	PC 1 Processes AN-105 Feed from AP-106
350.100	04JUN09*	06OCT10	PC 1 Processes AN-104 Feed from AP-106
350.110	07OCT10*	08FEB12	PC 1 Processes AW-101 Feed from AP-106
350.120	09FEB12*	12JUN13	PC 1 Processes AN-103 Feed from AP-106
350.123	13JUN13*	15OCT14	PC 1 Processes AP-101 Feed from AP-106

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Activity ID	Early Start	Early Finish	
350.125	16OCT14*	17FEB16	PC 1 Processes AY-101 Feed from AP-106
350.130	18FEB16*	21FEB18	PC 1 Processes AN-107 Feed from AP-106
360.020	01OCT99*	07MAY01	Final Design HLW/LAW Immobilization Facility
360.040	08MAY01*	06JUN01	Tie-In Feed Line to Valve Pit Provided by W-211
360.080	28FEB07*	11MAY07	Phase 1B Proc/Immb First Batch HLW Feed-AZ-101
360.090	14MAY07*	06MAR09	Phase 1B Proc/Immb Second Batch HLW Feed-AZ-101
360.100	09MAR09*	21MAY09	Phase 1B Proc/Immob Third Batch HLW Feed-AZ-102
360.110	22MAY09*	31MAY11	Phase 1B Proc/Immob Fourth Batch HLW Feed-AZ-102
360.120	01AUG11*	13OCT11	Phase 1B Proc/Immb Fifth Batch HLW Feed-AZ-102
360.130	14OCT11*	23DEC11	Phase 1B Proc/Immb Sixth Batch HLW Feed-AZ-102
360.140	28DEC11*	09MAR12	Phase 1B Proc/Immb Seventh Batch HLW Feed-AY-102
360.150	12MAR12*	22MAY12	Phase 1B Proc/Immb Eighth Batch HLW Feed-AY-102
360.160	23MAY12*	19MAR14	Phase 1B Proc/Immb Ninth Batch HLW Feed-AY-102
360.170	11JAN16*	27JAN20	Phase 1B Proc/Immob Ten Btch of HLW Feed C-102
360.180	23MAR16*	03JUN16	Phase 1B Proc/Immob Eleventh Batch of HLW C-104

FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67

Activity ID	Early Start	Early Finish
360.190	06JUN16*	17JAN18

FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64 FY67

Phase 1B Proc/Immob Twelveth Batch of HLW C-104

B.4.3.2 Execution Year Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP / FY00 OCT
1			Hanford Site
1.01			TWRS
1.01.04			Waste Retrieval Project
1.01.04.01			Tank Farm System (Waste Retrieval)
1.01.04.01.01			Deliver Waste Feed
1.01.04.01.01.01			Project Mgmt & Admin
150.704	01OCT98*	30SEP16	Manage Waste Feed Delivery Management
150.715	01OCT98*	30SEP16	WFD Engineering Management Support
150.725	01OCT98*	30SEP16	Prog Engineering Mgmt Support
720.100	01SEP99*	30SEP99	TW04 3161 Costs
720.702	01OCT98*	30SEP16	Manage TWRS Waste Retrieval Division
720.722	01OCT98*	30SEP16	TWR Business Management
720.724	01OCT98*	30SEP16	Waste Retrieval Program Analysis & Control
720.740	01OCT98*	28SEP18	TWR/TWRS Integration
720.740LA		30JUL99*	TWR 1.3.5 -Issue Ph 1B Unconstrained Integ Sched ◇ T04-99-A41
720.740LB		30SEP99*	TWR 1.3.5 - Issue Ph 1B Constrained Integ Sched T04-99-A42
720.750	01OCT98*	30SEP16	Maintain TWR QA Program

01OCT98 Early Bar
08JAN99 Progress Bar
01OCT98 Critical Activity
17NOV98

4BP2

Sheet 1 of 8

Tank Waste Remediation System
PMBS - FY 1999
TW04 - Retrieval

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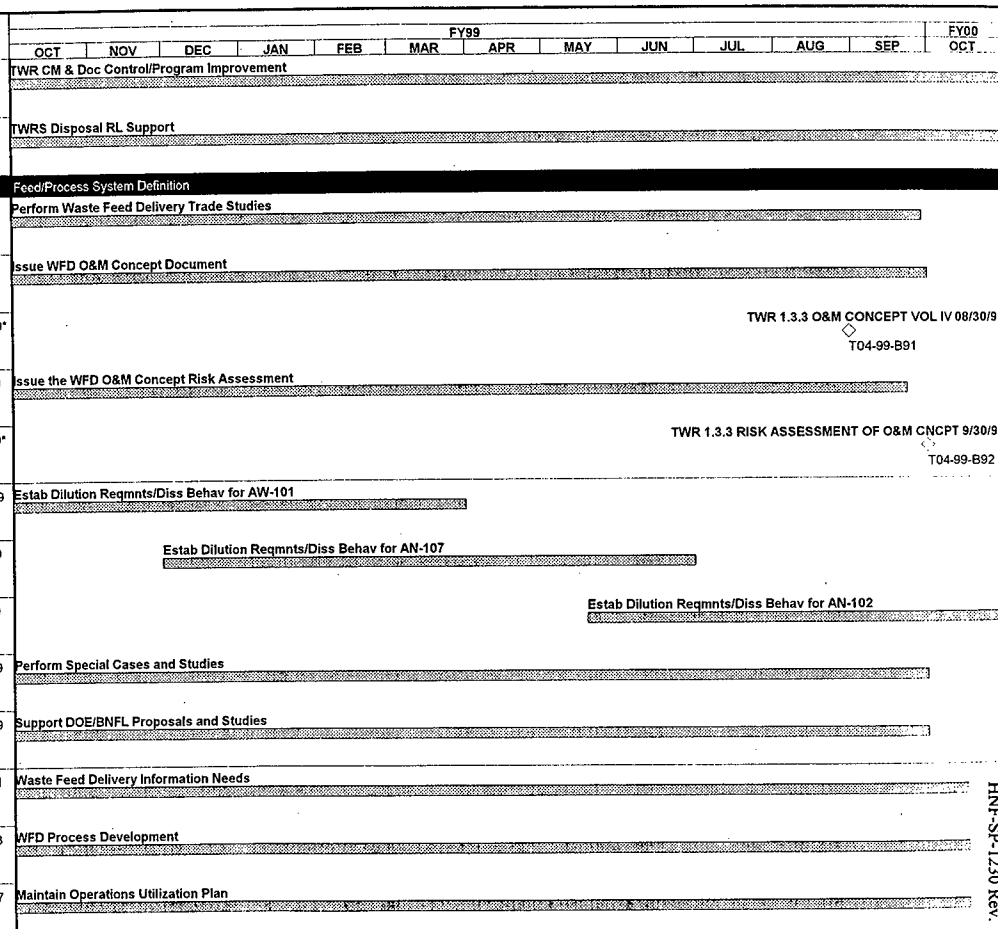
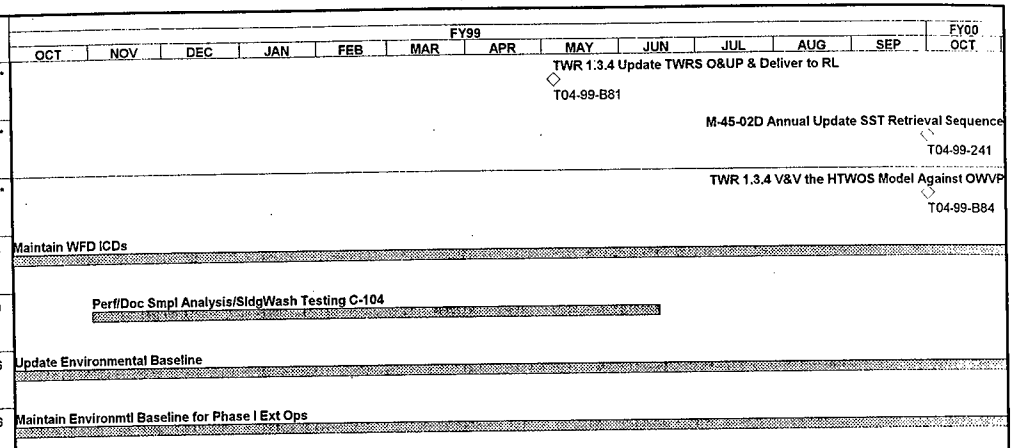
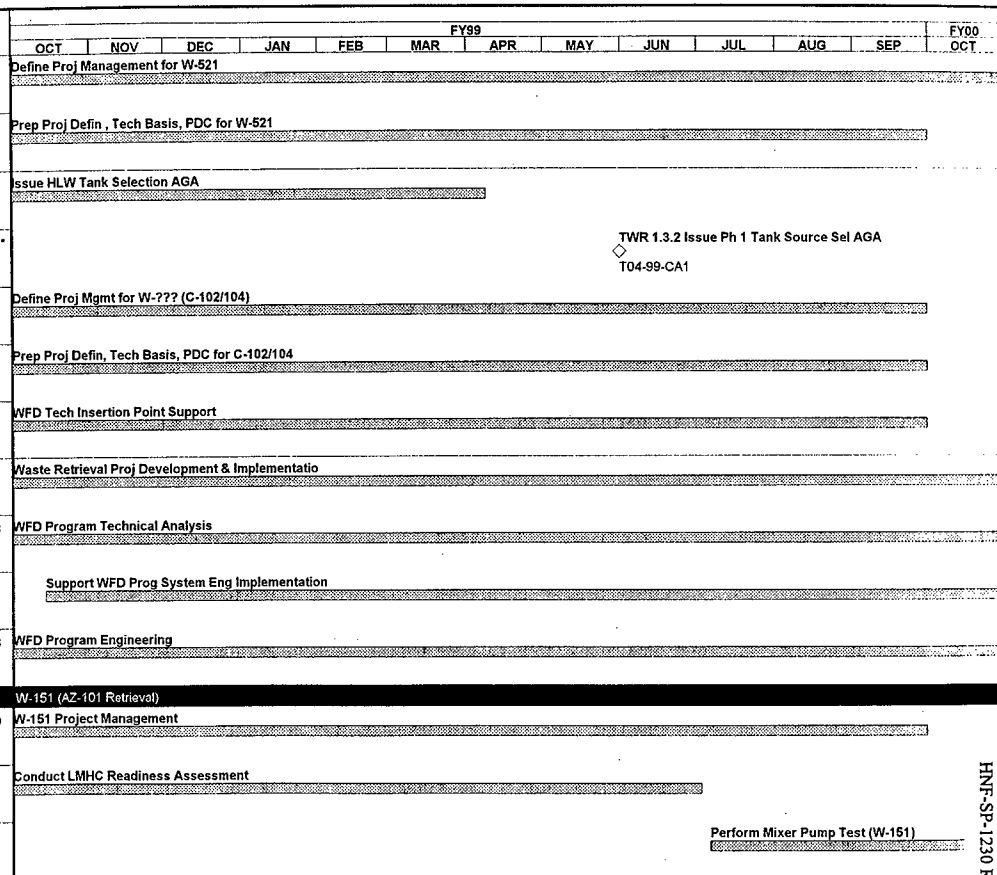
Activity ID	Early Start	Early Finish	Activity
720.760	01OCT98*	30SEP16	TWR CM & Doc Control/Program Improvement
720.900	01OCT98*	28FEB18	TWRS Disposal RL Support
1.01.04.01.01.02			Feed/Process System Definition
120.D34	01OCT98*	28SEP99	Perform Waste Feed Delivery Trade Studies
120.D38	01OCT98*	30SEP99	Issue WFD O&M Concept Document
120.D38M1		30AUG99*	TWR 1.3.3 O&M CONCEPT VOL IV 08/30/99 T04-99-B91
120.D42	01OCT98*	22SEP99	Issue the WFD O&M Concept Risk Assessment
120.D42D2		30SEP99*	TWR 1.3.3 RISK ASSESSMENT OF O&M CNCPT 9/30/99 T04-99-B92
120.G10	01OCT98*	31MAR99	Estab Dilution Reqmnts/Diss Behav for AW-101
120.K10	01DEC98*	30JUN99	Estab Dilution Reqmnts/Diss Behav for AN-107
120.L10	19MAY99*	24JAN00	Estab Dilution Reqmnts/Diss Behav for AN-102
130.028	01OCT98*	30SEP99	Perform Special Cases and Studies
130.033	01OCT98*	30SEP99	Support DOE/BNFL Proposals and Studies
130.044	01OCT98*	30SEP11	Waste Feed Delivery Information Needs
150.726	01OCT98*	28FEB18	WFD Process Development
150.B22	01OCT98*	29SEP17	Maintain Operations Utilization Plan



Activity ID	Early Start	Early Finish	Activity
150.B22E1B		05MAY99*	TWR 1.3.4 Update TWRS O&UP & Deliver to RL (T04-99-B81)
150.B22E1C		30SEP99*	M-45-02D Annual Update SST Retrieval Sequence (T04-99-241)
150.B22H1		30SEP99*	TWR 1.3.4 V&V the HTWOS Model Against OWVP (T04-99-B84)
150.B26	01OCT98*	30SEP03	Maintain WFD ICDs
160.J10	02NOV98*	15JUN99	Perf/Doc Smpl Analysis/SldgWash Testing C-104
620.070	01OCT98*	30SEP16	Update Environmental Baseline
620.090	01OCT98*	30SEP16	Maintain Environmtl Baseline for Phase I Ext Ops
1.01.04.01.01.03			DST Retrieval System Definition
120.005	01OCT98*	30AUG99	DST System Specification Development
120.010	07JUL99*	20SEP99	DST System Specification Maintenance
120.015	01OCT98*	30SEP99	Develop & Issue DST Component Specifications
120.D19	04JAN99*	30SEP99	WFD Retrieval Pump Optim & Standardization
120.G38	01OCT98*	04DEC98	Decn Board/Acqn Strategy PHI Ret After AN-104
150.702	01OCT98*	30SEP02	Operational Readiness Planning & Implementation
150.718	01OCT98*	27SEP11	Manage Retrieval Project Definition
160.005	01OCT98*	30SEP99	SST System & Subsystem Spec Developmt



Activity ID	Early Start	Early Finish	Activity
160.A59	01OCT98*	03DEC02	Define Proj Management for W-521
160.A60	01OCT98*	30SEP99	Prep Proj Defin , Tech Basis, PDC for W-521
160.B01	01OCT98*	08APR99	Issue HLW Tank Selection AGA
160.B01JN		31MAY99*	TWR 1.3.2 Issue Ph 1 Tank Source Sel AGA ◇ T04-99-CA1
160.J59	01OCT98*	30SEP99	Define Proj Mgmt for W-??? (C-102/104)
160.J61	01OCT98*	30SEP99	Prep Proj Defin, Tech Basis, PDC for C-102/104
720.711	01OCT98*	30SEP99	WFD Tech Insertion Point Support
720.720	01OCT98*	28FEB18	Waste Retrieval Proj Development & Implementatio
720.725	01OCT98*	30SEP16	WFD Program Technical Analysis
720.727	14OCT98*	30SEP11	Support WFD Prog System Eng Implementation
720.730	01OCT98*	30SEP16	WFD Program Engineering
1.01.04.01.01.04			W-151 (AZ-101 Retrieval)
110.010	01OCT98*	30SEP99	W-151 Project Management
110.050	01OCT98*	02JUL99	Conduct LMHC Readiness Assessment
110.070	07JUL99*	27JAN00	Perform Mixer Pump Test (W-151)



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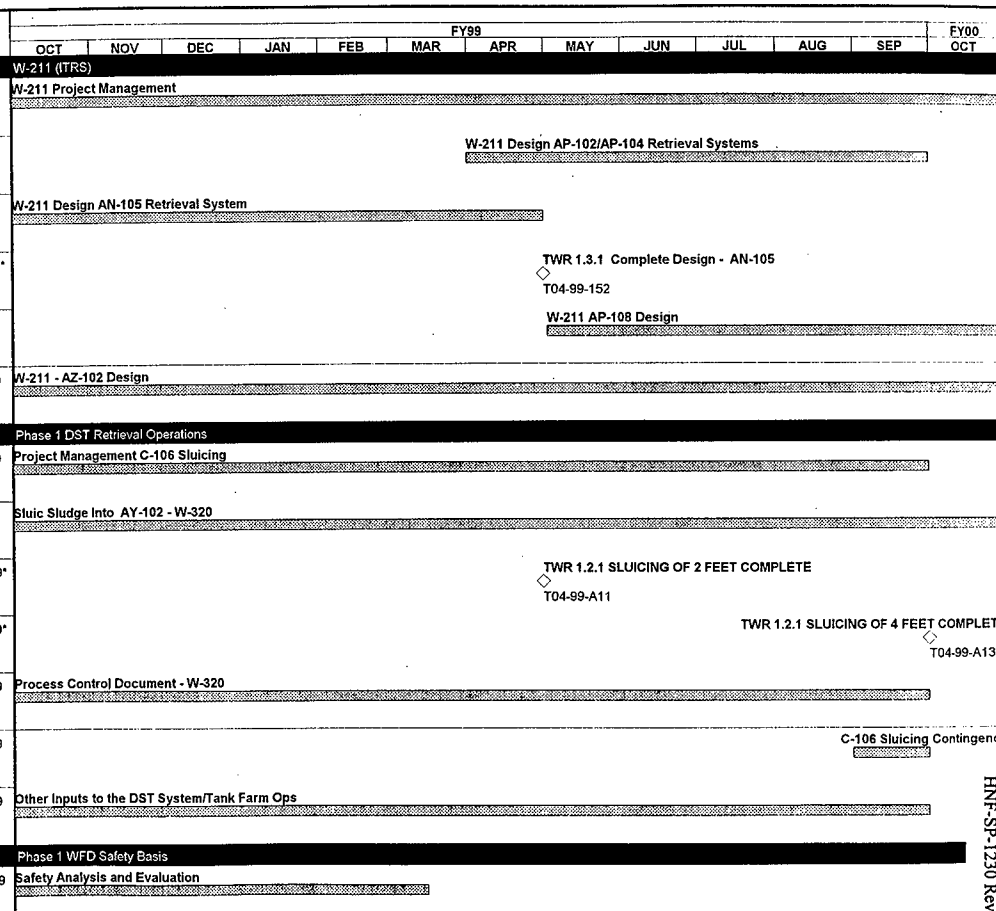
Activity ID	Early Start	Early Finish	Activity
1.01.04.01.01.05			W-211 (ITRS)
120.A00	01OCT98*	31MAR11	W-211 Project Management
120.B35	01APR99*	30SEP99	W-211 Design AP-102/AP-104 Retrieval Systems
120.D65	01OCT98*	30APR99	W-211 Design AN-105 Retrieval System
120.D65D1		30APR99*	TWR 1.3.1 Complete Design - AN-105 (T04-99-152)
120.Y50	03MAY99*	31MAY01	W-211 AP-108 Design
160.F40	01OCT98*	29SEP00	W-211 - AZ-102 Design
1.01.04.01.01.10			Phase 1 DST Retrieval Operations
050.010	01OCT98*	30SEP99	Project Management C-106 Sluicing
050.090	01OCT98*	19JAN00	Sluic Sludge Into AY-102 - W-320
050.090P1		30APR99*	TWR 1.2.1 SLUICING OF 2 FEET COMPLETE (T04-99-A11)
050.090P2		30SEP99*	TWR 1.2.1 SLUICING OF 4 FEET COMPLETE (T04-99-A13)
050.130	01OCT98*	30SEP99	Process Control Document - W-320
050.140	01SEP99*	30SEP99	C-106 Sluicing Contingency
160.X40	01OCT98*	30SEP99	Other Inputs to the DST System/Tank Farm Ops
1.01.04.01.01.12			Phase 1 WFD Safety Basis
150.B10	01OCT98*	15MAR99	Safety Analysis and Evaluation



Activity ID	Early Start	Early Finish	FY99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY00 OCT
150.B14	01OCT98*	12JUL99	Develop/Establish TSRs												
150.B16	01OCT98*	29SEP00	Update/Amend Auth Basis for WFD Activities												
620.050	01OCT98*	27SEP04	Develop Waste Feed Delivery Licensing Strategy												
1.01.04.01.02			Retrieve SST Waste												
1.01.04.01.02.01			SST/Closure Project Mgmt & Admin												
720.716	01OCT98*	29SEP00	SST Program Management												
1.01.04.01.02.02			SST Retrieval System Definition												
270.210	01OCT98*	29SEP00	SST Program Plan												
1.01.04.01.02.05			Hanford Tank Initiative												
060.020	01OCT98*	29SEP00	HTI Characterization												
060.020E06		30SEP99*	Issue LDUA Sample Validated Data Report T04-98-531												
060.020M11		30JUN99*	TWR 1.1.1 Cmplt AX-104 LDUA Sampling Campaign T04-98-511												
060.020R09		30SEP99*	TWR 1.1.1 Cmplt CP Verification Pushes T04-99-526												
060.020R24		31MAR99*	Complete CP Demo Pushes at AX-104 T04-99-525												
060.040	01OCT98*	29SEP00	HTI Closure												
060.040N15		29APR99*	Issue Final Conclu/Recom Rpt-AX Tk Fm Closure T04-99-517												
060.060	01OCT98*	30SEP02	HTI Retrieval System Supply												
060.060V10		30NOV98*	Complete C-106 Retrieval Vendors 1 & 2 Sys Def. T04-98-514												

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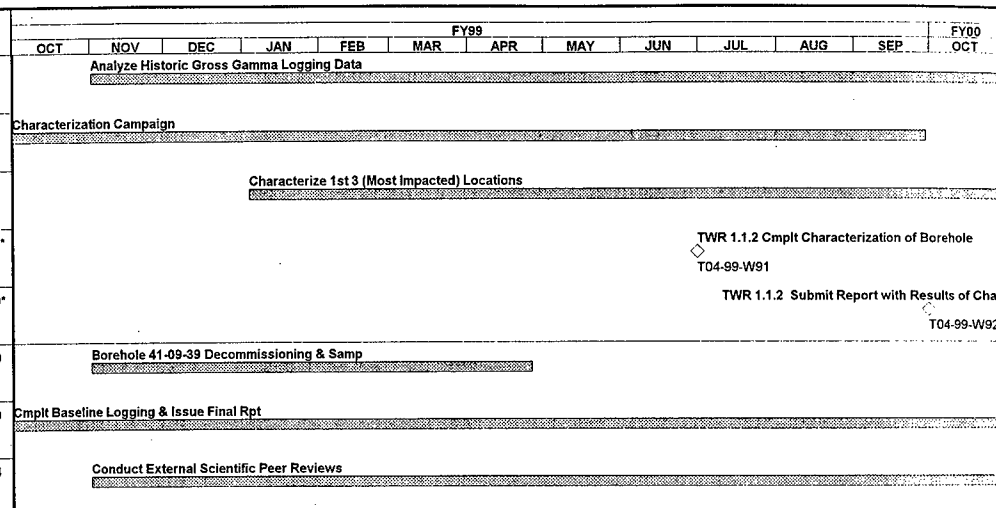
Activity ID	Early Start	Early Finish	FY99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY00 OCT
060.060Y01		01MAR99*						Select C-106 Retrieval Vendor ◇ T04-99-506							
060.070	01OCT98*	29MAR02	HTI Site Upgrades												
060.080	01OCT98*	30SEP02	HTI Startup												
720.710	01OCT98*	28SEP01	HTI Proj Mgmt, Sys Eng, Permits/Safety												
1.01.04.01.02.06			SST Technolgy and Assessments												
270.620	01OCT98*	30SEP03	SST Leak Detection Evaluation												
270.620BN		30SEP99*										M-45-09D: Submit Annual LDMM Progress Reports T04-99-341			
270.630	01OCT98*	29SEP00	SST Tank Conditions Assessment												
270.650	01OCT98*	29SEP00	SST Retrieval Risk Studies												
1.01.04.01.03			D&D Tank Farm Facility												
1.01.04.01.03.01			Closure/Vadose Zone Proj Mgmt												
720.712	01OCT98*	29SEP99	Manage Closure/Vadose Zone Activities												
1.01.04.01.03.03			Vadose Zone Activities												
650.110	02NOV98*	29SEP00	Seal Abandoned Wells & Cap Boreholes												
650.130	02NOV98*	28SEP01	Conduct Study & Field Test Interim Surf Barrior												
650.140	01OCT98*	29SEP99	Corrective Measures Study												
650.205	01OCT98*	27MAY99	Prepare Detailed Characterization Work Plan												
650.205DB		31JAN99*						TWR 1.1.2 Complete Detailed Char. Plan ◇ T04-99-W61							

Activity ID	Early Start	Early Finish
650.210	02NOV98*	29SEP00
650.215	01OCT98*	29SEP99
650.220	04JAN99*	29SEP00
650.220JB		30JUN99*
650.220JC		30SEP99*
650.230	02NOV98*	26APR99
650.405	01OCT98*	29SEP00
650.510	02NOV98*	30SEP04



B.4.3.3 Milestone List

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/TPA Date
T04-98-514	Complete C-106 Retrieval Vendors 1 & 2 System Definition	RL	-	30-Nov-98	-
T04-99-W61	TWR 1.1.2 Prepare Vadose Zone Characterization Plan	RL	-	31-Jan-99	-
T04-99-506	Select C-106 Retrieval Vendor	HQ	-	1-Mar-99	-
T04-99-525	Complete CP Demonstration Pushes at AX-104	HQ	-	31-Mar-99	-
T04-99-517	Issue Final Conclusions and Recommendations Report for AX-104 Tank Farm Closure Alternatives	FO	-	29-Apr-99	-
T04-99-A11	TWR1.2.1 C-106 Sluicing 2 Feet	RL	-	30-Apr-99	-
T04-99-152	TWR 1.3.1 AN-105 Retrieval System Title II Design	RL	-	30-Apr-99	-
T04-99-B81	TWR1.3.4 Issue TWRS Operation and Utilization Plan, Rev. 1	RL	-	5-May-99	-
T04-99-CA1	TWR 1.3.2 Prepare an AGA for Project C-102/104 Sludge Retrieval	RL	-	31-May-99	-
T04-99-W91	TWR 1.1.2 Complete Drilling and Sampling in a Characterization Borehole	RL	-	30-Jun-99	-
T04-98-511	TWR 1.1.1, Complete AX-104 LDUA Sampling Campaign	HQ	-	30-Jun-99	-
T04-99-A41	TWR1.3.5 Provide Integrated Resource-Loaded Project Schedule	RL	-	30-Jul-99	-
T04-99-B91	TWR 1.3.3 O&M Concept for 3 Source Tanks	RL	-	30-Aug-99	-
T04-99-526	TWR 1.1.1 Complete CP Verification Pushes at AX-104	HQ	-	30-Sep-99	-
T04-99-W92	TWR1.1.2 Submit Report on Results of Initial Characterization Activity	RL	-	30-Sep-99	-
T04-99-A13	TWR1.2.1 C-106 Sluicing of 2 Addtional Feet	RL	-	30-Sep-99	-
T04-99-B92	TWR1.3.3 O&M Concept Risk Assessment	RL	-	30-Sep-99	-
T04-99-B84	TWR1.3.4 V&V the HTWOS Model Against	RL	-	30-Sep-99	-
T04-99-A42	TWR1.3.5 Provide an Integrated Resource-Loaded Project Schedule	RL	-	30-Sep-99	-
T04-98-531	Issue LDUA Sample Validated Data Report	FO	-	30-Sep-99	-

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/TPA Date
T04-99-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02D	30-Sep-99	30-Sep-99
T04-99-341	Submit Annual Progress Report on Development of Waste Tank Leak Monitoring and Mitigation Activities in Support of M-45-08	HQ-I	M-45-09D	30-Sep-99	30-Sep-99
T04-00-341	Submit Annual Progress Report on Development of Waste Tank Leak Monitoring and Mitigation Activities in Support of M-45-08	HQ-I	M-45-09E	29-Sep-00	30-Sep-00
T04-00-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02E	29-Sep-00	30-Sep-00
T04-00-513	Complete Site Upgrades Design	FO	n/a	29-Sep-00	n/a
T04-00-545	TIP - Vadose Zone Contaminants Distribution	RL	n/a	29-Sep-00	n/a
T04-00-731	Complete Systems Description and Operation Strategy for Tank Leak Monitoring and Mitigation	HQ-I	M-45-08A	29-Dec-00	31-Dec-00
T04-01-341	Submit Annual Progress Report on Development of Waste Tank Leak Monitoring and Mitigation Activities in Support of M-45-08	HQ-I	M-45-09F	27-Sep-01	30-Sep-01
T04-01-C10	TIP - DST Mixing Pump Technology	RL	n/a	28-Sep-01	n/a
T04-01-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02F	28-Sep-01	30-Sep-01
T04-01-K10	Complete Design for the Initial SST Retrieval Systems	RL (Target)	M-45-04-T02	28-Feb-02	31-Dec-00
T04-02-503	Initiate Final Retrieval Demonstration of C-106	RL (Target)	M-45-03-T02	28-Jun-02	30-Jun-02
T04-02-341	Submit Annual Progress Report on Development of Waste Tank Leak Monitoring and Mitigation Activities in Support of M-45-08	HQ-I	M-45-09G	30-Sep-02	30-Sep-02
T04-02-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02G	30-Sep-02	30-Sep-02
T04-03-791	Establish Full-Scale Capability for Mitigation of Waste Tank Leakage During Retrieval Sluicing Operations	HQ-I	M-45-08	30-Jun-03	30-Jun-03
T04-03-792	Complete Demonstation and Installation of Leak Monitoring and Mitigation Systems for Initial SST Retrieval	HQ-I	M-45-08B	30-Jun-03	30-Jun-03

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/TPA Date
T04-03-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02H	30-Sep-03	30-Sep-03
T04-03-500	Complete SST Waste Retrieval Demonstration	RL (Target)	M-45-03-T01	30-Sep-03	30-Sep-03
T04-03-341	Submit Annual Progress Report on Development of Waste Tank Leak Monitoring and Mitigation Activities in Support of M-45-08	HQ-I	M-45-09H	30-Sep-03	30-Sep-03
T04-04-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02I	30-Sep-04	30-Sep-04
T04-04-K10	Provide Initial SST Retrieval Systems	RL (Target)	M-45-04-T01	05-Apr-05	30-Nov-03
T04-03-K10	Complete Construction for the Initial SST Retrieval Systems	RL (Target)	M-45-04-T03	05-Apr-05	30-Jun-03
T04-04-A10	Initiate Tank Waste Retrieval From One SST	RL (Target)	M-45-05-T01	06-Apr-05	31-Dec-03
T04-04-221	TIP - Submit Report on Suitability of Various Retrieval Technology for SST Applications	RL	n/a	30-Sep-05	n/a
T04-05-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02J	30-Sep-05	30-Sep-05
T04-05-910	Initiate Tank Waste Retrieval From Three Additional SSTs	RL (Target)	M-45-05-T03	30-Sep-05	30-Sep-05
T04-04-920	Initiate Tank Waste Retrieval From Two Additional SSTs	RL (Target)	M-45-05-T02	01-Jun-06	30-Sep-04
T04-06-910	Initiate Tank Waste Retrieval From Four Additional SSTs	RL (Target)	M-45-05-T04	29-Sep-06	30-Sep-06
T04-06-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02K	29-Sep-06	30-Sep-06
T04-07-U10	TIP - Decisions on IMUST Retrieval and Closure	RL	n/a	27-Sep-07	n/a
T04-07-910	Initiate Tank Waste Retrieval From Five Additional SSTs	RL (Target)	M-45-05-T05	28-Sep-07	30-Sep-07
T04-07-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02L	28-Sep-07	30-Sep-07
T04-08-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02M	30-Sep-08	30-Sep-08
T04-08-910	Initiate Tank Waste Retrieval From Five Additional SSTs	RL (Target)	M-45-05-T06	30-Sep-08	30-Sep-08

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/TPA Date
T04-09-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02N	30-Sep-09	30-Sep-09
T04-09-910	Initiate Tank Waste Retrieval From Seven Additional SSTs	RL (Target)	M-45-05-T07	30-Sep-09	30-Sep-09
T04-10-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02O	30-Sep-10	30-Sep-10
T04-10-910	Initiate Tank Waste Retrieval From Eight Additional SSTs	RL (Target)	M-45-05-T08	30-Sep-10	30-Sep-10
T04-05-X10	Submit Tank Closure/Post Closure Plan for Selected Closure Demonstration Operable Unit or Tank Farm	RL (Target)	M-45-06-T01	15-Jun-11	30-Nov-04
T04-11-1B1	Initiate Tank Waste Retrieval From Ten Additional SSTs	RL (Target)	M-45-05-T09	30-Sep-11	30-Sep-11
T04-11-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02P	30-Sep-11	30-Sep-11
T04-12-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02Q	28-Sep-12	30-Sep-12
T04-12-1B1	Initiate Tank Waste Retrieval From Twelve Additional SSTs	RL (Target)	M-45-05-T10	28-Sep-12	30-Sep-12
T04-06-X10	Ecology will issue Final Closure/Post Closure Plan for Selected Closure Demonstration Operable Unit or Tank Farm	RL (Target)	M-45-06-T02	14-Jun-13	30-Sep-06
T04-13-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02R	30-Sep-13	30-Sep-13
T04-13-1B1	Initiate Tank Waste Retrieval From 14 Additional SSTs	RL (Target)	M-45-05-T11	30-Sep-13	30-Sep-13
T04-12-X10	Initiate Closure Actions on an Operable Unit or Tank Farm Basis	RL (Target)	M-45-06-T03	17-Jun-14	31-Mar-12
T04-14-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02S	30-Sep-14	30-Sep-14
T04-14-1B1	Initiate Tank Waste Retrieval From 17 Additional SSTs	RL (Target)	M-45-05-T12	30-Sep-14	30-Sep-14
T04-15-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02T	30-Sep-15	30-Sep-15

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/TPA Date
T04-15-1B1	Initiate Tank Waste Retrieval From 20 Additional SSTs	RL (Target)	M-45-05-T13	30-Sep-15	30-Sep-15
T04-16-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02U	29-Sep-16	30-Sep-16
T04-16-1B1	Initiate Tank Waste Retrieval From 20 Additional SSTs	RL (Target)	M-45-05-T14	30-Sep-16	30-Sep-16
T04-17-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02V	29-Sep-17	30-Sep-17
T04-17-245	Submit Annual Updates to SST Retrieval Sequence Document	HQ-I	M-45-02	29-Sep-17	30-Sep-17
T04-17-1B1	Initiate Tank Waste Retrieval From 20 Additional SSTs	RL (Target)	M-45-05-T15	30-Sep-17	30-Sep-17
T04-14-X10	Complete Closure Actions on One Operable Unit or Tank Farm	RL (Target)	M-45-06-T04	11-Dec-17	31-Mar-14
T04-18-1B1	Retrieve Waste from all Remaining SSTs	HQ-I	M-45-05	28-Sep-18	30-Sep-18
T04-24-051	Complete Closure of all SST Farms	HQ-I	M-45-06	07-Jan-25	30-Sep-24
T04-24-052	Complete Closure of all SST Farms	HQ-M	M-45-00	07-Jan-25	30-Sep-24
	Carryover Milestones				
T04-98-161	Initiate Sluicing Retrieval of C-106	HQ-I	M-45-03A 93-05 (5.4.3.6.c)		31-Oct-97

B.4.3.4 Milestone Description Sheets

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete C-106 Retrieval Vendors 1 and 2 System Definition

Schedule Date: 11/30/98

Assigned to: L. B. McDaniel

WBS Number: 1.01.04.01.02.05.03

Milestone Control Number: T04-98-514 (C-1)

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Document from each vendor providing an engineering evaluation of retrieval equipment preliminary design of retrieval system, test results of critical component/subsystem performance testing and updated cost and schedule to complete.

Description of what constitutes completion of the commitment:

Reports accepted by HTI retrieval team with all comments on resolved.

T0498514

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Prepare Vadose Zone Characterization Plan (TWR1.1.2) Schedule Date: 1/31/99

Assigned to: Lockheed Martin Hanford Corp.

WBS Number: 1.01.04.01.03.03

Milestone Control Number: T04-99-W61

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[x] Other (Specify)	[ ] Other (Specify)
	Characterization Plan	

Description of this Commitment:

Issue a vadose zone characterization plan for characterization of a leak site in a single-shell tank farm, by January 31, 1999.

Description of what constitutes completion of the commitment:

Release, by 1/31/99, a vadose zone characterization plan incorporating DOE review comments. This plan will be subsequently transmittal by DOE to Ecology for review and approval. To meet the schedule for submittal of a characterization plan to DOE by 1/31/99, DOE must authorize LMHC to initiate work on the site-specific characterization plan by 10/15/99 and, together with Ecology, must approve designation of the initial leak site to be characterized not later than 10/22/98.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Select C-106 Retrieval Vendor

Schedule Date: 3/01/99

Assigned to: L. B. McDaniel

WBS Number: 1.01.04.01.02.05.03

Milestone Control Number: T04-99-506

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[X] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[x] Other (Specify)
		FDH

Description of this Commitment:

Exercise contract option with one or two vendors to authorize work on Phase 2 (design, fabrication, retrieval service), in accordance with approved specification.

Description of what constitutes completion of the commitment:

A letter will be issued to FDH documenting the option was exercised and the vendor authorized to proceed.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET (FY-99)

Title: Complete CP Demonstration Pushes at AX-104 Schedule Date: 3/31/99

Assigned to: D. F. Iwatate

WBS Number: 1.01.04.01.02.05.04.04.02

Milestone Control Number: T04-99-525

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[X] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:
The initial hot deployment demonstration of the cone penetrometer (CP)-deployed multi-sensor probe (MSP) and soil sampler probe (SSP) will be performed in the backfill material and upper vadose zone surrounding the AX-104 tank site. The technology objectives are to demonstrate that CP-deployed analytical sensors and samplers: 1) can be deployed in the tank farm environment; 2) can be used to screen/interrogate (i.e., semi-quantitative) the accessible soil column for constituents of concern (COCs); and 3) can be used to achieve targeted soil sampling for confirmatory laboratory analysis; and 4) can provide alternative technology that is less expensive, produces less secondary waste, and results in less radiological risk to workers to augment gamma-logging and drilled well techniques currently used to assess the extent of contaminant leakage from tanks. The programmatic objective is to provide characterization information that may be used to reduce the large uncertainty associated with the inventory assigned to the AX-104 tank site. This deployment goal is to complete CP probe pushes at the first cone penetrometer platform placement location in close proximity to tank 241-AX-104. Both MSP and SSP probes will be deployed consistent with the guidance provided in the AX-104 sampling and analysis plan that will be issued prior to the actual demonstration. This milestone is contingent upon completion of the LMHC approved standard start-up review check list for the CP deployment demonstration.

Description of what constitutes completion of the commitment:
This milestone will be considered complete when the initial hot deployment of the CP-deployed MSP and SSP are demonstrated at the first cone penetrometer platform placement location at the 241-AX-104 tank site. Documented evidence of milestone completion will be: 1) records of MSP/CPP/DAS integrated system performance; and 2) retrieval of soil samples with the SSP for "up-hole" MSP validation measurements. A letter that documents the success of the initial demonstration pushes will be issued from the contractor to DOE-RL within 30 days after completion of the milestone.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Issue Final Conclusions and Recommendations Report for AX-104 Tank Farm Closure Alternatives

Schedule Date: 4/29/99

Assigned to: D. L. Becker

WBS Number: 1.01.04.01.02.05.02.03

Milestone Control Number: T04-99-517 (B-4)

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[X] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Prepare a final report that presents the conclusions and recommendations of the retrieval performance evaluation. This report will be prepared by Jacobs Engineering Group, Inc., under separate contract to RL. The final conclusions report will include appropriate supporting data including figures and tables of the retrieval performance evaluation results, and will incorporate review comments of DOE, HTI Project Management, stakeholders, and Tribal Nations on the preliminary final report.

Description of what constitutes completion of the commitment:

This commitment is satisfied by transmittal to RL of the final report by Jacobs Engineering Group, Inc.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: WRSS, C-106 Sluicing Two Feet (TWR1.2.1) Schedule Date: 4/30/99

Assigned to: T. J. Kelley

WBS Number: 1.01.04.01.01.10

Milestone Control Number: T04-99-A11

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Remove two feet of waste from Tank C-106 by April 30, 1999.

Description of what constitutes completion of the commitment:

Contractor providing documented evidence that two feet of waste have been removed from Tank C-106. Two feet of waste is defined as a two foot net reduction in the average depth of sludge from Tank C-106 as of April 30, 1999.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: AN-105 Retrieval System Title II Design (TWR1.3.1) Schedule Date: 4/30/99

Assigned to: Tank Waste Retrieval

WBS Number: 1.01.04.01.01.05

Milestone Control Number: T04-99-152

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[x] Other (Specify)	[ ] Other (Specify)
	Specification	Released EDT

Description of this Commitment:

Project W-211 shall complete Title II design of the retrieval system for Tank AN-105 by April 30, 1999. The design shall include a complete package of drawings and specifications for construction of the retrieval system.

Description of what constitutes completion of the commitment:

The Title II design, including drawings and specifications, shall be approved by the contractor's design review team and release via EDT in the engineering document control system.

In addition to the contractor's review, RL may identify critical portions of the design that shall be subjected to a Critical Design Review (CDR). If a CDR is required, ten copies of the contractor-approved design shall be furnished to the review team at a CDR kick-off meeting. The CDR will be completed within 15 working-days, and comments provided to the contractor in a working session. The contractor shall furnish comment dispositions in a working session to the CDR team that are acceptable to the RL W-211 Project Manager. Within five working days of this session, RL shall document acceptance of the comment dispositions via letter to FDH. The drawings and specifications shall be released via EDT in the engineering document control system, and for those portions of the design successfully subjected to CDR as discussed above, the RL letter number will be included on the releasing EDT in Block 21.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Issue TWRS Operation and Utilization Plan, Rev. 1 (TWR1.3.4)

Schedule Date: 5/5/99

Assigned to: Randy Kirkbride

WBS Number: 1.01.04.01.01.02

Milestone Control Number: T04-99-B81

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Update the Tank Waste Remediation System Operation and Utilization Plan (TWRSO&UP; HNF-SD-WM-SP-012, Rev. 0) to revision 1 based upon the following input.

- Pertinent waste feed delivery requirements from the BNFL Interface Control Documents and TWRS Planning Guidance in the latest version available as of October 1, 1998.
- Input from other Hanford Site functions (e.g., SST stabilization, waste receipts from non-TWRS facilities, etc.) available as of October 1, 1998.
- Best Basis Inventory data available from the Tank Characterization Database in the latest version available as of October 1, 1998.
- Operational Waste Volume Projections (OWVP), Rev. 24

TWRSO&UP, Rev. 1 will based upon output data from the Hanford Tank Waste Operation Simulator (HTWOS) model and will provide outputs for both phase 1 and phase 2 of Privatization. The revision 1 document will contain a similar level of detail as was contained in revision 0, except where the information can be cited in other documents, and will provide tables and figures similar to those found in the OWVP.

Description of what constitutes completion of the commitment:

Deliver 10 copies of PHMC and DOE-RL approved TWRSO&UP, Rev. 1 to DOE-RL.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Prepare an AGA for Project C-102/104 Sludge Retrieval (TWR1.3.2) Due Date: 5/31/99

Assigned to: Lockheed Martin Hanford Corp.

WBS Number: 1.01.04.01.01.03

Milestone Control Number: T04-99-CA1

Milestone Type	(10) Deliverables	(11) Addressed to
[ ] TPA	[x] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

An alternative Generation Analysis will be prepared that evaluates alternative for removal of the sludge from two DSTs, C-102, and C-104. The AGA will result in the recommendations of the alternative to continue forward with the subsequent project activities. The AGA is to be prepared following the HNF-IP-0842, Volume IV, Section 3.3. Resolution of the DOE-RL comments utilizing the Review Comment Record (RCR) process is to be performed for successful completion of this Performance Evaluation.

Description of what constitutes completion of the commitment:

DOE-RL comments will be dispositioned utilizing the Review Comment Record (RCR) process and the AGA will be submitted to DOE-RL.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Drilling and Sampling in a Characterization Borehole (TWR 1.1.2)

Schedule Date: 6/30/99

Assigned to: Lockheed Martin Hanford Corp.

WBS Number: 1.01.04.01.03.03

Milestone Control Number: T04-99-W91

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[x] Other (Specify)	[ ] Other (Specify)

Samples delivered to laboratory

Description of this Commitment:

Complete drilling and sampling in a characterization borehole (or characterization activity that accomplishes similar objectives) at one of the leak sites addressed in the vadose zone characterization plan, by June 30, 1999.

Description of what constitutes completion of the commitment:

Complete drilling and retrieval of soil samples at one of the borehole locations identified in the characterization plan for the first leak site to be characterized, by 6/30/99. To initiate field characterization activities at the first leak site to be characterized, DOE and Ecology approval of the detailed characterization plan and Washington Department of Health approval of the Notice of Construction are required by 2/28/9. The 6/30/99 date for completion of drilling and sampling in a characterization borehole may slip on a day-for-day basis for every day delay in obtaining DOE and Ecology approval of the characterization plan, and Department of Health approval of the Notice of Construction. This completion date for sampling does not apply to groundwater sampling, which is a responsibility of the Environmental Restoration Program, to be carried out by PNNL.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete AX-104 LDUA Sampling Campaign (TWR 1.1.1)

Schedule Date: 6/30/99

Assigned to: T. E. Rainey

WBS Number: 1.01.04.01.02.05.04

Milestone Control Number: T04-98-511

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[X] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

The mission of the LDUA sampling campaign in tank AX-104 is to: 1) retrieve samples of the accessible residual waste on the tank bottom, and, if possible, the hard to reach locations that includes the waste on tank liner ribs and on the tank dome; 2) transfer the retrieved samples to the 222-S laboratory for analysis and water leach testing; and 3) provide additional waste distribution and tank integrity information. This mission is the first extensive sampling campaign in AX-104 and laboratory analysis results are expected to provide information on analyte concentration and spatial variability, validate auger sample analysis results, and ultimately reduce the large uncertainty associated with the radionuclide and hazardous chemical inventory in AX-104. The sampling campaign will be performed to the guidance provided in "Tank 241-AX-104 Light-Duty Utility Arm Sampling and Analysis Plan" (HNF-2071, Rev.0) or the most recent revision.

This commitment is to complete the LDUA sampling campaign within 60 calendar days of receiving approval from DOE-RL to deploy the LDUA in tank AX-104. Completion of this commitment is contingent upon:

- The FDHC contractor declaration of readiness for deployment by March 11, 1999
- Completion of the RL ORR process/comment resolution and RL approval to deploy within 35 calendar days
- No operational delays caused by weather (i.e., day-for-day extension granted for those affected days).

Description of what constitutes completion of the commitment:

This commitment is completed with the successful deployment of the LDUA in tank AX-104, and the shipment and receipt of all retrieved samples at the 222-S laboratory on or before 60 calendar days from RL approval to deploy the LDUA. A letter that documents the success of the sampling campaign and receipt of waste samples at the laboratory will be issued from the contractor to DOE-RL within 30 days after completion of the milestone.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Provide an Integrated, Resource-Loaded Project Schedule (TWR1.3.5)

Schedule Date: 7/30/99

Assigned to: Tank Waste Retrieval

WBS Number: 1.01.04.01.01.01

Milestone Control Number: T04-99-A41

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[x] Other (Specify)	[ ] Other (Specify)

Samples delivered to laboratory

Description of this Commitment:

An update of the integrated resource-loaded TWR project schedule, for implementation of Phase I, Part B Privatization will be provided demonstrating readiness-to-proceed with the Disposal Division Privatization Strategy for Phase I, Part B. The integrated resource-loaded TWR Project schedule will be based on the FY 1999 President's Budget, documented in the approved FY 1999 MYWP and unconstrained funding in all future years. The schedule shall reflect Phase I support work performed by the PHMC from FY 1999 through one year after initial Hot Operations of the Low Activity Treatment and Immobilization Facility as reflected in DOE Contract DE-RP06-96RL13308 (reference PA 1.3.5.)

In addition, RL planning guidance is required no later than April 1, 1999. This MDS shall have a day-to-day impact for delayed guidance.

Description of what constitutes completion of the commitment:

The schedule will include detailed planning at Level 7 or below of the work breakdown structure, clearly describing work scope required in support of TWRS privatization. The integrated resource-loaded project schedule will be consistent with the TWRS level 1 and TWRS level 0 logics and identify known interfaces between performing organizations and/or project areas.

Transmittal of this schedule to RL will constitute completion of the milestone.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: O&M Concept for Three Source Tanks (TWR1.3.3) Schedule Date: 8/30/99

Assigned to: Tank Waste Retrieval (AF Choho)

WBS Number: 1.01.04.01.01.02

Milestone Control Number: T04-99-B91

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Issue the operations and maintenance (O&M) concept document for waste feed delivery, to validate the ability to meet the waste feed delivery schedule for the first three source tanks. The first three source tanks that will be included in the O&M concept document are 241-AN-104, 241-AN-105, and 241-AZ-101. The outline of the O&M concept document will be transmitted to RL by November 30, 1998. Comments received from RL on the outline will be dispositioned using the RCR process. If RL comments are not received by December 15, 1998, the O&M concept document will proceed according to the outline submitted on November 30, 1998.

The O&M concept document for waste feed delivery shall be compliant with the contractor's O&M Concept Procedure. The Contractor shall incorporate a 15 working day RL review cycle for the O&M concept document for waste feed delivery. The Contractor shall disposition all DOE comments and receive RL acceptance of the proposed disposition. All comments will be recorded and dispositioned using the Review Comment Record (RCR) process." Note 1 states, "The table of contents for the O&M concept document will be submitted to RL by November 30, 1998. The Contractor will disposition the comments via the RCR process. If RL comments are not received by December 15, 1998, then the Contractor will proceed with completion of the PA as outlined on November 30, 1998.

Description of what constitutes completion of the commitment:

This commitment is considered complete upon transmittal of the O&M concept document to RL. The O&M concept document transmitted to RL shall incorporate the disposition of all DOE comments. Disposition of all DOE comments shall receive RL acceptance of the proposed disposition.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete CP Verification Pushes at AX-104 Schedule Date: 9/30/99

(TWR 1.1.1)

Assigned to: D. F. Iwatate

WBS Number: 1.01.04.01.02.05.04.04.02

Milestone Control Number: T04-99-526

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[x]DOE-HQ	[x]Letter	[x]DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

The performance of the cone penetrometer (CP)-deployed multi-sensor probe (MSP) and soil sample probe (SSP) technology will be demonstrated in a series of push events in close proximity to Tank 241-AX-104. The success of these push events will provide the basis to assess the degree to which the technical and programmatic objectives of the initiative have been met. The technical objectives are to demonstrate that CP-deployed analytical sensors and samplers: 1) can be deployed in the tank farm environment; 2) can be used to screen/interrogate (i.e., semi-quantitative) the accessible soil column for constituents of concern (COCs); and 3) can be used to achieve targeted soil sampling for confirmatory laboratory analysis. The programmatic objectives are to provide alternative technology that is less expensive, produces less secondary waste, and results in less radiological risk to workers to augment gamma-logging and drilled well techniques currently used to assess the extent of contaminant leakage from tanks. Both MSP and SSP probes will be deployed during these push events consistent with the guidance provided in the AX-104 sampling and analysis plan that will be issued prior to the initial demonstration push events.

This commitment is to complete the CP probe deployment demonstration at the AX Tank Farm by September 30, 1999.

Description of what constitutes completion of the commitment:

This milestone is satisfied when the planned series of in-tank-farm deployments of the CP-deployed MSP and SSP at Tank 241-AX-104 have been completed which includes the retrieval of soil samples with the SSP, and transfer to and receipt of soil samples at a Hanford Analytical Laboratory Operations (HALO) production laboratory no later than September 30, 1999. A letter that documents the success of the demonstration and receipt of soil samples at the laboratory will be issued from the contractor to DOE-RL within 30 days after completion of the milestone.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Submit Report on Results of Initial Characterization Activity (TWR1.1.2)

Schedule Date: 9/30/99

Assigned to: Lockheed Martin Hanford Corp.

WBS Number: 1.01.04.01.03.03

Milestone Control Number: T04-99-W92

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[x] Other (Specify)	[ ] Other (Specify)
	Samples delivered to laboratory	

Description of this Commitment:

Issue a report describing results of drilling and sampling in a characterization borehole (or characterization activity that accomplishes similar objectives) at one of the leak sites addressed in the vadose zone characterization plan, by September 30, 1999.

Description of what constitutes completion of the commitment:

Issue, by 9/30/99, a technical document describing results of field and laboratory analysis of soil samples from the initial characterization activity described in the characterization plan for the first leak site to be characterized. To achieve this milestone, DOE, Ecology, and Department of Health approvals are required as indicated in separate milestone descriptions for completing a detailed characterization plan, and completing drilling and sampling from the first borehole.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: WRSS, C-106 Sluicing Two Additional Feet (TWR1.2.1)

Schedule Date: 9/30/99

Assigned to: T. J. Kelley

WBS Number: 1.01.04.01.01.10

Milestone Control Number: T04-99-A13

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Remove an additional two feet of waste for a total of four feet of waste from Tank C-106 by September 30, 1999.

Description of what constitutes completion of the commitment:

Contractor providing documented evidence that an additional two feet of waste for a total of four feet of waste have been removed from Tank C-106. Four feet of waste is defined as a four foot net reduction in the average depth of sludge from Tank C-106 as of September 30, 1999.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: O&M Concept Risk Assessment (TWR1.3.3)

Schedule Date: 9/30/99

Assigned to: Tank Waste Retrieval (AF Choho)

WBS Number: 1.01.04.01.01.02

Milestone Control Number: T04-99-B92

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Conduct a risk assessment of the operations and maintenance (O&M) concept document completed under milestone control number T04-99-B91, per HNF-IP-0842, Volume I, Section 2.6, "Risk Management". The risk assessment will include identification of significant risk events associated with the O&M concept and determining management and staff responsibilities (e.g., responsible manager, responsible contact). Risk analysis will also be performed to determine risk likelihood, determine consequences, identify affected functions, determine consequence severity and decide if the risk is critical. The findings of the risk analysis and risk assessment will be documented in a report.

Description of what constitutes completion of the commitment:

This commitment is considered complete upon transmittal of the O&M concept risk assessment to RL.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: V&V The HTWOS Model Against OWVP (TWR1.3.4) Schedule Date: 9/30/99

Assigned to: Kent Hodgson

WBS Number: 1.01.04.01.01.02

Milestone Control Number: T04-99-B84

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Issue a report documenting the verification and validation of the Hanford Tank Waste Operation Simulator (HTWOS) Model for use in performing Operational Waste Volume Projection (OWVP) analyses.

Description of what constitutes completion of the commitment:

Deliver three copies of the report to DOE-RL by September 30, 1999. The report identifies the OWVP analysis requirements, describes the testing of the HTWOS model, and documents how the HTWOS model performance compared to the requirements.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Provide an Integrated, Resource-Loaded Project Schedule (TWR1.3.5)

Schedule Date: 09/30/99

Assigned to: Tank Waste Retrieval

WBS Number: 1.01.04.01.01.01

Milestone Control Number: T04-99-A42

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

An update of the integrated resource-loaded TWR project schedule, for implementation of Phase I, Part B Privatization will be provided demonstrating readiness-to-proceed with the Disposal Division Privatization Strategy for Phase I, Part B. The integrated resource-loaded TWR Project schedule will be based on the FY 1999 President's Budget, documented in the approved FY 1999 MYWP and constrained funding for FY 2000 through FY 2006 with the years thereafter unconstrained. The schedule shall reflect Phase I support work performed by the PHMC from FY 1999 through one year after initial Hot Operations of the Low Activity Treatment and Immobilization Facility as reflected in DOE contract DE-RP06-96RL13308. (Reference PA 1.3.5)

In addition, RL planning guidance for the constrained case is required no later than June 1, 1999. This MDS shall have a day-to-day impact for delayed guidance.

Description of what constitutes completion of the commitment:

The schedule will include detailed planning at Level 7 or below of the work breakdown structure, clearly describing work scope required in support of TWRS privatization. The integrated resource-loaded project schedule will be consistent with the TWRS level 1 and TWRS level 0 logics and identify known interfaces between performing organizations and/or project areas.

Transmittal of this schedule to DOE-RL will constitute completion of the milestone.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Issue LDUA Sample Validated Data Report

Due Date: 9/30/99

Assigned to: W. S. Callaway (NHC/COGEMA)

WBS Number: 1.01.04.01.02.05.04.02.01

Milestone Control Number: T04-98-531 (F-6)

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[X] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

A sampling campaign in tank AX-104 using the Light-Duty Utility Arm (LDUA) is planned for in FY-99. This milestone is contingent upon and assumes delivery of residual waste samples from AX-104 to the 222-S laboratory facility by March 31, 1999. These samples will be delivered to the 222-S Laboratory for analyses per the protocol prescribed in "Tank 241-AX-104 Light Duty Utility Arm Sampling and Analysis Plan" (HNF-2071, Rev.0). Upon receipt at 222-S, the samples will be extruded in the hot cells from the sampling devices; mechanically homogenized; tested for homogeneity; and analyzed by prescribed procedures. The peer reviewed validated analytical data package is transmitted from the Manager for 222-S Production, Scheduling and Control to the HTI Project Characterization Manager. This milestone is contingent upon completion of the LDUA deployment on or before the HTI internal milestone date of April 16, 1999.

Description of what constitutes completion of the commitment:

The AX-104 LDUA sample validated analytical data package is completed and peer reviewed by 222-S Laboratory personnel and reviewed by HTI personnel involved with the preparation of the Tank 241-AX-104 LDUA Sampling and Analysis Plan (SAP). The peer reviewed validated analytical data package is transmitted from the Manager for 222-S Production, Scheduling and Control to the HTI Project Characterization Manager and the task leads for HTI Tank Farms Residual Waste Inventory Assessment, and HTI Field and Laboratory Sample Analysis.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Submit Annual Update of SST Retrieval Sequence Document for Ecology Approval (M-45-02D)

Schedule Date: 9/30/99

TPA Date: Annual milestone due 9/30

Assigned to: Tank Waste Retrieval (J.S. Garfield)

TPA No.: M-45-02D

WBS Number: 1.01.04.01.01.02

Milestone Control Number: T04-99-241

M-45-02E - T04-00-241
M-45-02F - T04-01-241
M-45-02G - T04-02-241
M-45-02H - T04-03-241
M-45-02I - T04-04-241
M-45-02J - T04-05-241
M-45-02K -T04-06-241
M-45-02L - T04-07-241
M-45-02M - T04-08-241
M-45-02N - T04-09-241
M-45-02O - T04-10-241
M-45-02P - T04-11-241
M-45-02Q - T04-12-241
M-45-02R - T04-13-241
M-45-02S - T04-14-241
M-45-02T - T04-15-241
M-45-02U - T04-16-241
M-45-02V - T04-17-241

Milestone Type	Deliverables	Addressed to
[x] TPA	[x] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[x] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Based on the TWRS flowsheet and systems models, provide a Single-Shell Tank Retrieval Sequence Document that defines the tank selection criteria, tank selection rationale, reference retrieval methods for each tank, estimated retrieval schedules, and the retrieval sequence of the single-shell tanks.

Description of what constitutes completion of the commitment:

This is an annually recurring milestone which will be satisfied by submittal of an updated RL-approved Retrieval Sequence Document to DOE-RL (a minimum of five (5) working days prior to September 30 for Ecology approval. *Note: Allow a minimum of ten (10) working days for the review/comment/comment resolution period.

The Retrieval Sequence Document will be consistent with the latest revision of the TWRS flowsheet and provide a basis for the Retrieval Project and Operations schedule. All parameters set forth for completion are met.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Submit Annual Progress Reports of the Development of Waste Tank Leak Monitoring and Mitigation Activities in Support of M-45-08 (M-45-09D)

Schedule Date: 9/30/99

TPA Date: Annual milestone due 9/30

Assigned to: W. J. Stokes

TPA No.: M-45-09D

WBS Number: 1.01.04.01.02.06

Milestone Control Number: T04-99-341

M-45-09E - T04-00-341
M-45-09F - T04-01-341
M-45-09G - T04-02-341
M-45-09H - T04-03-341

Milestone Type	Deliverables	Addressed to
[x] TPA	[x] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Submit annual progress report on the development of waste tank leak monitoring/detection and mitigation activities in support of M-45-08. Report will provide a description of work accomplished under M-45-08. Report will also summarize any demonstrations performed by DOE and private industry for applicability to SST Retrieval and provide recommendations for further testing for use in retrieval operations.

Description of what constitutes completion of the commitment:

An annual report which addresses: work accomplished in the previous fiscal year, technologies, applications, costs, schedule, technical data, technology demonstrations, and recommended further testing, which has been released by the contractor as a supporting document by September 30.

Transmittal of the annual report to the Washington State Department of Ecology by DOE-RL.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Site Upgrades Design

Schedule Date: 9/29/00

Assigned to: L. B. McDaniel

WBS Number: 1.01.04.01.02.05.03.03

Milestone Control Number: T04-00-513

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[X] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Provide design of site upgrades and modifications to support the retrieval system to be I installed on Tank 241-C-106 for demonstration of heel retrieval based on the design specification. This will include drawings, specifications, and other such items as detailed.

Description of what constitutes completion of the commitment:

An external letter to RL documenting that the design media has been approved.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Technology Insertion Point – Vadose Zone Contaminants Distribution

Schedule Date: 9/29/00

Assigned to: D. F. Iwatate/E. A. Fredenburg

WBS Number: 1.01.04.01.02.05.02.03

Milestone Control Number: T04-00-545

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X]DOE-RL		
[ ]Contractor	[ ] Other (Specify)	[ ] Other (Specify)
		FDH

Description of this Commitment:

The Hanford Tanks Initiative AX-104 Subsurface Characterization task has been underway for three years (FY97 through FY99). Cone Penetrometer (CP) probes for soil sampling and for analytical sensor interrogation of soil and vadose zone have been prepared, demonstrated, and evaluated. Following this effort, a decision must be made as to whether or not the technology, and demonstrated tool, will be used in a routine operational mode to support Hanford needs. This decision will be documented in a letter report that captures the HTI CP probe task lessons learned, demonstration fielding experiences, and conclusion/results from the evaluation of actual data and soil samples. The decision will include discussion of possible degrees of implementation and integration that will result in new and significant support to Hanford needs and programmatic goals.

Description of what constitutes completion of the commitment:

This milestone will be considered complete when a decision has been made regarding use of CP technology to support Hanford programs. The decision, and the basis/background for that decision, will be documented in a letter report. Completion of the decision report includes review, comment incorporation, and final release to the Hanford document control system.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Systems Design and Operation Strategy for Tank Leak Monitoring and Mitigation for Systems to be used in conjunction with initial retrieval systems for SSTs

Schedule Date: 12/29/00

TPA Date: 12/31/00

TPA No.: M-45-08A

Assigned to: W. J. Stokes

WBS Number: 1.01.04.01.02.03

Milestone Control Number: T04-00-731

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)
	Design Documents	

Description of this Commitment:

Complete system design and operating strategy for leak monitoring and mitigation for systems to be used in conjunction with initial retrieval systems for SSTs.

Description of what constitutes completion of the commitment:

Complete disposition of all design review comments applying to the leak detection monitoring and mitigation (if any) sub-set of the initial single-shell tank retrieval system. Additionally, the DOE-RL will transmit a copy of the design documentation for the leak detection, monitoring, and mitigation system (if any) sub-set of the initial single-shell tank retrieval system when all design review comments are resolved.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Technology Insertion Point – DST Mixing Pump Technology

Schedule Date: 9/28/01

Assigned to: J.S. Garfield

WBS Number: 1.01.04.01.01.03

Milestone Control Number: T04-01-C10

Milestone Type	Deliverables	Addressed to
[ ] TPA	[x] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Document a basis for a mixing equipment baseline.

Description of what constitutes completion of the commitment:

Issue a trade study comparing the performance of alternative technologies and a decision report documenting the basis for a technology selection.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Design for the Initial SST Retrieval Systems (M-45-04-T02)

Schedule Date: 2/28/02

Target Date: 12/31/00

Assigned to: W. J. Stokes

WBS Number: 1.01.04.01.01.08

Milestone Control Number: T04-01-K10

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[X] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete design for the Initial SST Retrieval System

Description of what constitutes completion of the commitment:

Complete disposition of all ISSTRS System Design Review comments. Transmittal of the approved design package as well as notification that all design review comments have been dispositioned from DOE-RL to the Washington State Department of Ecology.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate Final Retrieval Demonstration of C-106 (M-45-03-T02)

Schedule Date: 6/28/02

Target Date: 6/30/02

Assigned to: R. W. Root, Jr.

WBS Number: 1.01.04.01.02.05

Milestone Control Number: T04-02-503

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[X] Other (Specify)

Description of this Commitment:

Initiate final retrieval of tank 241-C-106 to complete initial demonstration of SST retrieval technologies.

Description of what constitutes completion of the commitment:

Completion of all start-up documentation including Operational Readings Review (ORRs), approved test plans, and Operating Test Procedures (OTPs).

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Establish Full-Scale Capability For Mitigation of Waste Tank Leakage During Retrieval Sluicing Operations (M-45-08)

Schedule/TPA Date: 6/30/03

Assigned to: W. J. Stokes

TPA No.: M-45-08

WBS Number: 1.01.04.01.02.03

Milestone Control Number: T04-03-791

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Disposition ORR Comments

Description of this Commitment:

Establish full-scale capability for mitigation of waste tank leakage during retrieval sluicing operations.

Description of what constitutes completion of the commitment:

Complete disposition of all operational readiness review comments applying to the leak detection, monitoring, and mitigation system (if any) sub-set of the initial single-shell retrieval system.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Demonstration and Installation of Leak Monitoring and Mitigation Systems for Initial SST Retrieval

Schedule/TPA Date: 6/30/03

Assigned to: W.J. Stokes

TPA No.: M-45-08B

WBS Number: 1.01.04.01.02.03

Milestone Control Number: T04-03-792

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Disposition of ORR comments

Description of this Commitment:

Complete demonstration and installation of the Leak Monitoring and Mitigation Systems for initial single-shell tank retrieval.

Description of what constitutes completion of the commitment:

Complete disposition of all operational readiness review comments applying to the leak detection, monitoring system (if any) sub-set of the Initial Single-Shell Tank Retrieval System.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete SST Waste Retrieval Demonstration (M-45-03-T01)

Schedule/Target Date: 09/30/2003

Assigned to: R. W. Root, Jr.

WBS Number: 1.01.04.01.02.05

Milestone Control Number: T04-03-500

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete full-scale demonstration of SST retrieval technology in tank 241-C-106.

Description of what constitutes completion of the commitment:

A report documenting the completion of full-scale SST Technology demonstration.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Provide Initial Single-Shell Tank Retrieval Systems (M-45-04-T01)

Schedule Date: 4/5/05

Target Date: 11/30/2003

Assigned to: W. J. Stokes

WBS Number: 1.01.04.01.01.08

Milestone Control Number: T04-04-K10

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete construction and related testing of the Initial SST Retrieval Systems (ISSTRS).

Description of what constitutes completion of the commitment:

Completed all start up testing activities for an entire single-shell tank farm or an equivalent number of tanks. Approval of the ISSTRS Operational Readiness Review per the ISSTRS management plan.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Construction for the Initial SST Retrieval Systems (M-45-04-T03)

Schedule Date: 4/5/05

Target Date: 6/30/03

Assigned to: W. J. Stokes

WBS Number: 1.01.04.01.01.08

Milestone Control Number: T04-03-K10

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete construction for the Initial SST Retrieval System

Description of what constitutes completion of the commitment:

Complete disposition of all ISSTRS Operational Readiness Review Comments. Transmittal of notification to the WDOE from DOE-RL that all ISSTRS Operational Readiness Review comments have been dispositioned.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate Tank Waste Retrieval from 1 Single Shell Tank (M-45-05-T01)

Schedule Date: 4/6/05

Target Date: 12/31/2003

Assigned to: W. J. Stokes

WBS Number: 1.01.04.01.01.10

Milestone Control Number: T04-04-A10

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[X] Other (Specify)

Description of this Commitment:

Complete all start up activities including Operational readiness Reviews (ORRs), test plans, and Operating Test Procedures (OTPs) in order to start retrieval from one SST.

Description of what constitutes completion of the commitment:

Completion of all start up documentation. All documentation will be approved per the ISSTRS management plan.

Title: Technology Insertion Point - Submit Report On Suitability of Various Retrieval Technologies For SST Applications

Schedule Date: 9/30/05

Assigned to: W. J. Stokes.

WBS Number: 1.01.04.01.02.02

Milestone Control Number: T04-04-221

Milestone Type	Deliverables	Addressed to
[ ] TPA	[x] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Issue a report assessing the range of available retrieval system configuration options and provide application selection criteria for deployment of those technologies in the SSTs.

Description of what constitutes completion of the commitment:

Issue, by 9/30/98, a technical document describing results of technical evaluations and applications criteria for the various retrieval technologies to be employed in SST waste retrieval. The report will include the programmatic and process information, data collection and lessons learned from the sluicing operations of C-106, the C-106 hard heal retrieval demonstrations and saltcake dissolution in-tank demonstration(s) planned for late 2003.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate Tank Waste Retrieval From 3 Additional Single-Shell Tanks (M-45-05-T03)

Schedule/Target Date: 9/30/2005

Assigned to: W. J. Stokes

WBS Number: 1.01.04.01.02.09

Milestone Control Number: T04-05-910

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete all start up activities including operational readiness reviews (ORRs), test plans, and operating test procedures (OTPs) in order to start retrieval from 3 additional SSTs.

Description of what constitutes completion of the commitment:

Completion of all start up documentation. All documentation will be approved.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate Tank Waste Retrieval From 2 Additional Single-Shell Tanks (M-45-05-T02)

Schedule Date: 6/1/06

Target Date: 9/30/2004

Assigned to: W. J. Stokes

WBS Number: 1.01.04.01.02.09

Milestone Control Number: T04-04-920

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete all start up activities including operational readiness reviews (ORRs), test plans, and operating test procedures (OTPs) in order to start retrieval from 2 additional SSTs.

Description of what constitutes completion of the commitment:

Completion of all start up documentation. All documentation will be approved.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate Tank Waste Retrieval From 4 Additional Single-Shell Tanks (M-45-05-T04)

Schedule Date: 9/29/06

Target Date: 9/30/06

Assigned to: W. J. Stokes

WBS Number: 1.01.04.01.02.09

Milestone Control Number: T04-06-910

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete all start up activities including operational readiness review (ORRs), test plans, and operating test procedures (OTPs) in order to start retrieval from 4 additional SSTs.

Description of what constitutes completion of the commitment:

Completion of all start up documentation. All documentation will be approved

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: TIP--Decisions on IMUST Retrieval and Closure

Schedule Date: 9/27/07

Assigned to: E. A. Fredenburg

WBS Number: 1.01.04.01.03.02

Milestone Control Number: T04-07-U10

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[x] Other (Specify)	[x] Other (Specify)
	EIS Record of Decision	n/a

Description of this Commitment:

Publish a Record of Decision on closure of tank farms, to include requirements for waste retrieval from IMUSTs and closure of inactive miscellaneous underground storage tanks (IMUSTs) as elements of tank farm ancillary equipment. The Record of Decision will be based on evaluation of environmental impacts and costs of alternatives for closing tank farms, including ancillary equipment, and for preparing tanks and IMUSTs for closure (e.g., removing waste contained in SSTs, DSTs, and IMUSTs.)

Description of what constitutes completion of the commitment:

This commitment will be satisfied by DOE=s publishing in the Federal Register its Record of Decision for closure of SST and DST farms, addressing requirements for waste removal from SSTs, DSTs, and IMUSTs for closure, and method of closing tank farms. This decision will be based on assessment of alternatives for closing tank farms. This will require development of engineering data, as input to the closure EIS, on IMUST configuration and condition, nature and volume of contained wastes, manpower and resource requirements for remediation alternatives, and environmental releases under normal and accident conditions.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate Tank Waste Retrieval From 5 Additional Single-Shell Tanks (M-45-05-T05)

Schedule Date: 9/28/2007

Target Date: 9/30/07

Assigned to: W. J. Stokes

WBS Number: 1.01.04.01.02.09

Milestone Control Number: T04-07-910

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete all start up activities including operational readiness reviews (ORRs), test plans, and operating test procedures (OTPs) in order to start retrieval from 5 additional SSTs.

Description of what constitutes completion of the commitment:

Completion of all start up documentation. All documentation will be approved

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate Tank Waste Retrieval from 5 Additional Single-Shell Tanks (M-45-05-T06)

Schedule /Target Date: 9/30/2008

Assigned to: W. J. Stokes

WBS Number: 1.01.04.01.02.09

Milestone Control Number: T04-08-910

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Compete all start up activities including operational readiness reviews (ORRs), test plans, and operating test procedures (OTPs) in order to start retrieval from 5 additional tanks.

Description of what constitutes completion of the commitment:

Completion of all start up documentation. All documentation will be approved

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate Tank Waste Retrieval From 7 Additional Single-Shell Tanks (M-45-05-T07)

Schedule/Target Date 9/30/09

Assigned to: W. J. Stokes

WBS Number: 1.01.04.01.02.09

Milestone Control Number: T04-09-910

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Compete all start up activities including operational readiness reviews (ORRs), test plans, and operating test procedures (OTPs) in order to start retrieval from 7 additional tanks.

Description of what constitutes completion of the commitment:

Completion of all start up documentation. All documentation will be approved.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate Tank Waste Retrieval from 8 Additional Single-Shell Tanks (M-45-05-T08)

Schedule Date: 9/30/2010

Target Date: 9/30/2010

Assigned to: W. J. Stokes

WBS Number: 1.01.04.01.02.09

Milestone Control Number: T04-10-910

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Compete all start up activities including operational readiness reviews (ORRs), test plans, and operating test procedures (OTPs) in order to start retrieval from 8 additional tanks.

Description of what constitutes completion of the commitment:

Completion of all start up documentation. All documentation will be approved

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

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

Schedule Date: 6/15/11

Target Date: 11/30/04

Assigned to: E. A. Fredenburg

WBS Number: 1.01.04.01.03.04

Milestone Control Number: T04-05-X10

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Submit tank farm closure/post closure plan for selected closure demonstration operable unit or tank farm. The tank farm closure/post closure plan shall be based on a Record of Decision (ROD) on tank farm closure resulting from a supplement to the TWRS EIS addressing environmental impacts of tank farm closure alternatives, in accordance with NEPA requirements.

Description of what constitutes completion of the commitment:

Submission of plan to Ecology in accordance with TPA milestone M-45-06-T01. The tank farm closure/post closure plan shall be consistent with the ROD for tank farm closure resulting from the NEPA process, and shall be reviewed and approved by Retrieval Program and accepted by DOE RL.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Ecology Will Issue Final Closure/Post Closure Plan for Selected Closure Demonstration Operable Unit or Tank Farm

Schedule Date: 6/14/13

Target Date: 9/30/2006

(M-45-06-T02)

Assigned to: E. A. Fredenburg

WBS Number: 1.01.04.01.03.04

Milestone Control Number: T04-06-X10

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Ecology will issue final closure/post closure plan for selected closure demonstration operable unit or tank farm.

Description of what constitutes completion of the commitment:

Issuance of written plan acceptable to DOE and Ecology, in accordance with TPA milestone M-45-06-T02, and that is consistent with the Record of Decision (ROD) resulting from the NEPA process. Final closure/post closure plan shall be issued in accordance with WAC 173-303 regulations, and as otherwise provided in DOEs TSD permits with the Washington State Department of Ecology.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initate Closure Actions on an Operable Unit or Tank Farm Basis (M-45-06-T03)

Schedule Date: 6/17/14

Target Date: 3/31/2012

Assigned to: E. A. Fredenburg

WBS Number: 1.01.04.01.03.04

Milestone Control Number: T04-12-X10

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Initiate closure actions on SST operable unit or tank farm, in accordance with the tank farm closure/post closure plan to be issued by the Washington Department of Ecology.

Description of what constitutes completion of the commitment:

Initiation of closure actions for the first operable unit or tank farm selected for closure is defined as initiation of field activities to deploy equipment for removing, decontaminating, or immobilizing tanks with contained residual waste, ancillary equipment, and contaminated soil, as specified in the approved closure/post closure plan. Documented verification of initiation of field activities to deploy equipment for conducting closure activities, and transmittal of such documented verification to the Washington Department of Ecology.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Submit Annual Updates of SST Retrieval Sequence Document

Schedule Date: 9/29/17

TPA date: 9/30/17

Assigned to: J. S. Garfield

TPA No.: M-45-02

WBS Number: 1.01.04.01.01.02

Milestone Control Number: T04-17-245

Milestone Type	Deliverables	Addressed to
[x] TPA	[x] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Based on the TWRS flowsheet and system models, provide a Single-Shell Tank Retrieval Sequence Document that defines the tank selection criteria, tank selection rationale, reference retrieval methods for each tank and the estimated retrieval schedules and the retrieval sequence of the single shell tanks.

Description of what constitutes completion of the commitment:

Submit an updated RL approved Retrieval Sequence Document of DOE-RL (a minimum of five (5) working days prior to 9/30/2017) for Ecology approval. *Note: Allow a minimum of ten (10) working days for the review/comment/comment resolution period.

The Retrieval Sequence Document will clearly state the latest revision of the TWRS flowsheet and provide a basis for the Retrieval Project and Operations schedule. All parameters set forth for "Constitution of Completion" are met.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Closure Action on One Operable Unit or Tank Farm (M-45-06-T04)

Schedule Date: 12/11/17

Target Date: 3/31/2014

Assigned to: E. A. Fredenburg

WBS Number: 1.01.04.01.03.04

Milestone Control Number: T04-14-X10

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete closure actions on one SST operable unit or tank farm, in accordance with the tank farm closure/post closure plan to be issued by the Washington Department of Ecology.

Description of what constitutes completion of the commitment:

Completion of closure actions for the first tank farm shall be in accordance with requirements to be specified in the tank farm closure/post closure plan to be issued by the Washington Department of Ecology. Closure will be defined in the approved closure plan for the demonstration farm. (M-45-06-T02)

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Retrieve Waste From All Remaining SSTs

Schedule Date:9/28/18

TPA Date: 9/30/18

Assigned to: W. J. Stokes

WBS Number: 1.01.04.01.02.08

TPA No.: M-45-05

Milestone Control Number: T04-18-1B1

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Retrieve as much tank waste as technically possible, with tank waste residues not to exceed 360 cubic feet (Cu. Ft.) in each of the 100 series tanks, 30 Cu Ft in each of the 200 series tanks, or the limit of waste retrieval technology capability, whichever is less. If the DOE believes that waste retrieval to these levels is not possible for a tank, then DOE will submit a detailed explanation to EPA and Ecology explaining why these levels cannot be achieved, and specifying the qualities of waste that the DOE proposes to leave in the tank. The request will be approved or disapproved by EPA and Ecology on a tank-by-tank basis.

Description of what constitutes completion of the commitment:

Design, procure, construct, test, operate, and complete all documentation required to complete waste retrieval from all single-shell tanks. Retrieval to be accomplished as indicated in the single-shell tank retrieval sequence document.

Issue a letter documenting the complete waste retrieval from all single-shell tanks.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Closure of All Single-Shell Tank Farms

Schedule Date: 1/7/25

TPA Date: 9/30/24

Assigned to: E.A. Fredenburg

TPA No.: M-45-06

WBS Number: 1.01.04.01.03.04

Milestone Control Number: T04-24-051

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Close Tank Farm

Description of this Commitment:

Complete closure of SST farms in 200 East and 200 West Areas in accordance with Tank Farm Closure/Post Closure Plans to be issued by the Washington State Department of Ecology in accordance with WAC 173-303 regulations.

Description of what constitutes completion of the commitment:

Complete closure of SST farms in accordance with requirements specified in tank farm closure/post closure plans issued by the Washington State Department of Ecology in accordance with WAC 173-303 regulations.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Closure of All Single-Shell Tank Farms (M-45-00)

Schedule Date: 1/7/25

TPA Date: 9/30/24

Assigned to: E. A. Fredenburg

TPA No.: M-45-00

WBS Number: 1.01.04.01.03.04

Milestone Control Number: T04-24-052

Milestone Type	Deliverables	Addressed to
[x] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Closure will follow retrieval of as many tanks as technically possible, with tank waste residue not to exceed 360 cubic feet in each of the 100 series tanks, 30 cubic feet in each of the 200 series tanks, or the limit of waste retrieval technology capability, whichever is less. If the DOE believes that waste retrieval to these levels is not possible for a tank, then DOE will submit a detailed explanation to EPA and Ecology explaining why these levels cannot be achieved, and specifying the quantities of waste that the DOE proposes to leave in the tank. The request will be approved or disapproved by EPA and Ecology on a tank-by-tank basis. Following completion of retrieval, six operable units (tank farms), as described in Appendix C of the Tri-Party Agreement (200-BP-7, 200-PO-3, 200-RO-4, 200-TP-6, 200-UP-3), will be remediated in accordance with the approved Closure Plans. Final closure of the operable units (tank farms) shall be defined as regulatory approval of completion of closure actions and commencement of post-closure actions.

Description of what constitutes completion of the commitment:

Completion of closure actions for all single-shell tank farms shall be in accordance with requirements to be specified in tank farm closure/post closure plan(s) to be issued by the Washington State Department of Ecology in accordance with WAC 173-303 regulations.

B.4.4.1 Project Priority List

TANK WASTE REMEDIATION SYSTEM
FY 1999 - 2007 MYWP PRIORITY LIST BY PBS

11/23/98 'FY 99 MYWP

EXCEL: 10YRPR49.XLS

FDH 11/24/98 4:46 PM

UAS	PBS #	ADS		"UNIT OF ANALYSIS"	FY 99 TOTAL ESCAL'D	FY 00 TOTAL ESCAL'D	FY 01 TOTAL ESCAL'D	FY 02 TOTAL ESCAL'D	FY 03 TOTAL ESCAL'D	FY 04 TOTAL ESCAL'D	FY 05 TOTAL ESCAL'D	FY 06 TOTAL ESCAL'D	FY 07 TOTAL ESCAL'D
TW04													
211	TW04	1210	- 0	TWRS VADOSE ZONE CHARACTERIZATION	4,816	14,633	13,650	6,614	13,844	3,708	797	-	-
552	TW04	1210	- 0	TERMINATION COSTS - 3161	1,000	-	-	-	-	-	-	-	-
175	TW04	1210	- 0	TWRS HANFORD TANKS INITIATIVE: EM-30 - (PHMC)	997	11,331	9,979	6,172	-	-	-	-	-
				SUBTOTAL - ESSENTIAL SERVICES	**6,813**	**25,964**	**23,628**	**12,786**	**13,844**	**3,708**	**797**	**-**	**-**
157	TW04	1210	- 4	TWRS SST (C-106) RETRIEVAL OPERATIONS	12,319	2,232	-	-	-	-	-	-	-
				SUBTOTAL -URGENT RISK- SAFETY	**19,132**	**28,196**	**23,628**	**12,786**	**13,844**	**3,708**	**797**	**-**	**-**
152	TW04	1210	- 0	TWRS DISPOSAL RL SUPPORT	152	153	159	162	166	170	174	177	181
185	TW04	1210	- 2	TWRS W-151-101-AZ COMPL'N AND READINESS ASSM'T	3,994	195	-	-	-	-	-	-	-
196	TW04	1210	- 3	TWRS INITIAL TK RETRIEVAL SYS (ITRS) DST (W-211)	800	4,900	25,009	29,597	30,325	23,278	17,273	13,295	16,929
195	TW04	1210	- 0	TWRS DST WASTE RETRIEVAL	16,718	24,815	43,095	36,145	42,008	44,184	54,806	33,876	27,795
172	TW04	1210	- 0	TWRS HIGH-LEVEL WASTE SUPPORT (M-51) PHASE 1	2,310	2,243	7,249	8,071	8,062	5,298	4,678	3,672	2,656
171	TW04	1210	- 0	TWRS LAW SUPPORT PHASE 1	7,096	2,396	5,915	6,004	6,141	5,952	6,059	6,121	6,071
				S/T - FY 1999 URGENT RISK: PRIV'N: 90 %	**50,202**								
166	TW04	1210	- 0	TWRS SST PROGRAM DEVELOPMENT	1,300	-	11,068	8,130	10,087	23,486	40,921	48,249	62,866
171	TW04	1210	- 0	TWRS LAW SUPPORT PHASE 1	-	1,410	-	-	-	-	-	-	-
				S/T - FY 1999 / 2000 TARGET	**51,502**	**64,308**							
171	TW04	1210	- 0	TWRS LAW SUPPORT PHASE 1	-	2,576							
166	TW04	1210	- 0	TWRS SST PROGRAM DEVELOPMENT		7,490							
180	TW04	1210	- 0	TWRS TANK FARM CLOSURE	-	879	919	934	945	2,459	3,675	3,740	2,559
				S/T - FY 2000 90 % CASE		**75,253**							
660	TW04	1210	- 3	TWRS INITIAL TK RETRIEVAL SYS (ITRS) DST (W-211)	1,800	-	-	-	-	-	-	-	-
655	TW04	1210	- 0	TWRS LAW SUPPORT PHASE 1	400	-	-	-	-	-	-	-	-
663	TW04	1210	- 0	TWRS HIGH-LEVEL WASTE SUPPORT (M-51) PHASE 1	1,146	-	-	-	-	-	-	-	-
665	TW04	1210	- 0	TWRS SST PROGRAM DEVELOPMENT	1,700	-	-	-	-	-	-	-	-
666	TW04	1210	- 0	TWRS HANFORD TANKS INITIATIVE: EM-30 - (PHMC)	4,600	-	-	-	-	-	-	-	-
174	TW04	1210	- 0	TWRS HANFORD TANKS INITIATIVE: EM-30 - (DOE-RL)	117	-	-	-	-	-	-	-	-
NEW	TW04	1210	- 0	RTP RISK ALLOWANCE :TW04	-	-	10,435	42,657	62,668	11,139	6,830	47,700	24,969
				S/T - COMPLIANCE	**51,265**	**75,253**							
599	TW04	1210	- 0	TWRS SST PROGRAM DEVELOPMENT	2,000	-	-	-	-	-	-	-	-
620	TW04	1210	- 0	TWRS HANFORD TANKS INITIATIVE: EM-30 - (PHMC/RL)	1,000	-	-	-	-	-	-	-	-
347	TW04	1210	- 0	TWRS ACCELERATION VADOSE ZONE CHARACTERIZATION	7,200	-	-	-	-	-	-	-	-
349	TW04	1210	- 0	TWRS TANK FARM CLOSURE	1,527	-	-	-	-	-	-	-	-
				TOTAL TWRS REQUIREMENTS (EM-30)	**72,992**	**75,253**	**127,477**	**144,487**	**174,246**	**119,675**	**135,213**	**156,829**	**144,026**

B.4.4.2 Life Cycle Cost Baseline by PBS

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.4										
PBS NO:	RL-TW04										
PBS TITLE:	RETRIEVAL										SUBTOT
FUND TYPE	*ACTUAL* FY1997	*ACTUAL* FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997-FY2006
OPERATING EXPENSE	24,647	48,452	51,502	69,727	99,207	108,597	135,423	88,664	105,674	125,127	857,020
CENRTC	-	27	-	-	-	-	-	-	-	-	27
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*											
94-D-407 (W-211)	6,231	7,671	4,100	3,961	18,521	22,337	18,835	14,864	8,819	6,865	112,204
92-D-177 (W-151)	399	42	-	-	-	-	-	-	-	-	441
88-D-173 (HWVP)	-	(669)	-	-	-	-	-	-	-	-	(669)
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	6,630	7,044	4,100	3,961	18,521	22,337	18,835	14,864	8,819	6,865	111,976
Escalation	-	-	-	1,563	5,249	8,954	14,188	12,147	16,120	21,838	80,059
TOTAL BCWS/PMB[1]	31,277	55,523	55,602	75,251	122,977	139,888	168,446	119,675	130,613	153,830	1,049,081
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	4,283	4,267	5,239	3,515	3,932	2,494	23,730
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	4,283	4,267	5,239	3,515	3,932	2,494	23,730
Escalation	-	-	-	-	217	333	561	485	668	505	2,769
TOTAL	31,277	55,523	55,602	75,251	127,477	144,487	174,246	119,675	135,213	156,829	1,075,580
PRIV'ZN - RETR'VL PROJ (ESC'D)	-	-	-	-	-	-	-	-	-	-	-

[1] Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2] Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.4
PBS NO:	RL-TW04
PBS TITLE:	RETRIEVAL

FUND TYPE	FY2007	FY2008	FY2009	FY2010	FY2011-FY2015	FY2016-FY2020	FY2021-FY2025	FY2026-FY2030	FY2031-FY2035	FY2036 FY2040	FY2041-FY2045	FY2046 FY2050	TOTAL FY1997-FY2050
OPERATING EXPENSE	108,120	116,631	110,512	95,933	124,211	37,434	82,493	85,405	108,910	4,761	3,046	3,051	1,737,526
CENRTC	-	-	-	-	-	-	-	-	-	-	-	-	27
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*													
94-D-407 (W-211)	12,514	10,981	8,133	1,735	317	-	-	-	-	-	-	-	145,884
92-D-177 (W-151)	-	-	-	-	-	-	-	-	-	-	-	-	441
88-D-173 (HWVP)	-	-	-	-	-	-	-	-	-	-	-	-	(669)
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	12,514	10,981	8,133	1,735	317	-	-	-	-	-	-	-	145,656
Escalation	23,392	28,069	29,225	26,422	41,039	18,874	56,615	76,336	118,641	6,186	4,886	5,807	515,550
TOTAL BCWS/PMB[1]	144,026	155,681	147,870	124,089	165,567	56,308	139,108	161,741	227,551	10,947	7,932	8,858	2,396,759
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-	-	23,730
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-	-	23,730
Escalation	-	-	-	-	-	-	-	-	-	-	-	-	2,769
TOTAL	144,026	155,681	147,870	124,089	165,567	56,308	139,108	161,741	227,551	10,947	7,932	8,858	2,425,258
PRIV'ZN - RETR'VL PROJ (ESC'D)	-	-	-	-	2,138,548	1,058,871	384,627	90,818	-	-	-	-	3,672,864

[1] Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2] Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.4				
PBS NO:	RL-TW04				
PBS TITLE:	RETRIEVAL				TOTAL
FUND TYPE	FY2051 FY2055	FY2056 FY2060	FY2061- FY2065	FY2066 FY2070	FY1997- FY2070
OPERATING EXPENSE	3,048	3,050	3,048	163	1,746,835
CENRTC	-	-	-	-	27
GENERAL PLANT PROJECT	-	-	-	-	-
LINE ITEM *(List Each One)*					
94-D-407 (W-211)	-	-	-	-	145,884
92-D-177 (W-151)	-	-	-	-	441
88-D-173 (HWVP)	-	-	-	-	(669)
0	-	-	-	-	-
0	-	-	-	-	-
0	-	-	-	-	-
Subtotal Line Items	-	-	-	-	145,656
Escalation	6,818	7,958	9,217	537	540,080
TOTAL BCWS/PMB[1]	9,866	11,008	12,265	700	2,432,597
MGMT RESERVE[2]	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	23,730
TRANSFERS[3,4]	-	-	-	-	-
Subtotal	-	-	-	-	23,730
Escalation	-	-	-	-	2,769
TOTAL	9,866	11,008	12,265	700	2,459,096
PRIV'ZN - RETR'VL PROJ (ESC'D)	-	-	-	-	3,672,864

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Exp. C/O Not Included

[2]Management Reserve and Line Item Contingency Held By RL

[3] Funding & Work Scope Transferred To Other Sites Outside Hanford; &/or Funds & Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

HNF-SP-1230 Rev. 1

TW04-136

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
1/12/99
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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.4																	
RL-TWO4																	
WASTE RETRIEVAL PROJECT																	
1.1.4.1.1.1	WFD Proj. Mgmt & Adm	OE	9,525	10,684	21,276	53,362	73,697	22,406	17,890	59,306	268,147	476,740	36,523	37,689	38,146	35,825	148,183
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		9,525	10,684	21,276	53,362	73,697	22,406	17,890	59,306	268,147	476,740	36,523	37,689	38,146	35,825	148,183
1.1.4.1.1.2	Feed/Process Sys Defin	OE	9,541	7,842	12,284	11,024	11,066	8,022	7,457	6,515	73,750	116,252	5,560	4,934	5,041	5,137	20,671
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		9,541	7,842	12,284	11,024	11,066	8,022	7,457	6,515	73,750	116,252	5,560	4,934	5,041	5,137	20,671
1.1.4.1.1.3	WFD Retr'vl Sys Defin	OE	7,824	11,007	6,024	6,465	5,691	5,870	6,294	4,588	53,763	80,579	3,266	3,327	3,400	3,478	13,471
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		7,824	11,007	6,024	6,465	5,691	5,870	6,294	4,588	53,763	80,579	3,266	3,327	3,400	3,478	13,471
1.1.4.1.1.4	Project W-151 (AZ-101)	OE	3,993	196	0	0	0	0	0	0	4,189	4,189	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		3,993	196	0	0	0	0	0	0	4,189	4,189	0	0	0	0	0
1.1.4.1.1.5	Project W-211 (ITRS)	OE	800	840	1,049	919	3,674	2,362	2,355	2,039	14,039	23,320	1,457	1,975	2,129	2,890	8,450
		LI	4,100	4,060	19,459	24,078	20,851	16,916	10,318	8,256	108,038	150,860	15,472	13,956	10,626	2,330	42,384
		LI C	0	0	4,500	4,600	5,800	4,000	4,600	3,000	26,500	26,500	0	0	0	0	0
	S/T		4,900	4,900	25,008	29,597	30,325	23,278	17,273	13,295	148,577	200,680	16,929	15,931	12,755	5,220	50,834
1.1.4.1.1.6	Project W-521 (Sludge W	OE	0	49	4,823	1,794	125	0	0	0	6,791	6,791	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	49	4,823	1,794	125	0	0	0	6,791	6,791	0	0	0	0	0
1.1.4.1.1.7	Project W-522(Ph1 DST R	OE	0	0	224	1,512	3,116	10,050	15,142	9,008	39,054	51,879	7,960	3,648	1,217	0	12,825
		LI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	224	1,512	3,116	10,050	15,142	9,008	39,054	51,879	7,960	3,648	1,217	0	12,825
1.1.4.1.1.8	ISSTRS - Phase 1	OE	0	0	14,900	15,350	15,750	16,161	8,521	0	70,681	70,681	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	14,900	15,350	15,750	16,161	8,521	0	70,681	70,681	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
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		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.4														
RL-TWO4														
WASTE RETRIEVAL PROJECT														
1.1.4.1.1.1	WFD Proj. Mgmt & Adm	OE	48,270	12,141	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		48,270	12,141	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.2	Feed/Process Sys Defin	OE	16,129	5,702	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		16,129	5,702	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.3	WFD Retrvl Sys Defin	OE	10,851	2,493	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		10,851	2,493	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.4	Project W-151 (AZ-101)	OE	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.5	Project W-211 (ITRS)	OE	831	0	0	0	0	0	0	0	0	0	0	0
		LI	438	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		1,269	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.6	Project W-521 (Sludge W	OE	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.7	Project W-522(Ph1 DST R	OE	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.8	ISSTRS - Phase 1	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.4.1.1.9	Future DST Ret'vl/Trfr	OE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.10 (less W-320)	Ph 1 Retrieval Ops	OE	0	2,803	7,317	3,000	9,055	3,677	17,240	7,219	50,311	76,027	3,334	3,769	4,121	4,840	16,063
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	2,803	7,317	3,000	9,055	3,677	17,240	7,219	50,311	76,027	3,334	3,769	4,121	4,840	16,063
1.1.4.1.1.10.1 (level 7)	Project W-320	OE	12,319	2,232	0	0	0	0	0	0	14,551	14,551	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		12,319	2,232	0	0	0	0	0	0	14,551	14,551	0	0	0	0	0
1.1.4.1.1.12	Ph 1 Safety Basis	OE	387	1,205	6	533	547	555	0	4,900	8,134	34,402	5,028	5,138	5,252	5,366	20,784
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		387	1,205	6	533	547	555	0	4,900	8,134	34,402	5,028	5,138	5,252	5,366	20,784
1.1.4.1.1.13	Ph 1 Characterization	OE	0	0	0	0	1	2	1	8	13	35	1	0	4	1	6
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	1	2	1	8	13	35	1	0	4	1	6
1.1.4.1.2.1	SST Ret'vl Prj Mgmt	OE	361	501	110	166	171	292	297	304	2,202	3,824	312	317	324	331	1,284
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		361	501	110	166	171	292	297	304	2,202	3,824	312	317	324	331	1,284
1.1.4.1.2.2	SST Ret'vl Sys Defin	OE	471	178	0	274	995	451	460	1,058	3,887	5,799	304	307	314	322	1,248
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		471	178	0	274	995	451	460	1,058	3,887	5,799	304	307	314	322	1,248
1.1.4.1.2.3	ISSTRS - Tanks 3&4	OE	0	1,286	5,488	2,421	4,282	10,888	12,093	5,615	42,072	57,167	2,097	2,144	2,191	2,239	8,671
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	1,286	5,488	2,421	4,282	10,888	12,093	5,615	42,072	57,167	2,097	2,144	2,191	2,239	8,671
1.1.4.1.2.4	SSSTRS	OE	0	0	39	160	1,442	8,608	20,882	31,781	62,911	319,009	45,362	58,782	56,687	46,358	207,189
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	39	160	1,442	8,608	20,882	31,781	62,911	319,009	45,362	58,782	56,687	46,358	207,189
1.1.4.1.2.5	Hanford Tank Initiative	OE	996	11,331	9,979	6,172	0	0	0	0	28,478	28,478	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		996	11,331	9,979	6,172	0	0	0	0	28,478	28,478	0	0	0	0	0

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		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.4.1.1.9	Future DST Ret\/Trfr	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.10	Ph 1 Retrieval Ops	OE	9,137	516	0	0	0	0	0	0	0	0	0	0
(less W-320)		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		9,137	516	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.10.1	Project W-320	OE	0	0	0	0	0	0	0	0	0	0	0	0
(level 7)		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.12	Ph 1 Safety Basis	OE	5,484	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		5,484	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.13	Ph 1 Characterization	OE	16	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		16	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.2.1	SST Ret\/I Prj Mgmt	OE	339	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		339	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.2.2	SST Ret\/I Sys Defin	OE	664	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		664	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.2.3	ISSTRS - Tanks 3&4	OE	6,425	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		6,425	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.2.4	SSSTRS	OE	48,909	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		48,909	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.2.5	Hanford Tank Initiative	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0

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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.4.1.2.6	SST Tech'gy & Assm'ts	OE	469	5,525	5,432	3,892	31	0	0	0	15,349	15,349	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		469	5,525	5,432	3,892	31	0	0	0	15,349	15,349	0	0	0	0	0
1.1.4.1.2.7	Future SST Ret'vl Prj	OE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.2.9	Ph2 SST Ret'vl Ops	OE	0	0	0	1,216	3,164	3,247	7,190	9,492	24,309	88,443	14,792	15,066	12,111	11,046	53,015
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	1,216	3,164	3,247	7,190	9,492	24,309	88,443	14,792	15,066	12,111	11,046	53,015
1.1.4.1.2.10	Characterization	OE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.2.11	Safety Basis	OE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.3.1	VadoseClosure Zone Mg	OE	254	190	198	202	207	213	216	220	1,700	3,651	226	231	236	241	934
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		254	190	198	202	207	213	216	220	1,700	3,651	226	231	236	241	934
1.1.4.1.3.2	Closure Syst Defin'tn	OE	0	689	721	733	738	2,247	3,458	3,520	12,106	17,802	2,317	452	462	472	3,704
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	689	721	733	738	2,247	3,458	3,520	12,106	17,802	2,317	452	462	472	3,704
1.1.4.1.3.3	Vadose Zone Activities	OE	4,562	14,633	13,650	6,614	13,844	3,708	797	0	57,807	57,807	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		4,562	14,633	13,650	6,614	13,844	3,708	797	0	57,807	57,807	0	0	0	0	0
1.1.4.1.3.4	SST/IMUST Closure	OE	0	0	0	0	0	0	0	0	0	464,923	14	3,947	5,610	3,214	12,784
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	464,923	14	3,947	5,610	3,214	12,784

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		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.4.1.2.6	SST Tech'gy & Assm'ts	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.2.7	Future SST Ret'vl Prj	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.2.9	Ph2 SST Ret'vl Ops	OE	11,119	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		11,119	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.2.10	Characterization	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.2.11	Safety Basis	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.3.1	VadoseClosure Zone Mg	OE	1,017	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		1,017	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.3.2	Closure Syst Defin'tn	OE	1,992	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		1,992	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.3.3	Vadose Zone Activities	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.3.4	SST/IMUST Closure	OE	3,946	35,456	139,108	126,011	147,619	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		3,946	35,456	139,108	126,011	147,619	0	0	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.4.1.3.5	DST Closure	OE	0	0	0	0	0	0	0	0	0	119,851	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	119,851	0	0	0	0	0
1.1.4.1.3.6	Post-Closure Monitor	OE	0	0	0	0	0	0	0	0	0	57,387	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	57,387	0	0	0	0	0
1.1.4 WASTE RETR'VL PROJ		OE	34,390	67,923	102,469	114,889	143,921	96,397	117,940	143,534	821,463	2,152,875	127,097	139,751	135,115	118,869	520,832
(W/O W-151/W-211/W-320)		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		34,390	67,923	102,469	114,889	143,921	96,397	117,940	143,534	821,463	2,152,875	127,097	139,751	135,115	118,869	520,832
1.1.4 WASTE RETR'VL PROJ		OE	51,502	71,191	103,518	115,809	147,595	98,759	120,295	145,573	854,242	2,194,936	128,554	141,725	137,244	121,759	529,282
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI	4,100	4,060	19,459	24,078	20,851	16,916	10,318	8,256	108,038	150,860	15,472	13,956	10,626	2,330	42,384
		LI C	0	0	4,500	4,600	5,800	4,000	4,600	3,000	26,500	26,500	0	0	0	0	0
	TOTAL		55,602	75,251	127,477	144,487	174,246	119,675	135,213	156,829	988,780	2,372,296	144,026	155,681	147,870	124,089	571,666

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/99
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		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.4.1.3.5	DST Closure	OE	0	0	0	35,730	79,933	4,188	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	35,730	79,933	4,188	0	0	0	0	0	0
1.1.4.1.3.6	Post-Closure Monitor	OE	0	0	0	0	0	6,759	7,932	8,858	9,866	11,008	12,265	700
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	6,759	7,932	8,858	9,866	11,008	12,265	700
1.1.4 WASTE RETR'VL PROJ		OE	164,298	56,308	139,108	161,741	227,551	10,947	7,932	8,858	9,866	11,008	12,265	700
(W/O W-151/W-211/W-320)		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		164,298	56,308	139,108	161,741	227,551	10,947	7,932	8,858	9,866	11,008	12,265	700
1.1.4 WASTE RETR'VL PROJ		OE	165,129	56,308	139,108	161,741	227,551	10,947	7,932	8,858	9,866	11,008	12,265	700
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		LI	438	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL		165,567	56,308	139,108	161,741	227,551	10,947	7,932	8,858	9,866	11,008	12,265	700

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.4																	
RL-TW04																	
WASTE RETR'VL PROJ																	
1.1.4.1.1.11	Ph 2 DST Ret'vl Ops	OE	0	0	0	0	0	0	0	0	0	855,202	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	855,202	0	0	0	0	0
1.1.4.1.2.8	Retreieval Privatization	OE	0	0	0	0	0	0	0	0	0	2,817,662	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	2,817,662	0	0	0	0	0
1.1.4 WASTE RETR'VL PROJ																	
		OE	0	0	0	0	0	0	0	0	0	3,672,864	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL		0	0	0	0	0	0	0	0	0	3,672,864	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
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		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.4														
RL-TW04														
WASTE RETR'VL PROJ														
1.1.4.1.1.11	Ph 2 DST Ret'vl Ops	OE	299,398	162,031	302,955	90,818	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		299,398	162,031	302,955	90,818	0	0	0	0	0	0	0	0
1.1.4.1.2.8	Retreieval Privatization	OE	1,839,150	896,840	81,672	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		1,839,150	896,840	81,672	0	0	0	0	0	0	0	0	0
1.1.4 WASTE RETR'VL PROJ														
		OE	2,138,548	1,058,871	384,627	90,818	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL		2,138,548	1,058,871	384,627	90,818	0	0	0	0	0	0	0	0

B.4.4.3 Life Cycle Budget Authority by PBS

EXHIBIT 4a

TANK WASTE REMEDIATION SYSTEM
BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.4	
PBS NO:	RL-TW04	
PBS TITLE:	RETRIEVAL	
FUND TYPE	TARGET B/A FY1998	PRESIDENT'S BUDGET PLUS CARRYOVER[1] FY1999
OPERATING EXPENSE	48,479	51,502
CENRTC	-	-
GENERAL PLANT PROJECT	-	-
LINE ITEM *(List Each One)*		
94-D-407 (W-211)	7,671	-
92-D-177 (W-151)	42	-
88-D-173 (HWVP)	(669)	
0	-	-
0	-	-
0	-	-
Subtotal Line Items	7,044	
TOTAL NEW B/A	55,523	51,502
ESTIMATED FY 1998 CARRYOVER		8,295
TOTAL NEW B/A+CARRYOVER	55,523	59,797
PRIV'ZN - RETR'VL PROJ (ESC'D)	-	-

[1]Estimated Carryover Is NOT Included In Cost Baseline; Change Request For Actual Carryover Submitted After September 30, 1998.

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TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)
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PBS - ADS

PBS TITLE	F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A) *	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2068 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
TW04																		
1.1.4 WASTE RETRIEVAL PROJECT	EX	14,180	33,000	35,154	67,923	102,469	114,889	143,921	96,397	117,940	143,534	869,407	2,200,819	127,097	139,751	135,115	118,869	520,832
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	(669)	0	0	0	0	0	0	0	0	(669)	(669)	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	14,180	32,331	35,154	67,923	102,469	114,889	143,921	96,397	117,940	143,534	868,738	2,200,150	127,097	139,751	135,115	118,869	520,832
1.1.4.1.1.4 Project W-151	EX	465	225	3,993	196	0	0	0	0	0	0	4,879	4,879	0	0	0	0	0
	LI	399	42	0	0	0	0	0	0	0	0	441	441	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	864	267	3,993	196	0	0	0	0	0	0	5,320	5,320	0	0	0	0	0
1.1.4.1.1.5 Project W-211	EX	808	1,072	800	840	1,049	919	3,674	2,362	2,355	2,039	15,919	25,200	1,457	1,975	2,129	2,890	8,450
	LI	6,231	7,671	7,458	4,060	19,459	24,078	20,851	16,916	10,318	8,256	125,298	169,180	15,472	13,956	14,454	0	43,882
	LI CONT	0	0	0	0	4,500	4,600	5,800	4,000	4,600	3,000	26,500	26,500	0	0	0	0	0
	TOTAL	7,039	8,743	8,258	4,900	25,008	29,597	30,325	23,278	17,273	13,295	167,717	220,880	16,929	15,931	16,583	2,890	52,332
1.1.4.1.1.10.1 Project W-320 (LEVEL7)	EX	9,194	14,182	12,392	2,232	0	0	0	0	0	0	38,000	38,000	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	9,194	14,182	12,392	2,232	0	0	0	0	0	0	38,000	38,000	0	0	0	0	0
1.1.4 WASTE RETRIEVAL TOTAL	EX	24,647	48,479	52,339	71,191	103,518	115,809	147,595	98,759	120,295	145,573	928,205	2,268,899	128,554	141,725	137,244	121,759	529,282
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LI	6,630	7,044	7,458	4,060	19,459	24,078	20,851	16,916	10,318	8,256	125,070	168,952	15,472	13,956	14,454	0	43,882
	LI CONT	0	0	0	0	4,500	4,600	5,800	4,000	4,600	3,000	26,500	26,500	0	0	0	0	0
	TOTAL	31,277	55,523	59,797	75,251	127,477	144,487	174,246	119,675	135,213	156,829	1,079,775	2,464,351	144,026	155,681	151,698	121,759	573,164

* FY 1999 INCLUDES CARRYOVER OF $837 EXP, $7,458 LI

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

11/24/98	09/24/98 UPDATE

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PBS - A09 PBS TITLE	F/T	FY 2011- FY 2015 B/A PROFILE (B/A)	FY 2016- FY 2020 B/A PROFILE (B/A)	FY 2021- FY 2025 B/A PROFILE (B/A)	FY 2026- FY 2030 B/A PROFILE (B/A)	FY 2031- FY 2035 B/A PROFILE (B/A)	FY 2036- FY 2040 B/A PROFILE (B/A)	FY 2041- FY 2045 B/A PROFILE (B/A)	FY 2046- FY 2050 B/A PROFILE (B/A)	FY 2051- FY 2055 B/A PROFILE (B/A)	FY 2056- FY 2060 B/A PROFIL (B/A)	FY 2061- FY 2065 B/A PROFILE (B/A)	FY 2066- FY 2068 B/A PROFILE (B/A)
TW04													
1.1.4 WASTE RETRIEVAL PROJECT	EX	164,298	56,308	139,108	161,741	227,551	10,947	7,932	8,858	9,866	11,008	12,265	700
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	164,298	56,308	139,108	161,741	227,551	10,947	7,932	8,858	9,866	11,008	12,265	700
1.1.4.1.1.4 Project W-151	EX	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.5 Project W-211	EX	831	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	831	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.10.1 Project W-320 (LEVEL7)	EX	0	0	0	0	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.4 WASTE RETRIEVAL TOTAL	EX	165,129	56,308	139,108	161,741	227,551	10,947	7,932	8,858	9,866	11,008	12,265	700
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	165,129	56,308	139,108	161,741	227,551	10,947	7,932	8,858	9,866	11,008	12,265	700

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9784BOBA.XLS(SUMMARY)

11/24/98 09/24/98 UPDATE

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PBS - ADS PBS TITLE	F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A)*	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2066 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
TW04																		
1.1.4.1.1.11/1.1.4.1.2.8	EX	0	0	0	0	0	0	0	0	40,000	26,000	66,000	3,673,000	69,000	136,000	308,000	308,000	821,000
PRNTZN PHASE II	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	40,000	26,000	66,000	3,673,000	69,000	136,000	308,000	308,000	821,000

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

1/24/98	09/24/98 UPDATE

10:29 AM

PBS - ADS PBS TITLE	F/T	FY 2011- FY 2015 B/A PROFILE (B/A)	FY 2016- FY 2020 B/A PROFILE (B/A)	FY 2021- FY 2025 B/A PROFILE (B/A)	FY 2026- FY 2030 B/A PROFILE (B/A)	FY 2031- FY 2035 B/A PROFILE (B/A)	FY 2036- FY 2040 B/A PROFILE (B/A)	FY 2041- FY 2045 B/A PROFILE (B/A)	FY 2046- FY 2050 B/A PROFILE (B/A)	FY 2051- FY 2055 B/A PROFILE (B/A)	FY 2056- FY 2060 B/A PROFIL (B/A)	FY 2061- FY 2065 B/A PROFILE (B/A)	FY 2066- FY 2066 B/A PROFILE (B/A)
TW04													
1.1.4.1.1.11/1.1.4.1.2.8	EX	1,253,000	1,059,000	384,000	90,000	0	0	0	0	0	0	0	0
PRVTZN PHASE II	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1,253,000	1,059,000	384,000	90,000	0	0	0	0	0	0	0	0

B.4.4.4 Project (PBS) Contractor Split

TANK WASTE REMEDIATION SYSTEM
FY 1999 CONTRACTOR FUNDING SPLIT (NEW BA ONLY)

PBS	DOE-RL/ RL-PNNL	NATIONAL LABS	TOTAL
TW04	$ 1,183	$ 260	$ 1,443

REFLECTS FY 1999 NEW BA ONLY

B.5 Process Waste Support (RL-TW05)
B.5.1.0 Process Waste Support Technical Baseline
B.5.1.1 Process Waste Support Project Mission TW05-1
B.5.1.2 Process Waste Support End Point Targets from Hanford Strategic Plan TW05-1
B.5.1.3 Process Waste Support Major Facilities TW05-1
B.5.1.4 Drivers for Process Waste Support TW05-1
B.5.2.0 Process Waste Support Work Breakdown Structure (WBS)
B.5.2.1 Process Waste Support WBS Hierarchy TW05-2
B.5.2.2 Process Waste Support WBS Dictionary TW05-2
B.5.3.0 Schedule Baseline
B.5.3.1 Project Master Baseline Schedule by PBS TW05-5
B.5.3.2 Execution Year Project Master Baseline Schedule TW05-7
B.5.3.3 Milestone List TW05-9
B.5.3.4 Milestone Description Sheets TW05-11
B.5.4.0 Cost Baseline
B.5.4.1 Project Priority List TW05-18
B.5.4.2 Life Cycle Cost Baseline by PBS TW05-20
B.5.4.3 Life Cycle Budget Authority by PBS TW05-25
B.5.4.4 Project (PBS) Contractor Split TW05-29

B.5 Process Waste Support (RL-TW05)

B.5.1.0 Process Waste Support Technical Baseline

This section describes the technical baseline for this project. It identifies the mission, the end point targets, the site major facilities, technical logic, functions, requirements, and forecasts for this project.

B.5.1.1 Process Waste Support Mission

The mission of the TWRS Waste Processing Project, of which Process Waste Support is a part, is to provide for pretreatment and immobilization of the radioactive waste stored in 177 underground single and double shell tanks and the disposition of the cesium and strontium capsules at the Hanford Site. The High-Level Waste (HLW) fraction of the waste will be vitrified and sealed in canisters that can be temporarily stored onsite until shipped to a geologic repository for disposal. The Low-Level Waste (LLW) fraction will be immobilized and sealed in containers suitable for permanent near-surface disposal at Hanford.

To accomplish this mission, the Waste Processing Project will implement a two-phased procurement strategy. Phase I will be the proof-of-concept phase during which one vendor will design, construct, and operate immobilization facilities to treat 10% of the tank waste, using funding from the private sector. The U.S. Department of Energy (DOE) will pay the private contractor for waste treatment services in accordance with the contract. The goals of Phase I are to: demonstrate the technical and business viability of using privatized facilities to treat Hanford tank waste; define and maintain required levels of radiological, nuclear, process, and occupational safety; maintain environmental protection and compliance; and substantially reduce life-cycle costs and time required to treat Hanford tank waste. Phase I is scheduled to be completed by 2018. During Phase I the Process Waste Support Project will have the responsibility to administer and integrate the privatization contract, and provide for the interface between PHMC and the Private Contractor. Phase II will be the full-scale production phase, in which the facilities will be configured so all of the remaining waste can be processed on a schedule that will accommodate removing the waste from single-shell tanks by the year 2018. The objectives of Phase II would be to: implement the lessons learned from Phase I; process all tank waste into forms suitable for final disposal; achieve price competition and cost savings throughout the Phase II effort; and meet or exceed the TPA benchmark performance milestones, at which time all HLW will have been immobilized and placed in interim storage until a repository is available for final disposal and all LLW will be immobilized and disposed of on-site. The Process Waste Support Project will have the responsibility to develop any Requests for Proposals and award, administer, and integrate the vendor contracts for retrieving, pretreating, and processing both LLW and HLW including disposition of the cesium and strontium capsules..

B.5.1.2 Process Waste Support End Point Targets from Hanford Strategic Plan

-None-

B.5.1.3 Process Waste Support Major Facilities

B.5.1.4 Drivers for Process Waste Support

-None-

B.5.2.0 Process Waste Support Work Breakdown Structure (WBS)

B.5.2.1 Process Waste Support WBS Hierarchy

RL PBS	RL WBS	Title
RL-TW05	1.01.05	Process Waste Support
	1.01.05.01	Process Waste Support Project
	1.01.05.01.01	Process Waste Support Project

B.5.2.2 Process Waste Support WBS Dictionary

The following pages contain the WBS dictionary for RL-TW05

B.5-2 WBS Dictionary for Process Waste Support Project

1. Dictionary Title Process Waste Support Project		2. Date 2 November 1998	3. PBS Number RL-TW05	4. Dict Rev
5. WBS No. 1.01.05.01.01	6. B & R No. EW02J120		7. Baseline CR No.	
8. Organization Name Process Waste Support				

9. Scope of Work

Process Waste Support will implement a two-phased procurement strategy. Phase I is the proof-of concept phase where a private vendor will design, construct, and operate immobilization facilities to treat 10% of tank waste, utilizing private sector funding.

The objectives of Phase I, scheduled to complete by 2018 are: demonstrate the technical and business viability of using privatized facilities to treat Hanford tank waste; define and maintain required levels of radiological, nuclear, process, and occupational safety; maintain environmental protection and compliance; and reduce life-cycle costs and time necessary to treat Hanford tank waste. The Process Waste Support Project will be responsible to administer and integrate the privatization contract; and provide the interface between PHMC and the Private Contractor.

Phase II will be the full-production phase, in which facilities will be configured so all remaining waste can be processed that accommodates removing the waste from single-shell tanks by the year 2018. Phase II objectives are: process all tank waste into suitable forms for final disposal; achieve price competition and cost savings; and meet or exceed TPA benchmark performance milestones, at which time all HLW will have been immobilized and placed in interim storage until a repository is available for final disposal and all LLW immobilized and disposed of on-site. The Process Waste Support Project is responsible for developing Request for Proposals and award, administer and integration the vendor contracts for retrieving, pretreating, and processing both LLW and HLW, including disposition of cesium and strontium capsules.

The Process Waste Support Project further defines workscope as follows:

M&I Vendor Interface
The primary function of this activity is to ensure that the interfaces between the privatization contractor and the PHMC Team are identified and agreed upon by DOE, the privatization contractor and PHMC. An Integrated Product/Process Team (IPT) approach will be used to reach agreement for each Interface Control Document. A PHMC representative will provide direct support for the Interface IPT and the Safety, Health, and Environmental IPT, as defined in the privatization contract. In addition, technical review of specific ICDs and completion of agreed upon studies required to resolve open issues associated with these ICDs, will be conducted, as well. The specific ICDs are: Deactivated Facility and Site Return (ICD 10), Air Emissions (ICD 22), Emergency Response (ICD 25) and Permits (ICD 26).

Cesium and Strontium Capsules
The Cesium and Strontium capsules subproject is responsible for the disposition of the Cs and Sr capsules and will perform administrative functions, as necessary. The Alternative Generation Analysis (AGA) and Decision Analysis Report (DAR) for Cs and Sr and the Cesium and Strontium Disposition Decision Analysis will be updated, as needed.

Program Management
The Waste Disposal Integration Team (WIT) will assist the DOE Waste Disposal Division Director in the formulation, management and evaluation of the Phase I Waste Disposal Program. The WIT provides technical expertise in

B.5-2 WBS Dictionary for Process Waste Support Project (Continued)

1. Dictionary Title Process Waste Support Project		2. Date 2 November 1998	3. PBS Number RL-TW05	4. Dict Rev
5. WBS No. 1.01.05.01.01	6. B & R No. EW02J120		7. Baseline CR No.	
8. Organization Name Process Waste Support				

Program Formulation, Program Execution, and Program Performance Measurement and Reporting. A summary of the key activities as documented in the Level 6 Workbreakdown structure dictionary sheets are:

- Assist WDD in the execution of the privatization contract
- Support WDD in the Phase IB Part-2 decision process
- Support WDD in the Integration of Phase 1B performers
- Establish the management systems for WDD to execute Phase IB
- Assist WDD in expediting the completion of the Program

B.5.3.1 Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
1			Hanford Site
1.01			TWRS
1.01.05			Process Waste Support Project
1.01.05.01			Process Waste Support Project
1.01.05.01.01			Process Waste Support Project
1.01.05.01.01.01			M&I Vendor Interface
150.B24	01OCT98*	28SEP07	Support ICD Process & ICDs 10, 22, 25, & 26
15B24B20M		31JUL00*	T05-00-110 ICD Implementation Plan ◇ T05-00-110
15B24C20M		30JUL01*	T05-01-110 ICD Implementation Plan ◇ T05-01-110
420.010	01OCT99*	30SEP03	Cs/Sr Capsule Disposition Project
42010D10M		30JUN03*	M-92-05 Treatment/Repackag'g of Remaining Cs/Sr ◇ T05-03-191
1.01.05.01.01.02			Phase 1 Project Management
720.XXX	01OCT98*	29SEP28	Phase 1 Waste Integration Team
72XXXA97		30SEP99*	Manage/Integrate TWRS FY99 (Perform Object) ◇ T05-99-201
72XXXA98		29SEP00*	Manage/Integrate TWRS FY00 (Perform Object) ◇ T05-00-201
72XXXA99		27SEP01*	Manage/Integrate TWRS FY01 (Perform Object) ◇ T05-01-201

Ject Start 01OCT97
Ject Finish 29SEP28
a Date 01OCT98
t Date 17NOV98

Early Bar
Progress Bar
Critical Activity

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6BP2

Sheet 1 of 1

Tank Waste Remediation System
PMBS - Life of Project
TW05 - Process Waste Support

B.5.3.2 Execution Year Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY00 OCT	N
1			Hanford Site													
1.01			TWRS													
1.01.05			Process Waste Support Project													
1.01.05.01			Process Waste Support Project													
1.01.05.01.01			Process Waste Support Project													
1.01.05.01.01.01			M&I Vendor Interface													
150.B24	01OCT98*	28SEP07	Support ICD Process & ICDs 10, 22, 25, & 26													
1.01.05.01.01.02			Phase 1 Project Management													
720.XXX	01OCT98*	29SEP28	Phase 1 Waste Integration Team													
72XXXA97		30SEP99*	Manage/Integrate TWRS FY99 (Perform Object) ◇ T05-99-201													

Start 01OCT97
Finish 29SEP28
Date 01OCT98
Date 17NOV98

Early Bar
Progress Bar
Critical Activity

SBP2

Sheet 1 of 1

Tank Waste Remediation System
PMBS - FY 1999
TW05 - Process Waste Support

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B.5.3.3 Milestone List

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/TPA Date
T05-99-201	Process Waste Support Technical Management and Integration	RL	-	30-Sep-99	-
T05-00-110	Issue ICD Implementation Plan	RL	-	31-Jul-00	-
T05-00-201	Process Waste Support Technical Management and Integration	RL	-	29-Sep-00	-
T05-01-110	Issue ICD Implementation Plan	RL	-	30-Jul-01	-
T05-01-201	Process Waste Support Technical Management and Integration	RL	-	27-Sep-01	-
T05-03-191	Treatment and/or Repackaging of all Remaining Cs/Sr	HQ-I	M-92-05	30-Jun-03	30-Jun-03

B.5.3.4 Milestone Description Sheets

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Process Waste Support Technical Management and Integration

Schedule Date: 9/30/1999

Assigned to: George Mellinger

WBS Number: 1.01.05.01.01

Milestone Control Number: T05-99-201

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

This commitment provides assistance to the DOE Waste Disposal Division in management of the Phase I Waste Disposal Project. Included in the commitment are the following elements: 1) Integration of privatized and non-privatized activities; 2) Assisting the WDD in the administration and execution of the privatization contract; 3) Managing interfaces between the PHMC and BNFL; and 4) assisting the WDD in managing the interfaces with stakeholders and regulators. This milestone is a FY99 performance expectation in support of EM's near term performance objective to manage and integrate Tank Waste Remediation System activities.

Description of what constitutes completion of the commitment:

Completion of the milestone involves completion of progress reports and input into the DOE privatization decision management process to support execution of the Privatization Phase I Part B contract with BNFL and to support execution of the Waste Disposal Division mission.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Issue ICD Implementation Plan

Schedule Date: 7/31/00

Assigned to: K. A. Gasper

WBS Number: 1.01.05.01.01.01

Milestone Control Number: T05-00-110

Milestone Type	Deliverables	Addressed to
[] TPA	[x] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Issue a document that contains a compilation of an ICD Implementation Plan (IIP) for the latest version of each ICD provided to PHMC Team by May 1, 2000. The IIPs will contain an identification of the requirements in the current contract or revisions received by the PHMC Team prior to May 1, 2000 as well as the latest version of each ICD received by PHMC Team prior to May 1, 2000. It will identify the document number and title or the TBR number and title which fulfills these requirements. It will also identify open issues from each of the ICDs. For each open issue, an action plan and responsible organization will be identified. If the responsible organization is the PHMC Team, a responsible individual will be identified. The status of the action plan will also be identified.

Description of what constitutes completion of the commitment:

Transmittal of the document that contains a compilation of the IIPs to DOE-RL. The PHMC Team will have internally reviewed and concurred with the document.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Process Waste Support Technical Management and Integration

Schedule Date: 9/29/2000

Assigned to: George Mellinger

WBS Number: 1.01.05.01.01

Milestone Control Number: T05-00-201

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

This commitment provides assistance to the DOE Waste Disposal Division in management of the Phase I Waste Disposal Project. Included in the commitment are the following elements: 1) Integration of privatized and non-privatized activities; 2) Assisting the WDD in the administration and execution of the privatization contract; 3) Managing interfaces between the PHMC and BNFL; and 4) assisting the WDD in managing the interfaces with stakeholders and regulators. This milestone is a FY2000 performance expectation in support of EM's near term performance objective to manage and integrate Tank Waste Remediation System activities.

Description of what constitutes completion of the commitment:

Completion of the milestone involves completion of progress reports and input into the DOE privatization decision management process to support execution of the Privatization Phase I Part B contract with BNFL and to support execution of the Waste Disposal Division mission.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Issue ICD Implementation Plan

Schedule Date: 7/30/01

Assigned to: K. A. Gasper

WBS Number: 1.01.05.01.01.01

Milestone Control Number: T05-01-110

Milestone Type	Deliverables	Addressed to
[] TPA	[x] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Issue a document that contains a compilation of an ICD Implementation Plan (IIP) for the latest version of each ICD provided to PHMC Team by May 1, 2001. The IIPs will contain an identification of the requirements in the current contract or revisions received by the PHMC Team prior to May 1, 2001 as well as the latest version of each ICD received by the PHMC Team prior to May 1, 2001. It will identify the document number and title or the TBR number and title which fulfills these requirements. It will also identify open issues from each of the ICDs. For each open issue, an action plan and responsible organization will be identified. If the responsible organization is the PHMC Team, a responsible individual will be identified. The status of the action plan will also be identified.

Description of what constitutes completion of the commitment:

Transmittal of the document that contains a compilation of the IIPs to DOE-RL. The PHMC Team will have internally reviewed and concurred with the document.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Process Waste Support Technical Management and Integration

Schedule Date: 9/27/2001

Assigned to: George Mellinger

WBS Number: 1.01.05.01.01

Milestone Control Number: T05-01-201

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

This commitment provides assistance to the DOE Waste Disposal Division in management of the Phase I Waste Disposal Project. Included in the commitment are the following elements: 1) Integration of privatized and non-privatized activities; 2) Assisting the WDD in the administration and execution of the privatization contract; 3) Managing interfaces between the PHMC and BNFL; and 4) assisting the WDD in managing the interfaces with stakeholders and regulators. This milestone is a FY2001 performance expectation in support of EM's near term performance objective to manage and integrate Tank Waste Remediation System activities.

Description of what constitutes completion of the commitment:

Completion of the milestone involves completion of progress reports and input into the DOE privatization decision management process to support execution of the Privatization Phase I Part B contract with BNFL and to support execution of the Waste Disposal Division mission.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: M-92-05: Treatment and/or Repackaging of all Remaining Cs/Sr

Schedule Date: 6/30/2003

Assigned to: K. A. Gasper

WBS Number: 1.01.05.01.01.01.09

Milestone Control Number: T05-03-191

TPA No.: M-92-05

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[X] Other (Specify)
	_____	_____

Description of this Commitment:

Inclusion of Hanford Site Cs/Sr ATreatment and/or Repackaging Parameters in DOE TWRS Phase II Request for Proposal. (Treatment and/or Repackaging of all Remaining Cs/Sr.)

Description of what constitutes completion of the commitment:

The necessary and sufficient engineering data are generated, peer reviewed, and incorporated into the TWRS Program Technical Baseline. These data are generated as a result of engineering trade studies and other technical evaluations. Decision analyses are performed and the results documented in the technical baseline.

B.5.4.1 Project Priority List

TANK WASTE REMEDIATION SYSTEM
FY 1999 - 2007 MYWP PRIORITY LIST BY PBS

11/23/98 'FY 99 MYWP

EXCEL: 10YRPR49.XLS
11/24/98 4:40 PM

FDH UAS	PBS #	ADS		"UNIT OF ANALYSIS"	FY 99 TOTAL ESCAL'D	FY 00 TOTAL ESCAL'D	FY 01 TOTAL ESCAL'D	FY 02 TOTAL ESCAL'D	FY 03 TOTAL ESCAL'D	FY 04 TOTAL ESCAL'D	FY 05 TOTAL ESCAL'D	FY 06 TOTAL ESCAL'D	FY 07 TOTAL ESCAL'D
TW05													
163	TW05	1230	- 0	TWRS PRIVATIZATION PROGRAM MGMT (WIT) PHASE 1	7,400	8,800	10,682	17,831	18,296	18,727	16,814	16,940	17,327
162	TW05	1230	- 0	TWRS M AND I VENDOR INTERFACE	700	1,428	1,457	1,488	1,521	1,562	1,590	1,618	1,661
				S/T - TARGET	**8,100**	**10,228**	**12,139**	**19,318**	**19,817**	**20,289**	**18,404**	**18,559**	**18,988**
158	TW09	1250	- 0	TWRS CESIUM & STRONTIUM CAPSULE DISPOSITION	-	13	14	14	116	-	-	-	-
				SUBTOTAL -URGENT RISK- PRIVATIZ'N - 90%	**8,100**	**10,241**							
158	TW05	1230	- 0	TWRS CESIUM & STRONTIUM CAPSULE DISPOSITION	100	-	-	-	-	-	-	-	-
				S/T - COMPLIANCE	**8,200**	**10,241**							
614	TW05	1230	- 0	TWRS CESIUM & STRONTIUM CAPSULE DISPOSITION	362	-	-	-	-	-	-	-	-
				TOTAL TWRS REQUIREMENTS (EM-30)	**8,562**	**10,241**	**12,152**	**19,332**	**19,933**	**20,289**	**18,404**	**18,559**	**18,988**

B.5.4.2 Life Cycle Cost Baseline by PBS

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.5										
PBS NO:	RL-TW05										
PBS TITLE:	PROCESS WASTE SUPPORT										SUBTOT
FUND TYPE	*ACTUAL* FY1997	*ACTUAL* FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997-FY2006
OPERATING EXPENSE	5,352	9,020	8,100	10,030	11,646	18,128	18,289	18,215	16,167	15,952	130,899
CENRTC	-	-	-	-	-	-	-	-	-	-	-
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*											
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	211	506	1,204	1,644	2,074	2,237	2,607	10,482
TOTAL BCWS/PMB[1]	5,352	9,020	8,100	10,241	12,152	19,332	19,933	20,289	18,404	18,559	141,381
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-
TOTAL	5,352	9,020	8,100	10,241	12,152	19,332	19,933	20,289	18,404	18,559	141,381

[1] Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2] Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.5
PBS NO:	RL-TW05
PBS TITLE:	PROCESS WASTE SUPPORT

FUND TYPE	FY2007	FY2008	FY2009	FY2010	FY2011-FY2015	FY2016-FY2020	FY2021-FY2025	FY2026-FY2030	FY2031-FY2035	FY2036 FY2040	FY2041-FY2045	FY2046 FY2050	TOTAL FY1997-FY2050
OPERATING EXPENSE	15,970	14,573	14,573	14,573	63,236	48,934	48,922	29,372	-	-	-	-	381,052
CENRTC	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*													
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-	-	-
Escalation	3,018	3,136	3,525	3,923	22,054	25,019	33,512	24,604	-	-	-	-	129,274
TOTAL BCWS/PMB[1]	18,988	17,709	18,098	18,496	85,290	73,953	82,434	53,976	-	-	-	-	510,326
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	18,988	17,709	18,098	18,496	85,290	73,953	82,434	53,976	-	-	-	-	510,326

[1] Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2] Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

HNF-SP-1230 Rev. 1

TW05-22

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.5																	
RL-TW05																	
PROCESS WASTE SUPPORT																	
1.1.5.1.1.1	M&I Vendor Interface	OE	700	1,441	1,470	1,502	1,637	1,562	1,589	1,618	11,519	13,180	1,661	0	0	0	1,661
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		700	1,441	1,470	1,502	1,637	1,562	1,589	1,618	11,519	13,180	1,661	0	0	0	1,661
1.1.5.1.1.2	Ph I Project Mgmt	OE	7,400	8,800	9,212	7,435	7,629	7,797	5,692	5,554	59,519	102,010	5,685	5,810	5,937	6,068	23,500
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		7,400	8,800	9,212	7,435	7,629	7,797	5,692	5,554	59,519	102,010	5,685	5,810	5,937	6,068	23,500
1.1.5.1.1.3	Ph 1 Project Mgmt	OE	0	0	1,470	10,395	10,667	10,930	11,123	11,386	55,972	380,764	11,643	11,899	12,161	12,428	48,130
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	1,470	10,395	10,667	10,930	11,123	11,386	55,972	380,764	11,643	11,899	12,161	12,428	48,130
1.1.5.1.1.4	Ph 2 Project Mgmt	OE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.5	**PROC WASTE SUPPT**	OE	8,100	10,241	12,152	19,332	19,933	20,289	18,404	18,559	127,009	495,954	18,988	17,709	18,098	18,496	73,291
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL		8,100	10,241	12,152	19,332	19,933	20,289	18,404	18,559	127,009	495,954	18,988	17,709	18,098	18,496	73,291

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
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		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.5														
RL-TW05														
PROCESS WASTE SUPPORT														
1.1.5.1.1.1	M&I Vendor Interface	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.5.1.1.2	Ph I Project Mgmt	OE	18,991	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		18,991	0	0	0	0	0	0	0	0	0	0	0
1.1.5.1.1.3	Ph 1 Project Mgmt	OE	66,299	73,953	82,434	53,976	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		66,299	73,953	82,434	53,976	0	0	0	0	0	0	0	0
1.1.5.1.1.4	Ph 2 Project Mgmt	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.5	**PROC WASTE SUPPT**	OE	85,290	73,953	82,434	53,976	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL		85,290	73,953	82,434	53,976	0	0	0	0	0	0	0	0

B.5.4.3 Life Cycle Budget Authority by PBS

EXHIBIT 4a

TANK WASTE REMEDIATION SYSTEM
BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.5	
PBS NO:	RL-TW05	
PBS TITLE:	PROCESS WASTE SUPPORT	
FUND TYPE	TARGET B/A FY1998	PRESIDENT'S BUDGET PLUS CARRYOVER[1] FY1999
OPERATING EXPENSE	9,020	8,100
CENRTC	-	-
GENERAL PLANT PROJECT	-	-
LINE ITEM *(List Each One)*		
0	-	-
0	-	-
0	-	-
0	-	-
0	-	-
0	-	-
Subtotal Line Items	-	-
TOTAL NEW B/A	9,020	8,100
ESTIMATED FY 1998 CARRYOVER		277
TOTAL NEW B/A+CARRYOVER	9,020	8,377

[1]Estimated Carryover Is NOT Included In Cost Baseline; Change Request For Actual Carryover Submitted After September 30, 1998.

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

11/24/98 09/24/98 UPDATE

10:28 AM

PBS - ADS

PBS TITLE

TW05

1.1.5 PROCESS WASTE SUPPT

F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A) *	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2066 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
EX	5,352	9,020	8,377	10,241	12,152	19,332	19,933	20,289	18,404	18,559	141,658	510,603	18,988	17,709	18,098	18,496	73,291
CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	5,352	9,020	8,377	10,241	12,152	19,332	19,933	20,289	18,404	18,559	141,658	510,603	18,988	17,709	18,098	18,496	73,291

* FY 1999 INCLUDES CARRYOVER OF $277

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

12/24/98 09/24/98 UPDATE

10:29 AM

PBS - ADS

PBS TITLE	F/T	FY 2011-FY 2015 B/A PROFILE (B/A)	FY 2016-FY 2020 B/A PROFILE (B/A)	FY 2021-FY 2025 B/A PROFILE (B/A)	FY 2026-FY 2030 B/A PROFILE (B/A)	FY 2031-FY 2035 B/A PROFILE (B/A)	FY 2036-FY 2040 B/A PROFILE (B/A)	FY 2041-FY 2045 B/A PROFILE (B/A)	FY 2046-FY 2050 B/A PROFILE (B/A)	FY 2051-FY 2055 B/A PROFILE (B/A)	FY 2056-FY 2060 B/A PROFIL (B/A)	FY 2061-FY 2065 B/A PROFILE (B/A)	FY 2066-FY 2066 B/A PROFILE (B/A)
TW05													
1.1.5 PROCESS WASTE SUPPT	EX	85,290	73,953	82,434	53,976	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	85,290	73,953	82,434	53,976	0	0	0	0	0	0	0	0

B.5.4.4 Project (PBS) Contractor Split

TANK WASTE REMEDIATION SYSTEM
FY 1999 CONTRACTOR FUNDING SPLIT (NEW BA ONLY)

PBS	DOE-RL/ RL-PNNL	NATIONAL LABS	TOTAL
TW05	$ 7,400	$ -	$ 7,400

REFLECTS FY 1999 NEW BA ONLY

B.6 Privatization Phase 1 (RL-TW06)
B.6.1.0 Privatization Phase 1 Technical Baseline
B.6.1.1 Privatization Phase 1 Project Mission TW06-1
B.6.1.2 Privatization Phase 1 End Point Targets from Hanford Strategic Plan TW06-1
B.6.1.3 Privatization Phase 1 Major Facilities TW06-1
B.6.1.4 Drivers for Privatization Phase 1 ..... TW06-9
B.6.2.0 Privatization Phase 1 Work Breakdown Structure (WBS)
B.6.2.1 Privatization Phase 1 WBS Hierarchy TW06-11
B.6.2.2 Privatization Phase 1 WBS Dictionary TW06-11
B.6.3.0 Schedule Baseline
B.6.3.1 Project Master Baseline Schedule by PBS TW06-19
B.6.3.2 Execution Year Project Master Baseline Schedule TW06-23
B.6.3.3 Milestone List TW06-25
B.6.3.4 Milestone Description Sheets TW06-27
B.6.4.0 Cost Baseline
B.6.4.1 Project Priority List TW06-37
B.6.4.2 Life Cycle Cost Baseline by PBS TW06-38
B.6.4.3 Life Cycle Budget Authority by PBS TW06-45
B.6.4.4 Project (PBS) Contractor Split TW06-51

B.6 Privatization Phase 1 (RL-TW06)

B.6.1.0 Privatization Phase 1 Technical Baseline

This section describes the technical baseline for this project. It identifies the mission, the end point targets, the site major facilities, technical logic, functions, requirements, and forecasts for this project.

B.6.1.1 Privatization Phase 1 Mission

Phase I objectives are to: demonstrate the technical and business viability of using privatized facilities to treat Hanford tank waste; define and maintain required levels of radiological, nuclear, process, and occupational safety; maintain environmental protection and compliance; and substantially reduce life-cycle costs and time required to treat Hanford tank waste. This project demonstrates progress in limiting potential contamination of the Columbia River by removing high-level waste from underground storage tanks which can leak into the groundwater.

B.6.1.2 Privatization Phase 1 End Point Targets from Hanford Strategic Plan

- Transition high cost surplus facilities to a low cost, stable, deactivated condition.
- Remove Central Plateau (200 Area) non-essential, surplus buildings and facilities that don't have identified post-cleanup uses.
- Retrieve tank wastes to the extent needed for tank closure, divide into high level and low activity fractions and immobilize.

B.6.1.3 Privatization Phase 1 Major Facilities

B.6.1.3.1 LAW/HLW Plant, Phase 1 Facility

B.6.1.3.1.1 LAW/HLW Plant, Phase 1 Facility Description

New equipment and facilities required to create an immobilized low-activity waste form from tank waste supernatant and and immobilized high-level waste from enhanced sludge wash treated sludges/solids. Enhanced sludge washing will be performed out-of-tank. Entrained radionuclides solids may be returned to the DST System for storage. LAW Tank Waste produced from the enhanced sludge washing will be returned to the DST System for interim storage and ultimate immobilization. The new facility will be required to separate soluble radionuclides (e.g., cesium, technetium, and chelated strontium and transuranic elements) from tank waste supernatant and transform the resulting waste streams into inert waste forms. The LAW/HLW Plant, Phase I will be developed and operated by a private contractor directly accountable to the DOE.

B.6.1.3.1.2 LAW/HLW Plant, Phase 1 Facility Technical Logic:

The Department of Energy (DOE), in partnership with its contractors, shall plan, acquire, operate, maintain, and dispose of physical assets as valuable national resources. Stewardship of these physical assets shall be accomplished in a cost-effective manner to meet the DOE mission. This shall incorporate industry standards, a graded approach, and performance objectives.

This diagram displays the primary work activities (functions) that are performed in each life cycle phase of the facility. The diagram also reflects the technical logic (functional flow) for the facility through its remaining life cycle phases.

Project responsibility for the life cycle phases of the LAW/HLW Plant, Phase 1 components are assigned as follows:

Table B.6-1 Responsibility Assignment Matrix for LAW/HLW Plant, Phase 1

Facility	Life Cycle Phase *								
	Program Planning	Pre Conceptual	Conceptual	Execute			O&M	Close Out	
				Design	Construction	Turnover		Post Ops	D&D
LAW/HLW Plant, Phase 1	(tbd)		**RL-TW06**	**RL-TW06**	**RL-TW06**	**RL-TW06**	**RL-TW06**	**RL-TW06**	**RL-TW06**

* RL PBS Identifier Index:

RL-TW06 - Privatization Phase 1

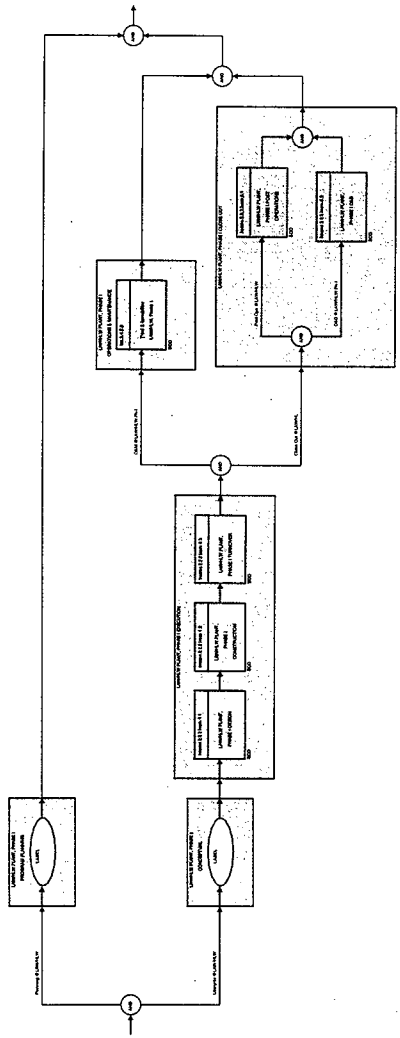

Figure B.6_1 LAW/HLW PLANT, PHASE I

B.6.1.3.1.3 LAW/HLW Plant, Phase 1 Life Cycle Functional Descriptions and Requirements

The Life Cycle Functional Descriptions table describes the life cycle phases and the functions performed during each phase. The Life Cycle Requirements table describes the requirements that trace to the functions listed in the Life Cycle Functional Descriptions table.

Table B.6-2 LAW/HLW Plant, Phase 1 Life Cycle Functional Descriptions

hsems.2.2.2.lcam.3	LAW/HLW PLANT, PHASE I CONCEPTUAL
hsems.2.2.2.lcam.4	LAW/HLW PLANT, PHASE I EXECUTION
hsems.2.2.2.lcam.4.1	LAW/HLW PLANT, PHASE I DESIGN
hsems.2.2.2.lcam.4.2	LAW/HLW PLANT, PHASE I CONSTRUCTION
hsems.2.2.2.lcam.4.3	LAW/HLW PLANT, PHASE I TURNOVER

Table B.6-2 LAW/HLW Plant, Phase 1 Life Cycle Functional Descriptions (Continued)

hsems.2.2.2.lcam.5 LAW/HLW PLANT, PHASE I OPERATIONS & MAINTENANCE

tsd.3.4.2.6 Treat & Immobilize LAW/HLW, Phase 1

Receive and treat waste delivered by the DST System and immobilize, separately, the low-activity fraction and high-level waste fraction of the waste delivered. Package and transfer immobilized LAW to the Immobilized LAW Storage Facility. Seal the IHLW into primary containers, decontaminate the container outer surfaces and test the integrity of the sealed containers. Load the IHLW onto the transport mechanism and transfer the IHLW to the TWRS CSB Modules, Phase I for storage. Transfer intermediate waste products resulting from the treatment/immobilization process back to the DST System for storage and future disposition.

Scope of Work

The scope of this WBS element is to provide waste treatment and immobilization services at fixed-unit prices using privatized facilities -- a Contractor-developed, -financed, -constructed, -owned, -operated, and -deactivated waste treatment and immobilization system for Hanford tank waste.

The multiple parts of this WBS element are identified as Part A, Part B-1, and Part B-2.

Part A - a 20-month period to establish the technical, operational, regulatory, and financial elements required by privatized facilities to provide waste treatment services at fixed-unit prices. This contract phase was completed during FY1998.

Part B-1 - In accordance with the contract statement of work, BNFL is to provide, during Part B-1, all labor, services, and materials necessary to:

(1) Optimize the LAW and HLW waste treatment and immobilization system, mitigate risk, and reduce contingencies in the waste treatment and immobilization system defined in Part A

(2) Revise the technical, operational, regulatory, and financial elements of the waste treatment and immobilization system

(3) Provide firm fixed-unit prices for waste treatment services

(4) Perform all contractor activities necessary to reach financial closure for privatized facilities.

The period of performance for Part B-1 is 24 months after Part B-1 authorization to proceed, which was granted on August 24, 1998. During this phase, BNFL will take its current enhanced conceptual design to one in which final design approaches have been selected for all major process and facility systems - approximately 30% design.

Part B-2 - the period to complete design, construction and permitting the privatized facilities, provide waste treatment services at firm fixed-unit prices, and deactivate the privatized facilities. During Part B-2, three LAW feed envelopes and one HLW feed envelope will be provided for treatment. DOE will order a nominal quantity of waste treatment services during Part B-2 and may order additional treatment services. When no further waste treatment services are required under the BNFL contract, DOE will decide either to: 1) take possession of the privatized facilities, or 2) direct BNFL to deactivate all privatized facilities.

During Part B-2, BNFL shall commission, by July 2008, a high-level waste treatment and immobilization service capable of treating Envelope D feed. A contract order quantity of 600 canisters of immobilized high-level waste shall be treated and immobilized by the target date of February 2018. BNFL shall also commission, by November 2006, a low-activity waste pretreatment service capable of treating 1300-1600 units of Envelope B feed, prior to commencement of LAW vitrification services. BNFL shall also commission, by April 2009, a LAW treatment and immobilization service capable of treating Envelope A, B, and C feeds. A minimum order quantity of 6000 units of LAW from Envelopes A, B, and C shall be treated and immobilized by the target date of February 2018. BNFL will operate Hanford Double-Shell Tank (DST) 241-AP-106 as the feed receipt tank for the Envelope A, B, and C LAW feeds.

Table B.6-2 LAW/HLW Plant, Phase 1 Life Cycle Functional Descriptions (Continued)

BNFL Inc. is to provide, during the Part B-2 phase, all remaining design, procurement, permitting, construction, startup, and operating plant services to treat DOE wastes in a privatized facility at fixed-unit prices. The construction and operating period of performance is 19 years. Services include:

(1) Receive batches of waste from the three waste envelopes described in Contract Specification 7, Low-Activity Waste Envelopes Definition, into DST 241-AP-106 provided to BNFL by DOE for operations and maintenance;
(2) Retrieve waste from the DST 241-AP-106 and transfer to BNFL facilities through a BNFL-provided transfer line;

(3) Treat and immobilize the low-activity fraction and any LAW entrained solids not returned to DOE and provide the final waste products described in Contract Specification 2, Immobilized Low-Activity Waste, for return to DOE;

(4) Return solids separated from LAW feed in the form of an intermediate waste product (Contract Specification 3, Entrained Solids), or immobilize the solids as either HLW (Contract Specification 1, Immobilized High-Level Waste) or LAW (Contract Specification 2, Immobilized Low-Activity Waste). If immobilized as LAW or HLW, the solids separated from the LAW feed shall count toward satisfying the minimum order quantity of the applicable feed;

(5) Receive batches of the HLW feed described in Contract Specification 8, High-Level Waste Envelope Definition, into a BNFL-provided transfer system, tank, and facility;

(6) Treat in accordance with Contract Specification 12, Number of HLW Canisters per Batch of Waste Envelope D; immobilize the HLW feed and radionuclides separated from LAW feed and any HLW Entrained Solids not returned to DOE; and provide the final waste products described in Contract Specification 1, Immobilized High-Level Waste, for return to DOE;

(7) Return the pretreated LAW resulting from HLW slurry processing as an intermediate waste product as described in Contract Specification 11, Pretreated Low-Activity Waste, until the low-activity vitrification plant is operational;

(8) Treat and immobilize pretreated LAW, previously prepared by BNFL and returned to DOE, and provide the final waste products described in Contract Specification 2, Immobilized Low-Activity Waste;

(9) Disposition all secondary wastes; secondary wastes are identified on Contract Figure C-1, Privatization Functions, Inputs, and Outputs, as those wastes associated with Waste Disposal Services DOE Provides at No Cost, and Waste the contractor is Responsible For;

(10) Protect materials from diversion, and the facilities and materials from sabotage or other acts that can result in wide-spread exposure of workers and the public.

Only DOE provided wastes will be treated in the BNFL Privatization facilities. BNFL will provide system capacity for waste treatment services for minimum order quantities as established in their DOE contract (Clause H.9) within the period of delivery in Contract Section F. Minimum orders include:

600 canisters of HLW (Envelop D)
1300 - 1600 units of LAW (Envelop B)
6000 units of LAW (Envelops A, B, and C).

The waste expected to be treated represents approximately 10% of Hanford=s waste by mass, will originate from 11 tanks including some of the highest safety risk tanks, and will constitute between 20% and 25% of the total radioactivity in the Hanford tanks. Ability to operate the facilities for a longer period and to expand the capacity is included in the facility design.

At the completion of waste treatment services, BNFL will deactivate all facilities as Part of B-2.

hsems.2.2.2.lcam.6 LAW/HLW PLANT, PHASE I CLOSE OUT

Table B.6-2 LAW/HLW Plant, Phase 1 Life Cycle Functional Descriptions (Continued)

hsems.2.2.2.lcam.6.1 LAW/HLW PLANT, PHASE I POST OPERATIONS

tsd.1.2.4.1.2 Maintain Safe & Compliant LAW/HLW Plant, Phase 1 in CP Areas
Following the Operations phase of the LAW/HLW Plant, Phase I, maintain the facility structures, systems and equipment, and monitoring systems until the facility is deactivated and turned over for D&D or returned to the Operational phase for additional waste processing.

tsd.2.2.4.1.2 Transition LAW/HLW Plant, Phase 1
At the completion of the Operations and Maintenance phase of the LAW/HLW Plant, Phase I, perform the deactivation activities necessary to place the plant in a safe, stable and environmentally sound condition pending final disposition of the plant. Activities include cleanout of process lines, storage/process vessels, contaminated equipment, etc., and removal of radioactive/hazardous materials. Cleanout activities for this function are the responsibility of the privatie contractor as described in Section C.5 Standard 8 of the TWRS Privatization contract (DE-RP06-96RL 13308).

hsems.2.2.2.lcam.6.2 LAW/HLW PLANT, PHASE I D&D

tsd.2.2.5.1.2 D&D LAW/HLW Plant, Phase 1
At the completion of the mission of the LAW/HLW Plant, Phase I, decontaminate the facility by removing all remaining radioactive and/or hazardous contamination from the facilities, equipment or soils by removal, washing, heating, chemical action, mechanical cleaning or other techniques. Decommission the LAW/HLW Plant, Phase I by entombing the facility.

Table B.6-3 LAW/HLW Plant, Phase 1 Life Cycle Requirements

Requirement	Function
HLW Immobilization facilities shall be designed to produce immobilized HLW products that conform to the requirements of Section C.6, Specification 1, of the Contract.	tsd.3.4.2.6
Future facilities shall be converted to a low cost stable deactivated condition when their functionality is no longer required to meet operational objectives.	tsd.2.2.4.1.2
Central Plateau processing facilities shall be entombed in place with co-disposal of waste materials	tsd.2.2.5.1.2
Central Plateau facilities other than processing facilities shall be dismantled	tsd.2.2.5.1.2
Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment	tsd.2.2.5.1.2
Central Plateau facilities shall be maintained within the approved safety envelope	tsd.1.2.4.1.2
Tank waste processing shall be operated within the approved safety envelope as approved by the REG Unit	tsd.3.4.2.6
High level waste immobilization facility shall start operations by Dec 2009	tsd.3.4.2.6
Tank waste commercial demonstration facility (ies) shall be constructed	tsd.3.4.2.6 hsems.2.2.2.lcam.4.2
Tank waste shall be separated into High Level and Low Activity fractions.	tsd.3.4.2.6
Start construction of HLW pretreatment facility. Due Date: 6/30/2001	hsems.2.2.2.lcam.4.2
Complete melter tests and select reference melter. Due Date: 9/30/1998	hsems.2.2.2.lcam.4.2
Initiate construction of the HLW vitirification facility. Due Date: 6/30/2002	hsems.2.2.2.lcam.4.2
Complete construction of the HLW vitirification facility. Due Date: 12/31/2007	hsems.2.2.2.lcam.4.2
The LAW/HLW Plant, Phase I shall produce immobilized LAW with the properties/characteristics specified in Specification 2 of the TWRS Privatization Contract (DE-RP-96RL13308) Part I, Section C.6. and ICD 15	tsd.3.4.2.6
The LAW/HLW Plant, Phase I shall produce immobilized HLW with the properties/characteristics specified in Specification 1 of the TWRS Privatization Contract (DE-RP-96RL13308) Part I, Section C.6. and ICD 14	tsd.3.4.2.6
The LAW/HLW Plant, Phase I shall produce intermediate waste products that satisfy the requirements given in Specifications 3 and 9 of the TWRS Privatization Contract (DE-RP-96RL13308) Part I, Section C.6.a and ICD's 16 and 24.	tsd.3.4.2.6

Table B.6-3 LAW/HLW Plant, Phase 1 Life Cycle Requirements (Continued)

Requirement	Function
The HLW portion of the LAW/HLW Plant, Phase I shall have the capacity to produce a minimum of 600 canisters of IHLW Glass as defined in paragrapth H.9.b and Specification 8 of the TWRS Privatization Contract (DE-RP-96RL13308) Part I, Section C.6.b and the Interface Control Document "Phase I Privatization - High Level Waste Feed" (ICD-20).	tsd.3.4.2.6
The LAW portion of the LAW/HLW Plant, Phase I shall have the capacity to produce a minimum of 6000 units of waste. Waste types and properties to be treated and immobilized are as specified in Specification 7 of the TWRS Privatization Contract (DE-RP-96RL13308) Part I, Section C.6. and the Interface Control Document "Low Activity Waste Feed" (ICD-19).	tsd.3.4.2.6
The LAW/HLW Plant, Phase I shall have the capacity to treat & immobilize waste delivered from the DST system as specified in "LAW/HLW Plant, Phase I: LAW capacity" and "LAW/HLW Plant, Phase I: HLW capacity" for a minimum of 9 years and a facility design life of 30 years.	tsd.3.4.2.6

B.6.1.3.1.4 LAW/HLW Plant, Phase 1 Boundary Diagram

This section identifies the other facilities (onsite and offsite) that have an interface (either input or output) with this facility.

Table B.6-4 LAW/HLW Plant, Phase 1 Boundary Diagram

Major Input Interfaces	Facility	Major Output Interfaces
External Interfaces -None- Hanford Site Environmental System Interfaces CP Road System CP-ES 13.8 kV Distribution System CP-Water Potable Water Piping Network Double Shell Tank (DST) System Water Systems in Central Plateau	LAW/HLW Plant, Phase 1	External Interfaces Hazardous Waste Disposal Contracts Hanford Site Environmental System Interfaces 200 Area TEDF Transfer System Canister Storage Building Central Waste Complex Double Shell Tank (DST) System Immobilized LAW Disposal Facilityy, Additional Vaults Immobilized LAW Storage Facility LERF Transfer System Solid Waste Disposal

B.6.1.3.1.5 LAW/HLW Plant, Phase 1 Interface Descriptions and Summary Level Forecasts

This section contains the material, waste, and infrastructure forecasts for this facility. It identifies the interface type, the period of time for the forecasts, the life cycle total forecast value, and the execution year forecast quantity.

OFFSITE INPUTS

-None-

ONSITE INPUTS

Table B.6-5 Onsite Inputs for LAW/HLW Plant, Phase 1

Stream	Category	Period	Total	FY99	Units
hsems.2.3.1.2 Double Shell Tank (DST) System					
LAW/HLW Plant, Phase I HLW Feed	HLW	2007 - 2018	14000		cubic meters
LAW/HLW Plant, Phase I LAW Feed	HLW	2008 - 2018	32200		cubic meters
hsems.5.1.2.2 Water Systems in Central Plateau					
Raw Water for LAW/HLW Plant, Phase I	Raw Water				Mgal
Potable Water for LAW/HLW Plant, Phase I	Potable Water				Mgal
hsems.5.1.2.2.11.2 CP-Water Potable Water Piping Network					
Potable Water for LAW/HLW Plant, Phase I	Potable Water				Mgal

Table B.6-5 Onsite Inputs for LAW/HLW Plant, Phase 1 (Continued)

Stream	Category	Period	Total	FY99	Units
hsems.5.1.4.2.8 CP-ES 13.8 kV Distribution System					
Electricity for LAW/HLW Plant, Phase I	Electricity				MW-hr
hsems.5.3.1.2 CP Road System					
Hanford Road Sys. Heavy Traffic for LAW/HLW Ph-1	Hanford Road System (Heavy Traffic)				truck loads

OFFSITE OUTPUTS

Table B.6-6 Offsite Outputs for LAW/HLW Plant, Phase 1

Stream	Category	Period	Total	FY99	Units
X Hazardous Waste Disposal Contracts					
LLVP, HAZ	HAZ	2002 - 2021	1280		cubic meters

ONSITE OUTPUTS

Table B.6-7 Onsite Outputs for LAW/HLW Plant, Phase 1

Stream	Category	Period	Total	FY99	Units
hsems.2.2.16.2 LERF Transfer System					
LAW/HLW Plant, Phase I Deactivation Waste Water	Waste Water	2018 - 2019	29200		cubic meters
LAW/HLW Phase 1 Waste Water	Waste Water	2007 - 2018	456000		cubic meters
hsems.2.3.1.2 Double Shell Tank (DST) System					
LAW/HLW Plant Phase I, Entrained Solides for Return to DSTs	HLW	2006 - 2015	3330		cubic meters
hsems.2.3.3 Canister Storage Building					
Phase I Immobilized HLW	HLW	2007 - 2018	725.0		cubic meters
hsems.2.3.5.1 Central Waste Complex					
D&D Phase 1 HLW Plants CH-LLW-I	CH LLW I	2012 - 2014	289000		cubic meters
LLVP, CH-LLMW-III	CH LLMW III	2002 - 2021	2560		cubic meters
LLVP, CH-LLW-I	CH LLW I	2002 - 2021	15300		cubic meters
LLVP, CH-LLW-III	CH LLW III	2002 - 2021	15300		cubic meters
LLVP, RH-LLW-III	RH LLW III	2002 - 2021	3830		cubic meters
LLVP, CH-LLMW-I	CH LLMW I	2002 - 2021	2560		cubic meters
hsems.2.4.1 Solid Waste Disposal					
LLVP, CH-LLW-I	CH LLW I	2002 - 2021	15300		cubic meters
LLVP, RH-LLW-III	RH LLW III	2002 - 2021	3830		cubic meters
LLVP, CH-LLW-III	CH LLW III	2002 - 2021	15300		cubic meters
hsems.2.4.3.1 200 Area TEDF Transfer System					
LAW/HLW Plant Phase 1 Non-radioactive/Non-dangerous Liquid Effluent	Treated Liquid Effluent	2007 - 2018	1480000		cubic meters
hsems.2.4.3.1 Immobilized LAW Storage Facility					
LAW/HLW Ph-I, Immobilized LAW (Initial)	RH LLMW III	2008 - 2016	17300		cubic meters
hsems.2.4.3.2 Immobilized LAW Disposal Facilityy, Additional Vaults					
LAW/HLW Ph-I, Immobilized LAW (Final)	RH LLMW III	2017 - 2018	4320		cubic meters

B.6.1.4 Drivers for Privatization Phase 1

Table B.6-8 Source Documents for Privatization Phase 1

Name	Title
BNFL-5193, Rev.2	Tank Waste Remediation System Privatization Project Interface Control Document, ICD-01 thru ICD-26
DOE/EIS-0222D	Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan
DOE/RL-89-10	Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)
DOE/RL-96-92	Hanford Strategic Plan

Table B.6-8 Source Documents for Privatization Phase 1 (Continued)

Name	Title
DOE/RL-97-55	Hanford Site Environmental Management Specification
TWRS Privatization Contract, DE-RP06-96RL13308	TWRS Privatization Contract, DE-RP06-96RL13308

B.6.2.0 Privatization Phase 1 Work Breakdown Structure (WBS)

B.6.2.1 Privatization Phase 1 WBS Hierarchy

RL PBS	RL WBS	Title
RL-TW06	1.01.06	Privatization Phase 1
	1.01.06.01	LAW/HLW Plant, Phase 1
	1.01.06.01.01	Treat & Immobilize LAW/HLW, Phase 1
	1.01.06.01.02	Maintain Safe & Compliant LAW/HLW Plant, Phase 1 in CP Areas
	1.01.06.01.03	Transition LAW/HLW Plant, Phase 1
	1.01.06.01.04	D&D LAW/HLW Plant, Phase 1

B.6.2.2 Privatization Phase 1 WBS Dictionary

The following pages contain the WBS dictionary for RL-TW06

B.6-9 WBS Dictionary for Treat & Immobilize LAW/HLW, Phase 1

1. Dictionary Title Treat & Immobilize LAW/HLW, Phase 1		2. Date 6 November 1998	3. PBS Number RL-TW06	4. Dict Rev
5. WBS No. 1.01.06.01.01	6. B & R No. EW03J101		7. Baseline CR No.	
8. Organization Name Privatization Phase 1				

9. Scope of Work

Receive and treat waste delivered by the DST System and immobilize, separately, the low-activity fraction and high-level waste fraction of the waste delivered. Package and transfer immobilized LAW to the Immobilized LAW Storage Facility. Seal the IHLW into primary containers, decontaminate the container outer surfaces and test the integrity of the sealed containers. Load the IHLW onto the transport mechanism and transfer the IHLW to the TWRS CSB Modules, Phase I for storage. Transfer intermediate waste products resulting from the treatment/immobilization process back to the DST System for storage and future disposition.

Scope of Work

The scope of this WBS element is to provide waste treatment and immobilization services at fixed-unit prices using privatized facilities -- a Contractor-developed, -financed, -constructed, -owned, -operated, and -deactivated waste treatment and immobilization system for Hanford tank waste.

The multiple parts of this WBS element are identified as Part A, Part B-1, and Part B-2.

Part A - a 20-month period to establish the technical, operational, regulatory, and financial elements required by privatized facilities to provide waste treatment services at fixed-unit prices. This contract phase was completed during FY1998.

Part B-1 - In accordance with the contract statement of work, BNFL is to provide, during Part B-1, all labor, services, and materials necessary to:

(1) Optimize the LAW and HLW waste treatment and immobilization system, mitigate risk, and reduce contingencies in the waste treatment and immobilization system defined in Part A

(2) Revise the technical, operational, regulatory, and financial elements of the waste treatment and immobilization system

(3) Provide firm fixed-unit prices for waste treatment services

(4) Perform all contractor activities necessary to reach financial closure for privatized facilities.

The period of performance for Part B-1 is 24 months after Part B-1 authorization to proceed, which was granted on August 24, 1998. During this phase, BNFL will take its current enhanced conceptual design to one in which final design approaches have been selected for all major process and facility systems - approximately 30% design.

Part B-2 - the period to complete design, construction and permitting the privatized facilities, provide waste treatment services at firm fixed-unit prices, and deactivate the privatized facilities. During Part B-2, three LAW feed envelopes and one HLW feed envelope will be provided for treatment. DOE will order a nominal quantity of waste treatment services during Part B-2 and may order additional treatment services. When no further waste treatment services are

B.6-9 WBS Dictionary for Treat & Immobilize LAW/HLW, Phase 1 (Continued)

1. Dictionary Title Treat & Immobilize LAW/HLW, Phase 1		2. Date 6 November 1998	3. PBS Number RL-TW06	4. Dict Rev
5. WBS No. 1.01.06.01.01	6. B & R No. EW03J101		7. Baseline CR No.	
8. Organization Name Privatization Phase 1				

required under the BNFL contract, DOE will decide either to: 1) take possession of the privatized facilities, or 2) direct BNFL to deactivate all privatized facilities.

During Part B-2, BNFL shall commission, by July 2008, a high-level waste treatment and immobilization service capable of treating Envelope D feed. A contract order quantity of 600 canisters of immobilized high-level waste shall be treated and immobilized by the target date of February 2018. BNFL shall also commission, by November 2006, a low-activity waste pretreatment service capable of treating 1300-1600 units of Envelope B feed, prior to commencement of LAW vitrification services. BNFL shall also commission, by April 2009, a LAW treatment and immobilization service capable of treating Envelope A, B, and C feeds. A minimum order quantity of 6000 units of LAW from Envelopes A, B, and C shall be treated and immobilized by the target date of February 2018. BNFL will operate Hanford Double-Shell Tank (DST) 241-AP-106 as the feed receipt tank for the Envelope A, B, and C LAW feeds.

BNFL Inc. is to provide, during the Part B-2 phase, all remaining design, procurement, permitting, construction, startup, and operating plant services to treat DOE wastes in a privatized facility at fixed-unit prices. The construction and operating period of performance is 19 years. Services include:

(1) Receive batches of waste from the three waste envelopes described in Contract Specification 7, Low-Activity Waste Envelopes Definition, into DST 241-AP-106 provided to BNFL by DOE for operations and maintenance;
(2) Retrieve waste from the DST 241-AP-106 and transfer to BNFL facilities through a BNFL-provided transfer line;

(3) Treat and immobilize the low-activity fraction and any LAW entrained solids not returned to DOE and provide the final waste products described in Contract Specification 2, Immobilized Low-Activity Waste, for return to DOE;

(4) Return solids separated from LAW feed in the form of an intermediate waste product (Contract Specification 3, Entrained Solids), or immobilize the solids as either HLW (Contract Specification 1, Immobilized High-Level Waste) or LAW (Contract Specification 2, Immobilized Low-Activity Waste). If immobilized as LAW or HLW, the solids separated from the LAW feed shall count toward satisfying the minimum order quantity of the applicable feed;

(5) Receive batches of the HLW feed described in Contract Specification 8, High-Level Waste Envelope Definition, into a BNFL-provided transfer system, tank, and facility;

(6) Treat in accordance with Contract Specification 12, Number of HLW Canisters per Batch of Waste Envelope D; immobilize the HLW feed and radionuclides separated from LAW feed and any HLW Entrained Solids not returned to DOE; and provide the final waste products described in Contract Specification 1, Immobilized High-Level Waste, for return to DOE;

(7) Return the pretreated LAW resulting from HLW slurry processing as an intermediate waste product as described in Contract Specification 11, Pretreated Low-Activity Waste, until the low-activity vitrification plant is operational;

(8) Treat and immobilize pretreated LAW, previously prepared by BNFL and returned to DOE, and provide the final waste products described in Contract Specification 2, Immobilized Low-Activity Waste;

B.6-9 WBS Dictionary for Treat & Immobilize LAW/HLW, Phase 1 (Continued)

1. Dictionary Title Treat & Immobilize LAW/HLW, Phase 1		2. Date 6 November 1998	3. PBS Number RL-TW06	4. Dict Rev
5. WBS No. 1.01.06.01.01	6. B & R No. EW03J101		7. Baseline CR No.	
8. Organization Name Privatization Phase 1				

(9) Disposition all secondary wastes; secondary wastes are identified on Contract Figure C-1, Privatization Functions, Inputs, and Outputs, as those wastes associated with Waste Disposal Services DOE Provides at No Cost, and Waste the contractor is Responsible For;

(10) Protect materials from diversion, and the facilities and materials from sabotage or other acts that can result in wide-spread exposure of workers and the public.

Only DOE provided wastes will be treated in the BNFL Privatization facilities. BNFL will provide system capacity for waste treatment services for minimum order quantities as established in their DOE contract (Clause H.9) within the period of delivery in Contract Section F. Minimum orders include:

600 canisters of HLW (Envelop D)
1300 - 1600 units of LAW (Envelop B)
6000 units of LAW (Envelops A, B, and C).

The waste expected to be treated represents approximately 10% of Hanford=s waste by mass, will originate from 11 tanks including some of the highest safety risk tanks, and will constitute between 20% and 25% of the total radioactivity in the Hanford tanks. Ability to operate the facilities for a longer period and to expand the capacity is included in the facility design.

At the completion of waste treatment services, BNFL will deactivate all facilities as Part of B-2.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- HLW Immobilization facilities shall be designed to produce immobilized HLW products that conform to the requirements of Section C.6, Specification 1, of the Contract.
- Tank waste processing shall be operated within the approved safety envelope as approved by the REG Unit
- High level waste immobilization facility shall start operations by Dec 2009
- Tank waste commercial demonstration facility (ies) shall be constructed
- Tank waste shall be separated into High Level and Low Activity fractions.
- The LAW/HLW Plant, Phase I shall produce immobilized LAW with the properties/characteristics specified in Specification 2 of the TWRS Privatization Contract (DE-RP-96RL13308) Part I, Section C.6. and ICD 15
- The LAW/HLW Plant, Phase I shall produce immobilized HLW with the properties/characteristics specified in Specification 1 of the TWRS Privatization Contract (DE-RP-96RL13308) Part I, Section C.6. and ICD 14
- The LAW/HLW Plant, Phase I shall produce intermediate waste products that satisfy the requirements given in Specifications 3 and 9 of the TWRS Privatization Contract (DE-RP-96RL13308) Part I, Section C.6.a and ICD's 16 and 24.

B.6-9 WBS Dictionary for Treat & Immobilize LAW/HLW, Phase 1 (Continued)

1. Dictionary Title Treat & Immobilize LAW/HLW, Phase 1		2. Date 6 November 1998	3. PBS Number RL-TW06	4. Dict Rev
5. WBS No. 1.01.06.01.01	6. B & R No. EW03J101		7. Baseline CR No.	
8. Organization Name Privatization Phase 1				

- The HLW portion of the LAW/HLW Plant, Phase I shall have the capacity to produce a minimum of 600 canisters of IHLW Glass as defined in paragrapth H.9.b and Specification 8 of the TWRS Privatization Contract (DE-RP-96RL13308) Part I, Section C.6.b and the Interface Control Document "Phase I Privatization - High Level Waste Feed" (ICD-20).
- The LAW portion of the LAW/HLW Plant, Phase I shall have the capacity to produce a minimum of 6000 units of waste. Waste types and properties to be treated and immobilized are as specified in Specification 7 of the TWRS Privatization Contract (DE-RP-96RL13308) Part I, Section C.6. and the Interface Control Document "Low Activity Waste Feed" (ICD-19).
- The LAW/HLW Plant, Phase I shall have the capacity to treat & immobilize waste delivered from the DST system as specified in "LAW/HLW Plant, Phase I: LAW capacity" and "LAW/HLW Plant, Phase I: HLW capacity" for a minimum of 9 years and a facility design life of 30 years.

B.6-10 WBS Dictionary for Maintain Safe & Compliant LAW/HLW Plant, Phase 1 in CP Areas

1. Dictionary Title Maintain Safe & Compliant LAW/HLW Plant, Phase 1 in CP Areas		2. Date 5 November 1998	3. PBS Number RL-TW06	4. Dict Rev
5. WBS No. 1.01.06.01.02	6. B & R No. EW03J101		7. Baseline CR No.	
8. Organization Name Privatization Phase 1				

9. Scope of Work

Following the Operations phase of the LAW/HLW Plant, Phase I, maintain the facility structures, systems and equipment, and monitoring systems until the facility is deactivated and turned over for D&D or returned to the Operational phase for additional waste processing.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau facilities shall be maintained within the approved safety envelope

B.6-11 WBS Dictionary for Transition LAW/HLW Plant, Phase 1

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
Transition LAW/HLW Plant, Phase 1		4 November 1998	RL-TW06	
5. WBS No.	6. B & R No.		7. Baseline CR No.	
1.01.06.01.03	EW03J101			
8. Organization Name				
Privatization Phase 1				

9. Scope of Work

At the completion of the Operations and Maintenance phase of the LAW/HLW Plant, Phase I, perform the deactivation activities necessary to place the plant in a safe, stable and environmentally sound condition pending final disposition of the plant. Activities include cleanout of process lines, storage/process vessels, contaminated equipment, etc., and removal of radioactive/hazardous materials. Cleanout activities for this function are the responsibility of the privatie contractor as described in Section C.5 Standard 8 of the TWRS Privatization contract (DE-RP06-96RL 13308).

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Future facilities shall be converted to a low cost stable deactivated condition when their functionality is no longer required to meet operational objectives.

B.6-12 WBS Dictionary for D&D LAW/HLW Plant, Phase 1

1. Dictionary Title D&D LAW/HLW Plant, Phase 1		2. Date 29 October 1998	3. PBS Number RL-TW06	4. Dict Rev
5. WBS No. 1.01.06.01.04	6. B & R No. EW03J101		7. Baseline CR No.	
8. Organization Name Privatization Phase 1				

9. Scope of Work

At the completion of the mission of the LAW/HLW Plant, Phase I, decontaminate the facility by removing all remaining radioactive and/or hazardous contamination from the facilities, equipment or soils by removal, washing, heating, chemical action, mechanical cleaning or other techniques. Decommission the LAW/HLW Plant, Phase I by entombing the facility.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau processing facilities shall be entombed in place with co-disposal of waste materials
- Central Plateau facilities other than processing facilities shall be dismantled
- Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment

B.6.3.1 Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26
1			**Hanford Site**
1.01			**Tank Waste Remediation System (TWRS)**
1.01.06			**TWRS Privatization Phase I**
1.01.06.01			LAW/HLW Plant, Phase I
1.01.06.01.01			Treat & Immobilize LAW/HLW, Phase I
1.01.06.01.01.01			Treat & Immobilize LAW/HLW, Phase I
350.010	24AUG98A	28FEB19	Maintain Phase 1 HLW/LAW ICDs
350.020	24AUG98A	28FEB19	Environ & Regulatory Compliance
350.030	24AUG98A	28FEB19	BNFL Project Management
350.040	01AUG00*	29SEP17	Capital Budget Outlay - FY2000-FY2017
350.050	01OCT08*	29SEP17	Operating Budget Outlay - FY2009-FY2017
350.110	24AUG98A	31JUL00	Phase 1 Definitieve Design
350.110A	24FEB99*		DOE Project Review of BNFL Design (Perf Exp) T06-99-101
350.110B	24AUG00*		Const Auth Pgm Review/Decision (Perf Expect) T06-00-101
350.120	24AUG00*	31MAR05	Pretreatment Facility Construction
350.120A	02JUL01*		Start Pretreatment Facility Const (Perf Expect) T06-01-101
350.120B	02JUL01*		M-50-04-T03 Start Const of HLW Pretreat Facility T06-01-102

t Start	01OCT97	Early Bar
t Finish	01MAR22	Progress Bar
ate	01OCT99	Critical Activity
ate	17NOV99	

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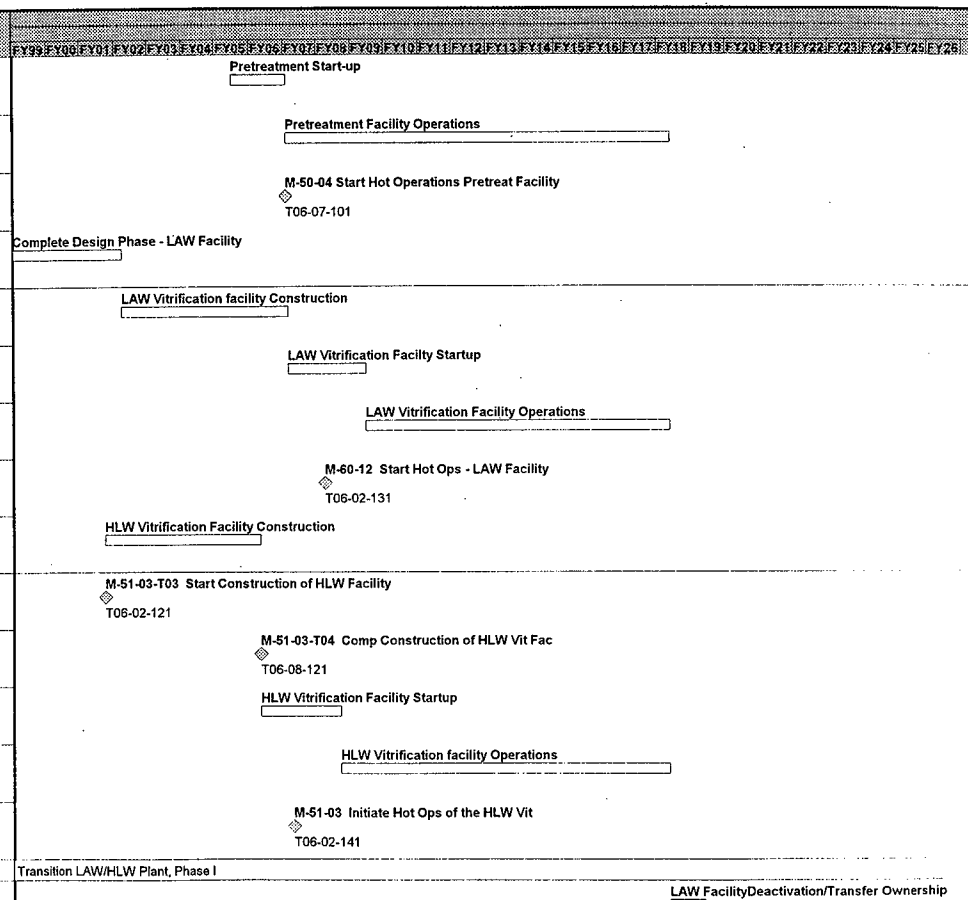
Tank Waste Remediation System
PMBS - Life of Project
TW06 - Privatization Phase 1

Activity ID	Early Start	Early Finish
350.125	01APR05*	31OCT06
350.130	01NOV06*	28FEB18
350.130A	01NOV06*	
350.210	24AUG98A	31DEC01
350.220	02JAN02*	30NOV06
350.225	01DEC06*	31MAR09
350.230	01APR09*	28FEB18
350.230A	02JAN08*	
360.110	02JUL01*	31JAN06
360.110A	02JUL01*	
360.110B		31JAN06*
360.115	01FEB06*	30JUN08
360.120	01JUL08*	28FEB18
360.120A	01FEB07*	
1.01.06.01.03		
350.310	02MAR18*	01MAR19



Activity ID	Early Start	Early Finish	FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26
360.210	02MAR18*	01MAR19	HLW FacilityDeactivation/Transfer Ownership
1.01.06.01.04			D&D LAW/HLW Plant, Phase I
1.01.06.01.04.01			D&D LAW/HLW Plant, Phase 1
530.010	02MAR18*	01MAR19	Perform AGA's & Establish D&D Requirements
530.030	01MAR19*	28FEB20	Design D&D
530.040	01MAR19*	28FEB20	Modify Permits
530.050	01MAR19*	28FEB20	Amend Authorization Basis
530.060	02MAR20*	01MAR22	D&D Facilities

B.6.3.2 Execution Year Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY99 / FY00
1			Hanford Site
1.01			Tank Waste Remediation System (TWRS)
1.01.06			TWRS Privatization Phase I
1.01.06.01			LAW/HLW Plant, Phase I
1.01.06.01.01			Treat & Immobilize LAW/HLW, Phase I
1.01.06.01.01.01			Treat & Immobilize LAW/HLW, Phase I
350.010	24AUG98A	28FEB19	Maintain Phase 1 HLW/LAW ICDs
350.020	24AUG98A	28FEB19	Environ & Regulatory Compliance
350.030	24AUG98A	28FEB19	BNFL Project Management
350.110	24AUG98A	31JUL00	Phase 1 Definitieve Design
350.110A	24FEB99*		DOE Project Review of BNFL Design (Perf Exp) T06-99-101
350.210	24AUG98A	31DEC01	Complete Design Phase - LAW Facility

Project Start	01OCT97	Early Bar
Project Finish	01MAR22	Progress Bar
Data Date	01OCT98	Critical Activity
Run Date	17NOV99	

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Sheet 1 of 1

Tank Waste Remediation System
PMBS - FY 1999
TW06 - Privatization Phase 1

B.6.3.3 Milestone List

MS #	Title	Level	DNFSB/TPA #	99 MYWP Date	DNFSB/TPA Date
T06-99-101	Project Review of BNFL Design Deliverables	RL	-	24-Feb-99	-
T06-00-101	Construction Authorization Program Review/Decision	RL	-	24-Aug-00	-
T06-01-102	Start Construction of HLW Pretreatment Facility	RL-Target	M-50-04-T03	02-Jul-01	30-Jun-01
T06-01-101	Start Pretreatment Facility Construction	RL	-	02-Jul-01	-
T06-02-121	Initiate Construction of the HLW Vitrification Facility	RL-Target	M-51-03-T03	02-Jul-01	30-Jun-02
T06-08-121	Complete Construction of the HLW Vitrification Facility	RL-Target	M-51-03-T04	31-Jan-06	31-Dec-07
T06-07-101	Start Hot Operations of HLW Pretreatment Facility	HQ-I	M-50-04	01-Nov-06	30-Jun-08
T06-02-141	Initiate Hot Operations of the HLW Vitrification Facility	HQ-I	M-51-03	01-Feb-07	31-Dec-09
T06-02-131	Start Hot Operations of Phase 1 LAW Pretreatment and Immobilization Facilities	HQ-I	M-60-12	02-Jan-08	31-Dec-02

B.6.3.4 Milestone Description Sheets

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Project Review of BNFL Design Deliverables

Schedule Date: 2/24/99

Assigned to: Neil Brown

WBS Number: 1.01.06.01.01

Milestone Control Number: T06-99-101

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)
	DOE Decision	

Description of this Commitment:

During the design phase of Privatization Phase I Part B-1, BNFL will refine the technical requirements, further clarify the regulatory requirements, and finalize the project's financial and incentive structure. BNFL will further develop its project design and technical approach, secure project financing, establish firm fixed-unit prices for Phase I waste treatment services, and enhance its approach to regulatory compliance by submitting necessary permit applications. DOE will review BNFL project progress 6 months after the August 24, 1998 Authorization to Proceed to ensure that necessary progress is maintained toward completion of the 24-month design phase. This milestone is a FY99 performance expectation in support of EM's near term performance objective to design and build HLW and LAW pretreatment and treatment facilities for TWRS.

Description of what constitutes completion of the commitment:

Completion of the interim project review and a decision by DOE to continue with the design phase of Part B-1 will constitute completion of this milestone.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Construction Authorization Program Review/Decision Schedule Date: 8/24/2000

Assigned to: Neil Brown

WBS Number: 1.01.06.01.01

Milestone Control Number: T06-00-101

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

During the 24-month design phase of Privatization Phase I Part B-1, BNFL will refine the technical requirements, further clarify the regulatory requirements, and finalize the project's financial and incentive structure. BNFL will further develop its project design and technical approach, secure project financing, establish firm fixed-unit prices for Phase I waste treatment services, and enhance its approach to regulatory compliance by submitting necessary permit applications. At the end of the design phase, DOE will decide whether to proceed with the subsequent construction and operations portion of Phase I or to pursue one of several other approaches to complete Phase I. This milestone is a FY00 performance expectation in support of EM's near term performance objective to design and build HLW and LAW pretreatment and treatment facilities for TWRS.

Description of what constitutes completion of the commitment:

Completion of the project review and a decision by DOE to proceed with the Construction and Operations Phase (Phase I Part B-2) will constitute completion of this milestone.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Start Construction of HLW Pretreatment Facility (M-50-04-T03)

Schedule Date: 7/2/01

Target Date: 6/30/01

Assigned to: Neil Brown

WBS Number: 1.01.06.01.01

Milestone Control Number: T06-01-102

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[X] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify) Construction Authorization	[ ] Other (Specify)

Description of this Commitment:

At the end of the 24-month design phase, DOE will decide whether to proceed with the subsequent construction and operations portion of Phase I or to pursue one of several other approaches to complete Phase I. BNFL's authorization to proceed will depend on DOE receiving acceptable fixed-unit prices, a substantial equity commitment by BNFL, other significant financing arranged by BNFL, and acceptance for review of their design for nuclear and chemical process safety. A key element of this financing will be BNFL equity, which represents BNFL's investment in the success of the project. This milestone is an FY01 performance expectation in support of EM's near term performance objective to design and build HLW and LAW pretreatment and treatment facilities for TWRS.

Description of what constitutes completion of the commitment:

DOE authorization to proceed with the construction and operations portion of Phase I will constitute completion of this milestone.

Title: Start Pretreatment Facility Construction

Schedule Date: 7/02/2001

Assigned to: Neil Brown

WBS Number: 1.01.06.01.01

Milestone Control Number: T06-01-101

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)
	Construction Authorization	

Description of this Commitment:

At the end of the 24-month design phase, DOE will decide whether to proceed with the subsequent construction and operations portion of Phase I or to pursue one of several other approaches to complete Phase I. BNFL's authorization to proceed will depend on DOE receiving acceptable fixed-unit prices, a substantial equity commitment by BNFL, other significant financing arranged by BNFL, and acceptance for review of their design for nuclear and chemical process safety. A key element of this financing will be BNFL equity, which represents BNFL's investment in the success of the project. This milestone is an FY01 performance expectation in support of EM's near term performance objective to design and build HLW and LAW pretreatment and treatment facilities for TWRS.

Description of what constitutes completion of the commitment:

DOE authorization to proceed with the construction and operations portion of Phase I will constitute completion of this milestone.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate Construction of the HLW Vitrification Facility (M-51-03-T03)

Schedule Date: 7/02/01

Assigned to: Neil Brown

Target Date: 6/30/02

WBS Number: 1.01.06.01.01

Milestone Control Number: T06-02-121

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify) Hot Operations Authorization	[X] Other (Specify) Ecology

Description of this Commitment:

Complete all activities necessary to being hot operations of the High-Level Waste (HLW) Vitrification Facility. This includes pre-operational testing with waste simulants (cold testing), completion of preparation for hot startup, and successful completion of all operational readiness reviews.

Description of what constitutes completion of the commitment:

Completion of this commitment includes preparation and receipt of all documentation necessary to begin operations from all agencies and approval authorities as defined in BNFL Privatization Contract DE-RP06-96RL13308.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Construction of the HLW Vitrification Facility (M-51-03-T04)

Schedule Date: 1/31/06

Target Date: 12/31/07

Assigned to: Neil Brown

WBS Number: 1.01.06.01.01

Milestone Control Number: T06-08-121

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[X] Other (Specify)
	Cold Startup Authorization	Ecology

Description of this Commitment:

Complete construction of the Phase I HLW facility and all support facilities. Complete acceptance testing of HLW facility, including individual process systems, and all support facilities.

Description of what constitutes completion of the commitment:

Successful completion of acceptance testing of the HLW facility, including each process system, and acceptance of support facilities constitutes completion of this milestone. This activity satisfies TPA Target Milestone M-51-03-T04.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Start Hot Operations of HLW Pretreatment Facility

Schedule Date: 11/1/06

Assigned to: Neil Brown

TPA Date: 6/30/08

WBS Number: 1.01.06.01.01

Milestone Control Number: T06-07-101

TPA No.: M-50-04

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[X] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)
	Hot Start Authorization	

Description of this Commitment:

Successfully initiate full operations of the support systems for the Phase I Pretreatment Facility.

Description of what constitutes completion of the commitment:

Completion of this commitment is dependant on completion of all activities necessary to achieve full operations of the Phase I Pretreatment Facility support systems, including procedure preparation, training preparations, personnel training and qualification, operations and maintenance planning, materials and spare parts procurement and operational readiness assessment. Complete pre-operational testing of all Pretreatment support systems to demonstrate that the systems are ready for full operation in support of waste processing during Phase I production.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate Hot Operations of the HLW Vitrification Facility

Schedule Date: 2/01/07

Assigned to: Neil Brown

TPA Date: 12/31/09

WBS Number: 1.01.06.01.01

Milestone Control Number: T06-02-141

TPA No.: M-51-03

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[X] Other (Specify)
	Hot Operations Authorization	Ecology

Description of this Commitment:

Complete all activities necessary to being hot operations of the High-Level Waste (HLW) Vitrification Facility. This includes pre-operational testing with waste simulants (cold testing), completion of preparation for hot startup, and successful completion of all operational readiness reviews.

Description of what constitutes completion of the commitment:

Completion of this commitment includes preparation and receipt of all documentation necessary to begin operations from all agencies and approval authorities as defined in BNFL Privatization Contract DE-RP06-96RL13308.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Start Hot Operations of Phase I LAW Pretreatment and Immobilization Facilities

Schedule Date: 1/02/08

Assigned to: Neil Brown

TPA Date: 12/31/02

WBS Number: 1.01.06.01.01

Milestone Control Number: T06-02-131

TPA No.: M-60-12

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[X] Other (Specify)
	Hot Operations Authorization	Ecology

Description of this Commitment:

Activities leading to start of hot operations of the LAW Immobilization Facility include completion of: construction activities, inspections and acceptance test procedures; final safety analysis report; licensing under RCRA and Clean Air Act; Operation Readiness Review for hot operations with actual simulants; and, operational readiness review for hot operations with actual radioactive waste.

Description of what constitutes completion of the commitment:

Completion of pre-operational testing of all LAW immobilization facility systems to demonstrate that all systems are ready for radioactive operations. Demonstration of facility capability to immobilize non-radioactive simulants. This commitment includes preparation and receipt of all documentation necessary to begin operations from all agencies and approval authorities as defined in BNFL Privatization Contract DE-RP06-96RL13308.

B.6.4.1 Project Priority List

PBS RL-TW06 is not reflected in the TWRS Project Priority List.

B.6.4.2 Life Cycle Cost Baseline by PBS

EXHIBIT 1a

TANK WASTE REMEDIATION
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.6
PBS NO:	RL-TW06
PBS TITLE:	PRIVATIZATION PHASE I

FUND TYPE	ACTUAL FY1997	ACTUAL FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	SUBTOT FY1997-FY2006
OPERATING EXPENSE	-	-		-	-	-	-	-	-	-	-
CENRTC	-	-	-	-	-	-	-	-	-	-	-
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*											
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-
TOTAL BCWS/PMB	-	-	-	-	-	-	-	-	-	-	-
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-	-	-	-
PRIV'ZN - PHASE I (ESC'D)	-	58,500	-	50,000	-	-	-	-	-	58,000	166,500

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2]Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4]Estimate for FY 1999 National Lab Transfers attached.

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EXHIBIT 1a

TANK WASTE REMEDIATION
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.6
PBS NO:	RL-TW06
PBS TITLE:	PRIVATIZATION PHASE I

FUND TYPE	FY2007	FY2008	FY2009	FY2010	FY2011-FY2015	FY2016-FY2020	FY2021-FY2025	FY2026-FY2030	FY2031-FY2035	FY2036 FY2040	FY2041-FY2045	FY2046 FY2050	TOTAL FY1997-FY2050
OPERATING EXPENSE	-	-	-	-	-	65,205	101,452	-	-	-	-	-	166,657
CENRTC	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*													
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	37,084	63,177	-	-	-	-	-	100,262
TOTAL BCWS/PMB[1]	-	-	-	-	-	102,289	164,629	-	-	-	-	-	266,919
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	102,289	164,629	-	-	-	-	-	266,919
PRIV'ZN - PHASE I (ESC'D)	188,000	401,000	908,000	1,073,000	6,112,000	1,693,000	-	-	-	-	-	-	10,541,500

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2]Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4]Estimate for FY 1999 National Lab Transfers attached.

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
07:35 AM

	F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.6																
RL-TW06																
PRIVATIZATION PHASE I																
1.1.6.1.4. D & D	OE	0	0	0	0	0	0	0	0	0	266,919	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S/T		0	0	0	0	0	0	0	0	0	266,919	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
07:35 AM

	F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.6													
RL-TW06													
PRIVATIZATION PHASE I													
1.1.6.1.4. D & D	OE	0	102,289	164,629	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI C	0	0	0	0	0	0	0	0	0	0	0	0
S/T		0	102,289	164,629	0	0	0	0	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
07:35 AM

	F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.6																
RL-TW06																
PRIVITIZATION PHASE I																
1.1.6 Privitization Phase I	OE	0	50,000	0	0	0	0	0	58,000	108,000	10,483,000	188,000	401,000	908,000	1,073,000	2,570,000
	C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S/T		0	50,000	0	0	0	0	0	58,000	108,000	10,483,000	188,000	401,000	908,000	1,073,000	2,570,000

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
07:35 AM

		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.6														
RL-TW06														
PRIVITIZATION PHASE I														
1.1.6	Privitization Phase I	OE	6,112,000	1,693,000	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		6,112,000	1,693,000	0	0	0	0	0	0	0	0	0	0

B.6.4.3 Life Cycle Budget Authority by PBS

EXHIBIT 4a

TANK WASTE REMEDIATION
BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.6	
PBS NO:	RL-TW06	
PBS TITLE:	PRIVATIZATION PHASE I	
FUND TYPE	TARGET B/A FY1998	PRESIDENT'S BUDGET PLUS CARRYOVER[1] FY1999
OPERATING EXPENSE	-	-
CENRTC	-	-
GENERAL PLANT PROJECT	-	-
LINE ITEM *(List Each One)*		
0	-	-
0	-	-
0	-	-
0	-	-
0	-	-
0	-	-
Subtotal Line Items	-	-
TOTAL NEW B/A	-	-
ESTIMATED FY 1998 CARRYOVER		
TOTAL NEW B/A+CARRYOVER	-	-

PRIV'ZN - PHASE I (ESC'D)	115,000	113,000
PRIV'ZN - PHASE I (ESC'D) Carryover		150,000

[1]Estimated Carryover Is NOT Included In Cost Baseline; Change Request For Actual Carryover Submitted After September 30, 1998.

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TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)
11/24/98 09/24/98 UPDATE
10:29 AM
PBS - ADS
PBS TITLE
TW06 - PHMC
1.1.6.1.4 D & D

F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A)*	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2066 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
EX	0	0	0	0	0	0	0	0	0	0	0	266,919	0	0	0	0	0
LI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	266,919	0	0	0	0	0

* FY 1999 INCLUDES CARRYOVER OF $150,000

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9784BOBA.XLS(SUMMARY)

09/24/98 09/24/98 UPDATE

10:25 AM

PBS - ADS

PBS TITLE

TW06 - PHMC

1.1.6.1.4 D & D

F/T	FY 2011-FY 2015 B/A PROFILE (B/A)	FY 2016-FY 2020 B/A PROFILE (B/A)	FY 2021-FY 2025 B/A PROFILE (B/A)	FY 2026-FY 2030 B/A PROFILE (B/A)	FY 2031-FY 2035 B/A PROFILE (B/A)	FY 2036-FY 2040 B/A PROFILE (B/A)	FY 2041-FY 2045 B/A PROFILE (B/A)	FY 2046-FY 2050 B/A PROFILE (B/A)	FY 2051-FY 2055 B/A PROFILE (B/A)	FY 2056-FY 2060 B/A PROFIL (B/A)	FY 2061-FY 2065 B/A PROFILE (B/A)	FY 2066-FY 2066 B/A PROFILE (B/A)
EX	0	102,289	164,629	0	0	0	0	0	0	0	0	0
LI	0	0	0	0	0	0	0	0	0	0	0	0
LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	102,289	164,629	0	0	0	0	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9704BOBA.XLS(SUMMARY)
11/24/98 09/24/98 UPDATE
10:29 AM

PBS - ADS PBS TITLE	F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A)*	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2066 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
TW06																		
1.1.6 PRIMTIZATION PHASE I	EX	170,000	115,000	113,000	474,000	675,000	675,000	610,000	600,000	573,000	529,000	4,534,000	10,483,000	530,000	403,000	711,000	691,000	2,335,000
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	170,000	115,000	113,000	474,000	675,000	675,000	610,000	600,000	573,000	529,000	4,534,000	10,483,000	530,000	403,000	711,000	691,000	2,335,000

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

9/24/98	09/24/98 UPDATE

10:28 AM

PBS - A09

PBS TITLE

TW06

1.1.6 PRIVITIZATION PHASE I

F/T	FY 2011-FY 2015 B/A PROFILE (B/A)	FY 2016-FY 2020 B/A PROFILE (B/A)	FY 2021-FY 2025 B/A PROFILE (B/A)	FY 2026-FY 2030 B/A PROFILE (B/A)	FY 2031-FY 2035 B/A PROFILE (B/A)	FY 2036-FY 2040 B/A PROFILE (B/A)	FY 2041-FY 2045 B/A PROFILE (B/A)	FY 2046-FY 2050 B/A PROFILE (B/A)	FY 2051-FY 2055 B/A PROFILE (B/A)	FY 2056-FY 2060 B/A PROFIL (B/A)	FY 2061-FY 2065 B/A PROFILE (B/A)	FY 2066-FY 2068 B/A PROFILE (B/A)
EX	3,132,000	482,000	0	0	0	0	0	0	0	0	0	0
CE	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	3,132,000	482,000	0	0	0	0	0	0	0	0	0	0

B.6.4.4 Project (PBS) Contractor Split

PBS RL-TW06 is not reflected in the TWRS Project Contractor Split.

B.7 Privatization Phase 2 (RL-TW07)
B.7.1.0 Privatization Phase 2 Technical Baseline
B.7.1.1 Privatization Phase 2 Mission TW07-1
B.7.1.2 Privatization Phase 2 End Point Targets from Hanford Strategic Plan TW07-1
B.7.1.3 Privatization Phase 2 Major Facilities TW07-1
B.7.1.4 Drivers for Privatization Phase 2 ..... TW07-11
B.7.2.0 Privatization Phase 2 Work Breakdown Structure (WBS)
B.7.2.1 Privatization Phase 2 WBS Hierarchy TW07-13
B.7.2.2 Privatization Phase 2 WBS Dictionary TW07-13
B.7.3.0 Schedule Baseline
B.7.3.1 Project Master Baseline Schedule by PBS TW07-22
B.7.3.2 Milestone List TW07-25
B.7.3.3 Milestone Description Sheets TW07-27
B.7.4.0 Cost Baseline
B.7.4.1 Project Priority List TW07-33
B.7.4.2 Life Cycle Cost Baseline by PBS TW07-34
B.7.4.3 Life Cycle Budget Authority by PBS TW07-39
B.7.4.4 Project (PBS) Contractor Split TW07-43

B.7 Privatization Phase 2 (RL-TW07)

B.7.1.0 Privatization Phase 2 Technical Baseline

This section describes the technical baseline for this project. It identifies the mission, the end point targets, the site major facilities, technical logic, functions, requirements, and forecasts for this project.

B.7.1.1 Privatization Phase 2 Mission

Phase II will be the full-scale production phase, in which the facilities will be configured so all the waste can be processed. The objectives of Phase II are to implement the lessons from Phase I; to process all tank waste and the cesium and strontium capsules into forms suitable for final disposal; achieve competition and cost savings; and meet or exceed the Tri-Party Agreement milestones.

B.7.1.2 Privatization Phase 2 End Point Targets from Hanford Strategic Plan

- Transition high cost surplus facilities to a low cost, stable, deactivated condition.
- Remove Central Plateau (200 Area) non-essential, surplus buildings and facilities that don't have identified post-cleanup uses.
- Retrieve tank wastes to the extent needed for tank closure, divide into high level and low activity fractions and immobilize.
- For Cs/Sr capsules declared waste, send to Yucca Mountain for HLW repository disposal.

B.7.1.3 Privatization Phase 2 Major Facilities

B.7.1.3.1 LAW Treatment Facility, Phase 2

B.7.1.3.1.1 LAW Treatment Facility, Phase 2 Description

New equipment and facilities required to create an immobilized low-activity waste form from tank waste. The equipment will be required to separate insoluble (e.g., entrained radionuclied solids) and soluble radionuclides (e.g., cesium, technetium, and chelated strontium and transuranic elements) from tank waste and transform the resulting low activity waste stream into an inert waste form. The separated HLW stream will be transferred to the HLW Treatment Facility, Phase II for further treatment and immobilization. The LAW Treatment Facilities, Phase II will be developed and operated by a private contractor directly accountable to the DOE.

B.7.1.3.1.2 LAW Treatment Facility, Phase 2 Technical Logic:

The Department of Energy (DOE), in partnership with its contractors, shall plan, acquire, operate, maintain, and dispose of physical assets as valuable national resources. Stewardship of these physical assets shall be accomplished in a cost-effective manner to meet the DOE mission. This shall incorporate industry standards, a graded approach, and performance objectives.

This diagram displays the primary work activities (functions) that are performed in each life cycle phase of the facility. The diagram also reflects the technical logic (functional flow) for the facility through its remaining life cycle phases.

Project responsibility for the life cycle phases of the LAW Treatment Facility, Phase 2 components are assigned as follows:

Table B.7-1 Responsibility Assignment Matrix for LAW Treatment Facility, Phase 2

Facility	Life Cycle Phase *								
	Program Planning	Pre Conceptual	Conceptual	Execute			O&M	Close Out	
				Design	Construction	Turnover		Post Ops	D&D
LAW Treatment Facility, Phase 2	(tbd)	(tbd)	RL-TW07	RL-TW07	RL-TW07	RL-TW07	RL-TW07	RL-TW07	RL-TW07

* RL PBS Identifier Index:

RL-TW07 - Privatization Phase 2

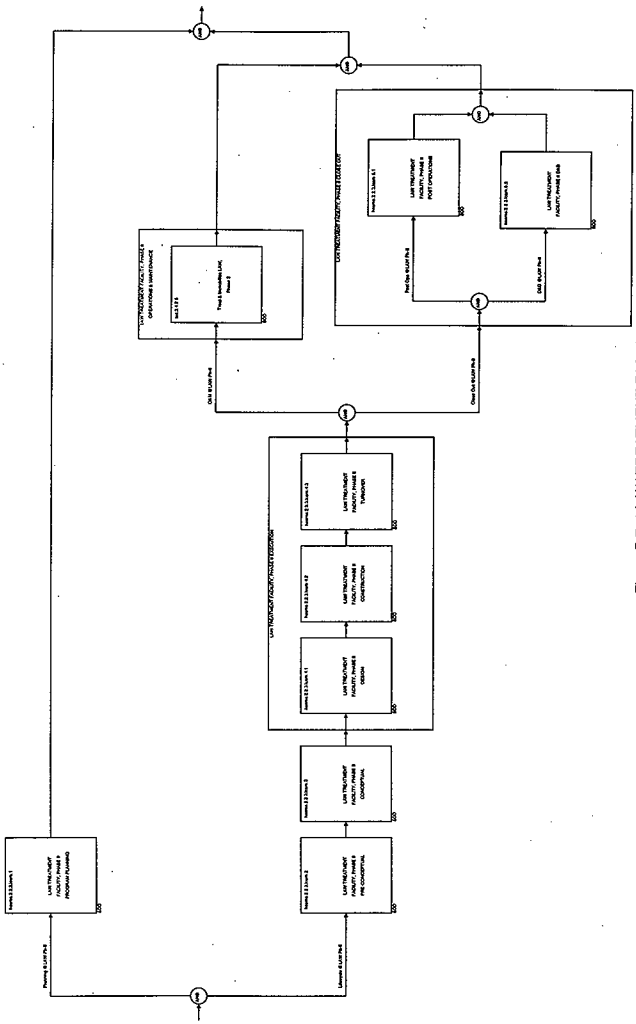

Figure B.7_1 LAW TREATMENT FACILITY, PHASE II

B.7.1.3.1.3 LAW Treatment Facility, Phase 2 Life Cycle Functional Descriptions and Requirements

The Life Cycle Functional Descriptions table describes the life cycle phases and the functions performed during each phase. The Life Cycle Requirements table describes the requirements that trace to the functions listed in the Life Cycle Functional Descriptions table.

Table B.7-2 LAW Treatment Facility, Phase 2 Life Cycle Functional Descriptions

hsems.2.2.3.lcam.3 LAW TREATMENT FACILITY, PHASE II CONCEPTUAL	
hsems.2.2.3.lcam.4 LAW TREATMENT FACILITY, PHASE II EXECUTION	
hsems.2.2.3.lcam.4.1 LAW TREATMENT FACILITY, PHASE II DESIGN	
hsems.2.2.3.lcam.4.2 LAW TREATMENT FACILITY, PHASE II CONSTRUCTION	
hsems.2.2.3.lcam.4.3 LAW TREATMENT FACILITY, PHASE II TURNOVER	
hsems.2.2.3.lcam.5 LAW TREATMENT FACILITY, PHASE II OPERATIONS & MAINTENANCE	
	tsd.3.4.2.5 Treat & Immobilize LAW, Phase 2 Receive and treat waste delivered by the DST System and immobilize the low-activity fraction of the waste delivered. Transfer the remaining HLW to the Phase II HLW Treatment Facility. Also, package and transfer the immobilized LAW product to the ILAW Storage Facility.
hsems.2.2.3.lcam.6 LAW TREATMENT FACILITY, PHASE II CLOSE OUT	
hsems.2.2.3.lcam.6.1 LAW TREATMENT FACILITY, PHASE II POST OPERATIONS	
	tsd.1.2.4.1.3 Maintain Safe & Compliant LAW Treatment Facility, Phase 2 in CP Areas Following the Operations and Maintenance phase of the LAW Treatment Facility, Phase II, maintain the facility structures, systems and equipment, and monitoring systems until the facility is turned over for D&D.
	tsd.2.2.4.1.3 Transition LAW Treatment Facility, Phase 2 At the completion of the Operations and Maintenance phase of the LAW Treatment Facility, Phase II, perform the activities necessary to place the plant in a safe, stable and environmentally sound condition pending final disposition of the plant. Activities include a degree of cleanout of process lines, storage/process vessels, contaminated equipment, etc., and removal of radioactive/hazardous materials. Cleanout activities for this function are limited to those that optimize surveillance and maintenance costs for the facility during the time between facility operations and D&D.
hsems.2.2.3.lcam.6.2 LAW TREATMENT FACILITY, PHASE II D&D	
	tsd.2.2.5.1.3 D&D LAW Treatment Facility, Phase 2 At the completion of the mission of the LAW Treatment Facility, Phase II, decontaminate the facility by removing all remaining radioactive and/or hazardous contamination from the facilities, equipment or soils by removal, washing, heating, chemical action, mechanical cleaning or other techniques. Decommission the LAW Plant, Phase I by demolishing the facility.

Table B.7-3 LAW Treatment Facility, Phase 2 Life Cycle Requirements

Requirement	Function
Future facilities shall be converted to a low cost stable deactivated condition when their functionality is no longer required to meet operational objectives.	tsd.2.2.4.1.3
Central Plateau processing facilities shall be entombed in place with co-disposal of waste materials	tsd.2.2.5.1.3
Central Plateau facilities other than processing facilities shall be dismantled	tsd.2.2.5.1.3
Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment	tsd.2.2.5.1.3
Central Plateau facilities shall be maintained within the approved safety envelope	tsd.1.2.4.1.3
Low activity tank waste shall be immobilized	tsd.3.4.2.5
Tank waste shall be separated into High Level and Low Activity fractions.	tsd.3.4.2.5

Table B.7-3 LAW Treatment Facility, Phase 2 Life Cycle Requirements (Continued)

Requirement	Function
The Phase II LAW Treatment Facility shall treat and immobilize wastes with properties specified in the requirement "DST / LAW Treatment Facility, Phase II: waste properties" to produce immobilized LAW with the following properties: - Radiological: TBD - Chemical: TBD - Physical: TBD and Phase II HLW Treatment Facility feed with the following properties: - Radiological Radionuclide composition/concentration - TBD - Chemical pH - TBD Corrosive chemical concentrations - TBD Waste Volume Reduction Factor (WVRF) - TBD - Physical Particle size - TBD Density - TBD Viscosity @ TBD temperature - TBD Percent solids - TBD Temperature - TBD	tsd.3.4.2.5
The Phase II LAW Treatment Facility shall have the capacity to produce a minimum of TBD ILAW packages and TBD L (TBD gal) of Phase II HLW Treatment Facility feed from feed delivered by the DST System. Waste types and properties to be treated and immobilized are as specified in the requirement "DST / LAW Treatment Facility, Phase II: waste properties".	tsd.3.4.2.5
The Phase II LAW Treatment Facility shall have the capacity to treat and immobilize waste from the DST System as specified in the requirement "Phase II LAW treatment and immobilization: capacity" within a timeframe of TBD years while operating TBD percentage of the specified time.	tsd.3.4.2.5

B.7.1.3.1.4 LAW Treatment Facility, Phase 2 Boundary Diagram

This section identifies the other facilities (onsite and offsite) that have an interface (either input or output) with this facility.

Table B.7-4 LAW Treatment Facility, Phase 2 Boundary Diagram

Major Input Interfaces	Facility	Major Output Interfaces
External Interfaces -None- Hanford Site Environmental System Interfaces Double Shell Tank (DST) System	LAW Treatment Facility, Phase 2	External Interfaces Hazardous Waste Disposal Contracts Hanford Site Environmental System Interfaces 200 Area TEDF Transfer System Central Waste Complex CP Liquid Sanitary Waste HLW Treatment Facility, Phase 2 Immobilized LAW Disposal Facility LERF Transfer System Low-Level Waste Burial Grounds

B.7.1.3.1.5 LAW Treatment Facility, Phase 2 Interface Descriptions and Summary Level Forecasts

This section contains the material, waste, and infrastructure forecasts for this facility. It identifies the interface type, the period of time for the forecasts, the life cycle total forecast value, and the execution year forecast quantity.

OFFSITE INPUTS

-None-

ONSITE INPUTS

Table B.7-5 Onsite Inputs for LAW Treatment Facility, Phase 2

Stream	Category	Period	Total	FY99	Units
hsems.2.3.1.2 Double Shell Tank (DST) System					
LAW Treatment Facility, Phase II Feed	HLW	2012 - 2028	531000		cubic meters

OFFSITE OUTPUTS

Table B.7-6 Offsite Outputs for LAW Treatment Facility, Phase 2

Stream	Category	Period	Total	FY99	Units
X Hazardous Waste Disposal Contracts					
LLVP, HAZ	HAZ	2002 - 2021	1280		cubic meters

ONSITE OUTPUTS

Table B.7-7 Onsite Outputs for LAW Treatment Facility, Phase 2

Stream	Category	Period	Total	FY99	Units
hsems.2.2.4 HLW Treatment Facility, Phase 2					
HLW Treatment Facility, Phase II Feed	HLW	2012 - 2028	168000		cubic meters
hsems.2.2.16.2 LERF Transfer System					
LAW Phase 2 Waste Water	Waste Water	2012 - 2028	550000		cubic meters
LAW Phase 2 Deactivation Waste Water	Waste Water	2029 - 2029	29200		cubic meters
hsems.2.3.5.1 Central Waste Complex					
LLVP, CH-LLMW-I	CH LLMW I	2002 - 2021	2560		cubic meters
LLVP, CH-LLMW-III	CH LLMW III	2002 - 2021	2560		cubic meters
LLVP, CH-LLW-I	CH LLW I	2002 - 2021	15300		cubic meters
LLVP, RH-LLW-III	RH LLW III	2002 - 2021	3830		cubic meters
LLVP, CH-LLW-III	CH LLW III	2002 - 2021	15300		cubic meters
hsems.2.4.1.1 Low-Level Waste Burial Grounds					
LLVP, CH-LLW-I	CH LLW I	2002 - 2021	15300		cubic meters
LLVP, CH-LLW-III	CH LLW III	2002 - 2021	15300		cubic meters
LLVP, RH-LLW-III	RH LLW III	2002 - 2021	3830		cubic meters
hsems.2.4.3 Immobilized LAW Disposal Facility					
LAW Ph-II, Immobilized LAW	RH LLMW III	2012 - 2028	227000		cubic meters
hsems.2.4.3.1 200 Area TEDF Transfer System					
LAW Phase 2 Non-radioactive/Non-dangerous Liquid Effluent	Treated Liquid Effluent	2012 - 2028	3400000		cubic meters
hsems.5.1.3.2 CP Liquid Sanitary Waste					
LAW Ph-II Liquid Sanitary Waste	Sanitary Liquid Waste	2000 - 2033	1690		Mgal

B.7.1.3.2 HLW Treatment Facility, Phase 2

B.7.1.3.2.1 HLW Treatment Facility, Phase 2 Description

New and existing equipment and facilities required to create an immobilized high-level waste form from tank waste solids/sludges and the Cs/Sr Capsules recovered from WESF. The HLW Treatment Facility, Phase II will be

developed and operated by a private contractor directly accountable to the DOE.

B.7.1.3.2.2 HLW Treatment Facility, Phase 2 Technical Logic:

The Department of Energy (DOE), in partnership with its contractors, shall plan, acquire, operate, maintain, and dispose of physical assets as valuable national resources. Stewardship of these physical assets shall be accomplished in a cost-effective manner to meet the DOE mission. This shall incorporate industry standards, a graded approach, and performance objectives.

This diagram displays the primary work activities (functions) that are performed in each life cycle phase of the facility. The diagram also reflects the technical logic (functional flow) for the facility through its remaining life cycle phases.

Project responsibility for the life cycle phases of the HLW Treatment Facility, Phase 2 components are assigned as follows:

Table B.7-8 Responsibility Assignment Matrix for HLW Treatment Facility, Phase 2

Facility	Life Cycle Phase *								
	Program Planning	Pre Conceptual	Conceptual	Execute			O&M	Close Out	
				Design	Construction	Turnover		Post Ops	D&D
HLW Treatment Facility, Phase 2	(tbd)	(tbd)	**RL-TW07**	**RL-TW07**	**RL-TW07**	**RL-TW07**	**RL-TW07**	**RL-TW07**	**RL-TW07**

* RL PBS Identifier Index:

RL-TW07 - Privatization Phase 2

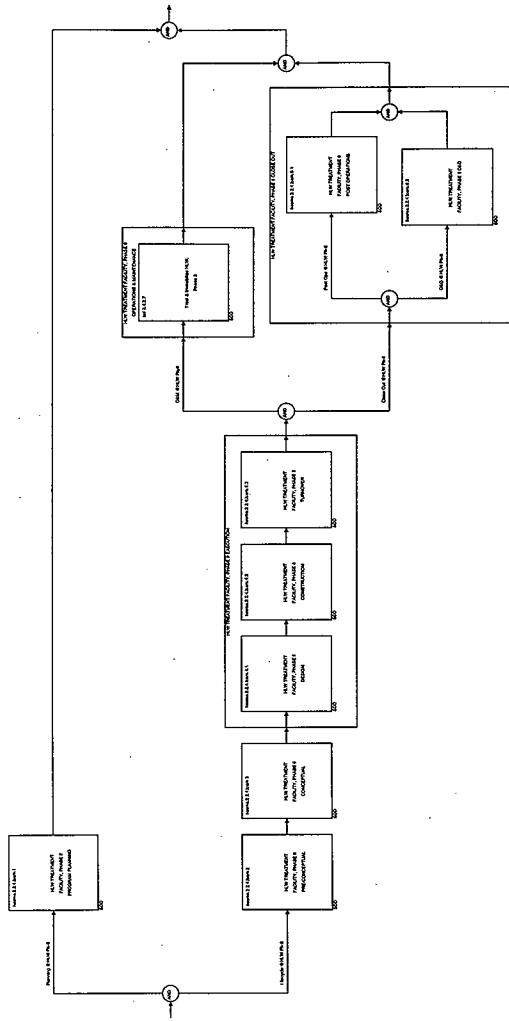

Figure B.7_2 HLW TREATMENT FACILITY, PHASE II

B.7.1.3.2.3 HLW Treatment Facility, Phase 2 Life Cycle Functional Descriptions and Requirements

The Life Cycle Functional Descriptions table describes the life cycle phases and the functions performed during each phase. The Life Cycle Requirements table describes the requirements that trace to the functions listed in the Life Cycle Functional Descriptions table.

Table B.7-9 HLW Treatment Facility, Phase 2 Life Cycle Functional Descriptions

hsems.2.2.4.lcam.3 HLW TREATMENT FACILITY, PHASE II CONCEPTUAL
hsems.2.2.4.lcam.4 HLW TREATMENT FACILITY, PHASE II EXECUTION
hsems.2.2.4.lcam.4.1 HLW TREATMENT FACILITY, PHASE II DESIGN
hsems.2.2.4.lcam.4.2 HLW TREATMENT FACILITY, PHASE II CONSTRUCTION
hsems.2.2.4.lcam.4.3 HLW TREATMENT FACILITY, PHASE II TURNOVER
hsems.2.2.4.lcam.5 HLW TREATMENT FACILITY, PHASE II OPERATIONS & MAINTENANCE
tsd.3.4.2.7 Treat & Immobilize HLW, Phase 2 Receive and treat/disposition waste delivered by: 1) the Phase II LAW Treatment Facility; and 2) the Waste Encapsulation & Storage Facility (Cs/Sr capsules). Appropriately combine and immobilize the waste feed delivered. Seal the immobilized waste into primary containers, decontaminate the container outer surfaces, and test the integrity of the sealed containers. Load the Immobilized HLW onto the transport mechanism and transfer it to the IHLW Storage Modules, Phase II.
hsems.2.2.4.lcam.6 HLW TREATMENT FACILITY, PHASE II CLOSE OUT
hsems.2.2.4.lcam.6.1 HLW TREATMENT FACILITY, PHASE II POST OPERATIONS
tsd.1.2.4.1.4 Maintain Safe & Compliant HLW Treatment Facility, Phase 2 in CP Areas Following the Operations and Maintenance phase of the HLW Treatment Facility, Phase II, maintain the facility structures, systems and equipment, and monitoring systems until the facility is turned over for D&D.
tsd.2.2.4.1.4 Transition HLW Treatment Facility, Phase 2 At the completion of the Operations and Maintenance phase of the HLW Treatment Facility, Phase II, perform the activities necessary to place the plant in a safe, stable and environmentally sound condition pending final disposition of the plant. Activities include a degree of cleanout of process lines, storage/process vessels, contaminated equipment, etc., and removal of radioactive/hazardous materials. Cleanout activities for this function are limited to those that optimize surveillance and maintenance costs for the facility during the time between facility operations and D&D.
hsems.2.2.4.lcam.6.2 HLW TREATMENT FACILITY, PHASE II D&D
tsd.2.2.5.1.4 D&D HLW Treatment Facility, Phase 2 At the completion of the mission of the HLW Treatment Facility, Phase II, decontaminate the facility by removing all remaining radioactive and/or hazardous contamination from the facilities, equipment or soils by removal, washing, heating, chemical action, mechanical cleaning or other techniques. Decommission the HLW Treatment Facility, Phase II by demolishing the facility.

Table B.7-10 HLW Treatment Facility, Phase 2 Life Cycle Requirements

Requirement	Function
HLW Immobilization facilities shall be designed to produce immobilized HLW products that conform to the requirements of WAS-RD, DOE/RW-0351P, Waste Acceptance System Requirements Document, Sections 3.7.1.2.1.2, 3.7.1.2.1.6 through 3.7.1.2.1.8, and 3.7.1.2.1.12.	tsd.3.4.2.7
Future facilities shall be converted to a low cost stable deactivated condition when their functionality is no longer required to meet operational objectives.	tsd.2.2.4.1.4
Central Plateau processing facilities shall be entombed in place with co-disposal of waste materials	tsd.2.2.5.1.4
Central Plateau facilities other than processing facilities shall be dismantled	tsd.2.2.5.1.4
Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment	tsd.2.2.5.1.4
Central Plateau facilities shall be maintained within the approved safety envelope	tsd.1.2.4.1.4

Table B.7-10 HLW Treatment Facility, Phase 2 Life Cycle Requirements (Continued)

Requirement	Function
The contents of the cesium capsules shall be blended with HLW feed, treated and dispositioned as immobilized HLW.	tsd.3.4.2.7
The contents of the strontium capsules shall be blended with HLW feed, treated and dispositioned as immobilized HLW.	tsd.3.4.2.7
High level tank waste shall be immobilized	tsd.3.4.2.7
Complete pretreatment processing of Hanford tank waste. Milestone completion date is 12/31/2028.	tsd.3.4.2.7
The Phase II HLW Treatment Facility shall treat and immobilize wastes with properties specified in the requirements "LAW Treatment Facility, Phase II / HLW Treatment Facility, Phase II: waste properties" and "WESF / HLW Treatment Facility, Phase II: waste properties" to produce immobilized HLW with the following properties: - Radiological: TBD - Chemical: TBD - Physical: TBD	tsd.3.4.2.7
The Phase II HLW Treatment Facility shall have the capacity to produce a minimum of TBD IHLW canisters from the Phase II LAW Treatment Facility and WESF. Waste types and properties to be treated and immobilized are as specified in the requirements "LAW Treatment Facility, Phase II / HLW Treatment Facility, Phase II: waste properties" and "WESF / HLW Treatment Facility, Phase II: waste properties".	tsd.3.4.2.7
The Phase II HLW Treatment Facility shall have the capacity to treat and immobilize waste from the Phase II LAW Treatment Facility and WESF as specified in the requirement "Phase II HLW treatment and immobilization: capacity" within a timeframe of TBD years while operating TBD percentage of the specified time.	tsd.3.4.2.7

B.7.1.3.2.4 HLW Treatment Facility, Phase 2 Boundary Diagram

This section identifies the other facilities (onsite and offsite) that have an interface (either input or output) with this facility.

Table B.7-11 HLW Treatment Facility, Phase 2 Boundary Diagram

Major Input Interfaces	Facility	Major Output Interfaces
External Interfaces -None- Hanford Site Environmental System Interfaces LAW Treatment Facility, Phase 2 WESF	HLW Treatment Facility, Phase 2	External Interfaces Hazardous Waste Disposal Contracts Hanford Site Environmental System Interfaces 200 Area TEDF Transfer System Central Waste Complex IHLW Storage Modules, Part 2 LERF Transfer System Low-Level Waste Burial Grounds

B.7.1.3.2.5 HLW Treatment Facility, Phase 2 Interface Descriptions and Summary Level Forecasts

This section contains the material, waste, and infrastructure forecasts for this facility. It identifies the interface type, the period of time for the forecasts, the life cycle total forecast value, and the execution year forecast quantity.

OFFSITE INPUTS

-None-

ONSITE INPUTS

Table B.7-12 Onsite Inputs for HLW Treatment Facility, Phase 2

Stream	Category	Period	Total	FY99	Units
hsems.2.2.3 LAW Treatment Facility, Phase 2					
HLW Treatment Facility, Phase II Feed	HLW	2012 - 2028	168000		cubic meters
hsems.2.2.8 WESF					
WESF Cesium Capsules	Cesium (Cs)	2013 - 2015	1320		capsules
WESF Strontium Capsules	Strontium (Sr)	2013 - 2015	601.0		capsules

OFFSITE OUTPUTS

Table B.7-13 Offsite Outputs for HLW Treatment Facility, Phase 2

Stream	Category	Period	Total	FY99	Units
X Hazardous Waste Disposal Contracts					
HLVP, HAZ	HAZ	2002 - 2028	872.0		cubic meters

ONSITE OUTPUTS

Table B.7-14 Onsite Outputs for HLW Treatment Facility, Phase 2

Stream	Category	Period	Total	FY99	Units
hsems.2.2.16.2 LERF Transfer System					
TWRS Priv Ph 2 HLW, Waste Water	Waste Water	2012 - 2028	550000		cubic meters
HLW Phase 2 Deactivation Waste Water	Waste Water	2029 - 2029	29200		cubic meters
hsems.2.3.5.1 Central Waste Complex					
HLVP, CH-LLMW-III	CH LLMW III	2002 - 2028	3470		cubic meters
HLVP, CH-LLMW-I	CH LLMW I	2002 - 2028	1730		cubic meters
HLVP, CH-LLW-I	CH LLW I	2002 - 2028	4350		cubic meters
HLW Plant, Ph-2 Cs/Sr CH LLMW III Shipment	CH LLMW III	2012 - 2020	5.0		cubic meters
HLVP, RH-LLW-III	RH LLW III	2002 - 2028	3490		cubic meters
HLVP, CH-LLW-III	CH LLW III	2002 - 2028	13000		cubic meters
HLVP, CH-TRUM	CH TRUM	2002 - 2028	872.0		cubic meters
HLVP, RH-TRUM	RH TRUM	2002 - 2028	875.0		cubic meters
hsems.2.3.6 IHLW Storage Modules, Part 2					
Phase II Immobilized HLW	HLW	2012 - 2028	15400		cubic meters
hsems.2.4.1.1 Low-Level Waste Burial Grounds					
HLVP, CH-LLW-I	CH LLW I	2002 - 2028	4350		cubic meters
HLVP, CH-LLW-III	CH LLW III	2002 - 2028	13000		cubic meters
HLVP, RH-LLW-III	RH LLW III	2002 - 2028	3490		cubic meters
hsems.2.4.3.1 200 Area TEDF Transfer System					
TWRS Ph2 HLW WW, Non-radioactive/Non-dangerous Liquid Effluent	Treated Liquid Effluent	2012 - 2028	3400000		cubic meters

B.7.1.4 Drivers for Privatization Phase 2

Table B.7-15 Source Documents for Privatization Phase 2

Name	Title
10 CFR 20	Control of Exposure from External Sources in Restricted Areas
40 CFR 191	Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes
DOE/EIS-0222D	Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan
DOE/RL-89-10	Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)
DOE/RL-96-92	Hanford Strategic Plan
DOE/RL-97-55	Hanford Site Environmental Management Specification

Table B.7-15 Source Documents for Privatization Phase 2 (Continued)

Name	Title
DOE/RW-0351P, rev.1	Waste Acceptance System Requirements Document
Tank Waste Remediation System Mission Analysis, WHC-SD-WM-MAR-008, Revision 2	Tank Waste Remediation System Mission Analysis (TWRS MAR)

B.7.2.0 Privatization Phase 2 Work Breakdown Structure (WBS)

B.7.2.1 Privatization Phase 2 WBS Hierarchy

RL PBS	RL WBS	Title
RL-TW07	1.01.07	Privatization Phase 2
	1.01.07.01	LAW Treatment Facility, Phase 2
	1.01.07.01.01	Treat & Immobilize LAW, Phase 2
	1.01.07.01.02	Maintain Safe & Compliant LAW Treatment Facility, Phase 2 in CP Areas
	1.01.07.01.03	Transition LAW Treatment Facility, Phase 2
	1.01.07.01.04	D&D LAW Treatment Facility, Phase 2
	1.01.07.02	HLW Treatment Facility, Phase 2
	1.01.07.02.01	Treat & Immobilize HLW, Phase 2
	1.01.07.02.02	Maintain Safe & Compliant HLW Treatment Facility, Phase 2 in CP Areas
	1.01.07.02.03	Transition HLW Treatment Facility, Phase 2
	1.01.07.02.04	D&D HLW Treatment Facility, Phase 2

B.7.2.2 Privatization Phase 2 WBS Dictionary

The following pages contain the WBS dictionary for RL-TW07

B.7-16 WBS Dictionary for Treat & Immobilize LAW, Phase 2

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
Treat & Immobilize LAW, Phase 2		15 July 1998	RL-TW07	
5. WBS No.	6. B & R No.		7. Baseline CR No.	
1.01.07.01.01	EW03J1			
8. Organization Name				
Privatization Phase 2				

9. Scope of Work

Receive and treat waste delivered by the DST System and immobilize the low-activity fraction of the waste delivered. Transfer the remaining HLW to the Phase II HLW Treatment Facility. Also, package and transfer the immobilized LAW product to the ILAW Storage Facility.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Low activity tank waste shall be immobilized
- Tank waste shall be separated into High Level and Low Activity fractions.
- The Phase II LAW Treatment Facility shall treat and immobilize wastes with properties specified in the requirement "DST / LAW Treatment Facility, Phase II: waste properties" to produce immobilized LAW with the following properties:

  - Radiological: TBD
  - Chemical: TBD
  - Physical: TBD

  and Phase II HLW Treatment Facility feed with the following properties:

  - Radiological
    Radionuclide composition/concentration - TBD

  - Chemical
    pH - TBD
    Corrosive chemical concentrations - TBD
    Waste Volume Reduction Factor (WVRF) - TBD

  - Physical
    Particle size - TBD
    Density - TBD
    Viscosity @ TBD temperature - TBD
    Percent solids - TBD
    Temperature - TBD
- The Phase II LAW Treatment Facility shall have the capacity to produce a minimum of TBD ILAW packages and TBD L (TBD gal) of Phase II HLW Treatment Facility feed from feed delivered by the DST System. Waste types and properties to be treated and immobilized are as specified in the requirement "DST / LAW Treatment Facility, Phase II: waste properties".
- The Phase II LAW Treatment Facility shall have the capacity to treat and immobilize waste from the DST System as specified in the requirement "Phase II LAW treatment and immobilization: capacity" within a timeframe of TBD years while operating TBD percentage of the specified time.

B.7-17 WBS Dictionary for Maintain Safe & Compliant LAW Treatment Facility, Phase 2 in CP Areas

1. Dictionary Title Maintain Safe & Compliant LAW Treatment Facility, Phase 2 in CP Areas		2. Date 6 November 1998	3. PBS Number RL-TW07	4. Dict Rev
5. WBS No. 1.01.07.01.02	6. B & R No. EW03J1		7. Baseline CR No.	
8. Organization Name Privatization Phase 2				

9. Scope of Work

Following the Operations and Maintenance phase of the LAW Treatment Facility, Phase II, maintain the facility structures, systems and equipment, and monitoring systems until the facility is turned over for D&D.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau facilities shall be maintained within the approved safety envelope

B.7-18 WBS Dictionary for Transition LAW Treatment Facility, Phase 2

1. Dictionary Title Transition LAW Treatment Facility, Phase 2		2. Date 4 November 1998	3. PBS Number RL-TW07	4. Dict Rev
5. WBS No. 1.01.07.01.03	6. B & R No. EW03J1		7. Baseline CR No.	
8. Organization Name Privatization Phase 2				

9. Scope of Work

At the completion of the Operations and Maintenance phase of the LAW Treatment Facility, Phase II, perform the activities necessary to place the plant in a safe, stable and environmentally sound condition pending final disposition of the plant. Activities include a degree of cleanout of process lines, storage/process vessels, contaminated equipment, etc., and removal of radioactive/hazardous materials. Cleanout activities for this function are limited to those that optimize surveillance and maintenance costs for the facility during the time between facility operations and D&D.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Future facilities shall be converted to a low cost stable deactivated condition when their functionality is no longer required to meet operational objectives.

B.7-19 WBS Dictionary for D&D LAW Treatment Facility, Phase 2

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
D&D LAW Treatment Facility, Phase 2		15 July 1998	RL-TW07	
5. WBS No.	6. B & R No.		7. Baseline CR No.	
1.01.07.01.04	EW03J1			
8. Organization Name				
Privatization Phase 2				

9. Scope of Work

At the completion of the mission of the LAW Treatment Facility, Phase II, decontaminate the facility by removing all remaining radioactive and/or hazardous contamination from the facilities, equipment or soils by removal, washing, heating, chemical action, mechanical cleaning or other techniques. Decommission the LAW Plant, Phase I by demolishing the facility.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau processing facilities shall be entombed in place with co-disposal of waste materials
- Central Plateau facilities other than processing facilities shall be dismantled
- Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment

B.7-20 WBS Dictionary for Treat & Immobilize HLW, Phase 2

1. Dictionary Title Treat & Immobilize HLW, Phase 2		2. Date 2 November 1998	3. PBS Number RL-TW07	4. Dict Rev
5. WBS No. 1.01.07.02.01	6. B & R No. EW03J1		7. Baseline CR No.	
8. Organization Name Privatization Phase 2				

9. Scope of Work

Receive and treat/disposition waste delivered by: 1) the Phase II LAW Treatment Facility; and 2) the Waste Encapsulation & Storage Facility (Cs/Sr capsules). Appropriately combine and immobilize the waste feed delivered. Seal the immobilized waste into primary containers, decontaminate the container outer surfaces, and test the integrity of the sealed containers. Load the Immobilized HLW onto the transport mechanism and transfer it to the IHLW Storage Modules, Phase II.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- HLW Immobilization facilities shall be designed to produce immobilized HLW products that conform to the requirements of WAS-RD, DOE/RW-0351P, Waste Acceptance System Requirements Document, Sections 3.7.1.2.1.2, 3.7.1.2.1.6 through 3.7.1.2.1.8, and 3.7.1.2.1.12.
- The contents of the cesium capsules shall be blended with HLW feed, treated and dispositioned as immobilized HLW.
- The contents of the strontium capsules shall be blended with HLW feed, treated and dispositioned as immobilized HLW.
- High level tank waste shall be immobilized
- Complete pretreatment processing of Hanford tank waste.

Milestone completion date is 12/31/2028.

- The Phase II HLW Treatment Facility shall treat and immobilize wastes with properties specified in the requirements "LAW Treatment Facility, Phase II / HLW Treatment Facility, Phase II: waste properties" and "WESF / HLW Treatment Facility, Phase II: waste properties" to produce immobilized HLW with the following properties:
  - Radiological: TBD
  - Chemical: TBD
  - Physical: TBD
- The Phase II HLW Treatment Facility shall have the capacity to produce a minimum of TBD IHLW canisters from the Phase II LAW Treatment Facility and WESF. Waste types and properties to be treated and immobilized are as specified in the requirements "LAW Treatment Facility, Phase II / HLW Treatment Facility, Phase II: waste properties" and "WESF / HLW Treatment Facility, Phase II: waste properties".
- The Phase II HLW Treatment Facility shall have the capacity to treat and immobilize waste from the Phase II LAW Treatment Facility and WESF as specified in the requirement "Phase II HLW treatment and immobilization: capacity" within a timeframe of TBD years while operating TBD percentage of the specified time.

B.7-21 WBS Dictionary for Maintain Safe & Compliant HLW Treatment Facility, Phase 2 in CP Areas

1. Dictionary Title Maintain Safe & Compliant HLW Treatment Facility, Phase 2 in CP Areas		2. Date 6 November 1998	3. PBS Number RL-TW07	4. Dict Rev
5. WBS No. 1.01.07.02.02	6. B & R No. EW03J1		7. Baseline CR No.	
8. Organization Name Privatization Phase 2				

9. Scope of Work

Following the Operations and Maintenance phase of the HLW Treatment Facility, Phase II, maintain the facility structures, systems and equipment, and monitoring systems until the facility is turned over for D&D.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau facilities shall be maintained within the approved safety envelope

B.7-22 WBS Dictionary for Transition HLW Treatment Facility, Phase 2

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
Transition HLW Treatment Facility, Phase 2		4 November 1998	RL-TW07	
5. WBS No.	6. B & R No.		7. Baseline CR No.	
1.01.07.02.03	EW03J1			
8. Organization Name				
Privatization Phase 2				

9. Scope of Work

At the completion of the Operations and Maintenance phase of the HLW Treatment Facility, Phase II, perform the activities necessary to place the plant in a safe, stable and environmentally sound condition pending final disposition of the plant. Activities include a degree of cleanout of process lines, storage/process vessels, contaminated equipment, etc., and removal of radioactive/hazardous materials. Cleanout activities for this function are limited to those that optimize surveillance and maintenance costs for the facility during the time between facility operations and D&D.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Future facilities shall be converted to a low cost stable deactivated condition when their functionality is no longer required to meet operational objectives.

B.7-23 WBS Dictionary for D&D HLW Treatment Facility, Phase 2

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
D&D HLW Treatment Facility, Phase 2		15 July 1998	RL-TW07	
5. WBS No.	6. B & R No.		7. Baseline CR No.	
1.01:07.02.04	EW03J1			
8. Organization Name				
Privatization Phase 2				

9. Scope of Work

At the completion of the mission of the HLW Treatment Facility, Phase II, decontaminate the facility by removing all remaining radioactive and/or hazardous contamination from the facilities, equipment or soils by removal, washing, heating, chemical action, mechanical cleaning or other techniques. Decommission the HLW Treatment Facility, Phase II by demolishing the facility.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau processing facilities shall be entombed in place with co-disposal of waste materials
- Central Plateau facilities other than processing facilities shall be dismantled
- Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment

B.7.3.1 Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30 FY32 FY34 FY36 FY38
1			Hanford Site
1.01			Tank Waste Remediation System (TWRS)
1.01.07			Privatization Phase 2
1.01.07.01.01			Treat & Immobilize LAW, Phase 2
400.010	02OCT00*	31DEC24	Project Mgmt - LAW Facility #1
400.010A		03JUN02*	M-60-13 Initiate Neg on Phase 2 LAW Treatment T07-02-111
400.010B		31JAN05*	Award Phase 2 Immobilization Contracts T07-05-112
400.020	01OCT03*	31DEC24	Prepare/Maintain ICDs - LAW Facility #1
400.210	01FEB05*	30SEP08	Design - LAW Facility #1
400.220	01OCT08*	30SEP11	Purchase Equip. & Building Construction
400.310	01FEB05*	30SEP08	Design - LAW Facility #2
400.320	01OCT08*	30SEP11	Purch Equip & Building Construction
400.410	01OCT10*	31DEC24	Operations - LAW Facilities FY11-FY25
400.410A		31DEC24*	M-50-00 Comp Pretreat Processing of Tank Waste T07-25-122
400.410B		31DEC24*	M-60-00 : Complete Vitrification of LAW T07-25-121

t Start 01OCT97
t Finish 30SEP33
ate 01OCT98
ate 17NOV98

Early Bar
Progress Bar
Critical Activity

TBP2

Sheet 1 of 2

Tank Waste Remediation System
PMBS - Life of Project
TW07 - Privatization Phase 2

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Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30 FY32 FY34 FY36 FY38
1.01.07.01.03			Transition LAW Treatment Facility, Phase 2
430.110	06JAN25*	05JAN26	Deactivate - LAW Facilities
1.01.07.01.04			D&D LAW Treatment Facility, Phase 2
430.120	06JAN26*	03OCT29	Facility D&D - LAW Facilities
430.220A		30SEP33*	Complete D&D of Phase 2 Facilities T07-33-141
1.01.07.02.01			Treat & Immobilize HLW, Phase 2
410.010	01FEB05*	29SEP28	Project Management - HLW Facility
410.020	01FEB05*	29SEP28	Prepare/Maintain ICDs - HLW Facility
410.110	01FEB06*	31DEC08	Design - HLW Facility
410.210	02JAN09*	28SEP12	Purch Equip. & Building Construction
410.310	01OCT12*	29SEP28	Operations - HLW Facility FY13 - FY28
410.310A		29SEP28*	M-51-00 : Complete Vitrification of HLW T07-29-131
1.01.07.02.03			Transition HLW Treatment Facility, Phase 2
430.210	04OCT28*	02OCT29	Deactivate - HLW Facility
1.01.07.02.04			D&D HLW Treatment Facility, Phase 2
430.220	03OCT29*	30SEP33	Facility D&D - HLW Facility

B.7.3.2 Milestone List

MS #	Title	Level	DNFSB/TPA #	99 MYWP Date	DNFSB/TPA Date
T07-02-111	Initiate Negotiations on Phase 2 LAW Pretreatment and Immobilization Milestones	HQ-I	M-60-13	03-Jun-02	31-Dec-03
T07-05-112	Award Phase 2 Immobilization Contracts	HQ	N/A	31-Jan-05	N/A
T07-25-122	Complete Pretreatment Processing of Hanford Tank Waste	HQ-M	M-50-00	31-Dec-24	31-Dec-28
T07-25-121	Complete Pretreatment and Immobilization of Hanford Low Activity Tank Waste	HQ-M	M-60-00	31-Dec-24	31-Dec-24
T07-29-131	Complete Vitrification of Hanford High Level Tank Waste	HQ-M	M-51-00	29-Sep-28	31-Dec-28
T07-33-141	Complete D&D of Phase 2 Facilities	HQ	N/A	30-Sep-33	N/A

B.7.3.3 Milestone Description Sheets

TANK WASTE REMEDIATION SYSTEM MILESTONE DESCRIPTION SHEET

Title: Initiate Negotiations on Phase 2 LAW Pretreatment and Immobilization Milestones

Schedule Date: 6/03/02

TPA Date: 12/31/03

Assigned to: Bill Taylor

WBS Number: 1.01.07

Milestone Control Number: T07-02-111

TPA No.: M-60-13

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[X] Other (Specify) Ecology

Description of this Commitment:

DOE will initiate planning for Phase II during the Privatization Phase I design phase, and decisions regarding how best to deploy Phase II services will occur during Phase I construction and operations. These decisions will occur some time after hot start of the Phase I facility, thus allowing some Phase I operating experience to be incorporated into the Phase II plan.

Description of what constitutes completion of the commitment:

Completion of this commitment will be met when DOE begins negotiations on Privatization Phase II milestones with the Washington State Department of Ecology and the United States Environmental Protection Agency.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Award Phase 2 Immobilization Contracts

Schedule Date: 1/31/2005

Assigned to: Bill Taylor

WBS Number: 1.01.07

Milestone Control Number: T07-05-112

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[X] DOE-HQ
[X] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify) Negotiated Contract	[ ] Other (Specify) Ecology

Description of this Commitment:

DOE will initiate planning for Phase II during the Privatization Phase I design phase, and decisions regarding how best to deploy Phase II services will occur during Phase I construction and operations. These decisions will occur some time after hot start of the Phase I facility, thus allowing some Phase I operating experience to be incorporated into the Phase II plan. This schedule represents a change to the Phase II planning assumptions and will require a change in the current baseline once contractual experience from Phase I is obtained.

Description of what constitutes completion of the commitment:

Completion of this commitment will be met when DOE awards contracts to begin Phase II immobilization activities.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Pretreatment Processing of Hanford Tank Waste

Schedule Date: 12/31/24

TPA Date: 12/31/28

Assigned to: Bill Taylor

WBS Number: 1.01.07

Milestone Control Number: T07-25-122

TPA No.: M-50-00

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[X] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify) Ecology

Description of this Commitment:

Private Vendor operation of the HLW Pretreatment Facility throughout the Phase II period producing pretreated HLW meeting the specification requirements and in the quantities specified in the contractual agreements with the government

Description of what constitutes completion of the commitment:

Completion of pretreatment processing of all retrieved HLW as specified in the contractual agreements between the vendor and the government.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Pretreatment and Immobilization of Hanford Low Activity Tank Waste

Schedule/TPA Date: 12/31/24

Assigned to: Bill Taylor

WBS Number: 1.01.07

Milestone Control Number: T07-25-121

TPA No.: M-60-00

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[X] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify) Immobilized LLW	[ ] Other (Specify)

Description of this Commitment:

Operations of the LAW Immobilization Facility throughout the Phase II period producing immobilized LAW meeting the specification requirements and in the quantities specified in the contractual agreements with the government.

Description of what constitutes completion of the commitment:

Delivery of immobilized LAW to the government's representative as specified in the contractual agreements between private vendors and the government.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Vitrification of Hanford High Level Tank Waste

Schedule Date: 9/29/28

TPA Date: 12/31/28

Assigned to: Bill Taylor

WBS Number: 1.01.07

Milestone Control Number: T07-29-131

TPA No.: M-51-00

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[X] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify) Immobilized LLW	[ ] Other (Specify)

Description of this Commitment:

Complete vitrification and packaging of all Hanford Site high-level waste (HLW) and transuranic (TRU) waste stored in double-shell tanks (DST) and single-shell tanks (SST). This activity also includes preparation and packaging of cesium/strontium capsule packages to be qualified for final storage in a federal repository. Current estimates indicate that approximately 1,000 to 2,000 containers of vitrified waste will be produced from the HLW stored in DSTs and SSTs. This estimate assumes that sludge washing will be adequate for separation of HLW and low-level waste fractions.

Description of what constitutes completion of the commitment:

This work will be completed when the production records are available for all of the containers filled with vitrified Hanford Site high-level and TRU tank wastes and with over-packed cesium/strontium capsules. The acceptance criteria for this milestone is the validation by DOE-RL to DOE-HQ that the HLW vitrification production records are complete.

B.7.4.1 Project Priority List

PBS RL-TW07 is not reflected in the TWRS Project Priority List.

B.7.4.2 Life Cycle Cost Baseline by PBS

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.7
PBS NO:	RL-TW07
PBS TITLE:	PRIVATIZATION PHASE II

FUND TYPE	*ACTUAL* FY1997	*ACTUAL* FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	SUBTOT FY1997-FY2006
OPERATING EXPENSE	-	-	-	-	-	-	-	-	-	-	-
CENRTC	-	-	-	-	-	-	-	-	-	-	-
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*											
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-
TOTAL BCWS/PMB[1]	-	-	-	-	-	-	-	-	-	-	-
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-	-	-	-
PRIV'ZN - PHASE II (ESC'D)	-	-	-	-	-	-	-	-	-	-	-

[1] Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2] Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.7
PBS NO:	RL-TW07
PBS TITLE:	PRIVATIZATION PHASE II

FUND TYPE	FY2007	FY2008	FY2009	FY2010	FY2011-FY2015	FY2016-FY2020	FY2021-FY2025	FY2026-FY2030	FY2031-FY2035	FY2036 FY2040	FY2041-FY2045	FY2046 FY2050	TOTAL FY1997-FY2050
OPERATING EXPENSE	-	-	-	-	-	-	-	-	-	-	-	-	-
CENRTC	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*													
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL BCWS/PMB[1]	-	-	-	-	-	-	-	-	-	-	-	-	-
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	-	-	-	-	-	-	-	-	-	-	-	-	-
PRIV'ZN - PHASE II (ESC'D)	-	-	-	-	9,591,504	4,434,731	3,242,841	624,679	-	-	-	-	17,893,755

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2]Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

HNF-SP-1230 Rev. 1

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/99
07:35 AM

	F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.7																
RL-TW07																
PRIVITIZATION PHASE II																
1.1.7 Privitization Phase II	OE	0	0	0	0	0	0	0	0	0	17,893,755	0	0	0	0	0
	C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
S/T		0	0	0	0	0	0	0	0	0	17,893,755	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
07:35 AM

		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.7														
RL-TW07														
PRIVITIZATION PHASE II														
1.1.7	Privitization Phase II	OE	9,591,504	4,434,731	3,242,841	624,679	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		9,591,504	4,434,731	3,242,841	624,679	0	0	0	0	0	0	0	0

B.7.4.3 Life Cycle Budget Authority by PBS

EXHIBIT 4a

TANK WASTE REMEDIATION SYSTEM
BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.7	
PBS NO:	RL-TW07	
PBS TITLE:	PRIVATIZATION PHASE II	
FUND TYPE	TARGET B/A FY1998	PRESIDENT'S BUDGET PLUS CARRYOVER[1] FY1999
OPERATING EXPENSE	-	-
CENRTC	-	-
GENERAL PLANT PROJECT	-	-
LINE ITEM *(List Each One)*		
0	-	-
0	-	-
0	-	-
0	-	-
0	-	-
0	-	-
Subtotal Line Items	-	-
TOTAL NEW B/A	-	-
ESTIMATED FY 1998 CARRYOVER		
TOTAL NEW B/A+CARRYOVER	-	-
PRIVATIZATION - PHASE II (ESC'D)	-	-

[1]Estimated Carryover Is NOT Included In Cost Baseline; Change Request For Actual Carryover Submitted After September 30, 1998.

TW07-40

HNF-SP 1230 Rev.1

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764B0BA.XLS(SUMMARY)
09/24/98 09/24/98 UPDATE
10:29 AM
PBS - ADS
PBS TITLE

TW07
1.1.7 PRIMITIZATION PHASE II

F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A)*	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2066 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
EX	0	0	0	0	0	0	0	0	172,000	176,000	348,000	17,893,755	186,000	304,000	1,212,000	1,298,000	3,000,000
CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	172,000	176,000	348,000	17,893,755	186,000	304,000	1,212,000	1,298,000	3,000,000

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

11/24/98 | 09/24/98 UPDATE

10:29 AM

PBS - ADS PBS TITLE	F/T	FY 2011- FY 2015 B/A PROFILE (B/A)	FY 2016- FY 2020 B/A PROFILE (B/A)	FY 2021- FY 2025 B/A PROFILE (B/A)	FY 2026- FY 2030 B/A PROFILE (B/A)	FY 2031- FY 2035 B/A PROFILE (B/A)	FY 2036- FY 2040 B/A PROFILE (B/A)	FY 2041- FY 2045 B/A PROFILE (B/A)	FY 2046- FY 2050 B/A PROFILE (B/A)	FY 2051- FY 2055 B/A PROFILE (B/A)	FY 2056- FY 2060 B/A PROFIL (B/A)	FY 2061- FY 2065 B/A PROFILE (B/A)	FY 2066- FY 2069 B/A PROFILE (B/A)
TW07													
1.1.7 PRIMTIZATION PHASE II	EX	7,433,000	3,244,000	3,242,000	626,755	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	7,433,000	3,244,000	3,242,000	626,755	0	0	0	0	0	0	0	0

B.7.4.4 Project (PBS) Contractor Split

PBS RL-TW07 is not reflected in the TWRS Project Contractor Split.

B.8 Privatization Infrastructure (RL-TW08)
B.8.1.0 Privatization Infrastructure Technical Baseline
B.8.1.1 Privatization Infrastructure Project Mission TW08-1
B.8.1.2 Privatization Infrastructure End Point Targets from Hanford Strategic Plan TW08-1
B.8.1.3 Privatization Infrastructure Major Facilities TW08-1
B.8.1.4 Drivers for Privatization Infrastructure TW08-1
B.8.2.0 Privatization Infrastructure Work Breakdown Structure (WBS)
B.8.2.1 Privatization Infrastructure WBS Hierarchy TW08-2
B.8.2.2 Privatization Infrastructure WBS Dictionary TW08-2
B.8.3.0 Schedule Baseline
B.8.3.1 Project Master Baseline Schedule by PBS TW08-5
B.8.3.2 Execution Year Project Master Baseline Schedule TW08-9
B.8.3.3 Milestone List TW08-11
B.8.3.4 Milestone Description Sheets TW08-13
B.8.4.0 Cost Baseline
B.8.4.1 Project Priority List TW08-18
B.8.4.2 Life Cycle Cost Baseline by PBS TW08-20
B.8.4.3 Life Cycle Budget Authority by PBS TW08-25
B.8.4.4 Project (PBS) Contractor Split TW08-29

B.8 Privatization Infrastructure (RL-TW08)

B.8.1.0 Privatization Infrastructure Technical Baseline

This section describes the technical baseline for this project. It identifies the mission, the end point targets, the site major facilities, technical logic, functions, requirements, and forecasts for this project.

B.8.1.1 Privatization Infrastructure Mission

Part of the Tank Waste Remediation Systems (TWRS) Project mission is to separate the Hanford Site liquid tank waste into low-activity and high-activity fractions and immobilize these fractions in an environmentally sound, safe and cost-effective manner. To achieve this a two phase alternative acquisition strategy (AAS) has been implemented by contracting with private contractors to perform pretreatment and immobilization of low-activity waste (LAW) and immobilization of the high-activity waste (HAW) fraction. The first phase of the AAS (Phase I) is a "proof of concept phase" during which approximately 13 percent of the tank waste will be treated. The remaining tank waste is to be treated in Phase II a full-scale production phase.

The Process Waste Privatization Infrastructure Project (PWPIP) will provide the needed infrastructure to support the private contractors. Most of this support is essential to meeting M-50, M-51 and M-60 TPA Milestones. Not developing this needed infrastructure would cause the Privatization effort to fail, delaying the treatment, immobilization and disposal of tank waste by several years. During this delay, tanks would continue to age increasing the chance of an accident with serious radiological consequences.

B.8.1.2 Privatization Infrastructure End Point Targets from Hanford Strategic Plan

-None-

B.8.1.3 Privatization Infrastructure Major Facilities

B.8.1.4 Drivers for Privatization Infrastructure

-None-

B.8.2.0 Privatization Infrastructure Work Breakdown Structure (WBS)

B.8.2.1 Privatization Infrastructure WBS Hierarchy

RL PBS	RL WBS	Title
RL-TW08	1.01.08	Privatization Infrastructure
	1.01.08.01	Privatization Infrastructure Project
	1.01.08.01.01	Privatization Infrastructure Project

B.8.2.2 Privatization Infrastructure WBS Dictionary

The following pages contain the WBS dictionary for RL-TW08

B.8-2 WBS Dictionary for Privatization Infrastructure Project

1. Dictionary Title Privatization Infrastructure Project		2. Date 4 November 1998	3. PBS Number RL-TW08	4. Dict Rev
5. WBS No. 1.01.08.01.01	6. B & R No. EW02J121		7. Baseline CR No.	
8. Organization Name Privatization Infrastructure				

9. Scope of Work

Technical Bases

Part of the Tank Waste Remediation System (TWRS) Project mission is to separate the Hanford Site liquid tank waste into low-activity and high-activity fractions and immobilize these fractions in an environmentally sound, safe and cost-effective manner. To achieve this, a two phase alternative acquisition strategy has been implemented by contracting with a private contractor(s) to perform pretreatment and immobilization of low-activity waste (LAW) and immobilization of the high-activity waste (HAW) fraction. The first phase of the strategy (Phase I) is a "proof of concept phase" during which approximately 13 percent of the tank waste will be treated. The remaining tank waste is to be treated in Phase II a full-scale production phase.

The Process Waste Privatization Infrastructure Project will provide the needed infrastructure to support the private contractor(s). Most of this support is essential to meeting M-50, M-51, and M-60 TPA Milestones. Not developing this needed infrastructure would cause the Privatization effort to fail, delaying the treatment, immobilization and disposal of tank waste by several years. During this delay, tanks would continue to age increasing the chance of an accident with serious radiological consequences.

Goals and Objectives

The Privatization Infrastructure project provides the required facilities and systems which assure the privatization contractor is integrated into the Hanford Site infrastructure. This project also provides funding which covers the cost for electricity, water, solid waste disposal and sanitary waste (Phase II only) services used by the privatization contractor. Privatization Infrastructure also provides funds for M&I costs associated for providing these services as well as incremental funding to operate and maintain the infrastructure systems added to accommodate privatization contractor production. Funding to train the initial operator work force will also be provided as well as funding for decontamination, decommissioning and closure of the added infrastructure systems.

The following summary work scope further defines lower tier WBS elements developed respectively for Phase I and Phase II.

Project Management and Administration

Project Management includes management, project control, and reporting for Privatization Infrastructure's (infrastructure) acquisition, operations, and decontamination and decommissioning/closure activities.

Work scope includes preparation of strategy documents and plans; development and maintenance of cost account plans and schedules; statusing of schedules, monitoring costs, and reporting cost/schedule performance; interfacing with other disposal projects, Waste Integration Team (WIT), and Privatization Contractor; establishing/maintaining change control for the Privatization Infrastructure project and line item projects

B.8-2 WBS Dictionary for Privatization Infrastructure Project (Continued)

1. Dictionary Title Privatization Infrastructure Project		2. Date 4 November 1998	3. PBS Number RL-TW08	4. Dict Rev
5. WBS No. 1.01.08.01.01	6. B & R No. EW02J121		7. Baseline CR No.	
8. Organization Name Privatization Infrastructure				

Systems Definition

Systems definition includes defining capital project requirements, establishing interface control with Privatization Contractors, and performing studies to determine impacts on the Hanford Site infrastructure caused by privatization. Tasks associated with turnover of AP 106 tank to Privatization Contractors are included. An engineering study will be performed to determine the impact on the Site solid waste disposal facilities as a result of Privatization Contractor operations and eventual D&D of the facilities.

Acquisition Project

Phase I Infrastructure project provides the required facilities and systems that assures the waste disposal Privatization Contractors are integrated into the Hanford Site infrastructure. This includes defining capital project requirements, executing capital projects, and establishing interface control with Privatization Contractors. For Phase I the systems provided are electrical, water, site/roads, and liquid effluent transfer systems (TWRS Project W-519). For Phase II, the Acquisition project is expected to include the following systems; electrical, water, site/roads, liquid effluent transfer sytems, sewage transfer/treatment/disposal and telecommunication (LAN only).

M&I Operations

Privatization Infrastructure operations activities include funding/resources to operate and maintain the added infrastructure and Phase I operator training. For Phase I and Phase II, this work scope includes activities required to operate and maintain the extended utility systems; in Phase I, one year of training will be provided for the vendor staff, in Phase II, the operation and maintenance of the sanitary sewer system will be provided.

PC Operations

Privatization contract operations activities include the utility costs associated with operation of the private contractor facilities, e.g. electricity and water, and the costs for solid waste. This includes the coordination and funding of government furnished services (i.e., electrical supply/maintenance, solid waste disposal, raw water and potable water supply)

Closure/D&D

Privatization Infrastructure removes all utility system infrastructure added to support Phase I and Phase II. Remove occurs after the contractors' facilities have been through D&D.

B.8.3.1 Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30 FY32 FY34 FY36 FY38
1			Hanford
1.01			Tank Waste Remediation Systems
1.01.08			Privatization Infrastructure TW08
1.01.08.01			Privatization Infrastructure
1.01.08.01.01			Privatization Infrastructure
1.01.08.01.01.01			Phase I Privatization Infrastructure
150.B76	01OCT98*	30SEP03	AP 106 Drawing & Procedure Revisions
150.B78	01APR04*	28JUL04	Execute Feed Tank Turnover Procedure
150.B88	02OCT00*	30SEP04	Field Support
150.B94	01OCT98*	30SEP04	IPT Support
150.B99	01DEC16*	29JUN17	Execute Feed Tank Return
330.010	01OCT98*	30SEP19	Program Administration
330.020	01OCT98*	30SEP16	Systems Evaluation
330.050	01OCT98*	19NOV01	W-519 Electrical System
330.050C3Z		01APR02*	Interface with ICD 11 Rev. 2 T08-02-100
330.070	01OCT98*	23JUL02	W-519 Utilities Systems
330.070D4X		28MAY99*	Provide to RL IC Information PA 8.1.1 T08-99-100

Act Start 29SEP98
Act Finish 30SEP32
Data 29SEP98
Data 17NOV98

Early Bar
Progress Bar
Critical Activity

6BP2

Sheet 1 of 3

Tank Waste Remediation System
PMBS - Life of Project
TW08 - Privatization Infrastructure

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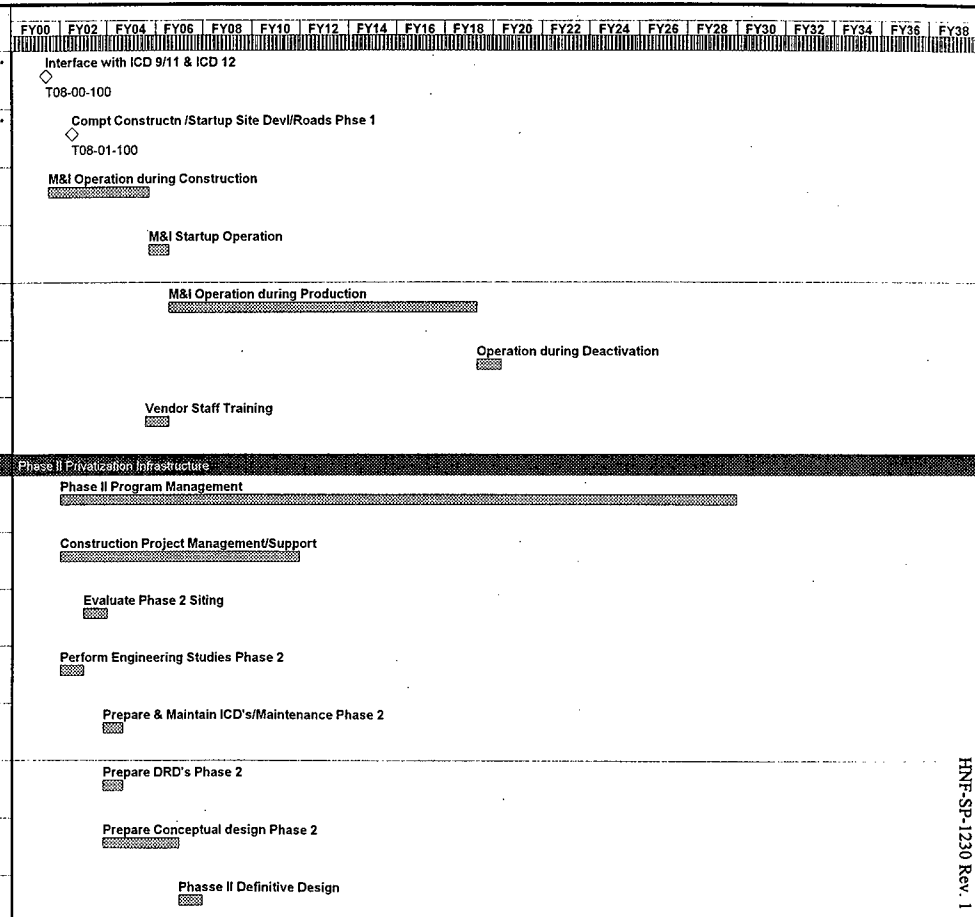
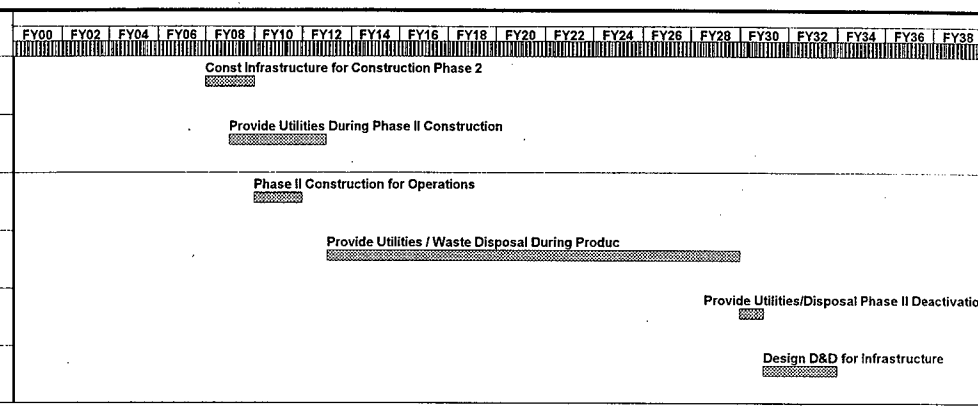
TW08-6

Activity ID	Early Start	Early Finish	Activity
330.070S5Z		01MAR00*	Interface with ICD 9/11 & ICD 12
			T08-00-100
330.070S90		30MAR01*	Compt Constructn /Startup Site Devl/Roads Phse 1
			T08-01-100
330.080	03APR00*	30JUN04	M&I Operation during Construction
330.090	01JUL04*	29APR05	M&I Startup Operation
330.100	02MAY05*	31JAN18	M&I Operation during Production
330.110	01FEB18*	30JAN19	Operation during Deactivation
330.120	03MAY04*	29APR05	Vendor Staff Training
1.01.08.01.01.02			Phase II Privatization Infrastructure
480.010	02OCT00*	29SEP28	Phase II Program Management
480.020	02OCT00*	30SEP10	Construction Project Management/Support
480.030	01OCT01*	30SEP02	Evaluate Phase 2 Siting
480.040	02OCT00*	28SEP01	Perform Engineering Studies Phase 2
480.050	01AUG02*	30MAY03	Prepare & Maintain ICD's/Maintenance Phase 2
480.060	01AUG02*	30MAY03	Prepare DRD's Phase 2
480.070	01AUG02*	30SEP05	Prepare Conceptual design Phase 2
480.080	03OCT05*	29SEP06	Phasse II Definitive Design



Activity ID	Early Start	Early Finish
480.090	02OCT06*	30SEP08
480.100	01OCT07*	30SEP11
480.120	01OCT08*	30SEP10
480.140	03OCT11*	29SEP28
480.150	02OCT28*	28SEP29
530.200	01OCT29*	30SEP32



B.8.3.2 Execution Year Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP / FY00 OCT
1			Hanford
1.01			Tank Waste Remediation Systems
1.01.08			Privatization Infrastructure TW08
1.01.08.01			Privatization Infrastructure
1.01.08.01.01			Privatization Infrastructure
1.01.08.01.01.01			Phase I Privatization Infrastructure
150.B76	01OCT98*	30SEP03	AP 106 Drawing & Procedure Revisions
150.B94	01OCT98*	30SEP04	IPT Support
330.010	01OCT98*	30SEP19	Program Administration
330.020	01OCT98*	30SEP16	Systems Evaluation
330.050	01OCT98*	19NOV01	W-519 Electrical System
330.070	01OCT98*	23JUL02	W-519 Utilities Systems
330.070D4X		28MAY99*	Provide to RL IC Information PA 8.1.1 ◇ T08-99-100

Start 29SEP98
Finish 30SEP02
Date 28SEP98
Date 17NOV98

Early Bar
Progress Bar
Critical Activity

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SBP2

Sheet 1 of 1

Tank Waste Remediation System
PMBS - FY 1999
TW08 - Privatization Infrastructure

B.8.3.3 Milestone List

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/ TPA Date
T08-99-100	TWR 8.1.1, Physical Interface Control	RL	-	28-May-99	-
T08-00-100	Construction Water and Roads Ready for BNFL	RL	-	01-Mar-00	-
T08-01-100	Installation of 7 MW of Electrical Power/Access Roads for BNFL site	RL	-	30-Mar-01	-
T08-02-100	Electrical Power for BNFL Operations	RL	-	01-Apr-02	-

B.8.3.4 Milestone Description Sheets

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Physical Interface Control Information (TWR8.1.1) Schedule Date: May 28, 1999

Assigned to: R. J. Parazin

WBS Number: 1.01.08.01.01.01.03

Milestone Control Number: T08-99-100

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[x] Drawings	
[x] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Provide to RL FDH-approved physical interface information between BNFL and Project W-519 for Site and Road Development, Raw and Potable Water, Liquid Effluent and Electrical Systems.

Description of what constitutes completion of the commitment:

The physical interface information will be in the form of design drawings. The physical interface will be interpreted to include the location of each hand-off point, type, quantity and composition of material as detailed and displayed on a design drawing (called an ICD drawing).

The design drawings will be provided for the following interfaces; Site and Roads, Raw Water, Potable Water, Non-Radioactive, Non-Dangerous Liquid Effluent, Radioactive, Dangerous Liquid Effluent, and Electrical.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Construction Water and Roads Ready for BNFL

Schedule Date: March 01, 2000

Assigned to: J. B. Payne

WBS Number: 1.01.08.01.01.01.03

Milestone Control Number: T08-00-100

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)
	Site Construction Preparation Complete	

Description of this Commitment:

Construction Water and Roads ready for BNFL.

Description of what constitutes completion of the commitment:

Provide all site preparation and construction access work, including completion of construction of the raw water supply and 200 lpm of potable water. Removal of the Grout Spoil Pile and all site prep including clearing and grubbing.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Installation of 7 MW of Electrical Power/Access Roads for BNFL site.

Schedule Date: March 30, 2001

Assigned to: J. B. Payne

WBS Number: 1.01.08.01.01.01.03

Milestone Control Number: T08-01-100

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)
	7MW Construction Power/ Road Installation Complete	

Description of this Commitment:

Complete the installation of 7 MW of construction power and provide access roads into the BNFL site.

Description of what constitutes completion of the commitment:

Installation of 13.8kv distribution line to the BNFL construction site. Installation of access roads from Route 4 around BNFL's facility site and connecting to Canton Avenue.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Electrical Power for BNFL Operations

Schedule Date: April 01, 2002

Assigned to: J. B. Payne

WBS Number: 1.01.08.01.01.01.03

Milestone Control Number: T08-02-100

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)
	33 MW of Electrical Power Installation Complete	

Description of this Commitment:

Complete construction of the Electrical Power System for BNFL operations.

Description of what constitutes completion of the commitment:

Completion of the construction/installation of electrical transmission lines, sub-station and 13.8kv distribution line to BNFL site. This system will provide 33 MW of power capacity.

B.8.4.1 Project Priority List

TANK WASTE REMEDIATION SYSTEM
FY 1999 - 2007 MYWP PRIORITY LIST BY PBS

11/23/98 'FY 99 MYWP

EXCEL: 10YRPR49.XLS

11/24/98 4:57 PM

FDH UAS	PBS #	ADS	"UNIT OF ANALYSIS"	FY 99 TOTAL ESCAL'D	FY 00 TOTAL ESCAL'D	FY 01 TOTAL ESCAL'D	FY 02 TOTAL ESCAL'D	FY 03 TOTAL ESCAL'D	FY 04 TOTAL ESCAL'D	FY 05 TOTAL ESCAL'D	FY 06 TOTAL ESCAL'D	FY 07 TOTAL ESCAL'D
TW08												
197	TW08	1230 - 0	TWRS PRIVZN INFRASTRUCTURE (INCL W-519)(PHASE I)	10,500	14,915	8,147	931	-	-	-	-	-
169	TW08	1230 - 0	TWRS 106/108AP TURNOVER (PROC/ENGRG/ADMIN)	1,645	-	2,041	2,105	1,641	1,730	-	-	-
471	TW08	1230 - 0	SOLID WASTE SUPPORT	458	-	1,813	2,980	3,596	16,123	801	163	168
			S/T - FY 1999 / 2000 TARGET	**12,603**	**14,915**							
169	TW08	1230 - 0	TWRS 106/108AP TURNOVER (PROC/ENGRG/ADMIN)	-	1,012							
471	TW08	1230 - 0	SOLID WASTE SUPPORT	-	835							
160	TW08	1230 - 0	TWRS PRIVATIZATION INFRASTRUCTURE (PHASE II)	-	-	4,652	2,586	4,097	1,281	1,303	4,615	14,026
334	TW08	1230 - 0	TWRS UTIL OPERS SUPPORT	-	2,152	4,473	4,571	4,691	21,930	41,455	25,097	25,751
			S/T -URGENT RISK- PRIVATIZATION	**12,603**	**18,914**	**21,126**	**13,172**	**14,025**	**41,063**	**43,559**	**29,875**	**39,945**
659	TW08	1230 - 0	TWRS PRIVZN INFRASTRUCTURE (INCL W-519)(PHASE I)	214	-	-	-	-	-	-	-	-
			TOTAL COMPLIANCE / REQUIREM'S (EM-30)	**12,817**	**18,914**	**21,126**	**13,172**	**14,025**	**41,063**	**43,559**	**29,875**	**39,945**

B.8.4.2 Life Cycle Cost Baseline by PBS

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.8										
PBS NO:	RL-TW08										
PBS TITLE:	PRIVATIZATION INFRASTRUCTURE										SUBTOT
FUND TYPE	*ACTUAL* FY1997	*ACTUAL* FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997-FY2006
OPERATING EXPENSE	1,772	5,132	3,664	4,824	12,539	11,792	12,330	24,847	38,265	22,989	138,353
CENRTC	-	-	-	-	-	-	-	-	-	-	-
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*											
99-D-403 (W-519)	-	-	8,739	11,236	6,536	554	-	-	-	-	27,065
WASTE MANAGEMENT	-	-	-	-	464	-	530	11,763	-	-	12,757
PHASE II INFRASTRUCTURE	-	-	-	-	-	-	-	-	-	2,602	2,602
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	8,739	11,236	7,000	554	530	11,763	-	2,602	42,424
Escalation	-	-	-	382	899	826	1,165	4,453	5,294	4,284	17,304
TOTAL BCWS/PMB[1]	1,772	5,132	12,603	16,442	20,438	13,172	14,025	41,063	43,559	29,875	198,081
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	2,412	655	-	-	-	-	-	3,067
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	2,412	655	-	-	-	-	-	3,067
Escalation	-	-	-	60	33	-	-	-	-	-	93
TOTAL	1,772	5,132	12,603	18,914	21,126	13,172	14,025	41,063	43,559	29,875	201,241

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2]Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

HNF-SP-1230 Rev. 1

TW08-21

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.8												
PBS NO:	RL-TW08												
PBS TITLE:	PRIVATIZATION INFRASTRUCTURE												TOTAL
FUND TYPE	FY2007	FY2008	FY2009	FY2010	FY2011-FY2015	FY2016-FY2020	FY2021-FY2025	FY2026-FY2030	FY2031-FY2035	FY2036 FY2040	FY2041-FY2045	FY2046 FY2050	FY1997-FY2050
OPERATING EXPENSE	23,081	35,847	35,847	35,848	430,827	442,089	385,603	247,704	2,898	-	-	-	1,778,097
CENRTC	-	-	-	-	-	-	-	-	-	-	-	-	-
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*													
99-D-403 (W-519)	-	-	-	-	-	-	-	-	-	-	-	-	27,065
WASTE MANAGEMENT	-	-	-	-	-	-	-	-	-	-	-	-	12,757
PHASE II INFRASTRUCTURE	10,112	621	22,974	22,348	-	-	-	-	-	-	-	-	58,657
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	10,112	621	22,974	22,348	-	-	-	-	-	-	-	-	98,479
Escalation	6,752	7,881	15,714	17,319	156,866	223,936	264,141	208,811	2,975	-	-	-	921,700
TOTAL BCWS/PMB[1]	39,945	44,349	74,534	75,515	587,693	666,025	649,744	456,515	5,873	-	-	-	2,798,276
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-	-	3,067
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-	-	3,067
Escalation	-	-	-	-	-	-	-	-	-	-	-	-	93
TOTAL	39,945	44,349	74,534	75,515	587,693	666,025	649,744	456,515	5,873	-	-	-	2,801,436

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2]Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.8																	
RL-TW08																	
PRIVATIZATION INFRASTRUCTURE																	
1.1.8.1.1.1	Ph 1 Infrastructure(W-519	OE	2,103	3,999	7,840	9,655	9,341	26,395	42,256	25,260	126,849	464,425	25,919	26,489	27,072	27,669	107,149
(less W-519)		LI	0	0	488	0	587	13,387	0	0	14,462	14,462	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		2,103	3,999	8,328	9,655	9,928	39,782	42,256	25,260	141,311	478,887	25,919	26,489	27,072	27,669	107,149
1.1.8.1.1.1.3	Project W-519	OE	1,761	926	592	334	0	0	0	0	3,612	3,612	0	0	0	0	0
(level 7)		LI	8,739	11,517	6,867	597	0	0	0	0	27,720	27,720	0	0	0	0	0
		LI C	0	2,472	688	0	0	0	0	0	3,160	3,160	0	0	0	0	0
	S/T		10,500	14,915	8,147	931	0	0	0	0	34,492	34,492	0	0	0	0	0
1.1.8.1.1.2	Ph 2 Infrastructure	OE	0	0	4,652	2,586	4,097	1,281	1,303	1,486	15,405	2,204,700	1,524	17,071	17,446	17,830	53,871
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	3,129	3,129	76,452	12,502	789	30,016	30,016	73,323
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	4,652	2,586	4,097	1,281	1,303	4,615	18,534	2,281,152	14,026	17,860	47,462	47,846	127,194
1.1.8	**PRIV'ZN INFRASTRUCTURE**	OE	3,864	4,925	13,083	12,575	13,438	27,676	43,559	26,746	145,866	2,672,738	27,443	43,560	44,518	45,499	161,020
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI	8,739	11,517	7,355	597	587	13,387	0	3,129	45,311	118,634	12,502	789	30,016	30,016	73,323
		LI C	0	2,472	688	0	0	0	0	0	3,160	3,160	0	0	0	0	0
	TOTAL		12,603	18,914	21,126	13,172	14,025	41,063	43,559	29,875	194,337	2,794,532	39,945	44,349	74,534	75,515	234,343

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
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		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.8														
RL-TW08														
PRIVATIZATION INFRASTRUCTURE														
1.1.8.1.1.1	Ph 1 Infrastructure(W-519	OE	147,627	82,800	0	0	0	0	0	0	0	0	0	0
(less W-519)		LI	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		147,627	82,800	0	0	0	0	0	0	0	0	0	0
1.1.8.1.1.1.3	Project W-519	OE	0	0	0	0	0	0	0	0	0	0	0	0
(level 7)		LI	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.8.1.1.2	Ph 2 Infrastructure	OE	440,066	583,225	649,744	456,515	5,873	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		440,066	583,225	649,744	456,515	5,873	0	0	0	0	0	0	0
1.1.8 PRIV'ZN INFRASTRUCTURE		OE	587,693	666,025	649,744	456,515	5,873	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL		587,693	666,025	649,744	456,515	5,873	0	0	0	0	0	0	0

B.8.4.3 Life Cycle Budget Authority by PBS

EXHIBIT 4a

TANK WASTE REMEDIATION SYSTEM
BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.8	
PBS NO:	RL-TW08	
PBS TITLE:	PRIVATIZATION INFRASTRUCTURE	
FUND TYPE	TARGET B/A FY1998	PRESIDENT'S BUDGET PLUS CARRYOVER[1] FY1999
OPERATING EXPENSE	5,132	3,864
CENRTC	-	-
GENERAL PLANT PROJECT	-	-
LINE ITEM *(List Each One)*		
99-D-403 (W-519)	-	8,739
0	-	-
0	-	-
0	-	-
0	-	-
0	-	-
Subtotal Line Items	-	8,739
TOTAL NEW B/A	5,132	12,603
ESTIMATED FY 1998 CARRYOVER		-
TOTAL NEW B/A+CARRYOVER	5,132	12,603

[1]Estimated Carryover Is NOT Included In Cost Baseline; Change Request For Actual Carryover Submitted After September 30, 1998.

HNF-SP 1230 Rev.1

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TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9784BOBA.XLS(SUMMARY)
11/24/98 09/24/98 UPDATE
10:29 AM
PBS - ADS

PBS TITLE	F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A) *	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2066 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
TW08																		
1.1.8 PRIV. INFRASTRUCTURE	EX	1,772	5,132	2,103	3,999	12,491	12,241	13,438	27,676	43,559	26,746	149,158	2,676,029	27,443	43,560	44,518	45,499	161,020
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	488	0	587	13,387	0	3,129	17,591	90,914	12,502	789	30,016	30,016	73,323
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1,772	5,132	2,103	3,999	12,979	12,241	14,025	41,063	43,559	29,875	166,749	2,766,943	39,945	44,349	74,534	75,515	234,343
1.1.8.1.1.1.3 Project W-519 (level 7)	EX	0	0	1,761	926	592	334	0	0	0	0	3,612	3,612	0	0	0	0	0
	LI	0	0	8,739	11,517	6,867	597	0	0	0	0	27,720	27,720	0	0	0	0	0
	LI CONT	0	0	0	2,472	688	0	0	0	0	0	3,160	3,160	0	0	0	0	0
	TOTAL	0	0	10,500	14,915	8,147	931	0	0	0	0	34,492	34,492	0	0	0	0	0
1.1.8 PRIV. INFRASTRUCTURE W-519	EX	1,772	5,132	3,864	4,925	13,083	12,575	13,438	27,676	43,559	26,746	152,770	2,679,642	27,443	43,560	44,518	45,499	161,020
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	8,739	11,517	7,355	597	587	13,387	0	3,129	45,311	118,634	12,502	789	30,016	30,016	73,323
	LI CONT	0	0	0	2,472	688	0	0	0	0	0	3,160	3,160	0	0	0	0	0
	TOTAL	1,772	5,132	12,603	18,914	21,126	13,172	14,025	41,063	43,559	29,875	201,241	2,801,436	39,945	44,349	74,534	75,515	234,343

* FY 1999 INCLUDES CARRYOVER OF $0

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR5A: 9764BOBA.XLS(SUMMARY)

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PBS - ADS

PBS TITLE	F/T	FY 2011-FY 2015 B/A PROFILE (B/A)	FY 2016-FY 2020 B/A PROFILE (B/A)	FY 2021-FY 2025 B/A PROFILE (B/A)	FY 2026-FY 2030 B/A PROFILE (B/A)	FY 2031-FY 2035 B/A PROFILE (B/A)	FY 2036-FY 2040 B/A PROFILE (B/A)	FY 2041-FY 2045 B/A PROFILE (B/A)	FY 2046-FY 2050 B/A PROFILE (B/A)	FY 2051-FY 2055 B/A PROFILE (B/A)	FY 2056-FY 2060 B/A PROFIL (B/A)	FY 2061-FY 2065 B/A PROFILE (B/A)	FY 2066-FY 2066 B/A PROFILE (B/A)
TW08													
1.1.8 PRIV. INFRASTRUCTURE	EX	587,693	666,025	649,744	456,515	5,873	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	587,693	666,025	649,744	456,515	5,873	0	0	0	0	0	0	0
1.1.8.1.1.1.3 Project W-519 (level 7)	EX	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.8 PRIV. INFRASTRUCTURE W-519	EX	587,693	666,025	649,744	456,515	5,873	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	587,693	666,025	649,744	456,515	5,873	0	0	0	0	0	0	0

B.8.4.4 Project (PBS) Contractor Split

TANK WASTE REMEDIATION SYSTEM
FY 1999 CONTRACTOR FUNDING SPLIT (NEW BA ONLY)

PBS	DOE-RL/ RL-PNNL	NATIONAL LABS	TOTAL
TW08	$ 179	$ -	$ 179

REFLECTS FY 1999 NEW BA ONLY

B.9 Immobilized Tank Waste Storage and Disposal (RL-TW09)
B.9.1.0 Immobilized Tank Waste Storage and Disposal Technical Baseline
B.9.1.1 Immobilized Tank Waste Storage and Disposal Mission TW09-1
B.9.1.2 Immobilized Tank Waste Storage and Disposal End Point Targets from Hanford Strategic Plan TW09-1
B.9.1.3 Immobilized Tank Waste Storage and Disposal Major Facilities TW09-1
B.9.1.4 Immobilized Tank Waste Storage and Disposal Drivers for Immobilized Tank Waste Storage and Disposal TW09-16
B.9.2.0 Immobilized Tank Waste Storage and Disposal Work Breakdown Structure (WBS)
B.9.2.1 Immobilized Tank Waste Storage and Disposal WBS Hierarchy TW09-18
B.9.2.2 Immobilized Tank Waste Storage and Disposal WBS Dictionary TW09-18
B.9.3.0 Schedule Baseline
B.9.3.1 Project Master Baseline Schedule by PBS TW09-32
B.9.3.2 Execution Year Project Master Baseline Schedule TW09-41
B.9.3.3 Milestone List TW09-44
B.9.3.4 Milestone Description Sheets TW09-46
B.9.4.0 Cost Baseline
B.9.4.1 Project Priority List TW09-68
B.9.4.2 Life Cycle Cost Baseline by PBS TW09-70
B.9.4.3 Life Cycle Budget Authority by PBS TW09-81
B.9.4.4 Project (PBS) Contractor Split TW09-85

B.9 Immobilized Tank Waste Storage & Disposal (RL-TW09)

B.9.1.0 Immobilized Tank Waste Storage & Disposal Technical Baseline

This section describes the technical baseline for this project. It identifies the mission, the end point targets, the site major facilities, technical logic, functions, requirements, and forecasts for this project.

B.9.1.1 Immobilized Tank Waste Storage & Disposal Mission

The Immobilized Tank Waste Storage & Disposal program will provide safe storage and final near-surface disposal on the Hanford Site for immobilized low activity tank waste (ILAW), interim storage for immobilized high level waste (IHLW), other HLW products.

The ILAW project will be complete when the immobilized low activity tank waste is disposed of on the Hanford site, long term surveillance and monitoring of the ILAW disposal site is ongoing, and interim storage facilities have been decontaminated and decommissioned. The ILAW Storage and Disposal facilities will accept the immobilized low activity tank waste from TWRS privatization vendors. The ILAW waste packages will be placed in near surface storage and disposal facilities. The near surface disposal systems along with the waste package are intended to meet DOE regulatory requirements for near-surface disposal of low-level waste. Waste receipts are currently planned to commence in 2008.

The HLW Interim Storage will receive IHLW, and transport these products to the Canister Storage Building (CSB), where the product will be stored until shipped to a geologic repository (IHLW). Storage of the Phase I product in the CSB will consolidate the high level waste in one area and provide a safe environmentally sound storage of the IHLW product. HLW Interim Storage will provide additional storage capacity during Phase II privatization. In addition HLW Interim Storage will provide loadout capability for IHLW canisters moving to a geologic repository.

B.9.1.2 Immobilized Tank Waste Storage & Disposal End Point Targets from Hanford Strategic Plan

- Transition high cost surplus facilities to a low cost, stable, deactivated condition.
- Remove Central Plateau (200 Area) non-essential, surplus buildings and facilities that don't have identified post-cleanup uses.
- Low level and low level mixed waste from onsite and offsite sources will continue to be disposed of in the 200 Area.
- The immobilized low activity fraction will be disposed onsite in a 200 Area disposal system.
- The high level immobilized fraction will be interim stored until it can be shipped offsite for disposal (planned for the Yucca Mountain geologic repository).

B.9.1.3 Immobilized Tank Waste Storage & Disposal Major Facilities

B.9.1.3.1 Canister Storage Building

B.9.1.3.1.1 Canister Storage Building Description

The CSB is a reinforced-concrete vault structure with storage tubes to be used for MCOs holding K Basins SNF and immobilized high level waste (IHLW) from the private vitrification contractor . The CSB provides safe interim storage of irradiated fuel and IHLW at Hanford. The CSB contains three vaults. Vault 1 will be for storage of K Basins fuel. Vaults 2 and 3 will be used by the TWRS Project for the storage of IHLW .

Functions performed in the CSB are identified in the following figure. Functions within Project Baseline Summary (PBS) element RL-WM01 includes CSB construction and initiation of SNF interim storage.

Functions performed within the scope of Program Baseline Summary (PBS) element RL-WM02 includes interim storage of K Basins SNF. Storage of Shippingport PWR Core 2 fuel assemblies is also included with the scope of CSB functions, in addition to disposition of SNF, CSB transition, Decontamination & Decommissioning, and transferring the CSB to Environmental Restoration.

Functions performed with the scope of PBS element RL-TW09 include modification of vaults 2 and 3, addition a new north annex for IHLW load in/out, addition of ventilation stacks for vaults 2 and 3, and installation of a shielded canister transporter for movement of the IHLW within the CSB, all under project W-464. The IHLW will be transported from the private vitrification contractor, off loaded at the CSB and stored in the vaults 2 and 3 pending final shipment to the Yucca Mountain HLW repository.

Canister Storage Building (CSB) Sub-Project Boundaries:

The Canister Storage Building (CSB) operations provide interim storage of MCOs filled with SNF and load empty Multi Canister Overpacks (MCOs) into the cask for return to the K Basins via the Cask and Transportation System (CTS). The CSB also receives new MCOs (empty) provided by the MCO System for insertion into the casks. The CSB transfers ventilation condensate to liquid effluent disposal and solid waste to solid waste burial. The CSB stores PWR Core 2 (Shippingport) fuel assemblies received from T-Plant. The CSB receives and repackages other SNF, returning repackaged Site-Wide SNF to the 200 Area Interim Storage Area (ISA) for interim storage. SNF is dispositioned offsite at the national repository. The CSB subproject provides the facilities, systems, and equipment to perform these operations.

The CSB will also provide interim storage of IHLW and overpacked IHLW. The CSB will off load IHLW check the transportation container for contamination and return the shipping container to the private contractor for additional shipments. The CSB is expecting to receive IHLW beginning in FY2007 and continue to FY2028. Shipment of IHLW from the CSB is scheduled to begin in FY2034 and be completed no later than 2048.

CSB completion occurs when stored SNF is transferred to the national repository, FY 2040, and the D&D CSB facilities are turned over to ER. The CSB subproject completion occurs upon satisfactory completion of acceptance testing and the CSB is turned over to operations, FY 1999.

B.9.1.3.1.2 Canister Storage Building Technical Logic:

The Department of Energy (DOE), in partnership with its contractors, shall plan, acquire, operate, maintain, and dispose of physical assets as valuable national resources. Stewardship of these physical assets shall be accomplished in a cost-effective manner to meet the DOE mission. This shall incorporate industry standards, a graded approach, and performance objectives.

This diagram displays the primary work activities (functions) that are performed in each life cycle phase of the facility.

The diagram also reflects the technical logic (functional flow) for the facility through its remaining life cycle phases.

Project responsibility for the life cycle phases of the Canister Storage Building components are assigned as follows:

Table B.9-1 Responsibility Assignment Matrix for Canister Storage Building

Facility	Life Cycle Phase *								
	Program Planning	Pre Conceptual	Conceptual	Execute			O&M	Close Out	
				Design	Construction	Turnover		Post Ops	D&D
Canister Storage Building	**RL-WM01**				**RL-WM01**	**RL-WM01** RL-TW09	**RL-WM02** RL-TW09 RL-WM01	**RL-WM02**	**RL-WM02**

* RL PBS Identifier Index:

RL-TW09 - Immobilized Tank Waste Storage & Disposal
RL-WM02 - Canister Storage Building Operations
RL-WM01 - Spent Nuclear Fuel

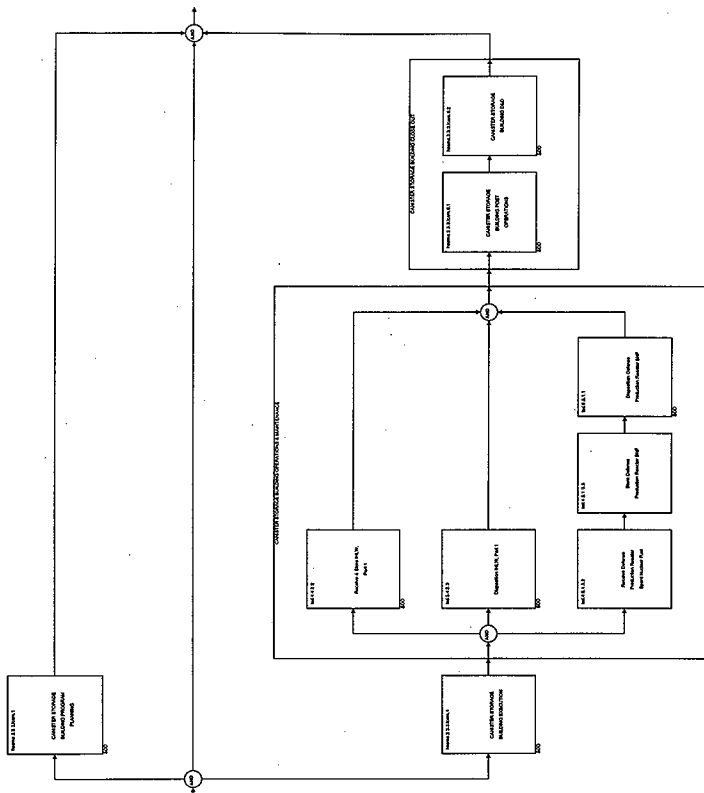

Figure B.9_1 CANISER STORAGE BUILDING

B.9.1.3.1.3 Canister Storage Building Life Cycle Functional Descriptions and Requirements

The Life Cycle Functional Descriptions table describes the life cycle phases and the functions performed during each phase. The Life Cycle Requirements table describes the requirements that trace to the functions listed in the Life Cycle Functional Descriptions table.

Table B.9-2 Canister Storage Building Life Cycle Functional Descriptions

hsems.2.3.3.lcam.4 CANISTER STORAGE BUILDING EXECUTION	
hsems.2.3.3.lcam.4.3 CANISTER STORAGE BUILDING TURNOVER	
hsems.2.3.3.lcam.5 CANISTER STORAGE BUILDING OPERATIONS & MAINTENANCE	
	tsd.4.4.2.2 Receive & Store IHLW, Part 1 Receive sealed containers of immobilized high-level waste (IHLW) from the LAW/HLW Plant, Phase 1. Prepare and place the containers in their designated storage locations, monitor the storage locations for storage containment integrity, for eventual retreival and shipment to geologic repository for disposal.
	tsd.5.4.2.3 Disposition IHLW, Part 1 This function includes activities necessary to prepare and load out stored IHLW for transport to the national repository for final disposition.

Table B.9-3 Canister Storage Building Life Cycle Requirements

Requirement	Function
Immobilized high level waste shall be shipped to the national high level waste repository	tsd.5.4.2.3
Immobilized high level waste interim storage facility shall be provided	tsd.4.4.2.2
Immobilized high level waste shall be safely stored in the Central Plateau pending availability of the National High Level Waste Repository	tsd.4.4.2.2
The design life shall be 40 years for nonreplaceable components. Receive IHLW starting Feb 2007.	tsd.4.4.2.2
Storage Capacity: Approximately 600 IHLW canister (0.61 m daimeter by 4.5 m tall).	tsd.4.4.2.2
The Phase I IHLW storage system shall be designed to ensure centerline temperature never exceeds 400C.	tsd.4.4.2.2

B.9.1.3.1.4 Canister Storage Building Boundary Diagram

This section identifies the other facilities (onsite and offsite) that have an interface (either input or output) with this facility.

Table B.9-4 Canister Storage Building Boundary Diagram

Major Input Interfaces	Facility	Major Output Interfaces
External Interfaces -None- Hanford Site Environmental System Interfaces LAW/HLW Plant, Phase 1	Canister Storage Building	External Interfaces National Geologic Repository Hanford Site Environmental System Interfaces -None-

B.9.1.3.1.5 Canister Storage Building Interface Descriptions and Summary Level Forecasts

This section contains the material, waste, and infrastructure forecasts for this facility. It identifies the interface type, the period of time for the forecasts, the life cycle total forecast value, and the execution year forecast quantity.

OFFSITE INPUTS

-None-

ONSITE INPUTS

Table B.9-5 Onsite Inputs for Canister Storage Building

Stream	Category	Period	Total	FY99	Units
hsems.2.2.2 LAW/HLW Plant, Phase 1					
Phase I Immobilized HLW	HLW	2007 - 2018	725.0		cubic meters

OFFSITE OUTPUTS

Table B.9-6 Offsite Outputs for Canister Storage Building

Stream	Category	Period	Total	FY99	Units
X National Geologic Repository					
TWRS Ph-I Immobilized HLW	HLW	2036 - 2036	600.0		cubic meters

ONSITE OUTPUTS

-None-

B.9.1.3.2 IHLW Storage Modules, Part 2 Facility

B.9.1.3.2.1 IHLW Storage Modules, Part 2 Facility Description

New & existing equipment required to tranport, receive and store Phase II solidified HLW prior to sending these wastes to a geologic repository. The IHLW Storage Modules, Phase II consists of the following subsystems:

- IHLW Transport

- Phase II IHLW package receiving system, which will accommodate Phase II IHLW packages received from the HLW Treatment Facility, Phase II.

- Modules to store the IHLW packages:
  Storage locations to hold the HLW packages
  Mechanisms to emplace and retrieve IHLW packages

- Modules for environmental control & monitor

B.9.1.3.2.2 IHLW Storage Modules, Part 2 Facility Technical Logic:

The Department of Energy (DOE), in partnership with its contractors, shall plan, acquire, operate, maintain, and dispose of physical assets as valuable national resources. Stewardship of these physical assets shall be accomplished in a cost-effective manner to meet the DOE mission. This shall incorporate industry standards, a graded approach, and performance objectives.

This diagram displays the primary work activities (functions) that are performed in each life cycle phase of the facility. The diagram also reflects the technical logic (functional flow) for the facility through its remaining life cycle phases.

Project responsibility for the life cycle phases of the IHLW Storage Modules, Part 2 components are assigned as follows:

Table B.9-7 Responsibility Assignment Matrix for IHLW Storage Modules, Part 2

Facility	Life Cycle Phase *								
	Program Planning	Pre Conceptual	Conceptual	Execute			O&M	Close Out	
				Design	Construction	Turnover		Post Ops	D&D
IHLW Storage Modules, Part 2	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09

* RL PBS Identifier Index:

RL-TW09 - Immobilized Tank Waste Storage & Disposal

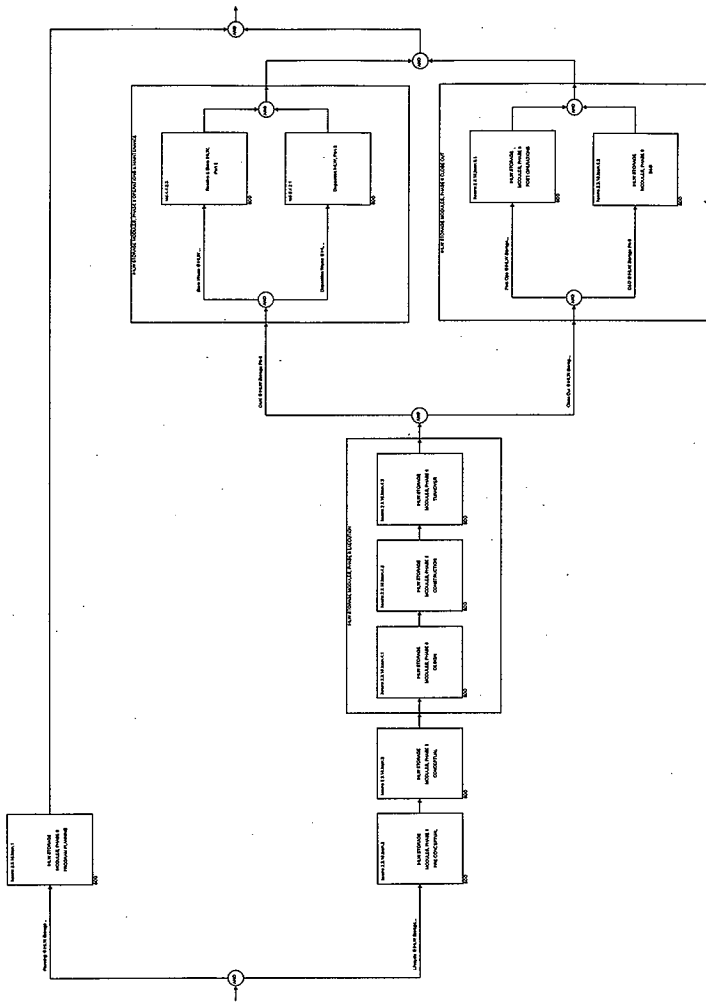

Figure B.9_2 IHLW STORAGE MODULES, PHASE II

B.9.1.3.2.3 IHLW Storage Modules, Part 2 Life Cycle Functional Descriptions and Requirements

The Life Cycle Functional Descriptions table describes the life cycle phases and the functions performed during each phase. The Life Cycle Requirements table describes the requirements that trace to the functions listed in the Life Cycle Functional Descriptions table.

Table B.9-8 IHLW Storage Modules, Part 2 Life Cycle Functional Descriptions

hsems.2.3.10.lcam.1 IHLW STORAGE MODULES, PHASE II PROGRAM PLANNING
hsems.2.3.10.lcam.2 IHLW STORAGE MODULES, PHASE II PRE-CONCEPTUAL
hsems.2.3.10.lcam.3 IHLW STORAGE MODULES, PHASE II CONCEPTUAL
hsems.2.3.10.lcam.4 IHLW STORAGE MODULES, PHASE II EXECUTION
hsems.2.3.10.lcam.4.1 IHLW STORAGE MODULES, PHASE II DESIGN
hsems.2.3.10.lcam.4.2 IHLW STORAGE MODULES, PHASE II CONSTRUCTION
hsems.2.3.10.lcam.4.3 IHLW STORAGE MODULES, PHASE II TURNOVER
hsems.2.3.10.lcam.5 IHLW STORAGE MODULES, PHASE II OPERATIONS & MAINTENANCE
tsd.4.4.2.3 Receive & Store IHLW, Part 2 Receive containers of IHLW from the HLW Treatment Facility, Phase II. Prepare and place the containers in their designated storage locations and monitor the storage locations for storage containment integrity.
tsd.5.4.2.1 Disposition IHLW, Part 2 This function includes systems and activities necessary to prepare and load out stored IHLW to the geological repository for final disposition. Under current schedules shipment will begin in 2036 and be completed in 2044.
hsems.2.3.10.lcam.6 IHLW STORAGE MODULES, PHASE II CLOSE OUT
hsems.2.3.10.lcam.6.1 IHLW STORAGE MODULES, PHASE II POST OPERATIONS
tsd.1.2.4.2.10 Maintain Safe & Compliant IHLW Storage Modules, Part 2 in CP Areas Following the Operations and Maintenance phase of the IHLW Storage Modules, Phase II, maintain the facility structures, systems and equipment, and monitoring systems until the facility is turned over for D&D dispositioned for reuse.
tsd.2.2.4.2.10 Transition IHLW Storage Modules, Part 2 At the completion of the Operations and Maintenance phase of the IHLW Storage Modules, Phase II, perform the activities necessary to place the plant in a safe, stable and environmentally sound condition pending final disposition of the facility. Activities include a degree of cleanout of process lines, storage/process vessels, contaminated equipment, etc., and removal of radioactive/hazardous materials. Cleanout activities for this function are limited to those that optimize surveillance and maintenance costs for the facility during the time between facility operations and D&D.
hsems.2.3.10.lcam.6.2 IHLW STORAGE MODULES, PHASE II D&D
tsd.2.2.5.2.10 D&D IHLW Storage Modules, Part 2 At the completion of the mission of the IHLW Storage Modules, Phase II, decontaminate the facility by removing all remaining radioactive and/or hazardous contamination from the facilities, equipment or soils by removal, washing, heating, chemical action, mechanical cleaning or other techniques. Decommission the IHLW Storage Modules, Phase II by demolishing the facility or transition to other use.

Table B.9-9 IHLW Storage Modules, Part 2 Life Cycle Requirements

Requirement	Function
Future facilities shall be converted to a low cost stable deactivated condition when their functionality is no longer required to meet operational objectives.	tsd.2.2.4.2.10
Central Plateau facilities other than processing facilities shall be dismantled	tsd.2.2.5.2.10
Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment	tsd.2.2.5.2.10
Immobilized high level waste shall be shipped to the national high level waste repository	tsd.5.4.2.1
Central Plateau gaseous effluent releases shall be monitored	tsd.1.2.4.2.10

Table B.9-9 IHLW Storage Modules, Part 2 Life Cycle Requirements (Continued)

Requirement	Function
Central Plateau facilities shall be maintained within the approved safety envelope	tsd.1.2.4.2.10
Immobilized high level waste shall be safely stored in the Central Plateau pending availability of the National High Level Waste Repository	tsd.4.4.2.3
Complete acquistion of new facilities, modification of existing facilities, and/or modificaiton of planned facilities as necessary for storage of Hanford Site IHLW and ILAW, and disposal of ILAW. Due Date: TBD. Six months after approval of Project Management Plan.	hsems.2.3.10. lcam.4 hsems.2.3.10. lcam.4.3
Preoperation and startup testing will be in accordance with DOE Order 5480.31.	hsems.2.3.10. lcam.4.3
The facility shall be designed to facilitate decommissioning.	tsd.2.2.5.2.10
The Phase II IHLW storage system shall be designed to ensure centerline temperature never exceeds 400C	tsd.4.4.2.3
Develop data to achieve CD-1 (Approval of Mission Need)	hsems.2.3.10. lcam.2
Develop technical, cost, schedule baseline at a level of detail/quality to achieve CD-2 (Approve Baseline)	hsems.2.3.10. lcam.3
Design to meet constrution, operational, and closeout requirements. Achieve CD-3(Start Build)	hsems.2.3.10. lcam.4.1
Acceptance of HLW and SNF into the Civilian Radioactive Waste Management System (CRWMS) shall be in accordance with DOE/RW-0351P, rev.1, Waste Acceptance System Requirements.	tsd.5.4.2.1
The Phase II IHLW Storage Modules storage basis is 11,000 large IHLW canisters from the HLW Treatment Facility, Phase II.	tsd.4.4.2.3
The design life shall be 75 years from the date of construction (non replaceable components) and 40 year (replaceable components). Receive IHLW starting 2016.	tsd.4.4.2.3
The Phase II IHLW Storage Modules shall prepare and transfer IHLW canisters for disposal at the geologic repository.	tsd.5.4.2.1
The Phase II IHLW Storage Modules shall have the capacity to prepare and loadout immobilized HLW for disposal at the geologic repository as specified in the requirement "IHLW preparation and transport to geologic repository" for a timeframe of 2036 to 2044.	tsd.5.4.2.1

B.9.1.3.2.4 IHLW Storage Modules, Part 2 Boundary Diagram

This section identifies the other facilities (onsite and offsite) that have an interface (either input or output) with this facility.

Table B.9-10 IHLW Storage Modules, Part 2 Boundary Diagram

Major Input Interfaces	Facility	Major Output Interfaces
External Interfaces -None- Hanford Site Environmental System Interfaces 331 Facility CP General Purpose Office CP General Purpose Shop CP Road System CP-ES 480 V Distribution System CP-Water Potable Water Piping Network HLW Treatment Facility, Phase 2 Misc Radiological Laboratories Water Systems in Central Plateau	IHLW Storage Modules, Part 2	External Interfaces National Geologic Repository Hanford Site Environmental System Interfaces CP Liquid Sanitary Waste

B.9.1.3.2.5 IHLW Storage Modules, Part 2 Interface Descriptions and Summary Level Forecasts

This section contains the material, waste, and infrastructure forecasts for this facility. It identifies the interface type,

the period of time for the forecasts, the life cycle total forecast value, and the execution year forecast quantity.

OFFSITE INPUTS

-None-

ONSITE INPUTS

Table B.9-11 Onsite Inputs for IHLW Storage Modules, Part 2

Stream	Category	Period	Total	FY99	Units
hsems.2.2.4 HLW Treatment Facility, Phase 2					
Phase II Immobilized HLW	HLW	2012 - 2028	15400		cubic meters
hsems.4.5.7 Misc Radiological Laboratories					
Radioactive Standards (Calibrations) for Stor&Disp	Radioactive Standards Lab Services				calibrations
hsems.4.6.1 331 Facility					
Non-rad Standards (Calibrations) for Stor&Disp	Non-rad Standards Lab Services				calibrations
hsems.5.1.2.2 Water Systems in Central Plateau					
Potable Water for Stor&Disp	Potable Water				Mgal
hsems.5.1.2.2.11.2 CP-Water Potable Water Piping Network					
Potable Water for Stor&Disp	Potable Water				Mgal
hsems.5.1.4.2.5 CP-ES 480 V Distribution System					
Electricity for Stor&Disp	Electricity				MW-hr
hsems.5.2.2.1 CP General Purpose Office					
Office Space (Program Owned) for Stor&Disp	Office Space (Program Owned)			1500.0	sq. ft.
hsems.5.2.3.1 CP General Purpose Shop					
Fab Shop Services for Stor&Disp	Fabrication Services (Other)				labor-hrs
Building Maintenance for Stor&Disp	(none forecasted)				
Custodial Services for Stor&Disp	Custodial Services			1500.0	sq. ft.
hsems.5.3.1.2 CP Road System					
Hanford Road Sys. Heavy Traffic for Stor&Disp	Hanford Road System (Heavy Traffic)				truck loads
Heavy Trucks for Stor&Disp	Heavy Trucks				vehicle-hrs

OFFSITE OUTPUTS

Table B.9-12 Offsite Outputs for IHLW Storage Modules, Part 2

Stream	Category	Period	Total	FY99	Units
X National Geologic Repository					
IHLW Storage, Ph-II Immobilized HLW	HLW	2036 - 2044	13900		cubic meters

ONSITE OUTPUTS

Table B.9-13 Onsite Outputs for IHLW Storage Modules, Part 2

Stream	Category	Period	Total	FY99	Units
hsems.5.1.3.2 CP Liquid Sanitary Waste					
IHLWSM Liquid Sanitary Waste	Sanitary Liquid Waste	2000 - 2042	16.7		Mgal

B.9.1.3.3 Immobilized LAW Disposal Facility

B.9.1.3.3.1 Immobilized LAW Disposal Facility Description

New equipment required to transport and dispose of Immobilized Low Activity Waste (ILAW) packages. The ILAW

Disposal Facility will consist of the following subsystems:

- ILAW Transport
- ILAW package receiving system
- Vaults to store the ILAW packages, which consist of:
  The ILAW packages and
  Mechanisms to emplace and retrieve ILAW packages
- Engineered surface barriers
- Vault monitors

B.9.1.3.3.2 Immobilized LAW Disposal Facility Technical Logic:

The Department of Energy (DOE), in partnership with its contractors, shall plan, acquire, operate, maintain, and dispose of physical assets as valuable national resources. Stewardship of these physical assets shall be accomplished in a cost-effective manner to meet the DOE mission. This shall incorporate industry standards, a graded approach, and performance objectives.

This diagram displays the primary work activities (functions) that are performed in each life cycle phase of the facility. The diagram also reflects the technical logic (functional flow) for the facility through its remaining life cycle phases.

Project responsibility for the life cycle phases of the Immobilized LAW Disposal Facility components are assigned as follows:

Table B.9-14 Responsibility Assignment Matrix for Immobilized LAW Disposal Facility

Facility	Life Cycle Phase *								
	Program Planning	Pre Conceptual	Conceptual	Execute			O&M	Close Out	
				Design	Construction	Turnover		Post Ops	D&D
Immobilized LAW Disposal Facility	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09

* RL PBS Identifier Index:

RL-TW09 - Immobilized Tank Waste Storage & Disposal

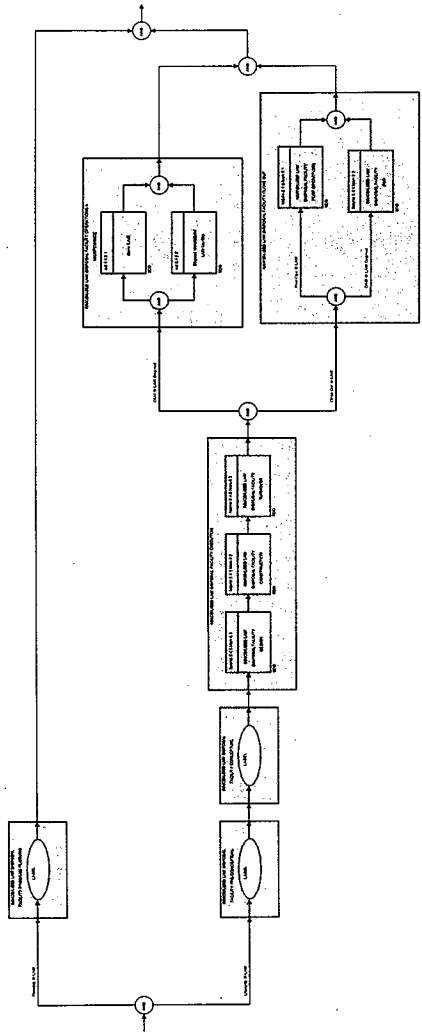

Figure B.9_3 IMMOBILIZED LAW DISPOSAL FACILITY

B.9.1.3.3.3 Immobilized LAW Disposal Facility Life Cycle Functional Descriptions and Requirements

The Life Cycle Functional Descriptions table describes the life cycle phases and the functions performed during each phase. The Life Cycle Requirements table describes the requirements that trace to the functions listed in the Life Cycle Functional Descriptions table.

Table B.9-15 Immobilized LAW Disposal Facility Life Cycle Functional Descriptions

hsems.2.4.5.lcam.1 IMMOBILIZED LAW DISPOSAL FACILITY PROGRAM PLANNING	
hsems.2.4.5.lcam.2 IMMOBILIZED LAW DISPOSAL FACILITY PRE-CONCEPTUAL	
hsems.2.4.5.lcam.3 IMMOBILIZED LAW DISPOSAL FACILITY CONCEPTUAL	
hsems.2.4.5.lcam.4 IMMOBILIZED LAW DISPOSAL FACILITY EXECUTION	
hsems.2.4.5.lcam.4.1 IMMOBILIZED LAW DISPOSAL FACILITY DESIGN	
hsems.2.4.5.lcam.4.2 IMMOBILIZED LAW DISPOSAL FACILITY CONSTRUCTION	
hsems.2.4.5.lcam.4.3 IMMOBILIZED LAW DISPOSAL FACILITY TURNOVER	
hsems.2.4.5.lcam.5 IMMOBILIZED LAW DISPOSAL FACILITY OPERATIONS & MAINTENANCE	
	tsd.4.4.2.1 Store ILAW Transport, receive, unload, emplace and store sealed containers of immobilized LAW from the LAW/HLW Plant, Phase I. Monitor immobilized LAW for containment integrity during storage.
	tsd.5.4.2.2 Dispose Immobilized LAW On-Site Provide on-site disposal of Immobilized LAW. Transport, receive, unload, emplace and cover sealed containers of immobilized LAW from the LAW Treatment Facility, Phase 2. It also includes monitor, control, containment and handling for long term disposal of Immobilized LAW. This function includes transporting the Immobilized LAW from the Interim Storage site (if necessary) to the disposal site.
hsems.2.4.5.lcam.6 IMMOBILIZED LAW DISPOSAL FACILITY CLOSE OUT	
hsems.2.4.5.lcam.6.1 IMMOBILIZED LAW DISPOSAL FACILITY POST OPERATIONS	
	tsd.1.2.4.3.5 Maintain Safe & Compliant Immobilized LAW Disposal Facility in CP Areas Maintain the Immobilized LAW Disposal facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facility is made available for clean-up.
	tsd.2.2.4.3.5 Transition Immobilized LAW Disposal Facility Initiate the transition phase of decontamination and decommissioning for the Immobilized LAW Disposal Facility
hsems.2.4.5.lcam.6.2 IMMOBILIZED LAW DISPOSAL FACILITY D&D	
	tsd.2.2.5.3.5 Close Immobilized LAW Disposal Facility At the completion of the long term storage mission of the Immobilized LAW Disposal Facility, the facility will be placed into a state to be the final disposal site for the ILAW. This could include decontamination, filling and sealing the storage vaults, and emplacement of a barrier.

Table B.9-16 Immobilized LAW Disposal Facility Life Cycle Requirements

Requirement	Function
Shipping and receiving. The ILAW Storage Facility shall be capable of receiving no less than 5 full containers per day	tsd.4.4.2.1
Shielded shipping containers shall be suitable for transporting ILAW waste packages. Shielding shall conform to DOT regulations and DOE 5480.11. The maximum gross wieght of a fully loaded vehicle shall be no more than 45,000 Kg.	tsd.4.4.2.1
The facility shall be designed to enable retrieval of stored packages for a period of 50 years from the time of receipt of the first package.	tsd.4.4.2.1
Safety shall comply with DOE Orders 6430.1A, 5480.4, 5480.7A, 5480.23, 5483.1A, 29CFR1910, 29CRF1926, and NFPA.	tsd.4.4.2.1

Table B.9-16 Immobilized LAW Disposal Facility Life Cycle Requirements (Continued)

Requirement	Function
The contractor is required to transport, store, and dispose of the ILAW.	tsd.4.4.2.1 tsd.5.4.2.2
Remediation levels and disposal standards that are consistent with long term uses for the central plateau shall be established by either the Resource Conservation and Recovery Act of 1976 (RCRA), CERCLA, or NEPA.	tsd.5.4.2.2
Future facilities shall be converted to a low cost stable deactivated condition when their functionality is no longer required to meet operational objectives.	tsd.2.2.4.3.5
Central Plateau facilities other than processing facilities shall be dismantled	tsd.2.2.5.3.5
Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment	tsd.2.2.5.3.5
Central Plateau shall be used for the disposal of radioactive waste materials that remain onsite	tsd.5.4.2.2
Onsite low level waste shall be dispositioned in the Central Plateau	tsd.5.4.2.2
Immobilized low activity tank waste shall be disposed in the Central Plateau	tsd.5.4.2.2
Central Plateau facilities shall be maintained within the approved safety envelope	tsd.1.2.4.3.5
Submit Interim ILAW Facility Part B Dangerous Waste Permit Application to Ecology. Due Date: 12/31/2000	tsd.4.4.2.1 tsd.5.4.2.2
Complete acquistion of new facilities, modification of existing facilities, and/or modificaiton of planned facilities as necessary for storage of Hanford Site IHLW and ILAW, and disposal of ILAW. Due Date: TBD. Six months after approval of Project Management Plan.	hsems.2.4.5.l cam.4 hsems.2.4.5.l cam.4.3
Initiate ILAW Interim Storage Facility construction Due Date: 6/30/2001	tsd.4.4.2.1 tsd.5.4.2.2
Initiate Hot Operations of ILAW Interim Storage Facility Due Date: 12/31/2002	tsd.4.4.2.1 tsd.5.4.2.2
Complete ILAW Disposal Facility Construction Due Date: 6/30/2003	tsd.5.4.2.2 hsems.2.4.5.l cam.4.2
Initiate Hot Operations of ILAW Disposal Facility Due Date: 12/31/2005	tsd.5.4.2.2 hsems.2.4.5.l cam.5
Disposal Capacity: 95,700 Packages	tsd.5.4.2.2
Storage Capacity: 7,000 Packages	tsd.4.4.2.1
Develop data to achieve CD-1 (Approval of Mission Need)	hsems.2.4.5.l cam.2 hsems.2.4.5.l cam.3
Develop technical, cost, schedule baseline at a level of detail/quality to achieve CD-2 (Approve Baseline)	hsems.2.4.5.l cam.3
Design to meet constrution, operational, and closeout requirements. Achieve CD-3(Start Build)	hsems.2.4.5.l cam.4.1
The Immobilized LAW Disposal Facility basis is 95,700 ILAW packages including those in the from the Immobilized LAW Storage Facility.	tsd.5.4.2.2

B.9.1.3.3.4 Immobilized LAW Disposal Facility Boundary Diagram

This section identifies the other facilities (onsite and offsite) that have an interface (either input or output) with this facility.

Table B.9-17 Immobilized LAW Disposal Facility Boundary Diagram

Major Input Interfaces	Facility	Major Output Interfaces
External Interfaces -None- Hanford Site Environmental System Interfaces LAW Treatment Facility, Phase 2 LAW/HLW Plant, Phase 1	Immobilized LAW Disposal Facility	External Interfaces -None- Hanford Site Environmental System Interfaces -None-

B.9.1.3.3.5 Immobilized LAW Disposal Facility Interface Descriptions and Summary Level Forecasts

This section contains the material, waste, and infrastructure forecasts for this facility. It identifies the interface type, the period of time for the forecasts, the life cycle total forecast value, and the execution year forecast quantity.

OFFSITE INPUTS

-None-

ONSITE INPUTS

Table B.9-18 Onsite Inputs for Immobilized LAW Disposal Facility

Stream	Category	Period	Total	FY99	Units
hsems.2.2.2 LAW/HLW Plant, Phase 1					
LAW/HLW Ph-I, Immobilized LAW (Initial)	RH LLMW III	2008 - 2016	17300		cubic meters
LAW/HLW Ph-I, Immobilized LAW (Final)	RH LLMW III	2017 - 2018	4320		cubic meters
hsems.2.2.3 LAW Treatment Facility, Phase 2					
LAW Ph-II, Immobilized LAW	RH LLMW III	2012 - 2028	227000		cubic meters

OFFSITE OUTPUTS

-None-

ONSITE OUTPUTS

-None-

B.9.1.4 Drivers for Immobilized Tank Waste Storage & Disposal

Table B.9-19 Source Documents for Immobilized Tank Waste Storage & Disposal

Name	Title
DE-AC06-96RL13200	Project Hanford Management Contract, Fluor Daniel Hanford, Inc.
DOE Order 430.1	Life Cycle Asset Management
DOE/EIS-0222D	Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan
DOE/RL-89-10	Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)
DOE/RL-96-92	Hanford Strategic Plan
DOE/RL-97-55	Hanford Site Environmental Management Specification
DOE/RW-0351P	Waste Acceptance System Requirements Document
HNF-SD-W465-DRD-001	
WHC-SD-W456-AGA-001	

Table B.9-19 Source Documents for Immobilized Tank Waste Storage & Disposal (Continued)

Name	Title
WHC-SD-WM-DRD-012	Design Requirements Document for the Interim Store Phase I Solidified High-Level Waste, Function 4.2.4.1.2
WHC-SD-WM-FRD-027	
WHC-SD-WM-MAR-008	TWRS Mission Analysis Report
WHC-SD-WM-SP-011	

B.9.2.0 Immobilized Tank Waste Storage & Disposal Work Breakdown Structure (WBS)

B.9.2.1 Immobilized Tank Waste Storage & Disposal WBS Hierarchy

RL PBS	RL WBS	Title
RL-TW09	1.01.09	Immobilized Tank Waste Storage & Disposal
	1.01.09.01	Immobilized LAW Disposal Facility
	1.01.09.01.01	Dispose Immobilized LAW On-Site
	1.01.09.01.02	Maintain Safe & Compliant Immobilized LAW Disposal Facility in CP Areas
	1.01.09.01.03	Transition Immobilized LAW Disposal Facility
	1.01.09.01.04	Close Immobilized LAW Disposal Facility
	1.01.09.01.05	Store ILAW
	1.01.09.02	Canister Storage Building
	1.01.09.02.01	Receive & Store IHLW, Part 1
	1.01.09.02.02	Disposition IHLW, Part 1
	1.01.09.03	IHLW Storage Modules, Part 2
	1.01.09.03.01	Receive & Store IHLW, Part 2
	1.01.09.03.02	Disposition IHLW, Part 2
	1.01.09.03.03	Maintain Safe & Compliant IHLW Storage Modules, Part 2 in CP Areas
	1.01.09.03.04	Transition IHLW Storage Modules, Part 2
	1.01.09.03.05	D&D IHLW Storage Modules, Part 2
	1.01.09.04	National Geologic Repository
	1.01.09.04.01	Receive and Dispose IHLW

B.9.2.2 Immobilized Tank Waste Storage & Disposal WBS Dictionary

The following pages contain the WBS dictionary for RL-TW09

B.9-20 WBS Dictionary for Dispose Immobilized LAW On-Site

1. Dictionary Title Dispose Immobilized LAW On-Site		2. Date 4 November 1998	3. PBS Number RL-TW09	4. Dict Rev
5. WBS No. 1.01.09.01.01	6. B & R No. EW02J122		7. Baseline CR No.	
8. Organization Name Immobilized Tank Waste Storage & Disposal				

9. Scope of Work

Provide on-site disposal of Immobilized LAW. Transport, receive, unload, emplace and cover sealed containers of immobilized LAW from the LAW Treatment Facility, Phase 2. It also includes monitor, control, containment and handling for long term disposal of Immobilized LAW. This function includes transporting the Immobilized LAW from the Interim Storage site (if necessary) to the disposal site.

This activity supports achieving the following technical baseline functions:

- Provide on-site disposal of Immobilized LAW. This function includes transporting the Immobilized LAW from the Interim Storage site (if necessary) to the disposal site. It includes monitor, control, containment and handling for long term disposal of Immobilized LAW.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- The contractor is required to transport, store, and dispose of the ILAW.
- Remediation levels and disposal standards that are consistent with long term uses for the central plateau shall be established by either the Resource Conservation and Recovery Act of 1976 (RCRA), CERCLA, or NEPA.
- Central Plateau shall be used for the disposal of radioactive waste materials that remain onsite
- Onsite low level waste shall be dispositioned in the Central Plateau
- Immobilized low activity tank waste shall be disposed in the Central Plateau
- Submit Interim ILAW Facility Part B Dangerous Waste Permit Application to Ecology.

  Due Date: 12/31/2000
- Initiate ILAW Interim Storage Facility construction

  Due Date: 6/30/2001
- Initiate Hot Operations of ILAW Interim Storage Facility

  Due Date: 12/31/2002
- Complete ILAW Disposal Facility Construction

  Due Date: 6/30/2003
- Initiate Hot Operations of ILAW Disposal Facility

  Due Date: 12/31/2005
- Disposal Capacity: 95,700 Packages
- The Immobilized LAW Disposal Facility basis is 95,700 ILAW packages including those in the from the Immobilized LAW Storage Facility.

B.9-21 WBS Dictionary for Maintain Safe & Compliant Immobilized LAW Disposal Facility in CP Areas

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
Maintain Safe & Compliant Immobilized LAW Disposal Facility in CP Areas		28 October 1998	RL-TW09	
5. WBS No.	6. B & R No.		7. Baseline CR No.	
1.01.09.01.02	EW02J122			
8. Organization Name				
Immobilized Tank Waste Storage & Disposal				

9. Scope of Work

Maintain the Immobilized LAW Disposal facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facility is made available for clean-up.

This activity supports achieving the following technical baseline functions:

- Following the Operations and Maintenance phase of the Immobilized LAW Storage Facility, maintain the facility structures, systems and equipment, and monitoring systems until the facility is turned over for D&D or returned to the Operational phase for additional waste processing.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau facilities shall be maintained within the approved safety envelope

B.9-22 WBS Dictionary for Transition Immobilized LAW Disposal Facility

1. Dictionary Title Transition Immobilized LAW Disposal Facility		2. Date 4 November 1998	3. PBS Number RL-TW09	4. Dict Rev
5. WBS No. 1.01.09.01.03	6. B & R No. EW02J122		7. Baseline CR No.	
8. Organization Name Immobilized Tank Waste Storage & Disposal				

9. Scope of Work

Initiate the transition phase of decontamination and decommissioning for the Immobilized LAW Disposal Facility

This activity supports achieving the following technical baseline functions:

- At the completion of the Operations and Maintenance phase of the Immobilized LAW Storage Facility, perform the activities necessary to place the facility in a safe, stable and environmentally sound condition pending final disposition of the facility. Activities include a degree of cleanout of storage vessels, contaminated equipment, etc., and removal of radioactive/hazardous materials. Cleanout activities for this function are limited to those that optimize surveillance and maintenance costs for the facility during the time between facility operations and D&D or transition to other use.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Future facilities shall be converted to a low cost stable deactivated condition when their functionality is no longer required to meet operational objectives.

B.9-23 WBS Dictionary for Close Immobilized LAW Disposal Facility

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
Close Immobilized LAW Disposal Facility		30 July 1998	RL-TW09	
5. WBS No.	6. B & R No.		7. Baseline CR No.	
1.01.09.01.04	EW02J122			
8. Organization Name				
Immobilized Tank Waste Storage & Disposal				

9. Scope of Work

At the completion of the long term storage mission of the Immobilized LAW Disposal Facility, the facility will be placed into a state to be the final disposal site for the ILAW. This could include decontamination, filling and sealing the storage vaults, and emplacement of a barrier.

This activity supports achieving the following technical baseline functions:

- Complete closure of the storage facility as a final disposal action for ILAW generated by Phase I Vendors.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau facilities other than processing facilities shall be dismantled
- Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment

B.9-24 WBS Dictionary for Store ILAW

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
Store ILAW		28 October 1998	RL-TW09	
5. WBS No.	6. B & R No.		7. Baseline CR No.	
1.01.09.01.05	EW02J122			

8. Organization Name
Immobilized Tank Waste Storage & Disposal

9. Scope of Work

Transport, receive, unload, emplace and store sealed containers of immobilized LAW from the LAW/HLW Plant, Phase I. Monitor immobilized LAW for containment integrity during storage.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Shipping and receiving. The ILAW Storage Facility shall be capable of receiving no less than 5 full containers per day
- Shielded shipping containers shall be suitable for transporting ILAW waste packages. Shielding shall conform to DOT regulations and DOE 5480.11. The maximum gross wieght of a fully loaded vehicle shall be no more than 45,000 Kg.
- The facility shall be designed to enable retrieval of stored packages for a period of 50 years from the time of receipt of the first package.
- Safety shall comply with DOE Orders 6430.1A, 5480.4, 5480.7A, 5480.23, 5483.1A, 29CFR1910, 29CRF1926, and NFPA.
- The contractor is required to transport, store, and dispose of the ILAW.
- Submit Interim ILAW Facility Part B Dangerous Waste Permit Application to Ecology.

  Due Date: 12/31/2000
- Initiate ILAW Interim Storage Facility construction

  Due Date: 6/30/2001
- Initiate Hot Operations of ILAW Interim Storage Facility

  Due Date: 12/31/2002
- Storage Capacity: 7,000 Packages

B.9-25 WBS Dictionary for Receive & Store IHLW, Part 1

1. Dictionary Title Receive & Store IHLW, Part 1		2. Date 12 November 1998	3. PBS Number RL-TW09	4. Dict Rev
5. WBS No. 1.01.09.02.01	6. B & R No. EW02J122		7. Baseline CR No.	
8. Organization Name Immobilized Tank Waste Storage & Disposal				

9. Scope of Work

Receive sealed containers of immobilized high-level waste (IHLW) from the LAW/HLW Plant, Phase 1. Prepare and place the containers in their designated storage locations, monitor the storage locations for storage containment integrity, for eventual retreival and shipment to geologic repository for disposal.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Immobilized high level waste interim storage facility shall be provided
- Immobilized high level waste shall be safely stored in the Central Plateau pending availability of the National High Level Waste Repository
- The design life shall be 40 years for nonreplaceable components. Receive IHLW starting Feb 2007.
- Storage Capacity: Approximately 600 IHLW cansister (0.61 m daimeter by 4.5 m tall).
- The Phase I IHLW storage system shall be designed to ensure centerline temperature never exceeds 400C.

B.9-26 WBS Dictionary for Disposition IHLW, Part 1

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
Disposition IHLW, Part 1		30 July 1998	RL-TW09	
5. WBS No.	6. B & R No.		7. Baseline CR No.	
1.01.09.02.02	EW02J122			
8. Organization Name				
Immobilized Tank Waste Storage & Disposal				

9. Scope of Work

This function includes activities necessary to prepare and load out stored IHLW for transport to the national repository for final disposition.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Immobilized high level waste shall be shipped to the national high level waste repository

B.9-27 WBS Dictionary for Receive & Store IHLW, Part 2

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
Receive & Store IHLW, Part 2		12 November 1998	RL-TW09	
5. WBS No.	6. B & R No.		7. Baseline CR No.	
1.01.09.03.01	EW02J122			
8. Organization Name				
Immobilized Tank Waste Storage & Disposal				

9. Scope of Work

Receive containers of IHLW from the HLW Treatment Facility, Phase II. Prepare and place the containers in their designated storage locations and monitor the storage locations for storage containment integrity.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Immobilized high level waste shall be safely stored in the Central Plateau pending availability of the National High Level Waste Repository
- The Phase II IHLW storage system shall be designed to ensure centerline temperature never exceeds 400C
- The Phase II IHLW Storage Modules storage basis is 11,000 large IHLW canisters from the HLW Treatment Facility, Phase II.
- The design life shall be 75 years from the date of construction (non replaceable components) and 40 year (replaceable components). Receive IHLW starting 2016.

B.9-28 WBS Dictionary for Disposition IHLW, Part 2

1. Dictionary Title Disposition IHLW, Part 2		2. Date 4 November 1998	3. PBS Number RL-TW09	4. Dict Rev
5. WBS No. 1.01.09.03.02	6. B & R No. EW02J122		7. Baseline CR No.	
8. Organization Name Immobilized Tank Waste Storage & Disposal				

9. Scope of Work

This function includes systems and activities necessary to prepare and load out stored IHLW to the geological repository for final disposition. Under current schedules shipment will begin in 2036 and be completed in 2044.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Immobilized high level waste shall be shipped to the national high level waste repository
- Acceptance of HLW and SNF into the Civilian Radioactive Waste Management System (CRWMS) shall be in accordance with DOE/RW-0351P, rev.1, Waste Acceptance System Requirements.
- The Phase II IHLW Storage Modules shall prepare and transfer IHLW canisters for disposal at the geologic repository.
- The Phase II IHLW Storage Modules shall have the capacity to prepare and loadout immobilized HLW for disposal at the geologic repository as specified in the requirement "IHLW preparation and transport to geologic repository" for a timeframe of 2036 to 2044.

B.9-29 WBS Dictionary for Maintain Safe & Compliant IHLW Storage Modules, Part 2 in CP Areas

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
Maintain Safe & Compliant IHLW Storage Modules, Part 2 in CP Areas		28 October 1998	RL-TW09	
5. WBS No.	6. B & R No.		7. Baseline CR No.	
1.01.09.03.03	EW02J122			
8. Organization Name				
Immobilized Tank Waste Storage & Disposal				

9. Scope of Work

Following the Operations and Maintenance phase of the IHLW Storage Modules, Phase II, maintain the facility structures, systems and equipment, and monitoring systems until the facility is turned over for D&D dispositioned for reuse.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau gaseous effluent releases shall be monitored
- Central Plateau facilities shall be maintained within the approved safety envelope

B.9-30 WBS Dictionary for Transition IHLW Storage Modules, Part 2

1. Dictionary Title Transition IHLW Storage Modules, Part 2		2. Date 4 November 1998	3. PBS Number RL-TW09	4. Dict Rev
5. WBS No. 1.01.09.03.04	6. B & R No. EW02J122		7. Baseline CR No.	
8. Organization Name Immobilized Tank Waste Storage & Disposal				

9. Scope of Work

At the completion of the Operations and Maintenance phase of the IHLW Storage Modules, Phase II, perform the activities necessary to place the plant in a safe, stable and environmentally sound condition pending final disposition of the facility. Activities include a degree of cleanout of process lines, storage/process vessels, contaminated equipment, etc., and removal of radioactive/hazardous materials. Cleanout activities for this function are limited to those that optimize surveillance and maintenance costs for the facility during the time between facility operations and D&D.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Future facilities shall be converted to a low cost stable deactivated condition when their functionality is no longer required to meet operational objectives.

B.9-31 WBS Dictionary for D&D IHLW Storage Modules, Part 2

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
D&D IHLW Storage Modules, Part 2		30 July 1998	RL-TW09	
5. WBS No.	6. B & R No.		7. Baseline CR No.	
1.01.09.03.05	EW02J122			
8. Organization Name				
Immobilized Tank Waste Storage & Disposal				

9. Scope of Work

At the completion of the mission of the IHLW Storage Modules, Phase II, decontaminate the facility by removing all remaining radioactive and/or hazardous contamination from the facilities, equipment or soils by removal, washing, heating, chemical action, mechanical cleaning or other techniques. Decommission the IHLW Storage Modules, Phase II by demolishing the facility or transition to other use.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau facilities other than processing facilities shall be dismantled
- Transitioned facilities shall be decontaminated and decommissioned sufficiently to enable removal or closure through entombment
- The facility shall be designed to facilitate decommissioning.

B.9-32 WBS Dictionary for Receive and Dispose IHLW

1. Dictionary Title Receive and Dispose IHLW		2. Date 28 October 1998	3. PBS Number RL-TW09	4. Dict Rev
5. WBS No. 1.01.09.04.01	6. B & R No. EW02J122		7. Baseline CR No.	
8. Organization Name Immobilized Tank Waste Storage & Disposal				

9. Scope of Work

Hanford will remove immobilized high level waste (IHLW) from interim storage and place the IHLW on transporters. The DOE high level waste geologic repository (Yucca Mt) will receive, transport, emplace, close and monitor spent fuel and immobilized high level waste. The DOE high level waste geologic repository charges each waste generator for acceptance of the waste to be disposed. This WBS provides programmatic funding for high level waste geologic repository fees incurred by TWRS.

B.9.3.1 Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64
1			Hanford Site
1.01			Tank Waste Remediation System
1.01.09			Immobilized Waste (TW09)
1.01.09.01			Immobilized LAW Disposal Facility
1.01.09.01.01			Dispose Immobilized LAW On-Site
1.01.09.01.01.01			ILAW Project Management
460.005	01OCT98*	31JAN18	LAW Project Management
1.01.09.01.01.02			ILAW Systems Definition
460.015	01OCT99*	29SEP00	Maintain Interface with Private Contractor
460.030	01OCT98*	31JAN18	Maintain Technical Reqmnts for Storage/Disposal
460.037	01APR99*	03SEP99	Project Management Plan Update
460.037A1B		30SEP99	TWR 3.1.1 ILAW Disposal Plan T09-99-101
460.095	02OCT00*	28SEP01	Prep/Maintain Tech Requirements for Disposal
1.01.09.01.01.03			ILAW Performance Assessment
460.140	01OCT98*	31MAR99	1998 Performance Assessment
460.145	01OCT98*	28SEP01	Data Collection for 2001 Performance Assessment
460.145G1A		31DEC99	Issue Waste Form Data Package for 2001 PA T09-00-005
460.155	04JAN00*	31DEC01	2001 Performance Assessment

Project Start 01OCT98
Project Finish 30SEP00
Data Date 01OCT98
Run Date 17NOV98

Early Bar
Progress Bar
Critical Activity

SBP2

Sheet 1 of 8

Tank Waste Remediation System
PMBS - Life of Project
TW09- Immobilized Tank Waste S&D

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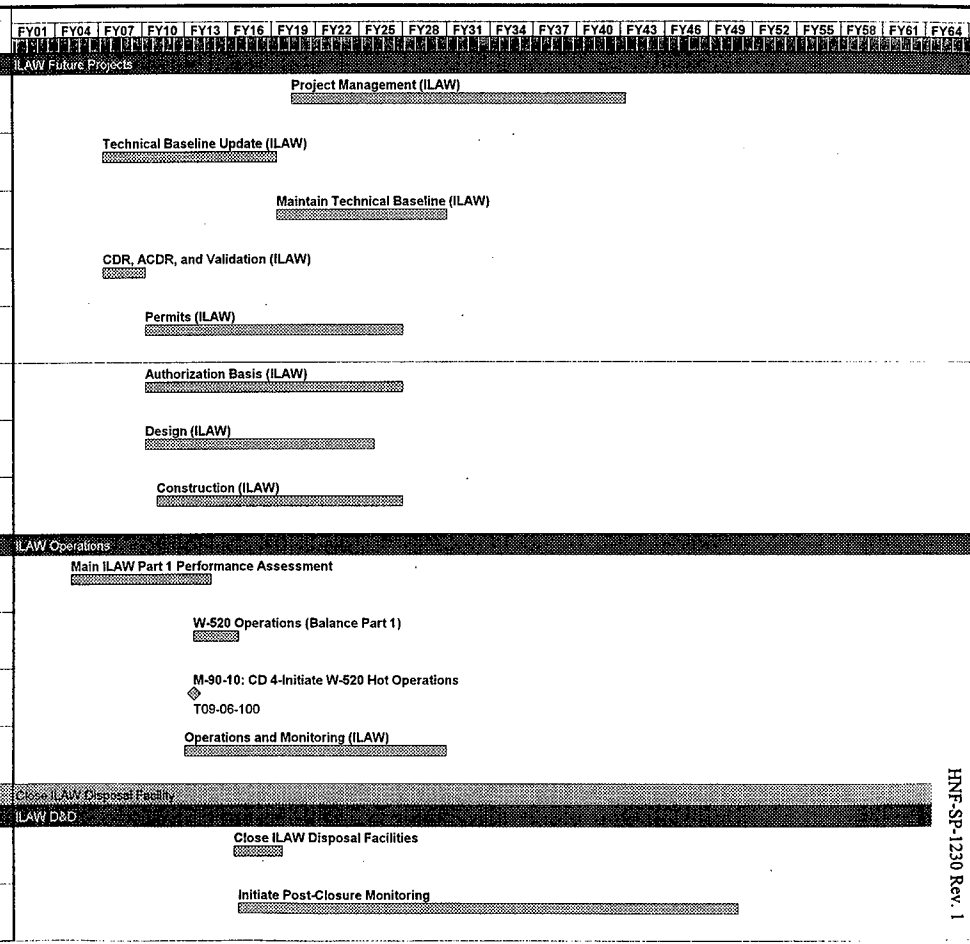
Activity ID	Early Start	Early Finish	Data Collection for Performance Assessment
460.160	01APR99*	30JAN04	
1.01.09.01.01.04			ILAW Project W-520: Immobilized LAW Disp Complex
460.105	01OCT98*	30SEP04	W-520 Conceptual Design
460.105A5A		31DEC03	M-90-07-T01: Complete W-520 Conceptual Design T09-99-011
460.110	02JAN04*	31JAN06	W-520 Advanced Conceptual Design
460.112	02OCT03*	30APR10	W-520 Project Validation
460.115	16DEC05*	09AUG10	W-520 Design
460.115A3A		15JUN07	M-90-09-T01: Complete W-520 Detailed Design T09-04-001
460.118	02OCT06*	29SEP08	W-520 Equipment Procurement
460.120	27AUG07*	10DEC10	W-520 Construction
460.120AA	27AUG07		M-90-08: CD 3-Initiate W-520 Construction T09-05-005
460.125	01OCT03*	30SEP09	W-520 Regulatory Requirements
460.125H1A		25AUG08	M-20-58: Sub ILAW Disp Part B Permit App to Ecol T09-01-020
460.130	01OCT03*	30SEP09	W-520 Authorization Basis Development/Approval
470.060	10AUG10*	16MAY11	W-520 Proc/Training/OTP/ORR (Bal Part 1)

FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64

Activity ID	Early Start	Early Finish
1.01.09.01.01.05		
600.005	01FEB18*	31JAN41
600.010	31JAN05*	31JAN17
600.015	01FEB17*	29SEP28
600.020	31JAN05*	31DEC07
600.030	02JAN08*	30SEP25
600.035	02JAN08*	30SEP25
600.050	02JAN08*	29SEP23
600.060	01OCT08*	30SEP25
1.01.09.01.01.06		
460.170	01OCT02*	29JUN12
470.075	17MAY11*	24JUN14
470.075A1	17MAY11	
640.040	01OCT10*	29SEP28
1.01.09.01.04		
1.01.09.01.04.01		
470.080	03MAR14*	28JUN17
550.020	25JUN14*	30SEP48



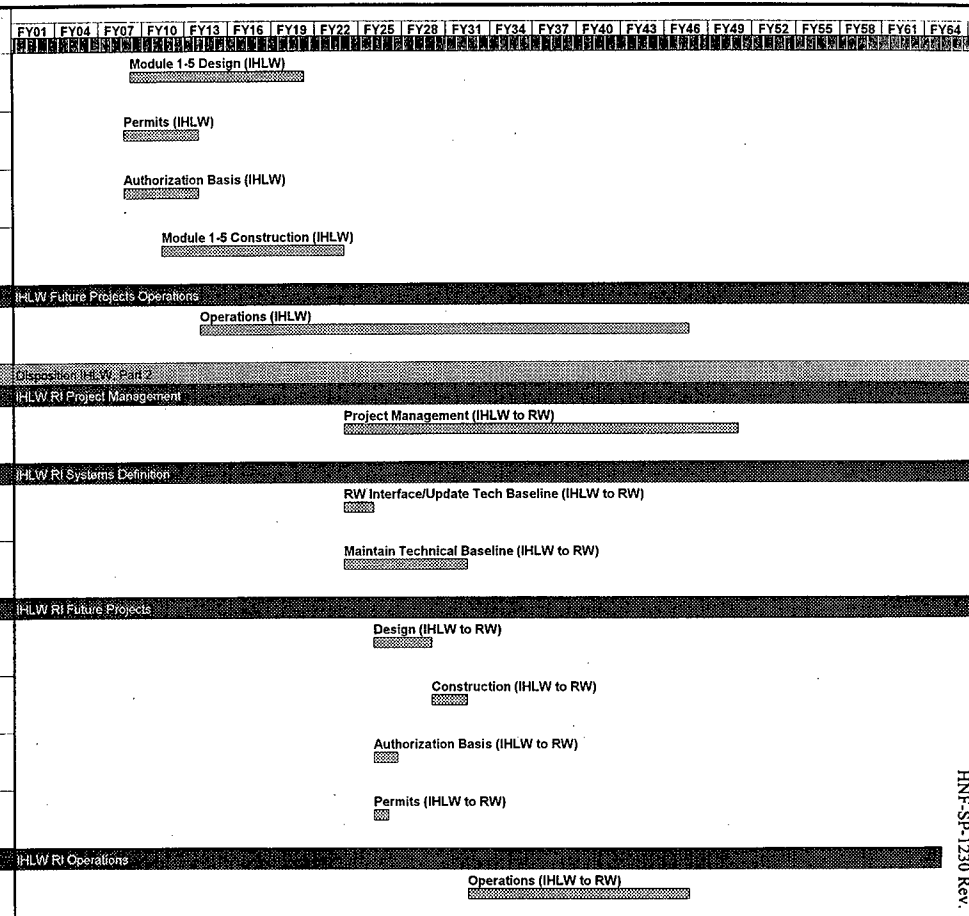
Activity ID	Early Start	Early Finish	FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64
640.050	03MAR15*	30SEP48	Closure/D&D
1.01.09.01.05			Store ILAW On-Site
1.01.09.01.05.01			Project W-465, Immobilized LAW Interim Stor Fac
460.045	01OCT98*	28SEP01	W-465 Advanced Conceptual Design
460.045BHA		28SEP01	Complete W-465 Advanced Conceptual Design T09-01-001
460.060	16DEC98*	30APR03	W-465 Project Revalidation
460.065	04SEP01*	31JUL06	W-465 Design
460.065BB		30JUN03	M-90-04-T01: Complete W-465 Definitive Design T09-01-010
460.068	01JUL03*	31JAN05	W-465 Equipment Procurement
460.070	02JUN03*	31JAN06	W-465 Modify Vaults
460.070C1	01OCT03		M-90-03: CD 3-Initiate W-465 Construction T09-00-003
460.075	01OCT02*	29JUL05	W-465 NEPA Documentation
460.080	01OCT01*	31MAR06	W-465 RCRA Permits
460.080C1A		30APR04	M-20-57: Sub ILAW Part B Permit App to Ecology T09-01-021
460.085	02OCT00*	31OCT05	W-465 Authorization Basis Development/Approval
470.010	03OCT05*	31DEC07	W-465 Procedures/Training/OTP/ORR (Init Part 1)

Activity ID	Early Start	Early Finish	Milestone
470.010A1	01FEB06		RL-WT010-ILAW Product Accptnce Inspect/Test Meth (T09-06-001)
1.01.09.01.05.02			W-465 Operations
470.040	02JAN08*	28FEB14	W-465 Operations (Initial Part 1)
470.040A1	02JAN08		M-90-06: CD 4-Initiate W-465 Hot Operations (T09-02-002)
1.01.09.02			Canister Storage Building
1.01.09.02.01			Receive/Store IHLW Part 1
1.01.09.02.01.01			IHLW Project Management
440.010	01OCT98*	31JAN18	IHLW Project Management
1.01.09.02.01.02			IHLW Systems Definition
440.020	04JAN00*	28SEP12	Prepare/Maintain ICDs
440.040	01OCT98*	28SEP01	Maintain Technical Requirements for IHLW
440.040A1B		03SEP99	TWR 4.1.1 IHLW Storage Plan (T09-99-102)
1.01.09.02.01.03			Project W-464, Immobilized HLW Interim Stor Fac
440.060	01OCT98*	29SEP00	W-464 Advanced Conceptual Design
440.060ANA		31MAR00	Complete W-464 Advanced Conceptual Design (T09-00-004)
440.070	01APR99*	30SEP04	W-464 Project Revalidation
440.090	03JUN02*	30SEP04	W-464 Equipment Procurement
440.100	02OCT00*	30JUN05	W-464 Design
440.100A2	02JAN01		CD 2-Initiate W-464 Detailed Design (T09-01-002)

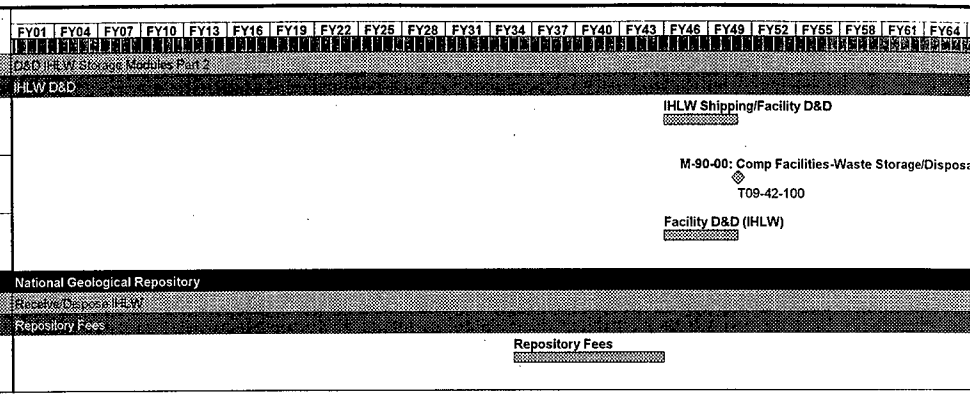
Activity ID	Early Start	Early Finish	
440.110	01OCT98*	23FEB01	W-464 NEPA Documentation
440.115	04JAN00*	27FEB04	W-464 RCRA Permits
440.115B1A		28JUN02	M-90-12: Sub Revised CS Facility Part A Permit T09-99-100
440.115C1A		30JUN03	M-20-56: Sub CSB Part B Application to Ecology T09-01-100
440.120	01MAR01*	30SEP05	W-464 Authorization Basis Development/Approval
440.140	01OCT02*	01MAR05	W-464 Construction
450.010	01JUN04*	31JAN07	W-464 Proc/Training/OTPs/Conduct Readiness Asmnt
450.010A7A		31MAR06	M-90-11: Complete W-464 Startup T09-03-003
1.01.09.02.01.04			IHLW Operations
450.030	01FEB07*	31JAN18	W-464 Transprt/Recve/Interm Store IHLW (Part 1)
1.01.09.03			IHLW Storage Modules, Part 2
1.01.09.03.01			Receive and Store IHLW, Part 2
1.01.09.03.01.01			IHLW Future Projects Project Management
610.010	01FEB18*	30SEP43	Project Management (IHLW)
1.01.09.03.01.02			IHLW Systems Definition
610.020	01JUL04*	30SEP05	Prepare Technical Baseline (IHLW)
610.030	03OCT05*	30SEP21	Maintain Technical Baseline (IHLW)
1.01.09.03.01.03			IHLW Future Projects
610.040	03OCT05*	30JUN16	Module 1-5 CDR, ACDR, Validtion/Revalidtn (IHLW)

FY01 FY04 FY07 FY10 FY13 FY16 FY19 FY22 FY25 FY28 FY31 FY34 FY37 FY40 FY43 FY46 FY49 FY52 FY55 FY58 FY61 FY64

Activity ID	Early Start	Early Finish	Activity
610.060	02JAN07*	31DEC18	Module 1-5 Design (IHLW)
610.070	05JUL06*	30SEP11	Permits (IHLW)
610.080	05JUL06*	30SEP11	Authorization Basis (IHLW)
610.090	02MAR09*	30SEP21	Module 1-5 Construction (IHLW)
1.01.09.03.01.04			IHLW Future Projects Operations
630.020	03OCT11*	31MAY45	Operations (IHLW)
1.01.09.03.02			Disposition IHLW, Part 2
1.01.09.03.02.01			IHLW RI Project Management
570.010	01OCT21*	30SEP48	Project Management (IHLW to RW)
1.01.09.03.02.02			IHLW RI Systems Definition
570.020	01OCT21*	29SEP23	RW Interface/Update Tech Baseline (IHLW to RW)
570.030	01OCT21*	29MAR30	Maintain Technical Baseline (IHLW to RW)
1.01.09.03.02.03			IHLW RI Future Projects
570.060	02OCT23*	30SEP27	Design (IHLW to RW)
570.070	01OCT27*	29MAR30	Construction (IHLW to RW)
570.090	02OCT23*	30MAY25	Authorization Basis (IHLW to RW)
570.100	02OCT23*	30SEP24	Permits (IHLW to RW)
1.01.09.03.02.04			IHLW RI Operations
570.120	01APR30*	31MAY45	Operations (IHLW to RW)



Activity ID	Early Start	Early Finish
1.01.09.03.05		
1.01.09.03.05.01		
530.150	01OCT43*	30SEP48
530.150A2A		30SEP48
530.190	01OCT43*	30SEP48
1.01.09.04		
1.01.09.04.01		
1.01.09.04.01.01		
570.130	01JUN33*	30SEP43



B.9.3.2 Execution Year Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP / FY00 OCT
1			Hanford Site
1.01			Tank Waste Remediation System
1.01.09			Immobilized Waste (TW09)
1.01.09.01			Immobilized LAW Disposal Facility
1.01.09.01.01			Dispose Immobilized LAW On-Site
1.01.09.01.01.01			ILAW Project Management
460.005	01OCT98*	31JAN18	LAW Project Management
1.01.09.01.01.02			ILAW Systems Definition
460.030	01OCT98*	31JAN18	Maintain Technical Reqmnts for Storage/Disposal
460.037	01APR99*	03SEP99	Project Management Plan Update
460.037A1B		30SEP99	TWR 3.1.1 ILAW Disposal Plan ◇ T09-99-101
1.01.09.01.01.03			ILAW Performance Assessment
460.140	01OCT98*	31MAR99	1998 Performance Assessment
460.145	01OCT98*	28SEP01	Data Collection for 2001 Performance Assessment
460.160	01APR99*	30JAN04	Data Collection for Performance Assessment
1.01.09.01.01.04			ILAW Project W-520, Immobilized LAW Disp Complex
460.105	01OCT98*	30SEP04	W-520 Conceptual Design
1.01.09.01.05			Store ILAW On-Site
1.01.09.01.05.01			Project W-465, Immobilized LAW Interim Stor Fac
460.045	01OCT98*	28SEP01	W-465 Advanced Conceptual Design

ject Start	01OCT98	Early Bar	98P2
ject Finish	30SEP48	Progress Bar	
a Date	01OCT98	Critical Activity	
Date	17NOV98		

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Sheet 1 of 2

Tank Waste Remediation System
PMBS - FY 1999
TW09- Immobilized Tank Waste S&D

TW09-42

HNF-SP-1230 Rev. 1

Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP / FY00 OCT
460.060	16DEC98*	30APR03	W-465 Project Revalidation
1.01.09.02			Canister Storage Building
1.01.09.02.01			Receive/Store HLW, Part I
1.01.09.02.01.01			IHLW Project Management
440.010	01OCT98*	31JAN18	IHLW Project Management
1.01.09.02.01.02			IHLW Systems Definition
440.040	01OCT98*	28SEP01	Maintain Technical Requirements for IHLW
440.040A1B		03SEP99	TWR 4.1.1 IHLW Storage Plan ◇ T09-99-102
1.01.09.02.01.03			Project W-464, Immobilized HLW Interim Stor Fac
440.060	01OCT98*	29SEP00	W-464 Advanced Conceptual Design
440.070	01APR99*	30SEP04	W-464 Project Revalidation
440.110	01OCT98*	23FEB01	W-464 NEPA Documentation

B.9.3.3 Milestone List

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/ TPA Date
T09-99-102	TWR4.1.1 IHLW Storage Plan	RL	-	3-Sep-99	-
T09-99-101	TWR 3.1.1 ILAW Disposal Plan	RL	-	30-Sep-99	-
T09-00-005	Issue Waste Form Data Packages for 2001 PA	RL	-	31-Dec-99	-
T09-00-004	Complete W-464 Advanced Conceptual Design	RL	-	31-Mar-00	
T09-01-002	CD 2 - Initiate W-464 Detailed Design	RL	-	02-Jan-01	-
T09-01-001	Complete W-465 Advanced Conceptual Design	RL	-	28-Sep-01	-
T09-99-100	Submit Revised Canister Storage Facility Part A Dangerous Waste Permit Application to Ecology	HQ-I	M-90-12	28-Jun-02	30-Jun-99
T09-01-100	Submit Canister Storage Facility Part B Dangerous Waste Permit Application to Ecology	HQ-I	M-20-56	30-Jun-03	31-Dec-00
T09-01-010	Complete ILAW Interim Storage Facility Detailed Design	RL (Target	M-90-04-T01	30-Jun-03	30-Jun-01
T09-00-003	Initiate ILAW Interim Storage Facility Construction	HQ-I	M-90-03	01-Oct-03	30-Jun-01
T09-99-011	Complete ILAW Disposal Facility Conceptual Design	RL (Target	M-90-07-T01	31-Dec-03	30-Jun-00
T09-01-021	Submit Interim ILAW Facility Part B Dangerous Waste Permit Application to Ecology	HQ-I	M-20-57	30-Apr-04	31-Dec-00
T09-06-001	RL-WT010-ILAW Product Acceptance Inspection and Test Methodology (TIP)	RL	-	01-Feb-06	-
T09-03-003	Complete Canister Storage Facility Construction	HQ-I	M-90-11	31-Mar-06	31-Dec-02
T09-04-001	Complete ILAW Disposal Facility Detailed Design	RL (Target	M-90-09-T01	15-Jun-07	31-Mar-03
T09-05-005	Initiate ILAW Disposal Facility Construction	HQ-I	M-90-08	27-Aug-07	30-Jun-03
T09-02-002	Initiate Hot Operations of ILAW Interim Storage Facility	HQ-I	M-90-06	02-Jan-08	31-Dec-02
T09-01-020	Submit ILAW Disposal Facility Part B Dangerous Waste Permit Application to Ecology	HQ-I	M-20-58	25-Aug-08	31-Dec-03
T09-06-100	Initiate Hot Operations of ILAW Disposal Facility	HQ-I	M-90-10	17-May-11	31-Dec-05
T09-42-100	Complete Facilities for Waste Storage and Disposal	HQ-M	M-90-00	30-Sep-48	TBD

B.9.3.4 Milestone Description Sheets

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: IHLW Storage Plan (TWR 4.1.1)

Schedule Date: 9/03/1999

Assigned to: R. W. Root

WBS Number: 1.01.09.02.02.01

Milestone Control Number: T09-99-102

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

1. By October 15, 1998, submit a Decision Plan to RL for approval.

2. By March 26, 1999, complete a re-evaluation of Immobilized High-Level Waste (IHLW) storage/disposal alternative and submit a recommendation to RL for approval of the preferred alternative.

3. By September 3, 1999, complete an update of the Immobilized High-level Waste Disposal Plan, HNF-1751, that reflects the preferred IHLW disposal alternative and DOE guidance.

Description of what constitutes completion of the commitment:

1. The decision plan shall be submitted to RL for approval. If RL does not approve the decision plan, the RL response shall include direction for revision of the decision plan and the contractor shall revise and resubmit the decision plan.

2. A draft Alternatives Generation and Analysis (AGA) report for IHLW storage/disposal alternatives will be provided to RL for review by January 29, 1999. RL comments on Review Comment Record (RCR) forms will be returned by February 15, 1999. Comments will be dispositioned via the RCR process and the draft AGA revised accordingly. Unresolved comments will be dispositioned in accordance with the PHMC recommendation for the purpose of determining completion of this performance agreement.

3. A complete draft revised HNF-1751 will be provided to RL for review by August 2, 1999. RL comments on RCR forms will be returned by August 16, 1999. Comments will be dispositioned via the RCR process and the draft HNF-1751 revised accordingly. Unresolved comments will be dispositioned in accordance with the PHMC recommendation for the purpose of determining completion of this performance agreement.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: ILAW Disposal Plan (TWR 3.1.1)

Schedule Date: 9/30/1999

Assigned to: R. W. Root

WBS Number: 1.01.09.01.01.02.03

Milestone Control Number: T09-99-101

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

1. By October 15, 1998, submit a Decision Plan to RL for approval.

2. In accordance with Section 5, Item 1, complete a re-evaluation of Immobilized Low-Activity Waste (ILAW) storage/disposal alternatives and by March 26, 1999, submit a recommendation to RL for the preferred alternative.

3. By September 3, 1999, and in accordance with the provisions of Section 5, item 2, complete an update of the Immobilized Low- Activity Waste Disposal Plan, HNF-1517, that reflects the preferred ILAW disposal alternative and current DOE programmatic guidance.

3. By September 30, 1999, and in accordance with the provisions of Section 5, item 3, submit to RL draft ILAW performance assessment data packages containing the waste form testing and geotechnical data needed to complete performance analyses in support of: a) the DOE decision to authorize construction of a privatized tank waste treatment plant, and b) the FY 2001 update of the ILAW performance assessment.

Description of what constitutes completion of the commitment:

1. By October 15, 1998, the contractor shall submit a Decision Plan to RL for approval. An RL response will be provided within ten working days of receipt by RL of the Decision Plan. If RL does not approve the Decision Plan, the RL response will include direction for revision of the Decision Plan and the contractor shall revise and resubmit the Decision Plan. The Performance Agreement shall be renegotiated, if necessary, following RL approval of the Decision Plan.

2. Based on the approved Decision Plan, a draft Alternatives Generation Analysis (AGA) report for ILAW storage and disposal alternatives will be provided to RL for review by February 15, 1999. Comments will be dispositioned via the Review Comment Record (RCR) process and the draft AGA revised accordingly.

Milestone Control Number: T09-99-101
Title: ILAW Disposal Plan (TWR 3.1.1)

3. A complete draft revised HNF-1751 will be provided to RL for review by August 2, 1999. RL comments on RCR forms will be returned within 15 working days. Comments will be dispositioned via the RCR process and the draft HNF-1751 revised accordingly.

4. A preliminary draft ILAW performance assessment data package for waste form testing will be submitted to RL by June 16, 1999, and RL comments on RCR forms will be returned within 15 working days. A preliminary draft ILAW performance assessment data package for borehole testing data will be submitted to RL by August 16, 1999, and RL comments on RCR forms will be returned within 15 working days. Comments will be dispositioned via the RCR process and the draft performance assessment data packages revised accordingly.

The waste form data package shall follow the modeling and laboratory approaches given in A Strategy to Conduct an Analysis of the Long-Term Performance of Low-Activity Waste Glass in a Shallow Subsurface System at Hanford, DOE/RL-97-69, Rev. 0, Appendix G. The geotechnical data packages shall provide all the geologic data (stratigraphy), hydraulic data (recharge, saturate, and unsaturated conductivities), and geochemical data (K_ds) specified as needed in the Hanford Immobilized Low-Activity Tank Waste Performance Assessment, DOE/RL-97-69, Rev. 0, Sections 3.4.3 and 3.4.6.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Issue Waste Form Data Packages for 2001 PA

Schedule Date: 12/31/1999

Assigned to: R. W. Root

WBS Number: 1.01.09.01.01.03.02.01.05

Milestone Control Number: T09-00-005

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

The waste form testing results has been developed into a data package that can be released to DOE-RL. This information will be used as the basis for the Performance Assessment calculations.

Description of what constitutes completion of the commitment:

By December 31, 1999, provide completed waste form data package that will be used in the development of the FY 2001 update of the Performance Assessment. Waste Form Data Package shall follow the modeling and laboratory approaches given in DOE-RL 97-69, Rev. 0. The data package shall be submitted to peer and external review.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete W-464 Advanced Conceptual Design

Schedule Date: 3/31/2000

Assigned to: G. L. Parsons

WBS Number: 1.01.09.02.01.03.02.26

Milestone Control Number: T09-00-004

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Advanced Conceptual Design Report will look at potential uncertainties from the Conceptual Design Report (CDR), provide studies to potentially reduce high cost items, develop preliminary specifications, develop an updated cost estimate and schedule, and develop potential alternatives to the CDR design concepts.

Description of what constitutes completion of the commitment:

Identified studies are completed, updated estimate, schedule, and updated sketches developed. The information will be made available to DOE-RL.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: CD 2-Initiate W-464 Detailed Design

Schedule Date: 1/02/2001

Assigned to: G. L. Parsons

WBS Number: 1.01.09.02.01.03.03

Milestone Control Number: T09-01-002

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Upon receipt of Critical Decision 2 from DOE-RL, the A/E will be directed to start Detailed Design for Project W-464.

Description of what constitutes completion of the commitment:

The statement of work and specification for W-464 will be completed. A bid selection process will be completed and an A/E selected. Critical Decision 2 will be received at least two months prior to initiation of Detailed Design. The contract with the A/E will be awarded and notice to proceed given to the A/E and will be followed by a kickoff meeting.

Title: Complete W-465 Advanced Conceptual Design

Schedule Date: 9/28/2001

Assigned to: G. L. Parsons

WBS Number: 1.01.09.01.05.01.02

Milestone Control Number: T09-01-001

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Advanced Conceptual Design will be performed to resolve items identified as potential risks, provide advanced design and preliminary specifications for long lead items, resolve uncertainties, and study alternatives identified in the Conceptual Design Report

Description of what constitutes completion of the commitment:

The identified advanced conceptual studies have been completed. New or updated design sketches are developed and an updated estimate and schedule for the project are completed. The information will be made available to DOE-RL.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Submit Revised Canister Storage Facility Part A Dangerous Waste Permit Application to Ecology

Scheduled Date: 6/28/2002
TPA Date: 6/30/1999

Assigned to: G. L. Parsons

WBS Number: 1.01.09.02.01.03.08.02

Milestone Control Number: T09-99-100

TPA No.: M-90-12

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[X] Other (Specify)
	Permit Application	Ecology

Description of this Commitment:

Prepare strategy for permitting Vaults 2 and 3 of the Canister Storage Building (CSB). Negotiate strategy with Ecology and revise waste permit application originally submitted under HWVP.

Description of what constitutes completion of the commitment:

Application for Part A Dangerous Waste Permit Application, Form 3 has been filled out, reviewed with DOE-RL, and submitted to Ecology.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Submit Canister Storage Facility Part B Dangerous Waste Permit Application to Ecology

Schedule Date: 6/30/2003
TPA Date: 12/31/2000

Assigned to: G. L. Parsons

WBS Number: 1.01.09.02.01.03.08.03

Milestone Control Number: T09-01-100

TPA No.:M-20-56

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[X] Other (Specify)
	Permit Application	Ecology

Description of this Commitment:

Submit Canister Storage Building (CSB) Facility Part B, Revision 0 Dangerous Waste Permit Application to Ecology.

Description of what constitutes completion of the commitment:

Delivery of text as a PHMC Certified Part B Permit Application to Fluor Daniel Hanford and DOE-RL. The delivered Permit Application will include addressing DOE-RL review comments on draft permit application. The delivery shall be made at least 30 days prior to listed TPA milestone date to allow time for DOE-RL certification of the permit application.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete ILAW Interim Storage Facility Detailed Design (M-90-04-T01)

Schedule Date: 6/30/2003
TPA Date: 6/30/2001

Assigned to: G. L. Parsons

WBS Number: 1.01.09.01.05.01.03.02

Milestone Control Number: T09-01-010

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[X] Other (Specify)
	M&I Contractor and A/E	Ecology

Description of this Commitment:

The A/E completes the detailed design (Title II) of the ILAW Interim Storage Facility. Note that the RCRA Permit Application is NOT part of this commitment since it will be handled as a separate activity.

Description of what constitutes completion of the commitment:

This commitment is completed when the approved Title II Design media is transmitted from DOE-RL to Ecology for information.

Approval of the Detailed Design (Title II) by the M&I Contractor through a series of design review meetings throughout this design phase and subsequent transmittal of design media from the M&I Contractor to DOE-RL.

Approval of Critical Decision 2 by DOE-RL as planned is an integral part of the above activity.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate ILAW Interim Storage Facility Construction

Schedule Date: 10/01/2003
TPA Date: 6/30/2001

Assigned to: G. L. Parsons

WBS Number: 1.01.09.01.05.01.05.03.01

Milestone Control Number: T09-00-003

TPA No.: M-90-03

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[X] Other (Specify)
		M&I Contractor

Description of this Commitment:

Activities leading to initiation of construction include completion of the following: Definitive Design, Preliminary Safety Analysis Report, applicable environmental documentation, and required project management documentation per DOE Order 4700.1.

Description of what constitutes completion of the commitment:

Initiation of construction occurs when DOE-RL or its contractors (as authorized) issues an Approval to Start Construction or award of the contract for structural modifications of an existing facility or installation of structural components of a new facility commences.

Execution of the initial construction activities will be based on timely issuance of Critical Decisions 2 and 3 as well as design media, project control documentation and contracting activities.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete ILAW Disposal Facility Conceptual Design (M-90-07-T01)

Schedule Date: 12/31/2003
TPA Date: 6/30/2000

Assigned to: G. L. Parsons

WBS Number: 1.01.09.01.01.04.01.03

Milestone Control Number: T09-99-011

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

A Conceptual Design Report (CDR) will be revised for the ILAW Additional Disposal Facility Project. Scope, schedule, and budget cost estimate will be updated based on current data. The original signed CDR completed on December 31, 1998 will need revision due to being shelved for two years.

Description of what constitutes completion of the commitment:

Transmittal of the M&I Contractor and A/E approved CDR to DOE-RL including project schedule and cost estimate.

The CDR will be submitted by the A/E, approved by the M&I Contractor and the A/E, and issued by DOE-RL.

TANK WASTE REMEDIATION SYSTEM MILESTONE DESCRIPTION SHEET

Title: Submit Interim ILAW Facility Part B Dangerous Waste Permit Application to Ecology (W-465)

Schedule Date: 4/30/2004
TPA Date: 12/31/2000

Assigned to: G. L. Parsons

WBS Number: 1.01.09.01.05.01.08.03

Milestone Control Number: T09-01-021

TPA No.: M-20-57

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[X] Other (Specify)
	Permit Application	Ecology

Description of this Commitment:

Submit Interim ILAW Facility Part B, Revision 0 Dangerous Waste Permit Application to Ecology.

Description of what constitutes completion of the commitment:

Delivery of text as a PHMC Certified Part B Permit Application to Fluor Daniel Hanford and DOE-RL. The delivered Permit Application will include addressing DOE review comments on draft permit application. The delivery shall be made at least 30 days prior to listed TPA milestone date to allow time for DOE-RL certification of the permit application.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: RL-WT010-ILAW Product Acceptance Inspection and Test Methodology

Schedule Date: 02/1/2006

Assigned to: R. W. Root

WBS Number: 1.01.09.01.05.01.06

Milestone Control Number: T09-06-001

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)
	Test Plan	

Description of this Commitment:

Provide a non-destructive testing method to ensure the ILAW is acceptable to be transferred from BNFL to ILAW Disposal Programs. The testing will have to ensure adherence to contractual requirements, onsite transportation requirements, disposal requires, and Performance Assessment requirements.

Description of what constitutes completion of the commitment:

The non-destructive testing method will be developed, tested, and verified to meet all contractual, transition, and disposal requirements. The acceptance method will be developed by the WIT (per DOE direction), approved by DOE, TWRS Disposal, and any facility/equipment supplied to perform the testing by WIT.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Canister Storage Facility Construction

Schedule Date: 3/31/2006
TPA Date: 12/31/2002

Assigned to: G. L. Parsons

WBS Number: 1.01.09.02.01.03.06

Milestone Control Number: T09-03-003

TPA No.: M-90-11

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Declaration of readiness by DOE-RL for the interim storage of HLW in Vaults 2 and 3 of the Canister Storage Building (CSB). This will be performed immediately after construction/outfit.

Description of this milestone requires the completion of all construction, internal/external facility(s) modifications and startup activities necessary for the Canister Storage Facility receipt of all Phase I Hanford Site High Level Waste (HLW) Canisters from Tank Waste Remediation System (TWRS) processing. For purposes of this interim milestone, Phase I IHLW Canister Storage is defined as the capability for storage of at least 500 IHLW canisters. Interim milestones and associated target dates establishing work schedules for Phase II IHLW Canister Storage will be established pursuant to the Phase II request for proposal for TWRS privatization.

Description of what constitutes completion of the commitment:

Vaults 2 and 3 of the CSB ready to receive waste as documented by successful completion of a readiness review by the M&I Contractor and approval of Critical Decision 4 by DOE-RL. A letter documenting this decision will be sent from DOE-RL to Washington Department of Ecology.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete ILAW Disposal Facility Detailed Design (M-90-09-T01)

Schedule Date: 6/15/2007
TPA Date: 3/31/2003

Assigned to: G. L. Parsons

WBS Number: 1.01.09.01.01.04.04

Milestone Control Number: T09-04-001

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[X] Other (Specify)
	M&I Contractor and A/E	Ecology

Description of this Commitment:

The A/E completes the Detailed Design (Title II) for the ILAW Disposal Facility. Note that the RCRA Permit Application is NOT part of this commitment since it will be handled as a separate activity.

Description of what constitutes completion of the commitment:

This commitment is completed when the approved Title II Design media is transmitted from DOE-RL to Ecology for information.

Approval of the Detailed Design (Title II) by the M&I Contractor through a series of design review meetings throughout this design phase and subsequent transmittal of design media from the M&I Contractor to DOE-RL.

Approval of Critical Decision 2 by DOE-RL as planned is an integral part of the above activity.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate ILAW Disposal Facility Construction

Schedule Date: 8/27/2007
TPA Date: 6/30/2003

Assigned to: G. L. Parsons

WBS Number: 1.01.09.01.01.04.06

Milestone Control Number: T09-05-005

TPA No.: M-90-08

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[X] Other (Specify)
		M&I Contractor

Description of this Commitment:

Activities leading to initiation of construction include completion of the following: Definitive Design, Preliminary Safety Analysis Report, applicable environmental documentation, and required project management documentation per DOE Order 4700.1.

Description of what constitutes completion of the commitment:

Initiation of construction occurs when DOE-RL or its contractors (as authorized) issues an Approval to Start Construction or award of the contract for modifications of an existing facility or installation of structural components of a new facility commences.

Execution of the initial construction activities will be based on timely issuance of Critical Decisions 2 and 3 as well as design media, project control documentation, and contracting activities.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: M-90-06: Initiate Hot Operations of ILAW Interim Storage Facility

Schedule Date: 1/02/2008
TPA Date: 12/31/2002

Assigned to: R. W. Root

WBS Number: 1.01.09.01.05.02.01

Milestone Control Number: T09-02-002

TPA No.: M-90-06

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)
	Initiate Facility Operations	_____

Description of this Commitment:

Complete all construction, startup, permitting, and preoperational activities necessary to begin radioactive operations of the first portion of the ILAW Interim Storage Facility.

Description of what constitutes completion of the commitment:

Completion of construction, startup, and preoperational activities shall be demonstrated through sign-off of all turnover packages by the constructor and operator of the facility and completion of the operational readiness review.

Completion of permitting shall be demonstrated through receiving approved permits from the regulatory authorities.

Department of Energy approval of the Operational Readiness Evaluation Report and authorization to the operating contractor to begin receiving radioactive material at the facility.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Submit ILAW Disposal Facility Part B Dangerous Waste Permit Application to Ecology

Schedule Due Date: 8/25/2008
TPA Date: 12/31/2003

Assigned to: G. L. Parsons

WBS Number: 1.01.09.01.01.04.08.10

Milestone Control Number: T09-01-020

TPA No.: M-20-58

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[X] Other (Specify)
	Permit Application	Ecology

Description of this Commitment:

Submit ILAW Facility Part B, Revision 0 Dangerous Waste Permit Application to Ecology.

Description of what constitutes completion of the commitment:

Delivery of text as a PHMC Certified Part B Permit Application to Fluor Daniel Hanford and DOE-RL. The delivered Permit Application will include addressing DOE review comments on draft permit application. The delivery shall be made at least 30 days prior to listed TPA milestone date to allow time for DOE-RL certification of the permit application.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate Hot Operations of ILAW Disposal Facility

Schedule Date: 5/17/2011
TPA Date: 12/31/2005

Assigned to: R. W. Root

WBS Number: 1.01.09.01.01.06.01

Milestone Control Number: T09-06-100

TPA No.: M-90-10

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Initiate Facility Hot Operations

Description of this Commitment:

Complete all construction, startup, permitting, and preoperational activities necessary to begin radioactive operations of the first module of the ILAW Disposal.

Description of what constitutes completion of the commitment:

Completion of construction, startup, and preoperational activities shall be demonstrated through sign-off of all turnover packages by the constructor and operator of the facility and completion of the operational readiness review.

Completion of permitting shall be demonstrated through receiving approved permits from the regulatory authorities.

Department of Energy approval of the Operational Readiness Evaluation Report and authorization to the operating contractor to begin receiving radioactive material at the facility.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Facilities for Waste Storage and Disposal

Schedule Date: 9/30/2048
TPA Date: TBD

Assigned to: R. W. Root

WBS Number: 1.01.09.03.05.01.02

Milestone Control Number: T09-42-100

TPA No.: M-90-00

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete acquisition of new facilities, modification of existing facilities, and/or modification of planned facilities as necessary for storage of Hanford Site IHLW and ILAW and disposal of ILAW.

Description of what constitutes completion of the commitment:

This milestone to be negotiated between DOE-RL and Ecology pending completion of updated project management plans reflecting BNFL privatization Phase 1B Contract.

Letter from RL to Ecology stating completion of facility acquisition activities as defined and negotiated in the management plan will complete this commitment.

B.9.4.1 Project Priority List

TANK WASTE REMEDIATION SYSTEM
FY 1999 - 2007 MYWP PRIORITY LIST BY PBS

11/23/98 'FY 99 MYWP

EXCEL: 10YRPR49.XLS

FDH				11/24/98 5:03 PM	FY 99	FY 00	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07
UAS	PBS #	ADS		"UNIT OF ANALYSIS"	TOTAL ESCAL'D	TOTAL ESCAL'D	TOTAL ESCAL'D	TOTAL ESCAL'D	TOTAL ESCAL'D	TOTAL ESCAL'D	TOTAL ESCAL'D	TOTAL ESCAL'D	TOTAL ESCAL'D
TW09													
161	TW09	1250	- 0	TWRS IHLW - PROGRAM, SYSTEMS DEF'N/OPS	547	-	728	675	691	776	1,284	22,947	31,444
NEW	TW09	1250	- 0	TWRS W-464, IHLW INTERIM STG FACILITY	535	-	5,324	10,404	37,120	33,015	8,500	1,182	-
167	TW09	1250	- 0	TWRS ILAW PROGRAM, SYSTEMS DEF'N/OPS	3,233	-	5,888	3,328	2,380	1,532	1,927	4,123	4,446
NEW	TW09	1250	- 0	TWRS W-465 ILAW INTERIM STG FACILITY	375	-	1,831	5,273	6,960	20,848	10,042	3,370	140
NEW	TW09	1250	- 0	TWRS W-520 ILAW DISPOSAL COMPLEX	60	-	-	-	545	2,249	2,962	6,073	13,586
				S/T - FY 1999 / 2000 TARGET	**4,750**	**-**							
161	TW09	1250	- 0	TWRS IHLW - PROGRAM, SYSTEMS DEF'N/OPS	-	904							
NEW	TW09	1250	- 0	TWRS W-464, IHLW INTERIM STG FACILITY	-	1,452	-	-	-	-	-	-	-
167	TW09	1250	- 0	TWRS ILAW PROGRAM, SYSTEMS DEF'N/OPS	-	4,572							
NEW	TW09	1250	- 0	TWRS W-465 ILAW INTERIM STG FACILITY	-	724	-	-	-	-	-	-	-
				S/T - URGENT RISK-PRIVATIZ'N: 90 %	**4,750**	**7,652**	**13,772**	**19,680**	**47,696**	**58,420**	**24,715**	**37,695**	**49,615**
662	TW09	1250	- 0	TWRS IHLW - STORAGE (INCL'G W-464)	704	-	-	-	-	-	-	-	-
664	TW09	1250	- 0	TWRS ILAW STORAGE/DISPOSAL (INCLG W-465)	1,276	-	-	-	-	-	-	-	-
				TOTAL COMPLIANCE/ REQUIREM'TS (EM-30)	**6,730**	**7,652**	**13,772**	**19,680**	**47,696**	**58,420**	**24,715**	**37,695**	**49,615**

B.9.4.2 Life Cycle Cost Baseline by PBS

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.9										
PBS NO:	RL-TW09										
PBS TITLE:	IMMOBILIZED TANK WASTE STORAGE & DISPOSAL										SUBTOT
FUND TYPE	*ACTUAL* FY1997	*ACTUAL* FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997-FY2006
OPERATING EXPENSE	4,687	9,977	4,750	7,429	9,270	7,179	7,002	8,428	8,789	26,971	94,482
CENRTC	-	280	-	66	279	265	-	506	-	-	1,396
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*											
ILAW FUTURE PROJECTS	-	-	-	-	-	-	-	-	-	-	-
W-465	-	-	-	-	-	3,256	4,805	16,288	7,712	2,095	34,156
W-464	-	-	-	-	3,624	7,637	31,386	26,302	4,862	-	73,811
IHLW FUTURE PROJECTS/OPERATI	-	-	-	-	-	-	-	-	-	-	-
W-520	-	-	-	-	-	-	-	-	-	3,157	3,157
0	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	-	-	3,624	10,893	36,191	42,590	12,574	5,252	111,124
Escalation	-	-	-	157	599	1,343	4,503	6,896	3,352	5,472	22,323
TOTAL BCWS/PMB[1]	4,687	10,257	4,750	7,652	13,772	19,680	47,696	58,420	24,715	37,695	229,325
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-
TOTAL	4,687	10,257	4,750	7,652	13,772	19,680	47,696	58,420	24,715	37,695	229,325

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2]Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

HNF-SP-1230 Rev. 1

TW09-71

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.9
PBS NO:	RL-TW09
PBS TITLE:	IMMOBILIZED TANK WASTE STORAGE & DISPOSAL

FUND TYPE	FY2007	FY2008	FY2009	FY2010	FY2011-FY2015	FY2016-FY2020	FY2021-FY2025	FY2026-FY2030	FY2031-FY2035	FY2036 FY2040	FY2041-FY2045	FY2046 FY2050	TOTAL FY1997-FY2050
OPERATING EXPENSE	16,001	28,175	24,721	38,002	136,162	97,863	79,362	45,247	15,314	32,125	58,258	57,001	722,711
CENRTC	-	-	-	805	195	-	-	-	-	-	-	-	2,396
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*													
ILAW FUTURE PROJECTS	-	-	34,422	33,485	75,038	69,873	55,095	20,738	-	-	-	-	288,651
W-465	-	-	-	-	-	-	-	-	-	-	-	-	34,156
W-464	-	-	-	-	-	-	-	-	-	-	-	-	73,811
IHLW FUTURE PROJECTS/OPERATI	15,213	27,772	55,013	79,904	438,347	519,901	68,587	27,124	1,593	-	-	-	1,233,454
W-520	9,529	18,900	13,396	10,959	816	-	-	-	-	-	-	-	56,757
0	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	24,742	46,672	102,831	124,348	514,201	589,774	123,682	47,862	1,593	-	-	-	1,686,829
Escalation	8,872	18,708	37,502	53,115	291,386	440,478	163,051	96,085	19,451	42,900	95,839	105,019	1,394,730
TOTAL BCWS/PMB[1]	49,615	93,558	165,054	216,270	941,944	1,128,115	366,095	189,194	36,358	75,025	154,097	162,020	3,806,666
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	49,615	93,558	165,054	216,270	941,944	1,128,115	366,095	189,194	36,358	75,025	154,097	162,020	3,806,666

[1] Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2] Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

HNF-SP-1230 Rev. 1

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.9																	
RL-TWO9																	
IMMOBILIZED TANK WASTE STORAGE & DISP SAL																	
1.1.9.1.1.1	ILAW Project Mgmt	OE	404	598	624	638	652	666	681	696	4,958	13,835	711	727	743	759	2,939
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		404	598	624	638	652	666	681	696	4,958	13,835	711	727	743	759	2,939
1.1.9.1.1.2	ILAW Systems Definition	OE	152	475	497	137	141	144	147	149	1,840	3,782	153	157	160	164	634
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		152	475	497	137	141	144	147	149	1,840	3,782	153	157	160	164	634
1.1.9.1.1.3	ILAW Perform Assm't	OE	2,677	3,432	4,476	2,270	548	48	0	0	13,452	13,452	0	0	0	0	0
		C/E	0	67	291	283	0	0	0	0	641	641	0	0	0	0	0
	S/T		2,677	3,499	4,768	2,553	548	48	0	0	14,093	14,093	0	0	0	0	0
1.1.9.1.1.4	Project W-520	OE	60	0	0	0	545	2,249	2,962	2,276	8,091	20,370	1,804	1,448	1,242	2,705	7,199
		C/E	0	0	0	0	0	0	0	0	0	1,275	0	0	0	1,022	1,022
		LI	0	0	0	0	0	0	0	3,797	3,797	72,949	11,782	24,021	17,502	14,719	68,024
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		60	0	0	0	545	2,249	2,962	6,073	11,888	94,593	13,586	25,469	18,744	18,445	76,244
1.1.9.1.1.5	ILAW Future Projects	OE	0	0	0	0	0	0	472	1,103	1,575	130,832	628	16,823	1,175	1,201	19,826
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	409,760	0	0	44,974	44,974	89,948
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	472	1,103	1,575	540,592	628	16,823	46,149	46,175	109,774
1.1.9.1.1.6	ILAW Operations	OE	0	0	0	0	1,041	674	627	635	2,977	157,376	600	450	422	432	1,904
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	1,041	674	627	635	2,977	157,376	600	450	422	432	1,904
1.1.9.1.2.1	Compliant ILAW	OE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.9.1.3.1	ILAW Transition	OE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

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		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.9														
RL-TWO9														
IMMOBILIZED TANK WASTE STORAGE & DISP														
1.1.9.1.1.1	ILAW Project Mgmt	OE	4,053	1,885	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		4,053	1,885	0	0	0	0	0	0	0	0	0	0
1.1.9.1.1.2	ILAW Systems Definition	OE	869	439	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		869	439	0	0	0	0	0	0	0	0	0	0
1.1.9.1.1.3	ILAW Perform Assm't	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.9.1.1.4	Project W-520	OE	5,080	0	0	0	0	0	0	0	0	0	0	0
		C/E	253	0	0	0	0	0	0	0	0	0	0	0
		LI	1,128	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		6,461	0	0	0	0	0	0	0	0	0	0	0
1.1.9.1.1.5	ILAW Future Projects	OE	23,644	29,426	35,242	8,059	5,959	6,633	468	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		LI	106,604	106,604	106,604	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		130,248	136,030	141,846	8,059	5,959	6,633	468	0	0	0	0	0
1.1.9.1.1.6	ILAW Operations	OE	48,912	36,430	40,523	26,629	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		48,912	36,430	40,523	26,629	0	0	0	0	0	0	0	0
1.1.9.1.2.1	Compliant ILAW	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.9.1.3.1	ILAW Transition	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.9.1.4.1	ILAW D & D	OE	0	0	0	0	0	0	0	0	0	14,258	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	59,506	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	73,764	0	0	0	0	0
1.1.9.1.5.1	Project W-465	OE	375	724	1,831	1,763	1,641	1,749	1,020	849	9,952	10,093	140	0	0	0	140
		C/E	0	0	0	0	0	564	0	0	564	564	0	0	0	0	0
		LI	0	0	0	3,510	5,319	18,536	9,022	2,521	38,908	38,908	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		375	724	1,831	5,273	6,960	20,848	10,042	3,370	49,424	49,564	140	0	0	0	140
1.1.9.1.5.2	W-465 Operations	OE	0	0	0	0	0	0	0	1,542	1,542	48,292	2,353	10,476	13,354	13,649	39,832
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	1,542	1,542	48,292	2,353	10,476	13,354	13,649	39,832
1.1.9.2.1.1	IHLW Project Mgmt	OE	416	546	570	582	594	608	620	634	4,571	12,673	649	663	677	692	2,681
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		416	546	570	582	594	608	620	634	4,571	12,673	649	663	677	692	2,681
1.1.9.2.1.2	IHLW Systems Definition	OE	131	358	159	94	96	98	100	102	1,138	1,801	105	107	109	112	433
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		131	358	159	94	96	98	100	102	1,138	1,801	105	107	109	112	433
1.1.9.2.1.3	Project W-464	OE	535	1,452	1,517	2,172	2,374	3,082	2,812	1,182	15,126	15,126	0	0	0	0	0
		LI	0	0	3,807	8,232	34,746	29,933	5,688	0	82,406	82,406	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		535	1,452	5,324	10,404	37,120	33,015	8,500	1,182	97,532	97,532	0	0	0	0	0
1.1.9.2.1.4	IHLW Operations	OE	0	0	0	0	0	0	0	564	564	37,178	2,339	2,992	3,058	3,125	11,513
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	564	564	37,178	2,339	2,992	3,058	3,125	11,513
1.1.9.2.1.5	IHLW RI to RW	OE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.9.3.1.1	IHLW Future Proj Mgmt	OE	0	0	0	0	0	0	0	0	0	7,013	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	7,013	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
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		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.9.1.4.1	ILAW D & D	OE	2,932	1,236	1,375	1,584	1,711	1,903	2,125	1,392	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		LI	3,732	10,616	0	45,158	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		6,664	11,852	1,375	46,742	1,711	1,903	2,125	1,392	0	0	0	0
1.1.9.1.5.1	Project W-465	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.9.1.5.2	W-465 Operations	OE	6,918	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		6,918	0	0	0	0	0	0	0	0	0	0	0
1.1.9.2.1.1	IHLW Project Mgmt	OE	3,696	1,725	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		3,696	1,725	0	0	0	0	0	0	0	0	0	0
1.1.9.2.1.2	IHLW Systems Definition	OE	231	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		231	0	0	0	0	0	0	0	0	0	0	0
1.1.9.2.1.3	Project W-464	OE	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.9.2.1.4	IHLW Operations	OE	16,672	8,429	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		16,672	8,429	0	0	0	0	0	0	0	0	0	0
1.1.9.2.1.5	IHLW RI to RW	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.9.3.1.1	IHLW Future Proj Mgmt	OE	0	605	1,237	1,379	1,496	1,390	907	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	605	1,237	1,379	1,496	1,390	907	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.9.3.1.2	IHLW Future Sys Definitio	OE	0	0	0	0	0	70	563	43	677	2,537	45	46	47	48	187
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	70	563	43	677	2,537	45	46	47	48	187
1.1.9.3.1.3	IHLW Future Projects	OE	0	0	0	0	0	0	0	21,602	21,602	144,124	9,498	349	9,714	25,349	44,909
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	1,704,855	18,808	35,297	71,877	107,321	233,303
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	21,602	21,602	1,848,979	28,306	35,646	81,591	132,670	278,212
1.1.9.3.1.4	IHLW Future Proj Ops	OE	0	0	0	0	0	0	0	0	0	137,630	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	165,500	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	303,130	0	0	0	0	0
1.1.9.3.2.1	IHLW RI Proj Mgmt	OE	0	0	0	0	0	0	0	0	0	18,978	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	18,978	0	0	0	0	0
1.1.9.3.2.2	IHLW RI Sys Definition	OE	0	0	0	0	0	0	0	0	0	6,504	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	6,504	0	0	0	0	0
1.1.9.3.2.3	IHLW RI Future Projs	OE	0	0	0	0	0	0	0	0	0	5,473	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	60,750	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	66,223	0	0	0	0	0
1.1.9.3.2.4	IHLW RI Operations	OE	0	0	0	0	0	0	0	0	0	136,182	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	4,000	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	140,182	0	0	0	0	0
1.1.9.3.3.1	Compliant IHLW Part 2	OE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
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		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.9.3.1.2	IHLW Future Sys Definitio	OE	590	893	190	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		590	893	190	0	0	0	0	0	0	0	0	0
1.1.9.3.1.3	IHLW Future Projects	OE	50,001	27,612	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		LI	615,762	767,761	88,029	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		665,763	795,373	88,029	0	0	0	0	0	0	0	0	0
1.1.9.3.1.4	IHLW Future Proj Ops	OE	20,380	37,258	41,638	28,523	3,402	3,795	2,634	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		LI	30,486	97,194	37,820	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		50,866	134,452	79,458	28,523	3,402	3,795	2,634	0	0	0	0	0
1.1.9.3.2.1	IHLW RI Proj Mgmt	OE	0	0	4,573	12,527	450	502	560	366	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	4,573	12,527	450	502	560	366	0	0	0	0
1.1.9.3.2.2	IHLW RI Sys Definition	OE	0	0	3,389	3,114	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	3,389	3,114	0	0	0	0	0	0	0	0
1.1.9.3.2.3	IHLW RI Future Projs	OE	0	0	5,473	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	60,750	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	5,473	60,750	0	0	0	0	0	0	0	0
1.1.9.3.2.4	IHLW RI Operations	OE	0	0	0	1,472	19,341	60,803	54,567	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	4,000	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	1,472	23,341	60,803	54,567	0	0	0	0	0
1.1.9.3.3.1	Compliant IHLW Part 2	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.9.3.4.1	IHLW Transition Part 2	OE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.9.3.5.1	IHLW D & D	OE	0	0	0	0	0	0	0	0	0	253,099	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	253,099	0	0	0	0	0
1.1.9.4.1.1	Repository Fees	OE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.9 IMMOB TW STG & DISP'SL		OE	3,780	5,409	6,325	3,721	3,071	2,308	3,211	27,070	54,896	1,145,020	17,081	32,789	29,459	45,529	124,858
(W/O W-464/W-465/W520)		C/E	0	67	291	283	0	0	0	0	641	641	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	2,404,371	18,808	35,297	116,851	152,295	323,251
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		3,780	5,476	6,617	4,003	3,071	2,308	3,211	27,070	55,537	3,550,032	35,889	68,086	146,310	197,824	448,109
1.1.9 IMMOB TW STG & DISP'SL		OE	4,750	7,585	9,674	7,656	7,631	9,388	10,005	31,377	88,066	1,190,609	19,025	34,237	30,701	48,234	132,197
		C/E	0	67	291	283	0	564	0	0	1,204	2,479	0	0	0	1,022	1,022
		LI	0	0	3,807	11,742	40,065	48,469	14,710	6,318	125,111	2,598,634	30,590	59,318	134,353	167,014	391,275
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL		4,750	7,652	13,772	19,680	47,696	58,420	24,715	37,695	214,381	3,791,722	49,615	93,555	165,054	216,270	524,494

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/99
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		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.9.3.4.1	IHLW Transition Part 2	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.9.3.5.1	IHLW D & D	OE	0	0	0	0	0	0	92,836	160,263	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	92,836	160,263	0	0	0	0
1.1.9.4.1.1	Repository Fees	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.9 IMMOB TW STG & DISP'SL		OE	178,899	145,939	133,641	83,285	32,359	75,025	154,097	162,020	0	0	0	0
(W/O W-464/W-465/W520)		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		LI	756,584	982,175	232,453	105,908	4,000	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		935,483	1,128,114	366,094	189,193	36,359	75,025	154,097	162,020	0	0	0	0
1.1.9 IMMOB TW STG & DISP'SL		OE	183,979	145,939	133,641	83,285	32,359	75,025	154,097	162,020	0	0	0	0
		C/E	253	0	0	0	0	0	0	0	0	0	0	0
		LI	757,712	982,175	232,453	105,908	4,000	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL		941,944	1,128,114	366,094	189,193	36,359	75,025	154,097	162,020	0	0	0	0

B.9.4.3 Life Cycle Budget Authority by PBS

EXHIBIT 4a

TANK WASTE REMEDIATION SYSTEM
BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.9	
PBS NO:	RL-TW09	
PBS TITLE:	IMMOBILIZED TANK WASTE STORAGE & DISPOSAL	
FUND TYPE	TARGET B/A FY1998	PRESIDENT'S BUDGET PLUS CARRYOVER[1] FY1999
OPERATING EXPENSE	9,977	4,750
CENRTC	280	-
GENERAL PLANT PROJECT	-	-
LINE ITEM *(List Each One)*		
0	-	-
0	-	-
0	-	-
0	-	-
0	-	-
0	-	-
Subtotal Line Items	-	-
TOTAL NEW B/A	10,257	4,750
ESTIMATED FY 1998 CARRYOVER		176
TOTAL NEW B/A+CARRYOVER	10,257	4,926

[1]Estimated Carryover Is NOT Included In Cost Baseline; Change Request For Actual Carryover Submitted After September 30, 1998.

TW09-82

HNF-SP-1230 Rev. 1

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)
11/04/98 09/24/98 UPDATE
10:29 AM
PBS - ADS

PBS TITLE	F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A) *	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2008 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
TW09																		
1.1.9 IMMOB. TW STOR. & DISP'SL	EX	4,687	9,977	3,956	5,409	6,325	3,721	3,071	2,308	3,211	27,070	69,736	1,159,860	17,081	32,789	29,459	45,529	124,858
	CE	0	280	0	67	291	283	0	0	0	0	921	921	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	2,404,371	18,808	35,297	116,851	152,295	323,251
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	4,687	10,257	3,956	5,476	6,617	4,003	3,071	2,308	3,211	27,070	70,657	3,565,152	35,889	68,086	146,310	197,824	448,109
1.1.9.1.1.4 Project W-520	EX	0	0	60	0	0	0	545	2,249	2,962	2,276	8,091	20,370	1,804	1,448	1,242	2,705	7,199
	CE	0	0	0	0	0	0	0	0	0	0	0	1,275	0	0	0	1,022	1,022
	LI	0	0	0	0	0	0	0	0	0	3,797	3,797	72,949	11,782	24,021	17,502	14,719	68,024
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	60	0	0	0	545	2,249	2,962	6,073	11,888	94,593	13,586	25,469	18,744	18,445	76,244
1.1.9.1.5.1 Project W-465	EX	0	0	375	724	1,831	1,763	1,641	1,749	1,020	849	9,952	10,093	140	0	0	0	140
	CE	0	0	0	0	0	0	0	564	0	0	564	564	0	0	0	0	0
	LI	0	0	0	0	0	4,500	9,400	22,500	2,508	0	38,908	38,908	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	375	724	1,831	6,263	11,041	24,812	3,528	849	49,424	49,564	140	0	0	0	140
1.1.9.2.1.3 Project W-464	EX	0	0	535	1,452	1,517	2,172	2,374	3,082	2,812	1,182	15,126	15,126	0	0	0	0	0
	LI	0	0	0	0	4,500	18,500	46,800	9,600	3,006	0	82,406	82,406	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	535	1,452	6,017	20,672	49,174	12,682	5,818	1,182	97,532	97,532	0	0	0	0	0
1.1.9 IMMOB. TW STOR. & DISP'SL	EX	4,687	9,977	4,926	7,585	9,674	7,656	7,631	9,388	10,005	31,377	102,906	1,205,449	19,025	34,237	30,701	48,234	132,197
	CE	0	280	0	67	291	283	0	564	0	0	1,484	2,759	0	0	0	1,022	1,022
	LI	0	0	0	0	4,500	23,000	56,200	32,100	5,514	3,797	125,111	2,598,634	30,590	59,318	134,353	167,014	391,275
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	4,687	10,257	4,926	7,652	14,465	30,938	63,831	42,051	15,519	35,174	229,501	3,806,842	49,615	93,555	165,054	216,270	524,494

* FY 1999 INCLUDES CARRYOVER OF $176

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

09/24/98 | 09/24/98 UPDATE

10:29 AM

PBS - ADS

PBS TITLE	F/T	FY 2011-FY 2015 B/A PROFILE (B/A)	FY 2016-FY 2020 B/A PROFILE (B/A)	FY 2021-FY 2025 B/A PROFILE (B/A)	FY 2026-FY 2030 B/A PROFILE (B/A)	FY 2031-FY 2035 B/A PROFILE (B/A)	FY 2036-FY 2040 B/A PROFILE (B/A)	FY 2041-FY 2045 B/A PROFILE (B/A)	FY 2046-FY 2050 B/A PROFILE (B/A)	FY 2051-FY 2055 B/A PROFILE (B/A)	FY 2056-FY 2060 B/A PROFIL (B/A)	FY 2061-FY 2065 B/A PROFILE (B/A)	FY 2066-FY 2069 B/A PROFILE (B/A)
TWO9													
1.1.9 IMMOB. TW STOR. & DISP'SL	EX	178,899	145,939	133,641	83,285	32,359	75,025	154,097	162,020	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	756,584	982,175	232,453	105,908	4,000	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	935,483	1,128,114	366,094	189,193	36,359	75,025	154,097	162,020	0	0	0	0
1.1.9.1.1.4 Project W-520	EX	5,080	0	0	0	0	0	0	0	0	0	0	0
	CE	253	0	0	0	0	0	0	0	0	0	0	0
	LI	1,128	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	6,461	0	0	0	0	0	0	0	0	0	0	0
1.1.9.1.5.1 Project W-465	EX	0	0	0	0	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.9.2.1.3 Project W-464	EX	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.9 IMMOB. TW STOR. & DISP'SL	EX	183,979	145,939	133,641	83,285	32,359	75,025	154,097	162,020	0	0	0	0
	CE	253	0	0	0	0	0	0	0	0	0	0	0
	LI	757,712	982,175	232,453	105,908	4,000	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	941,944	1,128,114	366,094	189,193	36,359	75,025	154,097	162,020	0	0	0	0

B.9.4.4 Project (PBS) Contractor Split

TANK WASTE REMEDIATION SYSTEM
FY 1999 CONTRACTOR FUNDING SPLIT (NEW BA ONLY)

PBS	DOE-RL/ RL-PNNL	NATIONAL LABS	TOTAL
TW09	$ -	$ 175	$ 175

REFLECTS FY 1999 NEW BA ONLY

B.10 TWRS Management Support (TW10)
B.10.1.0 TWRS Management Support Technical Baseline
B.10.1.1 TWRS Management Support Project Mission TW10-1
B.10.1.2 TWRS Management Support End Point Targets from Hanford Strategic Plan TW10-1
B.10.1.3 TWRS Management Support Major Facilities TW10-1
B.10.1.4 Drivers for TWRS Management Support TW10-1
B.10.2.0 TWRS Management Support Work Breakdown Structure (WBS)
B.10.2.1 TWRS Management Support WBS Hierarchy TW10-2
B.10.2.2 TWRS Management Support WBS Dictionary TW10-2
B.10.3.0 Schedule Baseline
B.10.3.1 Project Master Baseline Schedule by PBS TW10-4
B.10.3.2 Execution Year Project Master Baseline Schedule TW10-8
B.10.3.3 Milestone List TW10-12
B.10.3.4 Milestone Description Sheets TW10-14
B.10.4.0 Cost Baseline
B.10.4.1 Project Priority List TW10-22
B.10.4.2 Life Cycle Cost Baseline by PBS TW10-24
B.10.4.3 Life Cycle Budget Authority by PBS TW10-29
B.10.4.4 Project (PBS) Contractor Split TW10-33

B.10 TWRS Management Support (RL-TW10)

B.10.1.0 TWRS Management Support Technical Baseline

This section describes the technical baseline for this project. It identifies the mission, the end point targets, the site major facilities, technical logic, functions, requirements, and forecasts for this project.

B.10.1.1 TWRS Management Support Mission

The TWRS Management Support Project (MSP) provides program management services and oversight that sustain TWRS integration and control. Practical products of MSP work are systems developed, improved, deployed, and maintained to structure program strategy, direction and business management in support of the TWRS technical functions, waste storage and waste disposal. Primary MSP functions include executive management and strategic planning; systems engineering to support risk and decision management and ongoing evolution of the TWRS technical bases; administration of a core program and crosscutting services to ensure environmental, safety, health and quality assurance compliance to all regulatory and contractual requirements applicable for TWRS; and life-cycle project management that includes work to establish and maintain technical, cost and schedule elements for the TWRS baseline.

B.10.1.2 TWRS Management Support End Point Targets from Hanford Strategic Plan

-None-

B.10.1.3 TWRS Management Support Major Facilities

As shown in the Project responsibility matrix, this project is responsible for administration and management functions as detailed in their mission statement for the following TWRS major facilities . Major facility descriptions given below are shown for completeness.

B.10.1.4 Drivers for TWRS Management Support

-None-

B.10.2.0 TWRS Management Support Work Breakdown Structure (WBS)

B.10.2.1 TWRS Management Support WBS Hierarchy

RL PBS	RL WBS	Title
RL-TW10	1.01.10	TWRS Management Support
	1.01.10.01	TWRS Management Support
	1.01.10.01.01	TWRS Management Support

B.10.2.2 TWRS Management Support WBS Dictionary

The following pages contain the WBS dictionary for RL-TW10

B.10-2 WBS Dictionary for TWRS Management Support

1. Dictionary Title TWRS Management Support		2. Date 5 November 1998	3. PBS Number RL-TW10	4. Dict Rev
5. WBS No. 1.01.10.01.01	6. B & R No. EW02J123		7. Baseline CR No.	
8. Organization Name TWRS Management Support				

9. Scope of Work

The TWRS Management Support Project (MSP) provides program management services and oversight that sustain TWRS integration and control. Practical products of MSP work are systems developed, improved, deployed, and maintained to structure program strategy, direction and business management in support of the TWRS technical functions, waste storage, and waste disposal. Primary MSP functions include executive management and strategic planning; systems engineering to support risk and decision management and ongoing evolution of the TWRS technical bases; administration of a core program and crosscutting services to ensure environmental, safety, health and quality assurance compliance to all regulatory and contractual requirements applicable for TWRS; and life-cycle project management that includes work to establish and maintain technical, cost and schedule elements for the TWRS baseline. TWRS Management Support life of project activities at this WBS level are Management and Administration, Integration, Planning and Control, and Direction.

Management and Administration provides business administration and executive management oversight, TWRS strategic planning, baseline control, correspondence control, public interface, and TWRS engineering functional administration.

Integration encompasses oversight Environmental, Safety, Health, and Quality Assurance core program and Systems Engineering maintenance of the TWRS portion of the Hanford Site Technical Database. It also provides a structured, teaming approach to appropriately apply Business Process Improvement disciplines to the TWRS business processes, information resource management direction and control, and implementation of the work management modules.

Planning and Control provides for work definition, planning, and reporting to effectively sustain TWRS. Activities include direction for the development and control of the TWRS cost/schedule baseline; configuration management services to projects; administration of technical and programmatic baseline change control; cost estimating direction and services; construction project oversight; and cost, schedule, and technical risk evaluation.

Direction provides for the DOE-RL support to TWRS, including oversight, permitting, and environmental compliance and for the Fluor Daniel Hanford Project Office for TWRS. It also serves as an administrative placeholder to represent funds budgeted each fiscal year for collection by the TWRS contractor(s) as incentive fees.

B.10.3.1 Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26
1			Hanford Environmental Management
1.01			Tank Waste Remediation System
1.01.10			TWRS Management Support
1.01.10.01			TWRS Mgmt Support
1.01.10.01.01			TWRS Mgmt Support
1.01.10.01.01.01			Manage/Administer TWRS
710.002	01OCT98*	30SEP24	Executive Management/Adm/Strategic Planning
710.004	01OCT98*	30SEP24	Engineering Management
1.01.10.01.01.02			Integrate TWRS
710.006	01OCT98*	30SEP24	Information Management System/Y2K
710.006A1B		30JUL99*	Y2K:Cmplt Compliance Assurance (28 Critical Sys) T10-99-500
710.008	01OCT98*	01OCT10	Information Management System/TCB
710.010	01OCT98*	30SEP24	Integration of TWRS Content in HSTD
710.012	01OCT98*	30SEP24	Maintain & Develop Tools,Processes,Expertise
710.012L1M		12FEB99*	Submit LMHC approved TWRS Testing & Eval. Mgmt T10-99-503
710.012M1M		13AUG99*	RL TWRS Approved Testing & Evaluation Mgmt Plan T10-99-502
710.012N1M		30JUL99*	Submit TWRS Integrated Info Sys Assessment T10-99-501
710.014	01OCT98*	30SEP04	Integration of Tech Baseline Bus Processes

Project Start	01OCT98	Early Bar
Project Finish	07OCT24	Progress Bar
Data Date	01OCT98	Critical Activity
Run Date	18NOV98	

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ADP2

Sheet 1 of 3

Tank Waste Remediation System
PMBS - Life of Project
TW10 - TWRS Management Support

Activity ID	Early Start	Early Finish	FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26
710.016	01OCT98*	28JUN01	Work Management
710.016A1M		30SEP99*	Incorporate MEL & SEL into HANDI 2000 Work Mgt T10-99-506
710.036	01OCT98*	30SEP03	Requirements Engineering
710.602	01OCT98*	30SEP24	Direct & Administer LMHC ESH&Q Program
710.604	01OCT98*	30SEP24	Integrate TWRS Environmental Compliance Program
710.606	01OCT98*	30SEP24	Integrate TWRS Safety and Health Compliance
710.616	01OCT98*	30SEP24	Manage and Implement VPP Initiatives
710.624	01OCT98*	30SEP24	Oversee Injury/Illness Reporting
716.002	02OCT00*	30SEP24	
716.008	01OCT98*	07OCT24	Perform QA & Professional Development
1.01.10.01.01.03			Plan/Control TWRS
710.018	01OCT98*	30SEP24	Provide Finanacial Control, Integration
710.020	01OCT98*	30SEP24	Master Planning
710.020BCM		31AUG00*	Submit FY01 TWRS MYWP T10-00-101
710.020BEM		31AUG01*	Submit FY 02 TWRS MYWP T10-01-101
710.022	01OCT98*	30SEP24	Configuration Management

Activity ID	Early Start	Early Finish	FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26
710.024	01OCT98*	30SEP24	Cost Estimating
710.026	01OCT98*	30SEP24	Construction Project Management
710.038	01OCT98*	30SEP24	Risk Assessments
1.01.10.01.01.04			Direct TWRS
710.028	01OCT98*	30SEP24	Performance Fee Account
710.030	01OCT98*	30SEP24	FDH Project Office/Direction
710.032	01OCT98*	30SEP24	DOE-RL Oversight
710.034	01OCT98*	29SEP00	DOE-RL Permitting/Environ. Compliance

B.10.3.2 Execution Year Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP FY00 OCT
1			**Hanford Environmental Management**
1.01			**Tank Waste Remediation System**
1.01.10			**TWRS Management Support**
1.01.10.01			TWRS Mgmt Support
1.01.10.01.01			TWRS Mgmt Support
1.01.10.01.01.01			Manage/Administer TWRS
710.002	01OCT98*	30SEP24	Executive Management/Adm/Strategic Planning
710.004	01OCT98*	30SEP24	Engineering Management
1.01.10.01.01.02			Integrate TWRS
710.006	01OCT98*	30SEP24	Information Management System/Y2K
710.006A1B		30JUL99*	Y2K:Cmplt Compliance Assurance (28 Critical Sys) T10-99-500
710.008	01OCT98*	01OCT10	Information Management System/TCB
710.010	01OCT98*	30SEP24	Integration of TWRS Content in HSTD
710.012	01OCT98*	30SEP24	Maintain & Develop Tools,Processes,Expertise
710.012L1M		12FEB99*	Submit LMHC approved TWRS Testing & Eval. Mgmt T10-99-503
710.012M1M		13AUG99*	RL TWRS Approved Testing & Evaluation Mgmt Plan T10-99-502
710.012N1M		30JUL99*	Submit TWRS Integrated Info Sys Assessment T10-99-501
710.014	01OCT98*	30SEP04	Integration of Tech Baseline Bus Processes

Project Start 01OCT98
Project Finish 07OCT24
Data Date 01OCT98
Run Date 17NOV98

Early Bar
Progress Bar
Critical Activity

ABP2

Sheet 1 of 3

Tank Waste Remediation System
PMBS - FY 1999
TW10 - TWRS Management Support

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Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP FY00 OCT
710.016	01OCT98*	28JUN01	Work Management
710.016A1M		30SEP99*	Incorporate MEL & SEL into HANDI 2000 Work Mgt T10-99-506
710.036	01OCT98*	30SEP03	Requirements Engineering
710.602	01OCT98*	30SEP24	Direct & Administer LMHC ESH&Q Program
710.604	01OCT98*	30SEP24	Integrate TWRS Environmental Compliance Program
710.606	01OCT98*	30SEP24	Integrate TWRS Safety and Health Compliance
710.616	01OCT98*	30SEP24	Manage and Implement VPP Initiatives
710.624	01OCT98*	30SEP24	Oversee Injury/Illness Reporting
716.008	01OCT98*	07OCT24	Perform QA & Professional Development
1.01.10.01.01.03			Plan/Control TWRS
710.018	01OCT98*	30SEP24	Provide Finanacial Control, Integration
710.020	01OCT98*	30SEP24	Master Planning
710.022	01OCT98*	30SEP24	Configuration Management
710.024	01OCT98*	30SEP24	Cost Estimating
710.026	01OCT98*	30SEP24	Construction Project Management
710.038	01OCT98*	30SEP24	Risk Assessments

Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP	FY00 OCT
1.01.10.01.01.04			Direct TWRS	
710.028	01OCT98*	30SEP24	Performance Fee Account	
710.030	01OCT98*	30SEP24	FDH Project Office/Direction	
710.032	01OCT98*	30SEP24	DOE-RL Oversight	
710.034	01OCT98*	29SEP00	DOE-RL Permitting/Environ. Compliance	

B.10.3.3 Milestone List

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/ TPA Date
T10-99-503	TWR7.1.1 LMHC Approved TWRS Testing and Evaluation Management Plan	RL	-	12-Feb-99	-
T10-99-500	Y2K Complete Compliance Assurance of 28 Mission Critical Systems	RL	-	30-Jul-99	-
T10-99-501	TWR7.1.1 TWRS Integrated Information System Assessment	RL	-	30-Jul-99	-
T10-99-502	TWR7.1.1 DOE-RL TWRS Approved TWRS Testing and Evaluation Management Plan	RL	-	13-Aug-99	-
T10-99-506	TWR6.3.2 Incorporate MEL and SEL into HANDI 2000 Work Management	RL	-	30-Sep-99	-
T10-00-101	Issue TWRS FY 2001 MYWP	RL	-	31-Aug-00	-
T10-01-101	Issue TWRS FY 2002 MYWP	RL	-	31-Aug-01	-

B.10.3.4 Milestone Description Sheets

TANK WASTE REMEDIATION SYSTEM MILESTONE DESCRIPTION SHEET

Title: LMHC Approved TWRS Testing and Evaluation Management Plan (TWR7.1.1)

Schedule Date: February 12, 1999

Assigned to: Systems Engineering

WBS Number: 1.1.1.1.2.02

Milestone Control Number: T10-99-503

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify) TWRS Plan	[ ] Other (Specify)

Description of this Commitment:

The Contractor formally delivers to DOE-RL TWRS a contractor-approved life cycle TWRS Testing and Evaluation Management Plan (TEMP) for review and comment via the RCR process.

Description of what constitutes completion of the commitment: The TEMP shall:

- Establish the overall test and evaluation process for TWRS
- Direct TWRS activities to generate activity-specific Test and Evaluation Plans and Technical Performance Measures in a graded manner
- Ensure that test and evaluation planning processes and deliverables are integrated into the project baselines.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Y2K: Complete Compliance Assurance of 28 Mission critical systems

Schedule Date: 30-Jul-99

Assigned to: R. B. Bass

WBS Number: 1.01.10.01.01.02.03.01.01

Milestone Control Number: T10-99-500

Milestone Type	Deliverables	Addressed to
	Y2K Compliance Representation Letters	
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[x] Other (Specify)
		FDH's Y2K Program

Description of this Commitment:

The LMHC/TWRS Year 2000 (Y2K) Program has 28 Mission Critical Y2K Compliance Projects. Each project has a specific plan to assure that the business function of the software, hardware, or field equipment it uses will not be adversely affected by date-related processing associated with the transition of the year from 1999 to 2000 (other dates also apply). Compliance Assurance is actually a review by the FDH-run PHMC Y2K Project of a Compliance Project's assessment, renovation, validation, implementation, and contingency plans (if necessary) work phases. Compliance Project personnel will have to assist FDH by providing the necessary information and reports. The Y2K Compliance Representation letter is a statement that the project has completed the work and, based on the results of the tests or the actions specified in the Contingency Plan, the components of the project should perform their functions without adverse affects from the Year 2000-related date transitions.

Description of what constitutes completion of the commitment:

This commitment is completed when all Compliance Assurance reports covering the 28 LMHC/TWRS Mission Critical Compliance Projects have been issued by FDH's PHMC Y2K Project and LMHC/TWRS Y2K Program has issued the corresponding Compliance Representation letters to FDH.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: TWRS Integrated Information System Assessment (TWR7.1.1)

Schedule Date: July 30, 1999

Assigned to: Systems Engineering

WBS Number: 1.01.01.01.02.02

Milestone Control Number: T10-99-501

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

The Contractor delivers to DOE-RL TWRS a report that assesses the TWRS Integrated Information System

Description of what constitutes completion of the commitment:

The assessment report shall be formed as follows:

- The Contractor selects and defines a TWRS Integrated Information System.
- The contractor assesses the ability of that Information System to provide information through level 3 of the systems engineering maturity model for the TWRS program, as defined by the current TWRS Systems Engineering Maturity Assessment procedure in HNF-IP-0842.
- The Contractor delivers a report to DOE-RL-TWRS. The report describes the Information System, the assessment methods and results, and identifies gaps requiring resolution.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: DOE-RL TWRS Approved TWRS Testing and Evaluation Management Plan (TWR7.1.1)

Schedule Date: August 13, 1999

Assigned to: Systems Engineering

WBS Number: 1.01.10.01.02.02

Milestone Control Number: T10-99-502

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify) TWRS Plan	[ ] Other (Specify)

Description of this Commitment:

The Contractor revises the life-cycle TWRS Testing and Evaluation Management Plan (TEMP) per comments received from DOE-RL TWRS, as required to obtain approval of the TEMP from DOE-RL TWRS Systems Engineering.

Description of what constitutes completion of the commitment: The TEMP shall:

- Establish the overall test and evaluation process for TWRS
- Direct TWRS activities to generate activity-specific Test and Evaluation Plans and Technical Performance Measures in a graded manner
- Ensure that test and evaluation planning processes and deliverables are integrated into the project baselines.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Incorporate MEL and SEL into HANDI 2000 Work Management (TWR6.3.2)

Schedule Date: 9/30/99

Assigned to: Dale Allen

WBS Number: 1.01.10

Milestone Control Number: T10-99-506

Milestone Type	Deliverables	Addressed to
[ ] TPA	[x] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

By September 30, 1999, incorporate the Master Equipment List (MEL), generated by the As Building Project as of December 31, 1998 and the Safety Equipment List (SEL) revised as of July 31, 1999, into the HANDI 2000 Work Management Module so that TWRS personnel have a single source for configuration control of tank farm equipment.

Description of what constitutes completion of the commitment:

Completion of this milestone will be delivery of a letter from LMHC to FDH/DOE-RL stating that the MEL and SEL, as stated above, are loaded into the Work Management Module and that the Production Cutover as identified on the project schedule is complete, allowing access via the HANDI 2000 Work Management Module at any work management authorized computer.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Issue TWRS FY 2001MYWP

Schedule Date: 8/31/2000

Assigned to: D. L. Lenseigne

WBS Number: 1.01.10

Milestone Control Number: T10-00-101

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[x] Other (Specify)
	MYWP Document	FDH

Description of this Commitment:

Prepare and submit the TWRS Multi-Year Work Plan (MYWP) for FY 2001. The Management Support Project will coordinate the preparation and perform final assembly of the MYWP with activities to include:

- Receiving guidance from FDH/RL
- Preparing and distributing TWRS specific guidance
- Scheduling and coordinating the development of products
- Performing final assembly and distribution

Description of what constitutes completion of the commitment:

The input shall be prepared in accordance with the guidance provided by FDH/RL. Input shall include, but is not limited to following products.

- Hanford Site Technical Database (HSTD) input
- WBS Dictionary at the designated level
- Detailed project and summary schedules as required
- Milestone Description Sheets and Milestone Logs
- Cost Tables as designated in the guidance
- Other products as specified by the FDH/RL guidance

This milestone will be considered complete when the TWRS MYWP is cleared through Document Release and delivered to FDH.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: .Issue TWRS FY 2002 MYWP

Schedule Date: 8/31/2001

Assigned to: D. L. Lenseigne

WBS Number: 1.01.10

Milestone Control Number: T10-01-101

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[x] Other (Specify)
	MYWP Document	FDH

Description of this Commitment:

Prepare and submit the TWRS Multi-Year Work Plan (MYWP) for FY 2002. The Management Support Project will coordinate the preparation and perform final assembly of the MYWP with activities to include:

- Receiving guidance from FDH/RL
- Preparing and distributing TWRS specific guidance
- Scheduling and coordinating the development of products
- Performing final assembly and distribution

Description of what constitutes completion of the commitment:

The input shall be prepared in accordance with the guidance provided by FDH/RL. Input shall include, but is not limited to following products.

- Hanford Site Technical Database (HSTD) input
- WBS Dictionary at the designated level
- Detailed project and summary schedules as required
- Milestone Description Sheets and Milestone Logs
- Cost Tables as designated in the guidance
- Other products as specified by the FDH/RL guidance

This milestone will be considered complete when the TWRS MYWP is cleared through Document Release and delivered to FDH.

B.10.4.1 Project Priority List

TANK WASTE REMEDIATION SYSTEM
FY 1999 - 2007 MYWP PRIORITY LIST BY PBS

11/23/98 'FY 99 MYWP

EXCEL: 10YRPR49.XLS

FDH **11/24/98 5:06 PM**

UAS	PBS #	ADS	"UNIT OF ANALYSIS"	FY 99 TOTAL ESCAL'D	FY 00 TOTAL ESCAL'D	FY 01 TOTAL ESCAL'D	FY 02 TOTAL ESCAL'D	FY 03 TOTAL ESCAL'D	FY 04 TOTAL ESCAL'D	FY 05 TOTAL ESCAL'D	FY 06 TOTAL ESCAL'D	FY 07 TOTAL ESCAL'D
TW10												
142	TW10	1200 - 0	TWRS MGMT SUPPT-ENV. SAFETY QUAL ASSMT & HEALTH	2,400	2,474	3,490	3,373	3,490	3,672	3,647	3,715	3,810
136	TW10	1200 - 0	TWRS MGMT SUPPT - ENGINEERING MGMT & ADMIN	1,100	1,100	1,148	1,169	1,199	1,230	1,244	1,267	1,300
148	TW10	1200 - 0	TWRS MGMT SUPPT - RL SUPPORT	1,745	1,720	1,670	1,706	1,744	1,782	171	173	178
			SUBTOTAL - MIN SAFE	**5,245**	**5,294**	**6,308**	**6,248**	**6,432**	**6,684**	**5,062**	**5,155**	**5,287**
153	TW10	1200 - 0	TWRS MANAGEMENT SUPPORT - FEE	14,740	14,740	15,381	15,719	16,065	16,418	16,790	17,090	17,537
143	TW10	1200 - 0	TWRS F.D.H. PROJECT OFFICE SUPPORT	4,500	4,500	4,696	4,799	4,904	5,012	5,126	5,218	5,354
193	TW10	1200 - 0	TWRS MGMT. SUPPORT-PROJ PLNG INTG & CONT/CAD	9,401	9,169	11,324	11,409	12,567	11,193	15,483	11,537	11,841
194	TW10	1200 - 0	TWRS MGMT. SUPPORT-SYS ENGRG/REENGRG	2,903	2,782	2,405	2,439	2,494	1,782	2,304	1,005	1,031
213	TW10	1200 - 0	TWRS MANAGEMENT SUPPORT-COMM / HGET ETC.	262	266	278	284	290	296	303	309	316
581	TW10	1200 - 0	TWRS MANAGEMENT SUPPORT-WORK MANAGEMENT	1,659	1,826	1,567	-	-	-	-	-	-
			SUBTOTAL - ESSENTIAL SERVICES	**38,710**	**38,577**	**41,958**	**40,897**	**42,753**	**41,386**	**45,068**	**40,315**	**41,367**
			S/T-FY 1999 / 2000 TARGET/ 90 % /COMPLIANCE	**38,710**	**38,577**							
624	TW10	1200 - 0	WORK MANAGEMENT	2,500	700	-	-	-	-	-	-	-
475	TW10	1200 - 0	RL SUPPT - ICE REVIEW OF TWRS	1,500	-	-	-	-	-	-	-	-
633	TW10	1200 - 0	ES&H/QA INITIATIVES	1,300	1,300	-	-	-	-	-	-	-
634	TW10	1200 - 0	EXECUTIVE MANAGEMENT SUPPORT	250	250	-	-	-	-	-	-	-
635	TW10	1200 - 0	CONSTRUCTION PROJECT MANAGEMENT	1,200	1,200	-	-	-	-	-	-	-
636	TW10	1200 - 0	CONFIGURATION MANAGEMENT	1,200	600	-	-	-	-	-	-	-
638	TW10	1200 - 0	HANDI 2000 INTEGRATION	1,000	610	-	-	-	-	-	-	-
639	TW10	1200 - 0	CASS	300	-	-	-	-	-	-	-	-
640	TW10	1200 - 0	ADVANCED TECHNICAL INITIATIVES	400	130	-	-	-	-	-	-	-
641	TW10	1200 - 0	DESKTOP PC DISTRIBUTION	440	400	-	-	-	-	-	-	-
642	TW10	1200 - 0	COST ESTIMATING & RISK ANALYSIS	600	600	-	-	-	-	-	-	-
643	TW10	1200 - 0	MASTER PLANNING	400	300	-	-	-	-	-	-	-
644	TW10	1200 - 0	ENGINEERING MANAGEMENT	560	500	-	-	-	-	-	-	-
645	TW10	1200 - 0	SYSTEMS ENGINEERING	200	-	-	-	-	-	-	-	-
			TOTAL TWRS REQUIREMENTS (EM-30)	**50,560**	**45,167**	**41,958**	**40,897**	**42,753**	**41,386**	**45,068**	**40,315**	**41,367**

B.10.4.2 Life Cycle Cost Baseline by PBS

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.10
PBS NO:	RL-TW10
PBS TITLE:	TWRS MANAGEMENT SUPPORT

FUND TYPE	ACTUAL FY1997	ACTUAL FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	SUBTOT FY1997-FY2006
OPERATING EXPENSE	24,968	37,051	38,710	38,087	40,851	39,329	40,552	38,835	41,631	37,054	377,066
CENRTC	-	27	-	-	-	-	-	-	-	-	27
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*											
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	490	1,107	1,568	2,201	2,552	3,437	3,262	14,618
TOTAL BCWS/PMB[1]	24,968	37,078	38,710	38,577	41,958	40,897	42,753	41,387	45,067	40,316	391,711
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-
TOTAL	24,968	37,078	38,710	38,577	41,958	40,897	42,753	41,387	45,067	40,316	391,711

[1] Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2] Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.10
PBS NO:	RL-TW10
PBS TITLE:	TWRS MANAGEMENT SUPPORT

FUND TYPE	FY2007	FY2008	FY2009	FY2010	FY2011-FY2015	FY2016-FY2020	FY2021-FY2025	FY2026-FY2030	FY2031-FY2035	FY2036 FY2040	FY2041-FY2045	FY2046 FY2050	TOTAL FY1997-FY2050
OPERATING EXPENSE	37,579	37,965	38,064	38,467	197,064	208,710	175,899	-	-	-	-	-	1,110,813
CENRTC	-	-	-	-	-	-	-	-	-	-	-	-	27
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*													
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-	-	-
Escalation	3,788	4,312	4,777	5,316	34,547	49,728	51,770	-	-	-	-	-	168,856
TOTAL BCWS/PMB[1]	41,366	42,277	42,840	43,783	231,611	258,438	227,669	-	-	-	-	-	1,279,695
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	41,366	42,277	42,840	43,783	231,611	258,438	227,669	-	-	-	-	-	1,279,695

[1] Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2] Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
07:35 AM

		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.10																	
RL-TW10																	
TWRS MANAGEMENT SUPPORT																	
1.1.10.1.1.1	TWRS Mgmt & Admin	OE	4,316	4,371	4,555	4,651	4,757	4,866	4,804	4,890	37,210	146,520	5,018	5,128	5,241	5,356	20,742
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		4,316	4,371	4,555	4,651	4,757	4,866	4,804	4,890	37,210	146,520	5,018	5,128	5,241	5,356	20,742
1.1.10.1.1.2	TWRS Integration	OE	8,193	8,180	9,079	7,327	8,435	6,303	7,082	5,868	60,467	178,464	6,021	6,154	5,923	6,053	24,150
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		8,193	8,180	9,079	7,327	8,435	6,303	7,082	5,868	60,467	178,464	6,021	6,154	5,923	6,053	24,150
1.1.10.1.1.3	TWRS Planning/Control	OE	5,216	5,066	6,578	6,695	6,848	7,004	11,096	7,075	55,577	213,692	7,259	7,419	7,582	7,749	30,008
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		5,216	5,066	6,578	6,695	6,848	7,004	11,096	7,075	55,577	213,692	7,259	7,419	7,582	7,749	30,008
1.1.10.1.1.4	TWRS Direction	OE	20,985	20,960	21,746	22,224	22,713	23,213	22,086	22,483	176,410	678,972	23,069	23,577	24,095	24,625	95,366
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		20,985	20,960	21,746	22,224	22,713	23,213	22,086	22,483	176,410	678,972	23,069	23,577	24,095	24,625	95,366
1.1.10	**TWRS MGMT SUPPT**	OE	38,710	38,577	41,958	40,897	42,753	41,386	45,068	40,315	329,664	1,217,647	41,367	42,277	42,840	43,783	170,266
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL		38,710	38,577	41,958	40,897	42,753	41,386	45,068	40,315	329,664	1,217,647	41,367	42,277	42,840	43,783	170,266

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
07:35 AM

		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.10														
RL-TW10														
TWRS MANAGEMENT SUPPORT														
1.1.10.1.1.1	TWRS Mgmt & Admin	OE	28,578	31,888	28,102	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		28,578	31,888	28,102	0	0	0	0	0	0	0	0	0
1.1.10.1.1.2	TWRS Integration	OE	30,299	33,809	29,738	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		30,299	33,809	29,738	0	0	0	0	0	0	0	0	0
1.1.10.1.1.3	TWRS Planning/Control	OE	41,345	46,134	40,629	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		41,345	46,134	40,629	0	0	0	0	0	0	0	0	0
1.1.10.1.1.4	TWRS Direction	OE	131,389	146,607	129,199	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		131,389	146,607	129,199	0	0	0	0	0	0	0	0	0
1.1.10 TWRS MGMT SUPPT		OE	231,611	258,438	227,668	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL		231,611	258,438	227,668	0	0	0	0	0	0	0	0	0

B.10.4.3 Life Cycle Budget Authority by PBS

TANK WASTE REMEDIATION SYSTEM
BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.10	
PBS NO:	RL-TW10	
PBS TITLE:	TWRS MANAGEMENT SUPPORT	
FUND TYPE	TARGET B/A FY1998	PRESIDENT'S BUDGET PLUS CARRYOVER[1] FY1999
OPERATING EXPENSE	37,051	38,710
CENRTC	27	-
GENERAL PLANT PROJECT	-	-
LINE ITEM *(List Each One)*		
0	-	-
0	-	-
0	-	-
0	-	-
0	-	-
0	-	-
Subtotal Line Items	-	-
TOTAL NEW B/A	37,078	38,710
ESTIMATED FY 1998 CARRYOVER		265
TOTAL NEW B/A+CARRYOVER	37,078	38,975

[1]Estimated Carryover Is NOT Included In Cost Baseline; Change Request For Actual Carryover Submitted After September 30, 1998.

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

09/24/98 09/24/98 UPDATE

10:29 AM

PBS - ADS

PBS TITLE

TW10

1.1.10 TWRS MANAGEMENT SUPP'T

F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A) *	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2066 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
EX	24,968	37,051	38,975	38,577	41,958	40,897	42,753	41,386	45,068	40,315	391,948	1,279,931	41,367	42,277	42,840	43,783	170,266
CE	0	27	0	0	0	0	0	0	0	0	27	27	0	0	0	0	0
TOTAL	24,968	37,078	38,975	38,577	41,958	40,897	42,753	41,386	45,068	40,315	391,975	1,279,958	41,367	42,277	42,840	43,783	170,266

* FY 1999 INCLUDES CARRYOVER OF $265

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

11/24/98 09/24/98 UPDATE

18:29 AM

PBS - ADS

PBS TITLE

TW10

1.1.10 TWRS MANAGEMENT SUPP'T

F/T	FY 2011-FY 2015 B/A PROFILE (B/A)	FY 2016-FY 2020 B/A PROFILE (B/A)	FY 2021-FY 2025 B/A PROFILE (B/A)	FY 2026-FY 2030 B/A PROFILE (B/A)	FY 2031-FY 2035 B/A PROFILE (B/A)	FY 2036-FY 2040 B/A PROFILE (B/A)	FY 2041-FY 2045 B/A PROFILE (B/A)	FY 2046-FY 2050 B/A PROFILE (B/A)	FY 2051-FY 2055 B/A PROFILE (B/A)	FY 2056-FY 2060 B/A PROFIL (B/A)	FY 2061-FY 2065 B/A PROFILE (B/A)	FY 2066-FY 2066 B/A PROFILE (B/A)
EX	231,611	258,438	227,668	0	0	0	0	0	0	0	0	0
CE	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	231,611	258,438	227,668	0	0	0	0	0	0	0	0	0

B.10.4.4 Project (PBS) Contractor Split

TANK WASTE REMEDIATION SYSTEM
FY 1999 CONTRACTOR FUNDING SPLIT (NEW BA ONLY)

PBS	DOE-RL/ RL-PNNL	NATIONAL LABS	TOTAL
TW10	$ 1,745	$ -	$ 1,745

REFLECTS FY 1999 NEW BA ONLY

SUMMARY OF PROPOSED UPDATES TO THE MYWP

1. **PBS number and title: TW01 Tank Waste Characterization Project**

Concise narrative that describes/articulates proposed updates to the MYWP:

- TCR's reduced from 26 in FY 1998 to 17 in FY 1999.
- Evaporator support increased.
- Increased scope to support Retrieval (Waste Feed Delivery, WIT, and Privatization Contractor).
- Minimize safe operations requirements greatly reduced.
- Increased scope for grab samples to support Interim Stabilization.
- Support to Flammable Gas Safety Issue nearly eliminated.
- Defer Large Volume Sampler; below IPL Target in FY 1999 and FY 1998.
- The movement to a new business structure will provide an opportunity to demonstrate integration through the breakdown/roll up of cost and schedule information at the function level as well as better cost estimates for grab and core sampling using the Technical Baseline Review process.
- Outyear growth in 2001 supports upgrades in equipment engineering, data management, and best basis inventory. In addition, IMUST grab and vapor sampling programs will be fully implemented and long-length contaminated equipment removal will be demonstrated. Defense Nuclear Facilities Safety Board (DNFSB) 93-5 (Safety Screening) work deferred in FY 1999 and 2000 is schedule to complete DNFSB Milestone at the earliest possible time.

2. **Outcomes – based on proposed updates:**

Identify impacts to EM Management Commitments and proposed solutions.

- Defense Nuclear Facilities Safety Board (DNFSB) 93-5 Milestone will not complete on time, unless an alternative approach is successful.

Identify impacts to the PBS Performance Metrics and proposed solutions.

- None.

Be prepared to discuss desired project interim endpoints for FY 1999.

- None.

3. **Technical - based on proposed updates:**

Identify and describe which technical requirements are changing.

- Retrieval Air Emissions Characterization sampling Data Quality Objective (DQO) and Dangerous Waste DQO are in the review approval process. When finalized, an impact analysis will be performed with change control following prior to implementation.
- Sampling, analysis, and to studies to support Privatization Regulatory requirements are being approved by Ecology. If executed in its current form, the will requires a significant increase in work scope, especially laboratory work.

Identify and describe which technical work scope is changing.

- Recommendation for closure of DNFSB 93-5 Milestone 5.6.3.1j, is in preparation. This recommendation will contain the necessary information to support the conclusion that the basis for the initial safety screening sampling and specific sampling for safety issues has been met and that there is not a priority for sampling the remaining tanks. The recommendation will list which tanks have been sampled, which have not, and provide a rationale and recommendation to close this milestone.

4. **Schedule – based on proposed updates:**

Identify and describe which regulatory, DNFSB and/or HQ milestones have been or potentially need to be modified.

- DNFSB 93-5, 5.6.3.1j Milestone.
- Should the alternative approval for completion of DNFSB 93-5, Milestone 5.6.3.1j not be successful, and the current level of TW01 funding is maintained, this milestone would need to be extended from December 2002 to approximately December 2005.

Identify and describe which project interfaces (at PBS level) are affected.

- TW02 Safety Issue Resolution Project.

Identify and describe potential slippage of schedule activities as a result of Baseline Updating Guidance (BUG).

- Additional funding or a project change in direction will be needed to support sampling and analyses of IMUSTs in FY 1999.

5. **Cost – based on proposed updates:**

Identify and describe any significant cost changes that are a result of items 2 through 4 above (as well as re-estimates if applicable).

- RL Reg. DQO – approximately $2M this year to implement.
- Project is estimated on currently approved DQOs. As changing additional technical requirements are put forward, a project rebaselining change action will be needed.

6. **Funding:**

As a result of updates to expected available funding, what strategy/path forward do you recommend for any updates to the current life-cycle baseline?

- Life-cycle updates should tied and consistent to the annually updated Waste Information Requirements Document (WIRD) required by TPA.
- AE & DW DQOs – impact not known, could go either way.
- RL Regulations DQO – life-cycle adds $8-12M.
- Closure of DNFSB 93-5 – reduces life-cycle by approximately $110M.

7. **Key Areas of Focused Emphasis:**

- T01-99-123 Complete 21 Core Samples 9/30/99
  T01-99-125 Complete 21 Garb Samples 9/30/99
  T01-99-116 Issue 17 Tank Characterization Reports 9/20/99
  T01-99-146 Issue Rpts to Close DNFSB 93-5 Comm. 5.6.3.1j 6/30/99
  T01-99-131 10 Lab Analysis Reports for Core Samples 9/30/99
  T01-99-133 12 Lab Analysis Report for Grab Mode Samples 9/30/99
  T01-99-145 Complete Input for HLW Tanks per WIRD FY99 (M-44-16C) 9/30/99
  T01-99-100 Submit Final WIRD for FY 2000 to Ecology (M-44-14C) (TWR6.2.2) 8/23/99
  T01-00-104 Submit Final WIRD for FY 2001 to Ecology (M-44-14D) 8/31/00
  T01-01-107 Submit Final WIRD for FY 2002 to Ecology (M-44-14E) 8/31/01

Performance Enhancements (provide proposed "opportunities" data):

- Many proposed enhancements to engineering, data management, and best basis inventory were deferred from FY 1999 and FY 2000, and are identified as funded activities in FY 2001. Most of these will motivate a cost savings in subsequent years if implemented. The following should be looked at for funding in FY 1999 and FY 2000.

- Engineering upgrades will improve recovery rates, reduce safety hazards, and enhance configuration control.

- Upgrade to Data Management will improve TWINS3 user interface; consolidate database common fields; automate Hanlon report, link to other databases; add rheological and vadose zone data to TCD; eliminate TWINS data administrator; reduce correction TCD deficiencies; eliminate support to archiving samples.

- Best Basis Inventory requested improvements will provide additional analytes and radionuclides, develop inventory by waste phase, benchmark tank data, resolve TC-99/I-129 inventory discrepancies, update wash leach factors, define leak waste inventories, develop IMUST tank inventories, expand database for data integration.

Technical Issues Management List (TIML) Issues (identify each issue and its proposed schedule/milestone (s) for resolution):

- TWRS has no issues on the TIML.

Technology Insertion Points (TIPs) (identify each TIP and its proposed schedule for insertion):

- The following TIP milestone has been incorporated in the Characterization schedule.

  - Deployment Decision for Nested, Fixed-Depth Sampler (8/30/01)

SUMMARY OF PROPOSED UPDATES TO THE MYWP

1. PBS number and title: TW02 Tank Safety Issue Resolution Project

Concise narrative that describes/articulates proposed updates to the MYWP:

- Added resolution of the level growth USQ for SY-101
- Accelerated flammable gas USQ closure for catch tanks and deferred USQ closure for vaults
- Accelerated organic complexant USQ closure, and organic complexant and organic solvent safety issue resolution for single-shell and double-shell tanks
- Added organic complexant USQ closure activities for ancillary facilities
- Enhanced AB infrastructure
- Added AB implementation for orphan facilities
- Added FSAR implementation
- Accelerated nuclear criticality safety issue resolution

2. Outcomes – based on proposed updates:

Identify impacts to EM Management Commitments and proposed solutions.

- None.

Identify impacts to the PBS Performance Metrics and proposed solutions.

- None.

Be prepared to discuss desired project interim endpoints for FY99.

- Organic complexant USQ for SSTs and DSTs closed; organic complexant and organic solvent safety issues for SSTs and DSTs resolved and tanks removed from the Watch List
- Nuclear criticality safety issue resolved
- Flammable gas USQ for DSTs and SSTs closed
- Documentation for resolution of the high-heat safety issue submitted
- FSAR approved and final implementation plan issued
- RGS samples obtained, analyzed and interpreted for SY-101 level growth USQ

3. Technical - based on proposed updates:

Identify and describe which technical requirements are changing.

- None.

Identify and describe which technical work scope is changing.

- None.

4. **Schedule – based on proposed updates:**

Identify and describe which regulatory, DNFSB and/or HQ milestones have been or potentially need to be modified.

- "RL Approval of FSAR," DNFSB 93-5.4.3.1d, enforceable date revised from 06/30/97 to 01/29/99; MYWP date revised from 09/30/98 to 01/29/99

- "Letter reporting completion of topical report to resolve the High-Heat Safety Issue," DNFSB 93-5.4.3.6d, enforceable date revised from 05/31/98 to 12/31/99; MYWP date revised from 09/30/98 to 12/31/99

Identify and describe which project interfaces (at PBS level) are affected.

- None.

Identify and describe potential slippage of schedule activities as a result of BUG.

- None.

5. **Cost – based on proposed updates:**

Identify and describe any significant cost changes that are a result of items 2 through 4 above (as well as re-estimates if applicable).

- Re-estimated work to Collect and Analyze SST and DST Flammable Gas Data
- Added SY-101 USQ closure
- Shifted resources from SSTs and DSTs to Ancillary Facilities for Organic Complexant USQ Closure
- Deleted Mitigation Activities for Organic SSTs
- Deleted Removal of C-103 Floating Organic Layer
- Re-estimated work for AB Infrastructure
- Added FSAR Implementation

6. **Funding**

As a result of updates to expected available funding, what strategy/path forward do you recommend for any updates to the current life-cycle baseline?

- None

7. Key Areas of Focused Emphasis:

Performance Objectives and Performance Metrics (for the 7/31/98 submittal, only the FY 1999 data is required; the 11/27/98 submittal will include life-cycle data):

• T02-99-202	TWR6.1.1 Provide Technical Report on Flammable Gas Vapor SpaceData from Flammable Gas Tanks	8/23/99
T02-99-100	Transmit Letter to DNFSB Reporting Completion of Topical Report to resolve the High Heat Safety Issue	12/31/99
T02-01-100	Mitigate/Resolve Tank Safety Issues for High Priority Watch List Tanks (M-40-00)	9/28/01

Performance Enhancements (provide proposed "opportunities" data):

- None

Technical Issues Management List (TIML) Issues (identify each issue and its proposed schedule/milestone (s) for resolution):

- TWRS has no issues on the TIML.

Technology Insertion Points (TIPs) (identify each TIP and its proposed schedule for insertion):

- This project has no TIP milestones.

SUMMARY OF PROPOSED UPDATES TO THE MYWP

1. PBS number and title: RL-TW03 Tank Waste Operations

Concise narrative that describes/articulates proposed updates to the MYWP:

- Additional $2.7M funding for Conduct of Operations Upgrades.
- Additional $16.4M funding provided to support the new Interim Stabilization Pumping schedule per RL.
- Double Shell Tank Integrity Assessment activities transferred from RL-TW04 to RL-TW03 in FY 1999.
- Life of project end point changed from year 2006 out to 2024 based on new project strategy and integrated into the TWRS Tank Closure Plan. The FY 1998 strategy called for transferring Tank Farm Operations (RL-TW03) to Waste Tank Retrieval (RL-TW04) in FY 2006, however, the new strategy calls for continued Tank Farm Operations until FY 2024.
- Delays in Privatization (Case 2) are reflected in the baseline planning via scheduling delays, resource requirements, and potential increased near-term waste storage requirements until startup of the vitrification plant.

2. Outcomes - based on proposed updates:

Identify impacts to EM Management Commitments and proposed solutions.

- None

Identify impacts to the PBS Performance Metrics and proposed solutions.

- None

Be prepared to discuss desired project interim endpoints for FY99.

- Refer to TWRS Operational Waste Volume Projection document #HNF-SD-WM-ER-029 for forecasted volumes of liquid waste (integrated with 242A Evaporator Campaigns).

- No significant changes in Solid Waste Projections from FY 1998.

3. Technical - based on proposed updates:

Identify and describe which technical requirements are changing.

- None

Identify and describe which technical work scope is changing.

- None

4. **Schedule – based on proposed updates:**

Identify and describe which regulatory, DNFSB and/or HQ milestones have been or potentially need to be modified.

- None (Slippage of M-41 interim stabilization milestones for saltwell pumping have occurred, however, the WDOE has not approved any changes to the official milestone dates).

Identify and describe which project interfaces (at PBS level) are affected.

- The project interfaces that are affected are with RL-TW04 (Retrieval Project) and relate to Privatization and Double Shell Tank Integrity Assessment activities.

Identify and describe potential slippage of schedule activities as a result of BUG.

- None

5. **Cost – based on proposed updates:**

Identify and describe any significant cost changes that are a result of items 2 through 4 above (as well as re-estimates if applicable). FY 1999 changes are:

- None

6. **Funding**

As a result of updates to expected available funding, what strategy/path forward do you recommend for any updates to the current life-cycle baseline?

- The lifecycle baseline has been extended as described in 1. Above, due to a change in the project mission strategy.

7. **Key Areas of Focused Emphasis:**

Performance Objectives and Performance Metrics:

- Conduct Tank Farm Safe Operations:

T03-00-056	M-43-13 Start Construction in 2nd Farm	6/30/00
T03-01-057	M-43-14 Start Construction in 3rd Farm	3/30/01
T03-00-105	Double Shell Tank Space Evaluation (M-46-00G)	9/29/00
T03-01-100	Double Shell Tank Space Evaluation (M-46-00H)	9/30/01

Stabilize Tank Waste and Tank Farms:

T03-99-706	Initiate Interim Stab.of SSTs, Number TBD by RL	9/30/99

Conduct Reduced Mortgage Tank Farm Safe Operations:

T03-99-635	TWR6.3.5 Perform Drawing and Labeling Upgrade	9/30/99
T03-99-637	TWR6.3.7 Install 8 ENRAFs in S/SX Farms and 8 ENRAFs in AP Farm	9/30/99

Performance Enhancements (provide proposed Aopportunities data):

- None

Technical Issues Management List (TIML) Issues (identify each issue and its proposed schedule/milestone (s) for resolution):

- TWRS has no issues on the TIML.

Technology Insertion Points (TIPs) (identify each TIP and its proposed schedule for insertion):

- This project has no TIP milestones.

SUMMARY OF PROPOSED UPDATES TO THE MYWP

1. **PBS number and title: TW04 Retrieval Project**

Concise narrative that describes/articulates proposed updates to the MYWP:

- Major changes to the FY98 MYWP compared to the FY99 MYWP are primarily due to the delay in the privatization schedule:

  - Change some tanks and tank sequencing in preparing retrieval systems in project W-211.
  - Delay retrieval systems activities in projects W-211, W-521, W-522 and C-104
  - Add contingency tanks for LAW and HLW feeds.
  - Include approximately 1 year of contingency in construction/delivery schedules.
  - Improve definition of project requirements prior to design.
  - Replace sludge washing work with rheology work.

2. **Outcomes – based on proposed updates:**

Identify impacts to EM Management Commitments and proposed solutions.

- None.

Identify impacts to the PBS Performance Metrics and proposed solutions.

- None

Be prepared to discuss desired project interim endpoints for FY99.

- None.

3. **Technical - based on proposed updates:**

Identify and describe which <u>technical requirements</u> are changing.

- None.

Identify and describe which <u>technical work scope</u> is changing.

- None

4. **Schedule – based on proposed updates:**

   Identify and describe which regulatory, DNFSB and/or HQ milestones have been or potentially need to be modified.

   - None

   Identify and describe which project interfaces (at PBS level) are affected.

   - None

   Identify and describe potential slippage of schedule activities as a result of Baseline Updating Guidance (BUG).

5. **Cost – based on proposed updates:**

   Identify and describe any significant cost changes that are a result of items 2 through 4 above (as well as re-estimates if applicable).

   - None

6. **Funding**

   As a result of updates to expected available funding, what strategy/path forward do you recommend for any updates to the current life-cycle baseline?

   - None

7. **Key Areas of Focused Emphasis:**

   Performance Objectives and Performance Metrics:

   - T04-99-B81 Issue TWRS Ops and Utiliz. Plan Rev. 1 5/5/99
     T04-00-241 M-45-02E Annual Update SST Retrieval Sequence 9/29/00
     T04-01-241 M-45-02F Annual Update SST Retrieval Sequence 9/28/01

   Performance Enhancements (provide proposed "opportunities" data):

   - None

   Technical Issues Management List (TIML) Issues (identify each issue and its proposed schedule/milestone (s) for resolution):

   - There are no TWRS issues on the TIML.

Technology Insertion Points (TIPs) (identify each TIP and its proposed schedule for insertion):

- The following TIP milestones have been incorporated in the Retrieval schedule.
  - Vadose Zone Contaminated Distribution (9/29/00)
  - DST Mixing Pump Technology (9/28/2001)
  - Decisions on IMUST Retrieval and Closure (9/27/2007)
  - Select Retrieval Technology for SST Farm (9/30/2004)

SUMMARY OF PROPOSED UPDATES TO THE MYWP

1. **PBS number and title: TW05 Process Waste Support Project**

   Concise narrative that describes/articulates proposed updates to the MYWP:

   - Revised scope of work to reflect support to DOE for one (1) privatization vendor rather than the original baseline of two (2) vendors for Phase I;
   - Previously, TWRS Management Systems support transferred to the Disposal Division in FY2006, and budget for this support beyond FY2006 was included in the Process Waste Support Project (TW05). The FY99 MYWP deletes this budget from TW05 because this scope of work is retained in TW10

2. **Outcomes – based on proposed updates:**

   Identify impacts to EM Management Commitments and proposed solutions.

   - None. No impacts resulting from this scope deletion in TW05

   Identify impacts to the PBS Performance Metrics and proposed solutions.

   - None. No impacts resulting from this scope deletion in TW05

   Be prepared to discuss desired project interim endpoints for FY99.

   - None.

3. **Technical - based on proposed updates:**

   Identify and describe which <u>technical requirements</u> are changing.

   - No technical requirements have changed. Programmatically, the baseline now reflects one (1) vendor for TWRS Privatization Phase I rather than two (2) vendors.

   Identify and describe which <u>technical work scope</u> is changing.

   - No change to the technical work scope in TW05.

4. **Schedule – based on proposed updates:**

   Identify and describe which regulatory, DNFSB and/or HQ milestones have been or potentially need to be modified.

   - There are no regulatory, DNFSB or HQ milestones within TW05.

   Identify and describe which project interfaces (at PBS level) are affected.

- Project interfaces affected as a result of the BNFL Privatization Phase I contract are contained within PBS RL-TW06 TWRS Privatization Phase I.

Identify and describe potential slippage of schedule activities as a result of Baseline Updating Guidance (BUG).

5. **Cost – based on proposed updates:**

Identify and describe any significant cost changes that are a result of items 2 through 4 above (as well as re-estimates if applicable).

- The overall lifecycle cost baseline for TW05 was reduced $500M with the deletion of TWRS management system support beyond FY2006. An offsetting increase will be found in RL-TW10.

6. **Funding**

As a result of updates to expected available funding, what strategy/path forward do you recommend for any updates to the current life-cycle baseline?

- No recommendations identified at this point.

7. **Key Areas of Focused Emphasis:**

Performance Objectives and Performance Metrics:

• T05-99-201	Process Waste Support Technical Mgmt. and Integration	9/30/99
T05-00-201	Process Waste Support Technical Mgmt and Integration	9/29/00
T05-01-201	Process Waste Support Technical Mgmt and Integration	9/27/01
T05-00-110	Issue ICD Implementation Plan	7/31/00
T05-01-110	Issue ICD Implementation Plan	7/31/01

Performance Enhancements (provide proposed "opportunities" data):

- None

Technical Issues Management List (TIML) Issues (identify each issue and its proposed schedule/milestone (s) for resolution):

- There are no TWRS issues on the TIML.

Technology Insertion Points (TIPs) (identify each TIP and its proposed schedule for insertion):

- This project has no TIP milestones.

SUMMARY OF PROPOSED UPDATES TO THE MYWP

1. PBS number and title: TW06 Privatization Phase 1

Concise narrative that describes/articulates proposed updates to the MYWP:

A contract with BNFL was signed on August 24, 1998 that had numerous, but not substantial, changes to the existing technical and programmatic baselines as well as the business and finance approach to Privatization Phase 1. Specific detail changes can be found in Contract No. DE-RP06-96RL13308. The most significant changes are summarized as follows:

- Privatization Phase I project is now based on one (1) vendor, BNFL, rather than the previous baseline of two (2) vendors.
- The lifecycle cost baseline for Privatization Phase I increased from $5.9B to $10.6B based on the current DOE contract with BNFL (DE-RP06-96RL13308). Current contract target cost is $6.9B in 1997 dollars.
- The scheduled Phase 1 LAW/HLW waste treatment operations time frame moved from FY2002 through FY2012 to FY2006 through FY2018.

2. Outcomes – based on proposed updates:

Identify impacts to EM Management Commitments and proposed solutions.

- The current BNFL contract and proposed lifecycle cost profile represents a substantial increase to the previous Phase I budget requirement. The BNFL schedule also extends the previous baseline schedule for Privatization Phase I. Efforts are underway to reduce risk, cost, and schedule drivers to minimize impacts to EM management commitments.

Identify impacts to the PBS Performance Metrics and proposed solutions.

- Cost and schedule programmatic impacts as a result of the current BNFL contract do not specifically impact the PBS Performance Metrics.

Be prepared to discuss desired project interim endpoints for FY99.

- The desired project interim endpoints for FY99 include a project review of BNFL's conceptual design and their efforts to reduce overall project risk, schedule, and cost. This review is scheduled for February 1999.

3. Technical - based on proposed updates:

Identify and describe which <u>technical requirements</u> are changing.

- Overall technical requirements are not substantially different, but do include different volumes of waste, number of canisters of waste processed, and other minor changes to the way waste constituents are retained by BNFL or returned to DOE. One of the more significant technical changes is related to sludge washing. Previously, the M&I was responsible for in-tank sludge washing. And now, the current BNFL contract places responsibility for sludge washing with BNFL rather than the M&I.

Identify and describe which technical work scope is changing.

- In-tank sludge washing is now included in TW06 technical work scope. Other minor technical changes can be found in the BNFL contract.

4. **Schedule – based on proposed updates:**

Identify and describe which regulatory, DNFSB and/or HQ milestones have been or potentially need to be modified.

- TPA Milestone M-60-12, "Start Hot Operations of Phase 1 LAW Pretreatment and Immobilization Facilities" currently has an enforceable date of December 31, 2002. The BNFL contract date is January 1, 2008. Renegotiation of this milestone will be necessary.

Identify and describe which project interfaces (at PBS level) are affected.

- The M&I has been directed to plan to the dates defined in the BNFL Phase I Interface Control Documents (ICDs). Revised interface points have been defined in the MYWP Project Master Baseline Schedule (PMBS)

Identify and describe potential slippage of schedule activities as a result of Baseline Updating Guidance (BUG).

- As a result in delays to the start of hot operations in the BNFL Pretreatment, HLW, and LAW facilities, delays in delivery of waste feed from the M&I have been factored into the MYWP schedule
- The operations time frame for Privatization Phase I facilities has been extended from FY2012 to FY2018.

5. **Cost – based on proposed updates:**

Identify and describe any significant cost changes that are a result of items 2 through 4 above (as well as re-estimates if applicable).

- The overall lifecycle cost baseline increase resulting from the BNFL contract increased from a PBS amount of $5.8B to a FY99 MYWP of $10.6B ($6.9B in 1997 dollars). During the next 24 months, BNFL will perform optimization studies and continue conceptual design activities to reduce the risk and current target cost figures.

6. Funding

As a result of updates to expected available funding, what strategy/path forward do you recommend for any updates to the current life-cycle baseline?

- The current TWRS PBS annual BA/BO profile will need to be modified to reflect the target cost and revised deliverable dates included in the BNFL contract.

7. Key Areas of Focused Emphasis:

Performance Objectives and Performance:

• T06-99-101	Project Review of BNFL Design Deliverables	2/28/99
T06-00-101	Construction Authorization Program Review/Decision	8/24/00
T06-01-101	Start Pretreatment Facility Construction	7/02/01

Performance Enhancements (provide proposed "opportunities" data):

- None

Technical Issues Management List (TIML) Issues (identify each issue and its proposed schedule/milestone (s) for resolution):

- There are no TWRS issues on the TIML.

Technology Insertion Points (TIPs) (identify each TIP and its proposed schedule for insertion):

- This project has no TWRS funded TIP milestones.

SUMMARY OF PROPOSED UPDATES TO THE MYWP

1. **PBS number and title: TW07 Privatization Phase 2**

   Concise narrative that describes/articulates proposed updates to the MYWP:

   - No changes have been made to TW07 Privatization Phase 2 technical or programmatic baseline. It is possible that after additional information is obtained during the TW06 Privatization Phase 1 authorization to proceed process over the next 24 months, changes could be made to Privatization Phase 2.

2. **Outcomes – based on proposed updates:**

   Identify impacts to EM Management Commitments and proposed solutions.

   - None.

   Identify impacts to the PBS Performance Metrics and proposed solutions.

   - None

   Be prepared to discuss desired project interim endpoints for FY99.

   - None.

3. **Technical - based on proposed updates:**

   Identify and describe which technical requirements are changing.

   - No technical requirements are changing

   Identify and describe which technical work scope is changing.

   - No technical work scope is changing

4. **Schedule – based on proposed updates:**

   Identify and describe which regulatory, DNFSB and/or HQ milestones have been or potentially need to be modified.

   - No milestones modified

   Identify and describe which project interfaces (at PBS level) are affected.

   - No project interfaces affected.

Identify and describe potential slippage of schedule activities as a result of Baseline Updating Guidance (BUG).

- No potential slippage of schedule activities.

5. **Cost – based on proposed updates:**

Identify and describe any significant cost changes that are a result of items 2 through 4 above (as well as re-estimates if applicable).

- No cost changes have occurred in TW07.

6. **Funding**

As a result of updates to expected available funding, what strategy/path forward do you recommend for any updates to the current life-cycle baseline?

- No recommendations for updates to the current baseline at this time.

7. **Key Areas of Focused Emphasis:**

Performance Objectives and Performance Metrics (for the 7/31/98 submittal, only the FY 1999 data is required; the 11/27/98 submittal will include life-cycle data):

- No work planned in the PBS over the next three years.

Performance Enhancements (provide proposed "opportunities" data):

- None

Technical Issues Management List (TIML) Issues (identify each issue and its proposed schedule/milestone (s) for resolution):

- There are no TWRS issues on the TIML.

Technology Insertion Points (TIPs) (identify each TIP and its proposed schedule for insertion):

- This project has no TIP milestones.

SUMMARY OF PROPOSED UPDATES TO THE MYWP

1. PBS number and title: TW08 Privatization Infrastructure

Concise narrative that describes/articulates proposed updates to the MYWP:

- Work scope added : AP Tank Farm Work per RL request (FDH #9850767), Waste Management and Program Documentation/Administration, W-519 addition of Electrical Spare parts work scope
- Work scope Deferred: Delayed electrical systems by 6 months; Liquid Effluent Project by 1 year
- Work Scope Transferred: Integrity Assessment moved to PBS TW03

2. Outcomes – based on proposed updates:

Identify impacts to EM Management Commitments and proposed solutions.

- None.

Identify impacts to the PBS Performance Metrics and proposed solutions.

- None

Be prepared to discuss desired project interim endpoints for FY99.

- None.

3. Technical - based on proposed updates:

Identify and describe which technical requirements are changing.

- None

Identify and describe which technical work scope is changing.

- None

4. Schedule – based on proposed updates:

Identify and describe which regulatory, DNFSB and/or HQ milestones have been or potentially need to be modified.

- None

Identify and describe which project interfaces (at PBS level) are affected.

- TW03 – Transfer of Integrity Assessment work scope

Identify and describe potential slippage of schedule activities as a result of Baseline Updating Guidance (BUG).

- None

5. **Cost – based on proposed updates:**

Identify and describe any significant cost changes that are a result of items 2 through 4 above (as well as re-estimates if applicable).

- None

6. **Funding**

As a result of updates to expected available funding, what strategy/path forward do you recommend for any updates to the current life-cycle baseline?

- None

7. **Key Areas of Focused Emphasis:**

Performance Objectives and Performance Metrics:

• T08-99-100	Physical Interface Control Information	5/28/99
T08-00-100	Construction Water and Roads Ready for BNFL	3/1/00
T08-01-100	Installation of 7 MW of Electrical Power/Access	3/30/01

Performance Enhancements (provide proposed "opportunities" data):

- None

Technical Issues Management List (TIML) Issues (identify each issue and its proposed schedule/milestone (s) for resolution):

- There are no TWRS issues on the TIML.

Technology Insertion Points (TIPs) (identify each TIP and its proposed schedule for insertion):

- This project has no TIP milestones.

SUMMARY OF PROPOSED UPDATES TO THE MYWP

1. PBS number and title: TW09 Immobilized Tank Waste S&D

Concise narrative that describes/articulates proposed updates to the MYWP:

- Changes to the FY 1999 MYWP are in four (4) main areas:
  - Privatization contract requirements/interfaces
  - Estimates for projects W-464, W-465, and W520 based on CDRs
  - Part 2 (previously called Phase II) planned in more detail (RTP change request only addressed Part I/Phase I)
  - Transfer of Cs/Sr to PBS TW05

Substantial delays in the Program were made at the direction of DOE-RL to plan to revised schedules for the projects to support start of hot operations to January 2008 for ILAW, and February 2007 for IHLW.

Additional tasks:
- AGA and path forward verification (Consequence of contract change)
- Melter disposition issues (Consequence of contract change)
- Technical parameter implementation (assessment of contract changes and impact evaluation) (Consequence of contract change)
- Transportation/packaging studies (Additional detail required on existing scope)
- Project Management Plans (DOE/Ecology new work scope)

2. Outcomes – based on proposed updates:

Identify impacts to EM Management Commitments and proposed solutions.

- None.

Identify impacts to the PBS Performance Metrics and proposed solutions.

- None

Be prepared to discuss desired project interim endpoints for FY99.

- Verify AGA conclusion and issue recommendation [W-464 and W-465]
- Receipt of DOE-HQ approve of 1998 Performance Assessment
- Preliminary draft ILAW Performance Assessment data package for waste form testing
- Preliminary draft ILAW Performance assessment data package for geotechnical testing
- Project revalidation [W-464 and W-465]

3. **Technical - based on proposed updates:**

Identify and describe which technical requirements are changing.

- Activities have been identified in the Systems Definition and Projects areas for the purpose of interfacing with the private contractor to respond to evolving contract requirement changes and implementation strategies. See specific TBRs for details.

- W-465 scope is currently being considered by DOE for converting from storage to disposal)

Identify and describe which technical work scope is changing.

- None at the present time, pending DOE decision

4. **Schedule – based on proposed updates:**

Identify and describe which regulatory, DNFSB and/or HQ milestones have been or potentially need to be modified.

- All outyear Interim and Target TPA milestones have been identified as needing to be renegotiated due to the current privatization strategy. See Section 7.

Identify and describe which project interfaces (at PBS level) are affected.

- Project interfaces affected are TW06 and TW07.

Identify and describe potential slippage of schedule activities as a result of Baseline Updating Guidance (BUG).

- The guidance provided by the WDD supports the dates given in #1 above.

5. **Cost – based on proposed updates:**

Identify and describe any significant cost changes that are a result of items 2 through 4 above (as well as re-estimates if applicable).

- Cost changes to Part 2 have increased due to more detailed planning based on experience and estimates of recently validated projects
- There is a change in the current MYWP due to receipt of direction to remove the Repository Fees from the baseline ($5.2B)
- Cost increases to projects/programs due to schedule slip (escalation)

6. Funding

As a result of updates to expected available funding, what strategy/path forward do you recommend for any updates to the current life-cycle baseline?

- No recommendations can be made at this time, as the schedules have not been constrained to the planning guidance.

7. Key Areas of Focused Emphasis:

- Performance Objectives and Performance Metrics (life-cycle):

T09-99-101	TWR3.1.1 ILAW Disposal Plan	9/30/99
T09-99-102	TWR4.1.1 IHLW Storage Plan	9/03/99
T09-00-004	Complete W-464 Advanced Conceptual Design	3/31/00
T09-00-005	Issue Waste Form Data Pkg. for 2001 PA	12/31/99
T09-01-001	Complete W-465 Advanced Conceptual Design	9/28/01
T09-01-002	CD 2 - Initiate W-464 Detailed Design	1/02/01
T09-99-100	M-90-12: Sub Revised CS Facility Part A Permit	6/28/02
T09-01-010	M-90-04-T01: Complete W-465 Definitive Design	6/30/03
T09-01-100	M-20-56: Sub CSB Part B Application to Ecology	6/30/03
T09-00-003	M-90-03: CD 3-Initiate W-465 Construction	10/01/03
T09-99-011	M-90-07-T01: Complete W-520 Conceptual Design	12/31/03
T09-01-021	M-20-57: Sub ILAW Part B Permit App to Ecology	4/30/04
T09-03-003	M-90-11: Complete W-464 Startup	3/31/06
T09-04-001	M-90-09-T01: Complete W-520 Detailed Design	6/15/07
T09-05-005	M-90-08: CD 3-Initiate W-520 Construction	8/27/07
T09-02-002	M-90-06: CD 4-Initiate W-465 Hot Operations	1/02/08
T09-01-020	M-20-58: Sub ILAW Disp Part B Permit App to Ecology	8/25/08
T09-06-100	M-90-10: CD 4-Initiate W-520 Hot Operations	5/17/11
T09-42-100	M-90-00: Complete Facilities-Waste Storage/Disposal	9/30/48

Performance Enhancements (provide proposed "opportunities" data):

- None

Technical Issues Management List (TIML) Issues (identify each issue and its proposed schedule/milestone (s) for resolution):

- There are no TWRS issues on the TIML.

Technology Insertion Points (TIPs) (identify each TIP and its proposed schedule for insertion):

- The following TIP milestone has been incorporated in the TW09 schedule.
  - ILAW Product Acceptance Inspection & Test Methodology (02/1/2006)

SUMMARY OF PROPOSED UPDATES TO THE MYWP

1. PBS number and title: TW10 - TWRS MANAGEMENT SUPPORT

Concise narrative that describes/articulates proposed updates to the MYWP:

- TWRS Management Support will now continue for the life of the TWRS Program. RL milestone T10-05-001 "Transition to Waste Disposal Project" (9/30/05) is deleted.
- Management Support Project funding levels is revised to reflect a constant percentage of the overall TWRS Budget.
- Maintenance Management Activity is moved to PBS TW03 Operations
- Additional funding is included to support FEB activities in FY99.
- Independent Cost Estimate Review is added.

2. Outcomes – based on proposed updates:

Identify impacts to EM Management Commitments and proposed solutions.

- Not Applicable

Identify impacts to the PBS Performance Metrics and proposed solutions.

- Not Applicable

Be prepared to discuss desired project interim endpoints for FY99.

- Not Applicable

3. Technical - based on proposed updates:

Identify and describe which technical requirements are changing.

- Not Applicable

Identify and describe which technical work scope is changing.

- None

4. Schedule – based on proposed updates:

Identify and describe which regulatory, DNFSB and/or HQ milestones have been or potentially need to be modified.

- **None**

Identify and describe which project interfaces (at PBS level) are affected.

- TW09 Waste Disposal – No longer transitioning in 2005 (See item 1)
- TW03 Operations – Maintenance Activity (See item 1)

Identify and describe potential slippage of schedule activities as a result of BUG.

- None

5. **Cost – based on proposed updates:**

Identify and describe any significant cost changes that are a result of items 2 through 4 above (as well as re-estimates if applicable).

- None

6. **Funding**

As a result of updates to expected available funding, what strategy/path forward do you recommend for any updates to the current life-cycle baseline?

- TWRS will pursue reprogramming of Line Item to Expense in order to obtain funds for work scope that is unfunded.

7. **Key Areas of Focused Emphasis:**

Performance Objectives and Performance Metrics:

- T10-99-500 Y2K Complete Compliance Assurance of 28 Mission Critical Systems 7/30/99

T10-00-100	Issue TWRS MYWP to FDH	8/31/00
T10-01-100	Issue TWRS MYWP to FDH	8/31/01

Performance Enhancements (provide proposed "opportunities" data):

- None

Technical Issues Management List (TIML) Issues (identify each issue and its proposed schedule/milestone (s) for resolution):

- TWRS currently has no issues on the TIML.

Technology Insertion Points (TIPs) (identify each TIP and its proposed schedule for insertion):

- Not Applicable

Appendix 2

Additional MYWP Deliverables

2.1 Performance Objectives and Measures

Performance Objectives and Measures

Tank Waste Remediation System Mission

HSP Success Indicator/ Critical Success Factor	Strategic Outcome/Goal	Performance Objective	Output/Metric	EM Management Commitment	FY 1999	FY 2000	FY 2001	FY 97-06	End Point Target
TW01 Reduced risk; reduced inventory; reduced mortgages	Radioactive Tank Waste goal	Conduct tank farm safe operations	Complete input for HLW tanks per WIRD FY99 (M-44-16C)	No 9/30/99					
			Submit final WIRD for FY00 to Ecology (M-44-14C) (TWRS6.2.2)	No 8/23/99					
			Submit final WIRD for FY01 to Ecology (M-44-14D)	No		8/31/00			
			Submit final WIRD for FY02 to Ecology (M-44-14E)	No			8/31/01		
TW02			Mitigate/resolve tank safety issues for high priority watch list tanks (M-40-00)	No			9/28/01		
			Transmit letter to DNFSB reporting completion of topical report to resolve the high heat safety issue	No		12/31/99			
			TWR6.1.1 Provide technical report on flammable gas vapor space data from flammable gas tanks	No 8/23/99					
TW03		Conduct reduced mortgage tank farm safe operations	TWR6.3.5 Perform drawing and labeling upgrades	No 9/30/99					

Performance Objectives and Measures

Tank Waste Remediation System Mission

HSP Success Indicator/ Critical Success Factor	Strategic Outcome/Goal	Performance Objective	Output/Metric	EM Management Commitment	FY 1999	FY 2000	FY 2001	FY 97-06	End Point Target
TW03 Reduced risk; reduced inventory; reduced mortgages	Radioactive Tank Waste goal	Conduct reduced mortgage tank farm safe operations	TWR6.3.7 Install 8 ENRAFs in S/SX Farms and 8 ENRAFs in AP farm	No 9/30/99					
		Conduct tank farm safe operations	Double shell tank space evaluation (M-46-00G)	No		9/29/00			
			Double shell tank space evaluation (M-46-00H)	No			9/28/01		
			HLW new waste m3	No	5,860	3,350	2,910	68,250	22,686
			HLW storage, total inventory m3	Yes	340,000	221,000	220,000	211,000	822,000
			M-43-13 Start construction in 2nd farm	No		6/30/00			
			M-43-14 Start construction in 3rd farm	No			3/30/01		
			SI-4C Complete accelerated walkdowns in field	No 9/30/99					

Performance Objectives and Measures

Tank Waste Remediation System Mission

HSP Success Indicator/ Critical Success Factor	Strategic Outcome/Goal	Performance Objective	Output/Metric	EM Management Commitment	FY 1999	FY 2000	FY 2001	FY 97-06	End Point Target
TW03 Reduced risk; reduced inventory; reduced mortgages	Radioactive Tank Waste goal	Stabilize tank waste and tank farms	Initiate interim stabilization of SSTs, number TBD by RL	No 9/30/99					
TW04		Conduct tank farm safe operations	HLW new waste m3	No	2,540			19,500	284,000
			LLW, new waste m3	No					17,200
		Stage waste for HLW/LAW pretreatment and immobilization	Issue TWRS Ops and Utilization Plan, Rev. 1	No 5/5/99					
			M-45-02E Annual update SST retrieval sequence	No		9/29/00			
			M-45-02F Annual update SST retrieval sequence	No			9/28/01		
TW05		Manage and integrate TWRS activities	Issue ICD implementation plan	No			7/30/01		
			Issue ICD implementation plan	No		7/31/00			

Performance Objectives and Measures

Tank Waste Remediation System Mission

HSP Success Indicator/ Critical Success Factor	Strategic Outcome/Goal	Performance Objective	Output/Metric	EM Management Commitment	FY 1999	FY 2000	FY 2001	FY 97-06	End Point Target
TW05 Reduced risk; reduced inventory; reduced mortgages	Radioactive Tank Waste goal	Manage and integrate TWRS activities	Process waste support technical management and integration	No 9/30/99					
			Process waste support technical management and integration	No		9/29/00			
			Process waste support technical management and integration	No			9/27/01		
TW06		Design and build HLW and LAW pretreatment and treatment facilities	Construction authorization program review/decision	No		8/24/00			434,000
			HLW treatment m3	Yes					46,300
			LLW new waste m3	No					290,000
			Project review of BNFL design deliverables	No 2/24/99					434,000
			Start pretreatment facility construction	No			7/2/01		434,000

Performance Objectives and Measures

Tank Waste Remediation System Mission

HSP Success Indicator/ Critical Success Factor	Strategic Outcome/Goal	Performance Objective	Output/Metric	EM Management Commitment	FY 1999	FY 2000	FY 2001	FY 97-06	End Point Target
TW06 Reduced risk; reduced inventory; reduced mortgages	Facilities Transition goal	Transition 200 Area contaminated facilities to low risk, low cost surveillance & maintenance state	Facilities, final completion of decommissioning	No					2
			Facilities/buildings deactivated during the period	Yes					2
TW07	Radioactive Tank Waste goal	Design and build HLW and LAW pretreatment and treatment facilities	HLW treatment m3	Yes					701,000
			MLLW new waste m3	No					5
	Facilities Transition goal	Transition 200 Area contaminated facilities to low risk, low cost surveillance & maintenance state	Facilities, final completion of decommissioning	No					2
			Facilities/buildings deactivated during the period	Yes					2
TW08	Radioactive Tank Waste goal	Provide Phase I infrastructure support systems	Construction water and roads ready for BNFL	No			3/1/00		
			Installation of 7 MW of electrical power/access	No				3/30/01	

Performance Objectives and Measures

Tank Waste Remediation System Mission

HSP Success Indicator/ Critical Success Factor	Strategic Outcome/Goal	Performance Objective	Output/Metric	EM Management Commitment	FY 1999	FY 2000	FY 2001	FY 97-06	End Point Target
TW08 Reduced risk; reduced inventory; reduced mortgages	Radioactive Tank Waste goal	Provide Phase I infrastructure support systems	Physical interface control information	No 5/28/99					
TW09		Conduct tank farm safe operations	HLW disposal, shipped to DOE Site m3	No					14,500
			HLW new waste m3	No					16,200
			HLW storage, total inventory m3	No				3.12	
			MLLW disposal, on-site commercial m3	No					249,000
		Prepare to store/dispose ILAW and IHLW	CD 2 - Initiate W-464 detailed design	No			1/2/01		
			Complete W-464 advanced conceptual design	No		3/31/00			
			Complete W-465 advanced conceptual design	No			9/28/01		

Performance Objectives and Measures

Tank Waste Remediation System Mission

HSP Success Indicator/ Critical Success Factor	Strategic Outcome/Goal	Performance Objective	Output/Metric	EM Management Commitment	FY 1999	FY 2000	FY 2001	FY 97-06	End Point Target
TW09 Reduced risk; reduced inventory; reduced mortgages	Radioactive Tank Waste goal	Prepare to store/dispose ILAW and IHLW	Issue waste form data package for 2001 PA	No		12/31/99			
			TWR3.1.1 ILAW disposal plan	No 9/30/99					
			TWR4.1.1 IHLW storage plan	No 9/3/99					
	Facilities Transition goal	Transition 200 Area contaminated facilities to low risk, low cost surveillance & maintenance state	Facilities, final completion of decommissioning	No					1
TW10	Radioactive Tank Waste goal	Manage and integrate TWRS activities	Issue TWRS MYWP to FDH	No			8/31/01		
			Issue TWRS MYWP to FDH	No		8/31/00			
			Y2K complete compliance assurance of 28 mission critical systems	No 7/30/99					

Performance Objectives and Measures

Tank Waste Remediation System Mission

HSP Success Indicator/ Critical Success Factor	Strategic Outcome/Goal	Performance Objective	Output/Metric	EM Management Commitment	FY 1999	FY 2000	FY 2001	FY 97-06	End Point Target
TW10 Manage Hanford to achieve progress	Achieve mission progress in the most cost-effective manner	Obtain efficiencies in project performance	Maintain cost/schedule variance within established thresholds	No	-5%CV/-7.5%SV	-5%CV/-7.5%SV	-5%CV/-7.5%SV		

2.2 Performance Enhancements

TWRS was unable to identify any Performance Enhancements as required by the MYWP guidance. Cost savings and efficiencies which have been identified by the Program have been incorporated in the cost estimates and therefore are included in the MYWP baseline.

2.3 ES&H Risk Narratives

Per the MYWP guidance the location of the risk narratives should be referenced in the MYWP.

The ES&H risk narratives are contained in shared drive \\AP005\MYWP\Risk.

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HNF-SP-1230
Revision 1
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Assistant Secretary for Environmental Management

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Richland, Washington

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A.1 TWRS Summary Overview

The major planning assumptions under which the FY 1999 MYWP was developed include the following:

- Maintaining tank farms in a safe and compliant manner
- Utilization of the technical baseline review (TBR) process in the development of integrated cost, schedule, and technical requirements crosswalked to the TWRS priority list
- Implementing the BNFL 90% schedule scenario
  - Start high level waste (HLW) vitrification by February 2007
  - Start low activity waste (LAW) vitrification by January 2008
  - Start pretreatment of hot outlet pipe space (OPS) by April 2006
- Implementing the Saltwell Pumping Project Plan Case 4, Revision 1, including financial analysis requirements
- Close Defense Nuclear Facilities Safety Board (DNFSB) 93-5
- Mitigation plan to solve SY-101 unreviewed safety question (USQ)
- Complete double-shell tank (DST) Integrity Assessment per Tri-Party Agreement (TPA) M-32
- Pump tank C-106 to solve high heat safety issue

The minimum new budget authority (BA) funding levels required to maintain a safe operations configuration, and support the BNFL FY 2007/2008 start of HLW/LAW vitrification, is $313M and $381.7M respectively in FY 1999 and FY 2000, assuming all FY 1998 carryover (e.g., W-314 and W-211 line item) estimated at $15M for line item and $3M expense is provided incrementally. The new BA estimates also assume that a FY 1999 line item to expense reprogram initiative for projects W-211 DST Retrieval Systems, W-314 Tank Farm Upgrade, and W-519 Infrastructure is successfully executed estimated at $50.8M. Failure to approve this reprogramming will result in significant impacts to the work scope and funding requirement that are included in this submittal including up to an 18 month impact to the BNFL privatization schedule.

The $313 M FY 1999 minimum requirement is slightly lower than the $322M recent congressional request to support the BNFL vitrification contract. It is also consistent with the TWRS target-funding recommendation of $313.5M in April 1998 conveyed to regulators and stakeholders.

There are many zero sum changes to FY 1999 since the April 1998 integrated priority list (IPL) development driven by reductions in the disposal program due to the extension of the BNFL vitrification schedule offset by increased requirements for saltwell pumping, C-106 Retrieval and minimum safe operations requirements driven by pending penalties, violations, notices of corrections, increased lost work day cases, facility evaluation board conduct of operations and radiation control corrective actions, ventilation occurrences and authorization basis excursions due to aging unreliable equipment to mention a few. The tank farms cannot continue to work

within a declining budget posture. The budgets have been reduced over the last few years to unacceptable operating levels.

The $313M FY 1999 case makes sound business sense in that it supports:

- Rectifying unfavorable minimum safe operations trends
- The BNFL 90% privatization case
- Saltwell Pumping Updated Project Plan
- Pumping 4-feet of tank C-106
- Tank Integrity Assessments of DSTs
- Analysis of the SY-101 crust growth
- Year 2000 (Y2K) and commencement of work management upgrades

As noted above, one of the major planning assumptions for the FY 1999 MYWP is meeting the recently negotiated BNFL 90% scenario. In order to support this assumption, this MYWP submission includes FY 2000 at an unconstrained level of funding of $381.7M, which excludes $10M for EM-50 Hanford Tanks Initiative (HTI). This level of funding requirement exceeds the target guidance of $346.3M (excluding $8.0M for EM-50) by $35.4M. The impact of receiving target level funding will result in LMHC rescinding their Declaration of Readiness to support this case and result in an 18-month delay to privatization. Specific impacts to the privatization schedule would be as follows:

- The ability to store and dispose of immobilized products will be delayed at least 18 months impacting the Phase I Privatization Project. Such a delay will impact the U. S. Department of Energy's contract with BNFL and result in a delay in the start of waste immobilization by an equivalent period.
- The update of waste feed delivery and single-shell tank (SST) plans will not be completed impacting TPA milestones for FY 2000.
- LAW Support Phase I reductions will result in significant risk to delivering LAW for immobilization.
- The SST Program will be discontinued impacting program planning and initial engineering of SST retrieval activities. TPA milestones in FY 2003, FY 2004, and FY 2005 will not be met. The delay of the SST Program will eventually add significant risk to worker health and the environment.
- The ability to meet any accelerated schedule by BNFL (i.e., 50% Case) will not be achievable.

An analysis of the incremental acceleration of the baseline schedule to support a 50% Probability Case is being prepared as required by the baseline updating guidance (BUG). Completion and submittal is forecasted for mid-December.

In addition, analysis of the vadose zone is planned in the MYWP at a funding level of $14.6M (FY 2000) consistent with the vadose zone program plan. On November 20, 1998, the U. S. Department of Energy, Richland Operations Office (RL) requested TWRS to replan vadose zone

activities to a level of $4.1M in FY 2000. After submission of the MYWP the necessary change documentation will be processed to satisfy this request.

The FY 1999 portion of the MYWP is consistent with the FY 1999 advance work authorization (AWA) submittal of September 28, 1998. In line with that submittal, $40.8M of unfunded compliance items for FY 1999 remain as follows:

(Dollars in Millions)	FY 1999
HTI	$4.7
SST Program Development	1.7
W-211 DST Retrieval	1.8
Characterization Safety Screening	1.4
Misc. Privatization support	3.9
SY-101 Mitigation	6.0
TWRS As-Built Drawings/Labeling Configuration Management	2.5
TWRS Tank Isolation & Abandoned Equipment	3.8
Standards/Requirements Identification Document (S/RID) Assessment Phase 2	.3
Tank pH Issue Resolution	3.6
Flammable Gas Safety Issue Resolution	2.7
Facility Safety Analysis Report (FSAR) Implementation	6.8
TWRS Characterization Support to AN-107 (2 samples)	1.6
TOTAL	**$40.8**

Life cycle cost estimates have increased significantly since submittal of last year's MYWP. The overall increase of approximately $15B (including approximately $5.2B for repository fees which was excluded from this submittal) is a result of increases in Privatization Phase I at approximately $5B, Privatization Phase II at approximately $5B, and PHMC support of approximately $5B. Cost growth can be categorized in the following areas:

- Deficiencies in minimum safe operations
- Revisions to the Project Hanford Management Contract (PHMC) requirements for privatization
- Extended privatization schedule has resulted in continued operation and maintenance of the tank farms and continued maintenance of the authorization basis
- Revised estimates for saltwell pumping
- Updated BNFL requirements for PBS TW06 (Privatization Phase 1) and PBS TW07 (Privatization Phase 2) included in this submittal (not included in FY 1998)
- Resolution of SY-101 surface level growth and planned replacement of mixer pump
- Increased costs for pumping of tank C-106
- Impact of detailed planning as documented through completion of the TBR process
- Added life cycle escalation (previous MYWP included escalation through FY 2006)

In conjunction with the extensive use of the TBR process, the detail planning for the MYWP is based on Activity Based Cost Estimates. In addition, for the first time, the detail schedules have been successfully coded to crosswalk to the units of analysis (UAS) on the IPL. This satisfies one of the key guidance requirements to provide traceability between the schedule baseline and the IPL.

A.1.0 Technical Baseline

The MYWP technical baseline describes the work to be accomplished by the Project and the technical standards which govern that work.

A.1.1 Mission Statement

The TWRS Project mission scope includes the activities needed to (1) resolve safety issues; (2) operate, maintain, and upgrade the tank farms and supporting infrastructure; (3) construct, operate, and maintain facilities that are necessary for waste storage, retrieval, waste separation, waste preparation, immobilization, and disposal or shipment; (4) characterize, retrieve, pretreat, and immobilize the waste for disposal; (5) provide for the disposition of the cesium and strontium capsule contents; (6) provide disposal of immobilized low-activity waste (ILAW) onsite; (7) provide interim storage of immobilized high-level waste (IHLW) until it is shipped to the national geologic repository; and (8) provide for the closure and decontamination and decommissioning (D&D) of TWRS facilities and post-closure monitoring.

A.1.2 Boundary Diagram with Major Facilities

The following table identifies the major facilities that interface with this Project. The left column of the table identifies the major facilities that generate waste, materials, or infrastructure for this Project. The right column of the table identifies the major facilities that will receive waste and materials from this Project. The center column lists the major facilities managed by this Project.

Table A-1 Tank Waste Remediation Systems Boundary Diagram

Major Input Interfaces	Project Facilities	Major Output Interfaces
External Interfaces Hanford Legacy Hanford Site Environmental System Interfaces 100 K Area Facilities 222-S Laboratory 242-A Evaporator 324 Facility 325 Facility 327 Facility 331 Facility 340 Waste Handling Facility B Plant CP General Purpose Office CP General Purpose Shop CP General Purpose Warehouse CP Road System CP Steam System CP-ES 13.8 kV Distribution System CP-ES 480 V Distribution System CP-Water Potable Water Piping Network FFTF Misc Radiological Laboratories PFP PUREX RoR Soil Site Operable Units T-Plant Facility Water System Water Systems in Central Plateau WESF	LAW/HLW Plant, Phase 1 LAW Treatment Facility, Phase 2 HLW Treatment Facility, Phase 2 Tank Farm System Canister Storage Building IHLW Storage Modules, Part 2 Immobilized LAW Disposal Facility	External Interfaces Hazardous Waste Disposal Contracts National Geologic Repository Hanford Site Environmental System Interfaces 200 Area TEDF Transfer System 222-S Laboratory 242-A Evaporator Central Waste Complex CP Liquid Sanitary Waste Immobilized LAW Disposal Facilityy, Additional Vaults LERF Transfer System Low-Level Waste Burial Grounds Solid Waste Disposal

A.1.3 Facility Responsibility Assignment Matrix

This section provides a table that identifies the sub-projects, major facilities, and the life cycle assignments.

Table A-2 Facility Responsibility Assignment Matrix

Facility	Life Cycle Phase *								
	Program Planning	Pre Conceptual	Conceptual	Execute			O&M	Close Out	
				Design	Construction	Turnover		Post Ops	D&D
LAW/HLW Plant, Phase 1	(tbd)		RL-TW06	RL-TW06	RL-TW06	RL-TW06	RL-TW06	RL-TW06	RL-TW06
LAW Treatment Facility, Phase 2	(tbd)	(tbd)	RL-TW07	RL-TW07	RL-TW07	RL-TW07	RL-TW07	RL-TW07	RL-TW07
HLW Treatment Facility, Phase 2	(tbd)	(tbd)	RL-TW07	RL-TW07	RL-TW07	RL-TW07	RL-TW07	RL-TW07	RL-TW07
Tank Farm System	(tbd)						RL-TW03 RL-TW01 RL-TW02 RL-TW04	RL-TW03	RL-TW04
Canister Storage Building	RL-WM01				RL-WM01	RL-WM01 RL-TW09	RL-WM02 RL-TW09 RL-WM01	RL-WM02	RL-WM02
IHLW Storage Modules, Part 2	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09
Immobilized LAW Disposal Facility	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09	RL-TW09

* RL PBS Identifier Index:

RL-TW01 - Tank Waste Characterization
RL-TW02 - Tank Safety Issue Resolution
RL-TW03 - Tank Farm Operations
RL-TW04 - Retrieval
RL-TW09 - Immobilized Tank Waste Storage & Disposal
RL-WM02 - Canister Storage Building Operations

RL-TW07 - Privatization Phase 2
RL-TW06 - Privatization Phase 1
RL-WM01 - Spent Nuclear Fuel

A.1.4 Project Planning Assumptions

This section contains the issues that affect the project. These include project specific issues, as well as site-level issues that have been assigned to the project for resolution. It also contains the assumptions that are used as a basis for the development of project plans until the issues are formally resolved with records of decision. The "Champion" column determines if the Project has lead responsibility or is an affected participant. If the champion belongs to the Project, the Project has the lead. If not, the Project is an affected participant. Project plans include appropriate activities and resources for resolving these issues.

Table A-3 Project Issues And Assumptions

	ISSUE	PLANNING ASSUMPTION	CHAMPION
1	**TPA HLW Pretreatment Milestones** The current planning involving privatization of Phase I facilities to immobilize waste does not include the construction of a HLW Pretreatment Plant. Therefore the associated milestones are no longer valid and should be revised.		
2	**Requirements analysis needed-01** The Hanford Site Environmental Management Specification has invoked several source documents that will require additional analysis. This work is not in the current Site Systems Integration MYWP.		
3	**Land Use Plan 200** The interim end state for the 200 Areas has not been defined.	The 200 Area and central plateau will be used for the management of nuclear materials and the collection and disposal of waste materials that remain on site and for other related and compatible uses. Cleanup levels and disposal standards will be established in the CERCLA and RCRA permit modifications. Soil sites will be remediated consistent with CERCLA-ROD cleanup standards. DOE will retain control of this land or the local governments will issue their land use plans for the Hanford site. EPA will write RODs consistent with their default residential guidance until the HRA-EIS/CLUP has a NEPA-ROD.	Bauer
4	**Integrated Impact of the Current Disposal and Management Plans for the 200 Areas on the Environment are not well understood** DOE-RL policy limiting permanent disposal of wastes in the Hanford's Waste Management Area (i.e., 200 Area) will be based on cumulative limits that are protective of the groundwater per the Hanford Site Groundwater Protection Management Plan and revised Interim DOE Policy on Regulatory Structure for Low-Level Radioactive Waste Management and Disposal (issued July 31, 1996). The Interim DOE policy addresses new guidance to prepare Composite Analysis in addition to a Performance Assessment (PA) for managing Low-Level Waste (LLW) Disposal Facilities.	Current end-state baseline planning assumptions will remain in-place until CERCLA/RCRA RODs are issued. An integrated assessment of impacts will be completed before final RODs are issued.	Bauer
5	**Integration of CSB Operations and Construction Activities** The current schedule shows that construction activities on CSB vaults 2 & 3 (to support IHLW storage) occur during SNF fuel movement operations. This creates a risk of interference and possible delays in schedules.	1. The vaults 2 & 3 tube installation and stack construction can occur simultaneously with fuel movement. Accelerate funding into FY 99 to procure tubes and to install ventilation stacks before SNF operations.	Hansen/Kinzer Williams/Umek

Table A-3 Project Issues And Assumptions (Continued)

	ISSUE	PLANNING ASSUMPTION	CHAMPION
6	**TWRS MAR Issue #3. Retrieval Required for Closure** HOW MUCH WASTE SHOULD BE REMOVED FROM EACH TANK IN PREPARATION FOR CLOSURE ?	The SST waste retrieval system will be capable of meeting the Tri-Party Agreement milestone requiring 99% retrieval. This will be sufficient to close tanks without further retrieval. The waste retrieval systems for MUSTs and DSTs will be comparable to that for SSTs. Also, closure requirements for DSTs will be similar to requirements for SSTs. The TWRS MUSTs are included in both DST and SST operable units as ancillary equipment, and will be included in both DST and SST closure.	
7	**TWRS MAR Issue #4. Responsibility for DST Closure** IS TWRS RESPONSIBLE FOR DST CLOSURE ? Uncertainty exists with respect to disposition of DST structures. They may be closed by TWRS or the ER Program (DOE/RL 1993).	TWRS is responsible for DST closure.	
8	**TWRS MAR Issue #5. Responsibility for SST Closure** IS TWRS RESPONSIBLE FOR SST CLOSURE ? A recent EM-30 and EM-40 Memorandum of Agreement (Wagoner 1994) (DOE/RL 1995) was signed to turn over responsibility for SST closure and soils remediation to EM-30. The TWRS Project is currently awaiting formal direction from RL regarding this agreement.	SST closure is the responsibility of TWRS.	
9	**TWRS MAR Issue #12. Future Site Use** WHAT IS THE PATH FORWARD FOR FUTURE USES OF THE HANFORD SITE, AND SPECIFICALLY FOR THOSE AREAS UNDER DIRECT TWRS RESPONSIBILITY ?	The findings of the Hanford Future Site Uses Working Group, presented in the document The Future for Hanford: Uses and Cleanup, April 1992, will be used as guidance for the path forward.	
10	**TWRS MAR Issue #13. DST & SST Residuals at Closure** WHAT IS THE PATH FORWARD FOR TANK CLOSURE FOLLOWING REMOVAL OF SST AND DST WASTES ?	The Hanford Mission Plan identifies that all residual waste, in-tank equipment, structures, and underlying and adjacent contaminated soils will be disposed in-place after suitable treatment in keeping with performance assessment criteria.	

A.1.5 Risk Management

Mission Risk Management Plans are not available at this time, however, detailed risk analysis can be found in the following documents;

- PBS Level, Risk Data Tables, Section C.1.1
- PBS Level, Risk Evaluation Narrative, Section D.1.6
- Unit of Analysis Level, current PPL and IPL located on Hanford shared area: \ap014\pbs

A.1.6 Technical Issues Management List

This section identifies the site-level issues and planning assumptions from Section A.1.4 that have been assigned to the project for resolution. This section is used to delineate the site-level issues and planning assumptions from the project specific issues and planning assumptions.

Table A-4 Site Technical Issues And Assumptions

	ISSUE	PLANNING ASSUMPTION	CHAMPION
1	**Land Use Plan 200** The interim end state for the 200 Areas has not been defined.	The 200 Area and central plateau will be used for the management of nuclear materials and the collection and disposal of waste materials that remain on site and for other related and compatible uses. Cleanup levels and disposal standards will be established in the CERCLA and RCRA permit modifications. Soil sites will be remediated consistent with CERCLA-ROD cleanup standards. DOE will retain control of this land or the local governments will issue their land use plans for the Hanford site. EPA will write RODs consistent with their default residential guidance until the HRA-EIS/CLUP has a NEPA-ROD.	Bauer
2	**Integrated Impact of the Current Disposal and Management Plans for the 200 Areas on the Environment are not well understood** DOE-RL policy limiting permanent disposal of wastes in the Hanford's Waste Management Area (i.e., 200 Area) will be based on cumulative limits that are protective of the groundwater per the Hanford Site Groundwater Protection Management Plan and revised Interim DOE Policy on Regulatory Structure for Low-Level Radioactive Waste Management and Disposal (issued July 31, 1996). The Interim DOE policy addresses new guidance to prepare Composite Analysis in addition to a Performance Assessment (PA) for managing Low-Level Waste (LLW) Disposal Facilities.	Current end-state baseline planning assumptions will remain in-place until CERCLA/RCRA RODs are issued. An integrated assessment of impacts will be completed before final RODs are issued.	Bauer
3	**Integration of CSB Operations and Construction Activities** The current schedule shows that construction activities on CSB vaults 2 & 3 (to support IHLW storage) occur during SNF fuel movement operations. This creates a risk of interference and possible delays in schedules.	1. The vaults 2 & 3 tube installation and stack construction can occur simultaneously with fuel movement. Accelerate funding into FY 99 to procure tubes and to install ventilation stacks before SNF operations.	Hansen/Kinzer Williams/Umek

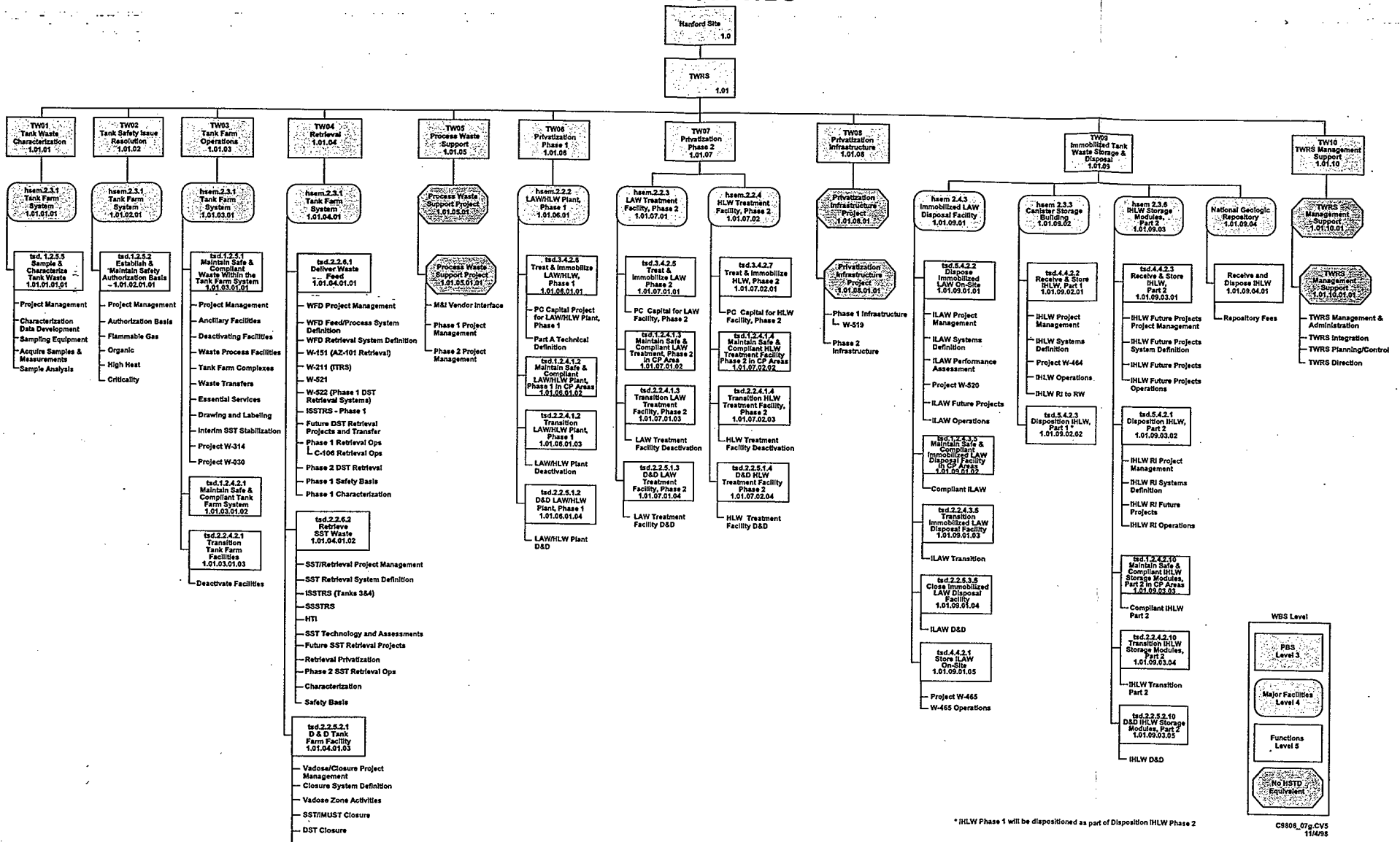
A.2.0 Project Hanford Breakdown Structure (PHBS)

A.2.1 PHBS Hierarchy

RL PBS	RL WBS	Title
	1.01	Tank Waste Remediation Systems
RL-TW01	1.01.01	Tank Waste Characterization
	1.01.01.01	Tank Farm System
	1.01.01.01.01	Sample and Characterize Tank Waste
RL-TW02	1.01.02	Tank Safety Issue Resolution
	1.01.02.01	Tank Farm System
	1.01.02.01.01	Establish & Maintain Safety Authorization Basis
RL-TW03	1.01.03	Tank Farm Operations
	1.01.03.01	Tank Farm System
	1.01.03.01.01	Maintain Safe & Compliant Waste Within Tank Farm System
	1.01.03.01.02	Maintain Safe & Compliant Tank Farm System
	1.01.03.01.03	Transition Tank Farm Facilities
RL-TW04	1.01.04	Retrieval
	1.01.04.01	Tank Farm System
	1.01.04.01.01	Deliver Waste Feed
	1.01.04.01.02	Retrieve SST Waste
	1.01.04.01.03	D&D Tank Farm Facility
RL-TW05	1.01.05	Process Waste Support
	1.01.05.01	Process Waste Support Project
	1.01.05.01.01	Process Waste Support Project
RL-TW06	1.01.06	Privatization Phase 1
	1.01.06.01	LAW/HLW Plant, Phase 1
	1.01.06.01.01	Treat & Immobilize LAW/HLW, Phase 1
	1.01.06.01.02	Maintain Safe & Compliant LAW/HLW Plant, Phase 1 in CP Areas
	1.01.06.01.03	Transition LAW/HLW Plant, Phase 1
	1.01.06.01.04	D&D LAW/HLW Plant, Phase 1
RL-TW07	1.01.07	Privatization Phase 2
	1.01.07.01	LAW Treatment Facility, Phase 2
	1.01.07.01.01	Treat & Immobilize LAW, Phase 2
	1.01.07.01.02	Maintain Safe & Compliant LAW Treatment Facility, Phase 2 in CP Areas
	1.01.07.01.03	Transition LAW Treatment Facility, Phase 2
	1.01.07.01.04	D&D LAW Treatment Facility, Phase 2
	1.01.07.02	HLW Treatment Facility, Phase 2
	1.01.07.02.01	Treat & Immobilize HLW, Phase 2
	1.01.07.02.02	Maintain Safe & Compliant HLW Treatment Facility, Phase 2 in CP Areas
	1.01.07.02.03	Transition HLW Treatment Facility, Phase 2
	1.01.07.02.04	D&D HLW Treatment Facility, Phase 2

RL PBS	RL WBS	Title
RL-TW08	1.01.08	Privatization Infrastructure
	1.01.08.01	Privatization Infrastructure Project
	1.01.08.01.01	Privatization Infrastructure Project
RL-TW09	1.01.09	Immobilized Tank Waste Storage & Disposal
	1.01.09.01	Immobilized LAW Disposal Facility
	1.01.09.01.01	Dispose Immobilized LAW On-Site
	1.01.09.01.02	Maintain Safe & Compliant Immobilized LAW Disposal Facility in CP Areas
	1.01.09.01.03	Transition Immobilized LAW Disposal Facility
	1.01.09.01.04	Close Immobilized LAW Disposal Facility
	1.01.09.01.05	Store ILAW
	1.01.09.02	Canister Storage Building
	1.01.09.02.01	Receive & Store IHLW, Part 1
	1.01.09.02.02	Disposition IHLW, Part 1
	1.01.09.03	IHLW Storage Modules, Part 2
	1.01.09.03.01	Receive & Store IHLW, Part 2
	1.01.09.03.02	Disposition IHLW, Part 2
	1.01.09.03.03	Maintain Safe & Compliant IHLW Storage Modules, Part 2 in CP Areas
	1.01.09.03.04	Transition IHLW Storage Modules, Part 2
	1.01.09.03.05	D&D IHLW Storage Modules, Part 2
	1.01.09.04	National Geologic Repository
	1.01.09.04.01	Receive and Dispose IHLW
RL-TW10	1.01.10	TWRS Management Support
	1.01.10.01	TWRS Management Support
	1.01.10.01.01	TWRS Management Support

TWRS FY99 WBS



* IHLW Phase 1 will be dispositioned as part of Disposition IHLW Phase 2

TWRS Program Logic

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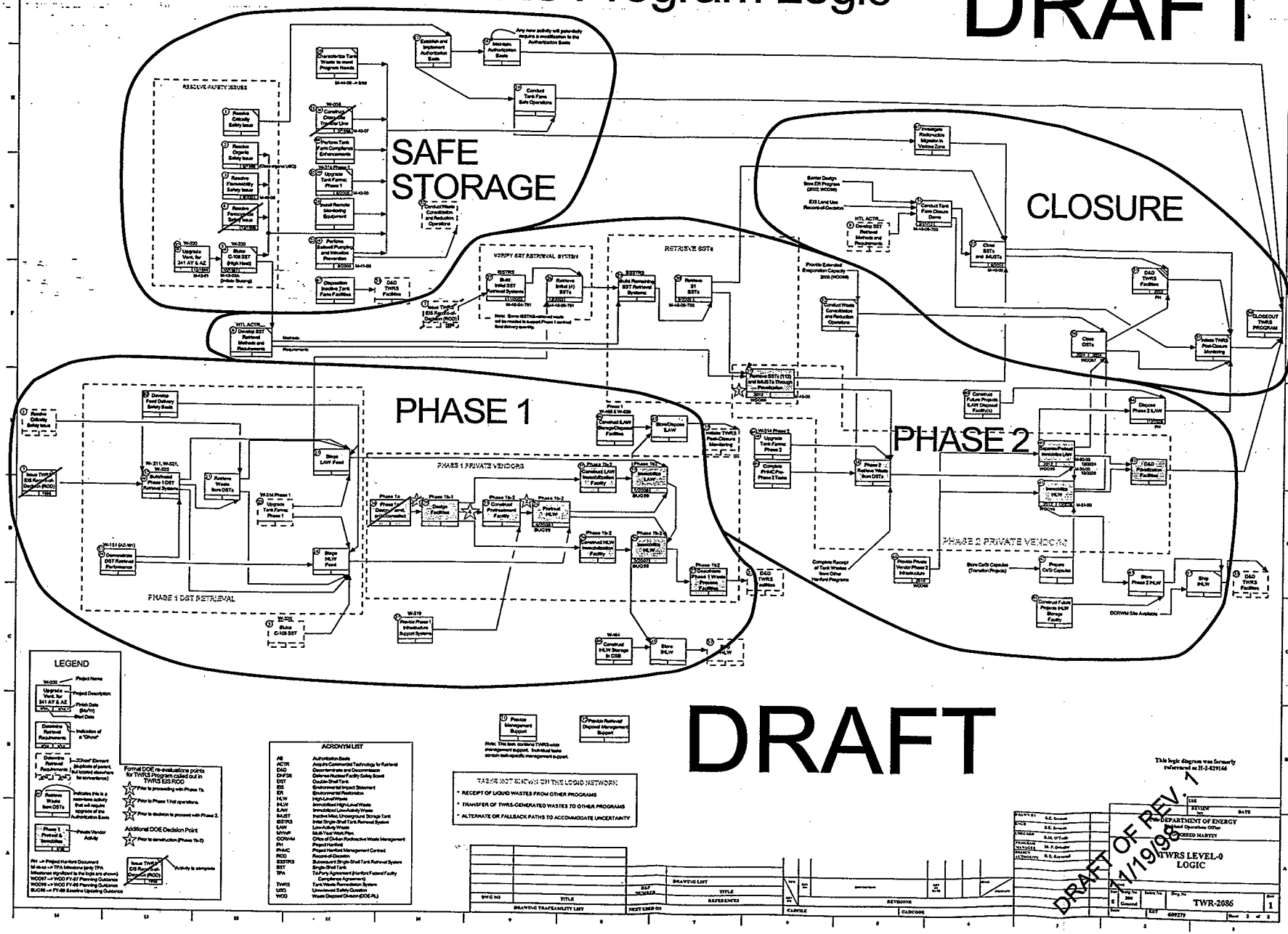

Activity ID	Early Start	Early Finish	2001 2004 2007 2010 2013 2016 2019 2022 2025 2028 2031 2034 2037 2040 2043 2046 2049 2052 2055 2058 2061 2064 2067
1			**Hanford Environmental Management**
1.01			**Tank Waste Remediation System**
1.01.01			**Tank Waste Characterization**
100.1A	30SEP98A	27SEP24	Characterize Tank Waste to meet Program Needs
100.3AD		31DEC99*	Vapor Sampling of All SSTs (5.4.3.4.d) T01-00-101
100.3AF		31DEC00*	Completion Letter for DST Vap Samp (5.4.3.4.f) T01-01-101
100.3AH		31DEC02*	Comp Core Sampling all Tanks (5.6.3.1.j) T01-03-301
100.401AA		30SEP99*	Complete Char Data Input M-44-16C T01-99-145
100.501AB		31DEC98*	Iss DOE-RL Ltr to DNFSB Rep TCM Upd (5.6.3.1.i) T01-99-138
100.6AA		15JUN99*	Submit Draft WIRD to Ecology M-44-13C T01-99-102
100.6AB		23AUG99*	Submit Final WIRD to Ecology for FY2000 M-44-14C T01-99-100
100.6AC		20SEP99*	Issue Char Del Consist w/99 WIRD M-44-15C T01-99-144
100.6AD		30JUN00*	Submit Draft WIRD for FY2001 to Ecol (M-44-13D) T01-00-103
100.6AE		31AUG00*	Submit Final WIRD for FY2001 to Ecol (M-44-14D) T01-00-104
100.6AF		29JUN01*	Submit Draft WIRD for FY2002 to Ecol (M-44-13E) T01-01-106

Project Start	01OCT98	Early Bar
Project Finish	08JAN66	Progress Bar
Data Date	01OCT98	Critical Activity
Run Date	19NOV98	

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Sheet 1 of 12

Tank Waste Remediation System
Level 0 Logic Schedule
Includes Enforcable & DNSFB MS

Activity ID	Early Start	Early Finish	Activity
100.6AG		31AUG01*	Submit Final WIRD for FY2002 to Ecol (M-44-14E) T01-01-107
100.7AA		29SEP00*	Iss Char Del Cons with WIRD/FY2000 (M-44-15D) T01-00-105
100.7AB		29SEP00*	Comp HLW Tank Input Per WIRD FY2000 (M-44-16D) T01-00-106
100.7AC		28SEP01*	Iss Char Del Cons with WIRD/FY2001 (M-44-15E) T01-01-102
100.7AD		28SEP01*	Comp HLW Tank Input Per WIRD FY2001 (M-44-16E) T01-01-103
100.7AE		30SEP02*	Iss Char Del Cons with WIRD/FY2002 (M-44-15F) T01-02-200
100.7AF		30SEP02*	Comp HLW Tank Input Per WIRD FY2002 (M-44-16F) T01-02-201
100.7AG		30SEP02*	Comp Del of Inf Req Identified in WIRD (M-44-00A T01-01-104
1.01.02			**Tank Safety Issue Resolution Project**
010.A	01OCT98*	30SEP99	Resolve Criticality Safety Issue
01475A20		30SEP99*	Resolve Nuclear Criticality Safety Issue M-40-12 T02-99-102
020.A	01OCT98*	28SEP01	Resolve Organic Safety Issue
02497A20		30NOV98*	Confirm Org Safety Storage Crit DNFSB 5.4.3.3b T02-99-101
02497C40		30SEP99*	Org Solvent Topical CN-032 DNFSB 5.4.3.4e,d,f T02-99-103
030.A	01OCT98*	30SEP03	Resolve Flammability Safety Issue
03456E70		28SEP01*	Mitigate/Resolve Tank Safety Issues M-40-00 T02-01-100

2001 2004 2007 2010 2013 2016 2019 2022 2025 2028 2031 2034 2037 2040 2043 2046 2049 2052 2055 2058 2061 2064 2067

Activity ID	Early Start	Early Finish	Activity
050.A	01OCT98*	14FEB00	Sluice C-106 SST (High Heat)
05482B90		31DEC99*	Transmit Rpt to Resolve HH SI DNFSB 5.4.3.6.d T02-99-100
180.A	01OCT98*	30SEP08	Maintain Authorization Basis
18826C30		29JAN99*	RL Approval of FSAR DNFSB 5.4.3.1d (SER) T02-98-111
1.01.03			**Tank Farm Operations**
190.1A	01OCT98*	29SEP27	Conduct Tank Farm Safe Operations
190.320A1M		30SEP99*	M-46-00F Double-Shell Tank Space Evaluation T03-99-103
190.320A2M		29SEP00*	M-46-00G Double-Shell Tank Space Evaluation T03-00-105
190.320A3M		28SEP01*	M-46-00H Double-Shell Tank Space Evaluation T03-01-100
190.320A4M		30SEP02*	M-46-00I Double-Shell Tank Space Evaluation T03-02-100
190.320A5M		30SEP03*	M-46-00J Double-Shell Tank Space Evaluation T03-03-100
190.320B1M		30NOV98*	M-46-01E Concurence of Add'l Tank Acquisition T03-99-102
190.320B2M		30NOV99*	M-46-01F Concurence of Add'l Tank Acquisition T03-00-104
190.320B3M		30NOV00*	M-46-01G Concurence of Add'l Tank Acquisition T03-01-104
190.320B4M		30NOV01*	M-46-01H Concurence of Add'l Tank Acquisition T03-02-104
190.320B5M		27NOV02*	M-46-01I Concurence of Add'l Tank Acquisition T03-03-104

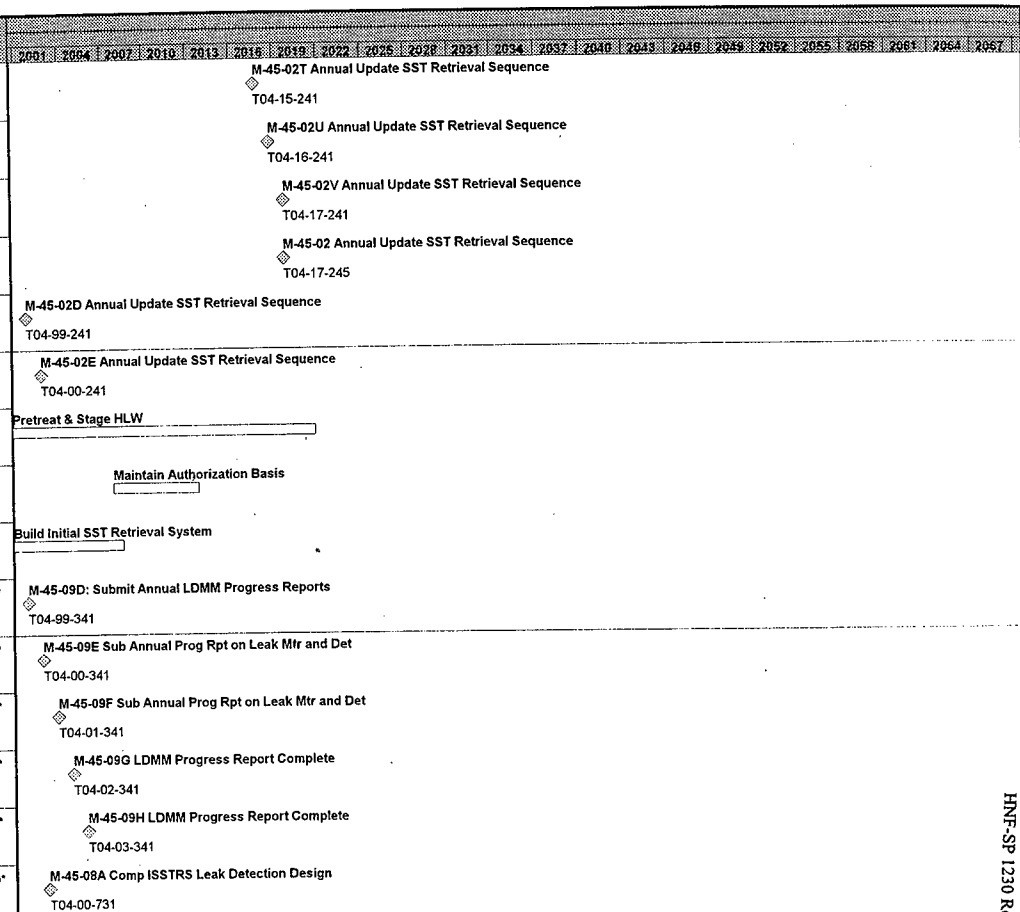
Activity ID	Early Start	Early Finish	Activity
190.320B6M		01DEC03*	M-46-01J Concurence of Add'l Tank Acquisition T03-04-104
190.S43A1N		30SEP99*	SI 4c Complete Accelerated Walk-Downs and Field T03-99-400
210.1A	01OCT98*	29NOV05	Construct Cross-Site Transfer Line
230.00A	01OCT98*	30JUN05	Perform Saltwell Pumping & Introsion Provention
230.070N2A	01OCT98*		Start Interim Stabilization of 6 SSTs (M-41-22) T03-97-150
230.070N2B	01OCT98*		Start Interim Stabilization of 8 SSTs (M-41-23) T03-98-151
230.070N2C	01OCT98*		Start Interim Stabilization of 9 SSTs (M-41-24) T03-98-152
230.070N2D	01APR99*		Start Interim Stabilization of 3 SSTs M-41-25 T03-99-191
230.070N2E	01OCT99*		Start Interim Stabilization of 2 SSTs M-41-26 T03-99-192
230.070N3B		29SEP00*	Compl Salt Well Pumping of Single Shell M-41-27 T03-00-196
230.0MS01		14JUN05*	M-41-00 COMPL SST INTERIM STABILIZATION T03-00-193
240.1A	01OCT98*	13JAN04	Install Remote Monitoring Equipmnet
250.0A	01OCT96A	29JUN07	Upgrade Tank Farms; Phase 1
250.100165		20AUG98A	MS: M-43-11Provide W-314 Const Sch to Ecology M-43-11
250.100170	02MAR98A		MS: M-43-12 Start Construction in 1st Farm T03-01-057

2001 2004 2007 2010 2013 2016 2019 2022 2025 2028 2031 2034 2037 2040 2043 2046 2049 2052 2055 2058 2061 2064 2067

Activity ID	Early Start	Early Finish	2001 2004 2007 2010 2013 2016 2019 2022 2025 2028 2031 2034 2037 2040 2043 2046 2049 2052 2055 2058 2061 2064 2067
250.100175	30JUN00*		MS: M-43-13 Start Construction in 2nd Farm T03-00-056
250.100180	30MAR01*		MS: M-43-14 Start Construction in 3rd Farm T03-01-057
250.100185	29MAR02*		MS: M-43-15 Start Construction in 4th Farm T03-02-058
250.100190	30JUN03*		MS: M-43-16 Start Construction in 5th Farm T03-03-059
250.100195		30JUN05*	MS: M-43-00 Complete TF Upgrades T03-05-051
320.1A	01OCT98*	30SEP10	Conduct Waste Consolidation and Reduction Ops
670.1A	02OCT00*	29SEP06	Disposition Inactive Tank Farm Facilities
680.1A	01OCT98*	30SEP24	Perform Tank Farm Compliance Enhancements
680.R77A7M		30SEP08*	M-32-06 Comp 244-AR Vault Inter Stat Tk Action T03-08-206
680.R77A9M		30SEP08*	M-32-08 Comp Grout Interim Status Tk Actions T03-08-208
1.01.04			**Retrieval**
050.B	01OCT98*	19JAN00	Sluice C-106 (High Heat)
060.A	01OCT98*	30SEP02	Develop SST Retrieval Methods and Requirements
110.A	01OCT98*	27JAN00	Demonstrate DST Retrieval Perf (W-151 Az-101)
120.A	01OCT98*	30SEP11	Build/Install Phase 1 DST Retrieval Systems
130.A	01OCT98*	18NOV16	Retrieve Waste from DSTs

Activity ID	Early Start	Early Finish	Stage for LAW Pretreatment and Immobilizations
150.B	01OCT98*	28FEB18	
15B22A3A		28SEP01*	M-45-02F Annual Update SST Retrieval Sequence T04-01-241
15B22A4A		30SEP02*	M-45-02G Annual Update SST Retrieval Sequence T04-02-241
15B22A5A		30SEP03*	M-45-02H Annual Update SST Retrieval Sequence T04-03-241
15B22A6A		30SEP04*	M-45-02I Annual Update SST Retrieval Sequence T04-04-241
15B22A7A		30SEP05*	M-45-02J Annual Update SST Retrieval Sequence T04-05-241
15B22A8A		29SEP06*	M-45-02K Annual Update SST Retrieval Sequence T04-06-241
15B22A9A		28SEP07*	M-45-02L Annual Update SST Retrieval Sequence T04-07-241
15B22AAA		30SEP08*	M-45-02M Annual Update SST Retrieval Sequence T04-08-241
15B22ABA		30SEP09*	M-45-02N Annual Update SST Retrieval Sequence T04-09-241
15B22ACA		30SEP10*	M-45-02O Annual Update SST Retrieval Sequence T04-10-241
15B22ADA		30SEP11*	M-45-02P Annual Update SST Retrieval Sequence T04-11-241
15B22AEA		28SEP12*	M-45-02Q Annual Update SST Retrieval Sequence T04-12-241
15B22AGA		30SEP13*	M-45-02R Annual Update SST Retrieval Sequence T04-13-241
15B22AHA		30SEP14*	M-45-02S Annual Update SST Retrieval Sequence T04-14-241

Activity ID	Early Start	Early Finish
15B22AJA		30SEP15*
15B22AKA		29SEP16*
15B22ALA		29SEP17*
15B22ALB		29SEP17*
15B22E1C		30SEP99*
15B22H2A		29SEP00*
160.A	01OCT98*	14NOV19
180.B	03OCT05*	30SEP11
270.A	01OCT98*	31MAY06
27620BN		30SEP99*
27A32AM		29SEP00*
27A35AM		27SEP01*
27A36AM		30SEP02*
27A37AM		30SEP03*
27A50AM		29DEC00*



Activity ID	Early Start	Early Finish	Activity
27D20AM		30JUN03*	M-45-08 Estab Capabil for Leakage Mitigation T04-03-791
27D20AN		30JUN03*	M-45-08B Comp Demo/Install of Leak Monit/Mitigtn T04-03-792
280.A	01OCT02*	31MAY12	Retrieve Initial (4) SSTs
290.A	01OCT99*	02JUL13	Build Remaining SST Retrieval Systems
300.A	01OCT01*	03OCT11	Retrieve 31 SSTs
320.A	01OCT99*	29SEP05	Conduct Waste Consolidation and Reduction Ops
370.A	01OCT10*	30DEC21	Retrieve SSTs(113) and MUSTs Thru Privatization
37080NM		28SEP18*	M-45-05 Retrieve Waste from All SSTs T04-18-1B1
380.A	01OCT10*	29SEP28	Phase 2 Retrieve Waste from DST
400.A	07FEB06*	06FEB13	Separate/Pretreat/Immobilize LAW
410.A	02FEB06*	01FEB13	Immobilize HLW
490.A	02OCT00*	01FEB07	Complete PHMC Pre-Phase 2 Tasks
510.A	01OCT99*	29SEP34	Conduct Tank Closure Demo
520.A	01OCT08*	08JAN35	Close SSTs and Musts
52110CN		07JAN25*	M-45-06 Complete closure of all SST Farms T04-24-051

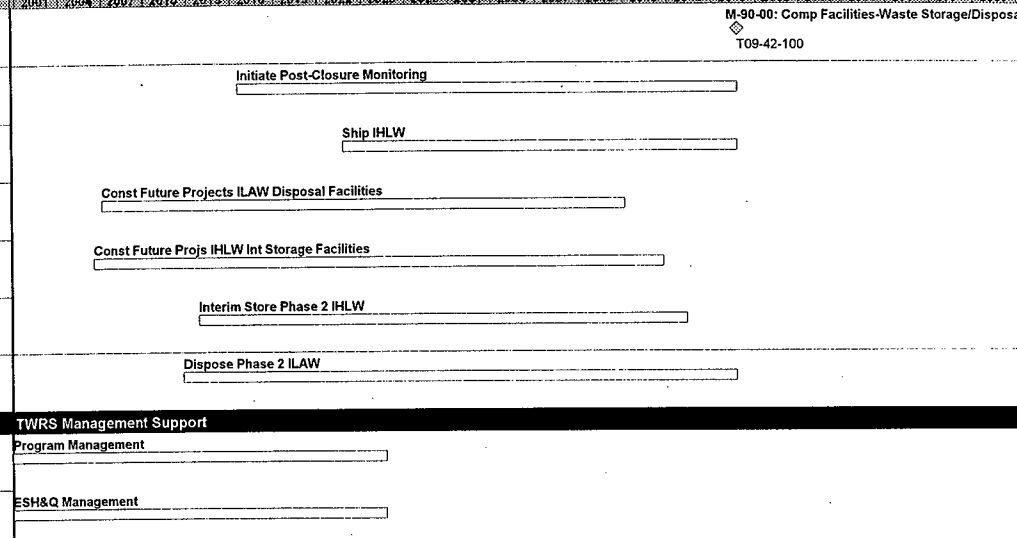
Activity ID	Early Start	Early Finish	
52110CP		07JAN25*	M-45-00 Complete closure of all SST Farms (T04-24-052)
540.A	01OCT14*	09JAN36	Close DSTs
550.A	01OCT20*	08JAN66	Initiate Post-Closure Monitoring
620.A	01OCT98*	30SEP16	Develop Feed Delivery Safety Basis
650.A	01OCT98*	30SEP05	Investig. Radionuclide Migration in Vadose Zon
720.B	01OCT98*	28SEP18	Program Management
1.01.05			**Process Waste Support**
150.A	01OCT98*	28SEP07	Stage for LAW Pretreatment and Immobilizations
420.A	01OCT99*	30SEP03	Prepare Cs/Sr Capsules
42010D10M		30JUN03*	M-92-05 Treatment/Repackag'g of Remaining Cs/Sr (T05-03-191)
720.A	01OCT98*	29SEP28	Program Management
1.01.06			**Privitization Phase I**
350.B	24AUG98A	01MAR19	Phase 1b: Pretreat & Immobilize LAW
350.BE	01NOV06*		M-50-04 Start Hot Operations Pretreat Facility (T06-07-101)
350.BF	02JAN08*		M-60-12 Start Hot Ops ; LAW Facility (T06-02-131)
360.B	02JUL01*	01MAR19	Phase 1b: Immobilize HLW

Activity ID	Early Start	Early Finish	Activity
360.BC	01FEB07*		M-51-03 Initiate Hot Ops of the HLW Vit (T06-02-141)
530.A	26FEB18*	23FEB22	D & D TWRS Facilities
1.01.07			**Privitization Phase II**
400.B	02OCT00*	31DEC24	Separate/Pretreat/Immobilize LAW
400.BA		03JUN02*	M-60-13 Initiate Neg on Phase 2 LAW Treatment (T07-02-111)
400.BB		31JAN05*	Award Phase 2 Immobilization Contracts (T07-05-112)
400.BC		31DEC24*	M-50-00 Comp Pretreat Processing of Tank Waste (T07-25-122)
400.BD		31DEC24*	M-60-00 : Complete Vitrification of LAW (T07-25-121)
410.B	01FEB05*	29SEP28	Immobilize HLW
410.BA		29SEP28*	M-51-00 : Complete Vitrification of HLW (T07-29-131)
430.A	06JAN25*	30SEP33	D&D Privatization Facilities
430.AA		30SEP33*	Complete D&D of Phase 2 Facilities (T07-33-141)
1.01.08			**Privatization Infrastructure**
150.C	01OCT98*	29JUN17	Stage for LAW Pretreatment and Immobilizations
330.A	01OCT98*	30SEP19	Provide Phase 1 Infrastructure Support Systems
480.A	02OCT00*	28SEP29	Provide Private Vendor Phase 2 Infrastructure

Activity ID	Early Start	Early Finish	Activity
530.B	01OCT29*	30SEP32	D & D TWRS Facilities
1.01.09			**Immobilized Tank Waste Storage & Disposal**
440.A	01OCT98*	31JAN18	Construct Interim IHLW Storage Facility
44115B1A		28JUN02*	M-90-12: Sub Revised CS Facility Part A Permit T09-99-100
44115C1A		30JUN03*	M-20-56: Sub CSB Part B Application to Ecology T09-01-100
450.A	01JUN04*	31JAN18	Interim Store IHLW
45010A7A		31MAR06*	M-90-11: Complete W-464 Startup T09-03-003
460.A	01OCT98*	31JAN18	Const ILAW Interim Storage/Disposal Facilities
46070C1	01OCT03*		M-90-03: CD 3-Initiate W-465 Construction T09-00-003
46080C1A		30APR04*	M-20-57: Sub ILAW Part B Permit App to Ecology T09-01-021
46120AA	27AUG07*		M-90-08: CD 3-Initiate W-520 Construction T09-05-005
46125H1A		25AUG08*	M-20-58: Sub ILAW Disp Part B Permit App to Ecol T09-01-020
470.A	03OCT05*	28JUN17	Store/Dispose ILAW
47040A1	02JAN08*		M-90-06: CD 4-Initiate W-465 Hot Operations T09-02-002
47075A1	17MAY11*		M-90-10: CD 4-Initiate W-520 Hot Operations T09-06-100
530.C	01OCT43*	30SEP48	D & D TWRS Facilities

2001 2004 2007 2010 2013 2016 2019 2022 2025 2028 2031 2034 2037 2040 2043 2046 2049 2052 2055 2058 2061 2064 2067

Activity ID	Early Start	Early Finish	
53150A2A		30SEP48*	M-90-00: Comp Facilities-Waste Storage/Disposal T09-42-100
550.B	25JUN14*	30SEP48	Initiate Post-Closure Monitoring
570.A	01OCT21*	30SEP48	Ship IHLW
600.A	31JAN05*	31JAN41	Const Future Projects ILAW Disposal Facilities
610.A	01JUL04*	30SEP43	Const Future Projs IHLW Int Storage Facilities
630.A	03OCT11*	31MAY45	Interim Store Phase 2 IHLW
640.A	01OCT10*	30SEP48	Dispose Phase 2 ILAW
1.01.10			**TWRS Management Support**
710.A	01OCT98	30SEP24	Program Management
716.A	17SEP98	23SEP24	ESH&Q Management



Tank Waste Remediation System
Tri-Party Agreement Milestones

MS #	Title	Level	TPA #	99 MYWP Date	TPA Date
T01-99-102	Submit Draft WIRD for FY 2O00 to Ecology	HQ-I	M-44-13C	15-Jun-99	30-Jun-99
T01-99-100	Submit Final WIRD for FY 2O00 to Ecology	HQ-I	M-44-14C	23-Aug-99	31-Aug-99
T01-99-144	Issue Characterization Deliverables Consistent with WIRD Developed for FY99	HQ-I	M-44-15C	20-Sep-99	30-Sep-99
T01-99-145	Complete Input of Characterization Information for HLW Tanks for which Sampling and Analysis Were Completed per WIRD	HQ-I	M-44-16C	30-Sep-99	30-Sep-99
T01-00-103	Submit Draft WIRD for FY 2O01 to Ecology	HQ-I	M-44-13D	30-Jun-00	30-Jun-00
T01-00-104	Submit Final WIRD for FY 2O01 to Ecology	HQ-I	M-44-14D	31-Aug-00	31-Aug-00
T01-00-105	Issue Characterization Deliverables Consistent with WIRD Developed for FY 2000	HQ-I	M-44-15D	29-Sep-00	30-Sep-00
T01-00-106	Complete Input of Characterization Information for HLW Tanks for which Sampling and Analysis Were Completed per WIRD	HQ-I	M-44-16D	29-Sep-00	30-Sep-00
T01-01-106	Submit Draft WIRD for FY 2O02 to Ecology	HQ-I	M-44-13E	29-Jun-01	30-Jun-01
T01-01-107	Submit Final WIRD for FY 2O02 to Ecology	HQ-I	M-44-14E	31-Aug-01	31-Aug-01
T01-01-102	Issue Characterization Deliverables Consistent with WIRD Developed for FY 2001	HQ-I	M-44-15E	28-Sep-01	30-Sep-01
T01-01-103	Complete Input of Characterization Information for HLW Tanks for which Sampling and Analysis Were Completed per WIRD	HQ-I	M-44-16E	28-Sep-01	30-Sep-01
T01-02-200	Issue Characterization Deliverables Consistent with WIRD Developed for FY 2002	HQ-I	M-44-15F	30-Sep-02	30-Sep-02
T01-02-201	Complete Input of Characterization Information for HLW Tanks for which Sampling and Analysis Were Completed per WIRD	HQ-I	M-44-16F	30-Sep-02	30-Sep-02
T01-01-104	Complete Delivery of Information Requirement Identified in WIRD	HQ-M	M-44-00A	30-Sep-02	30-Sep-02
T02-99-102	Resolve Nuclear Criticality Safety Issue	HQ-I	M-40-12	30-Sep-99	30-Sep-99
T02-01-100	Mitigate/Resolve Tank Safety Issues High Priority Watch List Tanks	HQ-M	M-40-00	28-Sep-01	30-Sep-01

Tank Waste Remediation System
Tri-Party Agreement Milestones

MS #	Title	Level	TPA #	99 MYWP Date	TPA Date
T03-99-055	Start Construction for Upgrades in the 1st Tank Farm	HQ-I	M-43-12	2-Mar-98A	30-Jun-99
T03-99-102	Concurrence of Additional Tank Acquisition	HQ-I	M-46-01E	30-Nov-98	30-Nov-98
T03-99-103	Double-Shell Tank Space Evaluation	HQ-I	M-46-00F	30-Sep-99	30-Sep-99
T03-00-104	Concurrence of Additional Tank Acquisition	HQ-I	M-46-01F	30-Nov-99	30-Nov-99
T03-00-056	Start Construction for Upgrades in the 2nd Tank Farm	HQ-I	M-43-13	30-Jun-00	30-Jun-00
T03-00-105	Double-Shell Tank Space Evaluation	HQ-I	M-46-00G	29-Sep-00	30-Sep-00
T03-01-057	Start Construction for Upgrades in the 3rd Tank Farm	HQ-I	M-43-14	30-Mar-01	31-Mar-01
T03-01-104	Concurrence of Additional Tank Acquisition	HQ-I	M-46-01G	30-Nov-00	30-Nov-00
T03-01-100	Double-Shell Tank Space Evaluation	HQ-I	M-46-00H	28-Sep-01	30-Sep-01
T03-02-104	Concurrence of Additional Tank Acquisition	HQ-I	M-46-01H	30-Nov-01	30-Nov-01
T03-02-058	Start Construction for Upgrades in the 4th Tank Farm	HQ-I	M-43-15	29-Mar-02	31-Mar-02
T03-02-100	Double-Shell Tank Space Evaluation	HQ-I	M-46-00I	30-Sep-02	30-Sep-02
T03-03-104	Concurrence of Additional Tank Acquisition	HQ-I	M-46-01I	27-Nov-02	30-Nov-02
T03-03-059	Start Construction for Upgrades in the 5th Tank Farm	HQ-I	M-43-16	30-Jun-03	30-Jun-03
T03-03-100	Double-Shell Tank Space Evaluation	HQ-I	M-46-00J	30-Sep-03	30-Sep-03
T03-04-104	Concurrence of Additional Tank Acquisition	HQ-I	M-46-01J	01-Dec-03	30-Nov-03
T03-05-051	Complete Tank Farm Upgrades	HQ-I	M-43-00	30-Jun-05	30-Jun-05
T03-08-206	Complete 244-AR Vault Interim Status Tank Actions.	HQ-I	M-32-06	30-Sep-08	TBD
T03-08-208	Complete Grout Interim Status Tank Actions.	HQ-I	M-32-08	30-Sep-08	TBD
T04-99-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02D	30-Sep-99	30-Sep-99
T04-99-341	Submit Annual Progress Report on Development of Waste Tank Leak Monitoring and Mitigation Activities in Support of M-45-08	HQ-I	M-45-09D	30-Sep-99	30-Sep-99
T04-00-341	Submit Annual Progress Report on Development of Waste Tank Leak Monitoring and Mitigation Activities in Support of M-45-08	HQ-I	M-45-09E	29-Sep-00	30-Sep-00
T04-00-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02E	29-Sep-00	30-Sep-00

Tank Waste Remediation System
Tri-Party Agreement Milestones

MS #	Title	Level	TPA #	99 MYWP Date	TPA Date
T04-00-731	Complete Systems Description and Operation Strategy for Tank Leak Monitoring and Mitigation	HQ-I	M-45-08A	29-Dec-00	31-Dec-00
T04-01-341	Submit Annual Progress Report on Development of Waste Tank Leak Monitoring and Mitigation Activities in Support of M-45-08	HQ-I	M-45-09F	27-Sep-01	30-Sep-01
T04-01-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02F	28-Sep-01	30-Sep-01
T04-02-341	Submit Annual Progress Report on Development of Waste Tank Leak Monitoring and Mitigation Activities in Support of M-45-08	HQ-I	M-45-09G	30-Sep-02	30-Sep-02
T04-02-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02G	30-Sep-02	30-Sep-02
T04-03-791	Establish Full-Scale Capability for Mitigation of Waste Tank Leakage During Retrieval Sluicing Operations	HQ-I	M-45-08	30-Jun-03	30-Jun-03
T04-03-792	Complete Demonstation and Installation of Leak Monitoring and Mitigation Systems for Initial SST Retrieval	HQ-I	M-45-08B	30-Jun-03	30-Jun-03
T04-03-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02H	30-Sep-03	30-Sep-03
T04-03-341	Submit Annual Progress Report on Development of Waste Tank Leak Monitoring and Mitigation Activities in Support of M-45-08	HQ-I	M-45-09H	30-Sep-03	30-Sep-03
T04-04-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02I	30-Sep-04	30-Sep-04
T04-05-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02J	30-Sep-05	30-Sep-05
T04-06-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02K	29-Sep-06	30-Sep-06
T04-07-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02L	28-Sep-07	30-Sep-07
T04-08-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02M	30-Sep-08	30-Sep-08
T04-09-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02N	30-Sep-09	30-Sep-09

Tank Waste Remediation System
Tri-Party Agreement Milestones

MS #	Title	Level	TPA #	99 MYWP Date	TPA Date
T04-10-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02O	30-Sep-10	30-Sep-10
T04-11-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02P	30-Sep-11	30-Sep-11
T04-12-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02Q	28-Sep-12	30-Sep-12
T04-13-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02R	30-Sep-13	30-Sep-13
T04-14-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02S	30-Sep-14	30-Sep-14
T04-15-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02T	30-Sep-15	30-Sep-15
T04-16-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02U	29-Sep-16	30-Sep-16
T04-17-241	Submit Annual Update SST Retrieval Sequence Document	HQ-I	M-45-02V	29-Sep-17	30-Sep-17
T04-17-245	Submit Annual Updates to SST Retrieval Sequence Document	HQ-I	M-45-02	29-Sep-17	30-Sep-17
T04-18-1B1	Retrieve Waste from all Remaining SSTs	HQ-I	M-45-05	28-Sep-18	30-Sep-18
T04-24-051	Complete Closure of all SST Farms	HQ-I	M-45-06	07-Jan-25	30-Sep-24
T04-24-052	Complete Closure of all SST Farms	HQ-M	M-45-00	07-Jan-25	30-Sep-24
T05-03-191	Treatment and/or Repackaging of all Remaining Cs/Sr	HQ-I	M-92-05	30-Jun-03	30-Jun-03
T06-07-101	Start Hot Operations of HLW Pretreatment Facility	HQ-I	M-50-04	01-Nov-06	30-Jun-08
T06-02-141	Initiate Hot Operations of the HLW Vitrification Facility	HQ-I	M-51-03	01-Feb-07	31-Dec-09
T06-02-131	Start Hot Operations of Phase 1 LAW Pretreatment and Immobilization Facilities	HQ-I	M-60-12	02-Jan-08	31-Dec-02
T07-02-111	Initiate Negotiations on Phase 2 LAW Pretreatment and Immobilization Milestones	HQ-I	M-60-13	03-Jun-02	31-Dec-03
T07-25-122	Complete Pretreatment Processing of Hanford Tank Waste	HQ-M	M-50-00	31-Dec-24	31-Dec-28
T07-25-121	Complete Pretreatment and Immobilization of Hanford Low Activity Tank Waste	HQ-M	M-60-00	31-Dec-24	31-Dec-24
T07-29-131	Complete Vitrification of Hanford High Level Tank Waste	HQ-M	M-51-00	29-Sep-28	31-Dec-28

Tank Waste Remediation System
Tri-Party Agreement Milestones

MS #	Title	Level	TPA #	99 MYWP Date	TPA Date
T09-99-100	Submit Revised Canister Storage Facility Part A Dangerous Waste Permit Application to Ecology	HQ-I	M-90-12	28-Jun-02	30-Jun-99
T09-01-100	Submit Canister Storage Facility Part B Dangerous Waste Permit Application to Ecology	HQ-I	M-20-56	30-Jun-03	31-Dec-00
T09-00-003	Initiate ILAW Interim Storage Facility Construction	HQ-I	M-90-03	01-Oct-03	30-Jun-01
T09-01-021	Submit Interim ILAW Facility Part B Dangerous Waste Permit Application to Ecology	HQ-I	M-20-57	30-Apr-04	31-Dec-00
T09-03-003	Complete Canister Storage Facility Construction	HQ-I	M-90-11	31-Mar-06	31-Dec-02
T09-05-005	Initiate ILAW Disposal Facility Construction	HQ-I	M-90-08	27-Aug-07	30-Jun-03
T09-02-002	Initiate Hot Operations of ILAW Interim Storage Facility	HQ-I	M-90-06	02-Jan-08	31-Dec-02
T09-01-020	Submit ILAW Disposal Facility Part B Dangerous Waste Permit Application to Ecology	HQ-I	M-20-58	25-Aug-08	31-Dec-03
T09-06-100	Initiate Hot Operations of ILAW Disposal Facility	HQ-I	M-90-10	17-May-11	31-Dec-05
T09-42-100	Complete Facilities for Waste Storage and Disposal	HQ-M	M-90-00	30-Sep-48	TBD

NOTE ON SHADED MILESTONES: Renegotiation of TPA milestones will be required as a result of the recently negotiated BNFL contract. Additional Target-level milestones are also impacted as identified in the individual PBS sections.

	M-41 Milestones				
T03-97-150	Start Interim Stabilization of 6 SSTs	HQ-I	M-41-22	TBD [1]	30-Sep-97
T03-98-151	Start Interim Stabilization OF 8 SSTs	HQ-I	M-41-23	TBD [1]	31-Mar-98
T03-98-152	Start Interim Stabilization of 9 SSTs	HQ-I	M-41-24	TBD [1]	30-Sep-98
T03-99-191	Start Interim Stabilization of 3 SSTs	HQ-I	M-41-25	TBD [1]	31-Mar-99
T03-99-192	Start Interim Stabilization of 2 SSTs	HQ-I	M-41-26	TBD [1]	30-Sep-99
T03-00-196	Complete Salt Well Pumping of SSTs	HQ-I	M-41-27	TBD [1]	30-Sep-00
T03-00-193	Complete SST Interim Stabilization	HQ-I	M-41-00	TBD [1]	30-Sep-00

[1] The M-41 milestones are being renegotiated and the current enforceable dates are not supported in the FY99 MYWP schedule

Tank Waste Remediation System DNFSB Milestones

MS #	Title	Level	DNFSB #	99 MYWP Date	DNFSB Date
T02-99-101	Transmit Letter to DNFSB Reporting Results of Testing Completion to Confirm Organic Safe Storage Criteria	FO	5.4.3.3.b	30-Nov-98	30-Nov-98
T02-99-100	Transmit Letter to DNFSB Reporting Completion of Topical Report to Resolve High Heat Safety Issue	FO	5.4.3.6.d	31-Dec-99	31-May-98
T02-98-111	RL Approval of TWRS FSAR	FO	5.4.3.1.d	29-Jan-99	30-Jun-97
T02-99-103	Transmit Letter to DNFSB Reporting Completion of Organic Solvent CN-032 to Resolve Safety Issue	FO	5.4.3.4.d, e, f	d, e, f - 30-Sep-99	d- 31-Dec-99; e - 30-Apr-00; f - 31-Dec-00
T01-99-138	Update Tank Content Models (5.6.3.1.i)	HQ	5.6.3.1.i	31-Dec-98	31-Dec-98
T01-00-101	Vapor Sampling of all SSTs (5.4.3.4.d)	HQ	5.4.3.4.d	31-Dec-99	31-Dec-99
T01-01-101	Letter Reporting Completion of Vapor Sampling of All DSTs (5.4.3.4.f)	HQ	5.4.3.4.f	31-Dec-00	31-Dec-00
T01-03-301	Completion of Core Sampling of all Tanks (5.6.3.1.j)	HQ	5.6.3.1.j	31-Dec-02	31-Dec-02

A.4.1 Basis of Estimate

Estimates supporting the Tank Waste Remediation Systems (TWRS) fiscal year (FY) 1999 Multi-Year Work Plan (MYWP) estimate were developed using Activity-Based Cost (ABC) estimating methodology consistent with the "Hanford Cost Estimating and Scheduling Guide," DOE/RL-97-90, Revision 0.

The TWRS MYWP has been developed to define the technical scope, schedule and cost. The scope, schedule and cost baselines are interrelated and have been integrated. The Hanford Site Technical Baseline requirements have been incorporated in the TWRS Technical Baseline through development of TWRS technical specifications. Level 0 and Level 1 work logics were developed to define the activities and interfaces necessary to meet the technical requirements. For much of the TWRS work, Technical Basis Review (TBR) data packages were then prepared to decompose the Level 1 activities to a detailed, executable task level and document scope and resources necessary to complete the work. Activities and resources from the TBRs were input to Primavera[1] (P3) to prepare the TWRS detailed baseline schedule. Pricing of the estimate was performed in P3 using standard rates and factors developed by the FDH Chief Financial Officer and approved by DOE for MYWP forward pricing purposes. The resource-loaded schedules are traceable to the TBR data packages. Costs generated by P3 were developed using the DOE-approved planning rates (see Planning Rates table on next page) and were manually escalated using the DOE-approved escalation rates.

This MYWP is the product of an iterative planning process to arrive at baselines consistent with the TWRS mission strategy. The MYWP guidance for this strategy includes the latest Project Baseline Summaries (PBS's), Priority List and other guidance documentation provided by Fluor Daniel Hanford (FDH) and DOE.

Due to significant variations in the current phases of the TWRS projects and available data and scope definition, many estimating techniques have been utilized in development of the cost estimate. They include definitive, parametric, analogy, trend analysis, level of effort and engineering judgement. ABC estimates for the scope of work have been prepared at the lowest level of detail practical. As expected, the level of scope definition and estimate detail is greatest for the near-term activities and less well defined in later years. Through the annual planning process and change control, the execution year and outyear estimate basis will continue to be refined, updated and validated.

The Estimate Basis is contained in numerous technical scope, schedule and cost baseline and supporting documents including TBR data packages. The Estimate Basis includes the following key data:

- Technical scope
- Purpose of the project
- Assumptions and exclusions
- Work breakdown structure
- Technique and historical basis
- Cost estimating relationship (CER) development (as applicable)
- Labor rates, unit rates, and unit cost sources
- Escalation amounts and sources
- Legal Drivers

[1] Primavera is a trademark of Primavera Systems, Inc.

- Labor costs
- Technical logic diagrams
- Integrated, logic driven, resource loaded schedules
- Responsibility assignment matrices
- Other costs that will be reflected in the budget for the particular project or program

The baseline and supporting documentation that contains the Estimate Basis is located in the respective TWRS project offices in the 200 East and West Areas and the 2430 Stevens Center Building.

Planning Rates (as of June 25, 1998)

Rate	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06+
HANDI 2000 (ERP)	2.1%							
ESS		13.0%	13.0%	13.0%	13.0%	13.0%	13.0%	13.0%
G&A	13.6%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
Subtotal	15.7%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%
Burdened (COS)	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%	32.0%
Absence	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Labor Escalation								
Exempt	4.6%							
Non-exempt	3.6%							
Bargaining	3.5%							
Expense		2.1%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
Capital		2.5%	2.5%	2.6%	2.7%	2.8%	2.8%	2.8%
MPR	7.0%	Included in ESS in 2000 and outyears						
PMA's								
B&W	16.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%	15.0%
DE&S	19.7%	20.0%	20.0%	50.0%	50.0%			
WMH	17.8%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%
LMH	23.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%
Numatec	30.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%	29.0%
FDH ES&H	37.0%	Included in ESS in 2000 and outyears						
Dyncorp								
Fab Svcs	115.0%	135.0%	135.0%	135.0%	135.0%	135.0%	135.0%	135.0%
Fleet Ops	50.0%	Included in ESS in 2000 and outyears						
ES&H	71.3%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%	70.0%
Infrastructure	69.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
Utilities	32.0%	Included in ESS in 2000 and outyears						
Fire	27.1%	Included in ESS in 2000 and outyears						
GFS								
B&W Protec	16.7%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
DESNW	15.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%	16.0%
WMNW	5.2%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
FDNW	5.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
LMSI	6.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%
COGEMA	5.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%	4.0%

A.4.2 Project Priority List

TANK WASTE REMEDIATION SYSTEM
FY 1999- 2007 MYWP PRIORITY LIST

11/23/98 'FY 1999 MYWP

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FDH UAS	PBS #	ADS	"UNIT OF ANALYSIS"	FY 1999 TOTAL ESCAL'D	FY 2000 TOTAL ESCAL'D	FY 2001 TOTAL ESCAL'D	FY 2002 TOTAL ESCAL'D	FY 2003 TOTAL ESCAL'D	FY 2004 TOTAL ESCAL'D	FY 2005 TOTAL ESCAL'D	FY 2006 TOTAL ESCAL'D	FY 2007 TOTAL ESCAL'D
130	TW03	1100 - 0	TWRS DST MINIMUM SAFE OPERATIONS	61,761	62,495	67,246	79,653	75,470	69,452	71,711	67,917	73,926
134	TW03	1100 - 0	TWRS SST MINIMUM SAFE OPERATIONS	11,728	12,364	26,036	16,065	18,544	9,376	8,944	8,990	9,224
538	TW03	1100 - 0	TWRS TRANSFERS & WASTE STAGING	1,290	1,407	1,447	1,588	2,990	1,064	2,108	1,120	1,315
133	TW01	1130 - 0	TWRS CHAR'ZN -SUPPT TO MIN SAFE OPS	1,518	2,783	2,383	2,209	2,180	2,228	2,668	2,576	2,556
138	TW03	1100 - 0	TWRS SST LIQUID EMERGENCY PUMPING	4,000	2,000	2,087	2,133	2,180	2,229	1,599	-	-
139	TW01	1130 - 0	TWRS CHAR'ZN - SUPPT TO INTERIM STABILIZN	500	500	522	533	545	557	-	-	-
132	TW02	1110 - 0	TWRS FLAMMABLE GAS MINIMUM SAFE OPERATIONS	9,164	13,177	9,470	1,166	1,057	-	-	-	-
580	TW02	1110 - 0	SY 101 USQ LEVEL GROWTH	2,500	5,000	5,217	-	-	-	-	-	-
135	TW01	1130 - 0	TWRS CHAR'ZN - SUPPORT TO FLAMMABLE GAS	162	303	255	236	112	90	76	73	73
142	TW10	1200 - 0	TWRS MGMT SUPPT-ENV. SAFETY QUAL ASSMT & HEALTH	2,400	2,474	3,490	3,373	3,490	3,672	3,647	3,715	3,810
136	TW10	1200 - 0	TWRS MGMT SUPPT - ENGINEERING MGMT & ADMIN	1,100	1,100	1,148	1,169	1,199	1,230	1,244	1,267	1,300
148	TW10	1200 - 0	TWRS MGMT SUPPT - RL SUPPORT	1,745	1,720	1,670	1,706	1,744	1,782	171	173	178
149	TW03	1100 - 0	TWRS OPERATIONS RL SUPPORT	2,764	2,856	2,980	3,046	3,113	3,181	3,253	3,311	3,398
150	TW02	1110 - 0	TWRS SAFETY RL SUPPORT	1,225	1,430	-	-	-	-	-	-	-
147	TW01	1130 - 0	TWRS CHAR'ZN - SUPPORT TO EVAPORATOR	1,631	552	2,561	2,373	1,127	906	765	739	732
145	TW02	1110 - 0	TWRS SAFETY, USQ, AUTHORIZATION BASIS	6,415	7,084	7,888	8,450	8,027	8,204	8,384	8,568	8,757
540	TW03	1100 - 0	TWRS ECN INCORPORATION	364	522	269	275	281	287	148	-	-
543	TW03	1100 - 0	TWRS EMERG. PREPAREDNESS DRILL REQTS	390	387	404	414	422	432	442	449	461
546	TW03	1100 - 0	TWRS CONFIGURATION / ALARM MGMT.	1,732	1,623	1,388	1,118	-	-	-	-	-
547	TW03	1100 - 0	TWRS WDOH ROUTINE ACTIVIT NOC's	49	-	-	-	-	-	-	-	-
549	TW03	1100 - 0	TWRS WDOE ENVIRONMENTAL RECORDS	186	113	105	110	110	111	115	116	120
551	TW03	1100 - 0	TWRS AIR OPERATING PERMIT IMPLEMENTATION	423	400	494	427	478	483	491	500	512
			SUBTOTAL - MIN SAFE	**113,047**	**120,290**	**137,060**	**126,041**	**123,068**	**105,285**	**105,767**	**99,515**	**108,383**
153	TW10	1200 - 0	TWRS MANAGEMENT SUPPORT - FEE	14,740	14,740	15,381	15,719	16,065	16,418	16,790	17,090	17,537
211	TW04	1210 - 0	TWRS VADOSE ZONE CHARACTERIZATION	4,816	14,633	13,650	6,614	13,844	3,708	797	-	-
151	TW01	1130 - 0	TWRS CHAR'ZN SUPPT TO RL	175	145	274	255	121	97	82	79	78
143	TW10	1200 - 0	TWRS F.D.H. PROJECT OFFICE SUPPORT	4,500	4,500	4,696	4,799	4,904	5,012	5,126	5,218	5,354
193	TW10	1200 - 0	TWRS MGMT. SUPPORT-PROJ PLNG INTG & CONT/CAD	9,401	9,169	11,324	11,409	12,567	11,193	15,483	11,537	11,841
194	TW10	1200 - 0	TWRS MGMT. SUPPORT-SYS ENGRG/REENGRG	2,903	2,782	2,405	2,439	2,494	1,782	2,304	1,005	1,031
213	TW10	1200 - 0	TWRS MANAGEMENT SUPPORT-COMM / HGET ETC.	262	266	278	284	290	296	303	309	316
333	TW03	1100 - 0	TWRS ROVER PATROL	1,135	1,197	1,249	1,277	1,305	1,333	1,364	1,388	1,424
552	TW04	1210 - 0	TERMINATION COSTS - 3161	1,000	-	-	-	-	-	-	-	-
544	TW03	1100 - 0	TWRS PAAA COMPLIANCE (HNF-PRO-2243)	789	686	716	739	750	780	799	813	835
581	TW10	1200 - 0	TWRS MANAGEMENT SUPPORT-WORK MANAGEMENT	1,659	1,826	1,567	-	-	-	-	-	-
175	TW04	1210 - 0	TWRS HANFORD TANKS INITIATIVE; EM-30 - (PHMC)	997	11,331	9,979	6,172	-	-	-	-	-
			SUBTOTAL - ESSENTIAL SERVICES	**155,424**	**181,565**	**198,577**	**175,747**	**175,407**	**145,905**	**148,815**	**138,956**	**144,780**

TANK WASTE REMEDIATION SYSTEM
FY 1999- 2007 MYWP PRIORITY LIST

11/23/98 'FY 1999 MYWP

EXCEL: 10YRPR49.XLS

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FDH UAS	PBS #	ADS	"UNIT OF ANALYSIS"	FY 1999 TOTAL ESCAL'D	FY 2000 TOTAL ESCAL'D	FY 2001 TOTAL ESCAL'D	FY 2002 TOTAL ESCAL'D	FY 2003 TOTAL ESCAL'D	FY 2004 TOTAL ESCAL'D	FY 2005 TOTAL ESCAL'D	FY 2006 TOTAL ESCAL'D	FY 2007 TOTAL ESCAL'D
131	TW02	1110 - 0	TWRS ORGANIC OPERATIONS	275	3,932	1,120	-	-	-	-	-	-
157	TW04	1210 - 4	TWRS SST (C-106) RETRIEVAL OPERATIONS	12,319	2,232	-	-	-	-	-	-	-
539	TW03	1100 - 0	TWRS PROCESS SYSTEMS UPGRADE	1,952	279	269	275	281	287	294	300	307
545	TW03	1100 - 0	TWRS CAM REPLACEMENT	1,797	324	-	-	-	-	-	-	-
137	TW03	1100 - 0	TWRS TMACS AND ENRAF	4,671	-	-	-	-	-	-	-	-
188	TW02	1110 - 0	TWRS FLAMMABLE GAS ADDIT'L MONIT'G UPGRADES	348	4,543	-	-	-	-	-	-	-
140	TW01	1130 - 0	TWRS CHAR'ZN - SUPPORT TO SAFETY SCREENING	16,898	13,840	11,928	10,724	10,542	2,432	-	-	-
NEW	TW03	1100 - 0	TANK PH ISSUE RESOLUTION	52	3,543	768	781	401	410	585	342	-
NEW	TW03	1100 - 0	TWRS SY101 MIXER PUMP REPLACEMENT	-	-	10,152	-	-	-	-	-	-
			SUBTOTAL -URGENT RISK- SAFETY	193,736	210,258	222,814	197,526	186,632	149,034	149,693	137,598	145,087
224	TW03	1100 - 0	TWRS SST LIQUID PUMPING - INCREMENT	22,000	26,800	25,051	21,502	20,322	18,875	-	-	-
139	TW01	1130 - 0	TWRS CHAR'ZN - SUPPT TO INTERIM STABILIZN	3,640	1,782	5,979	5,491	2,315	1,742	-	-	-
			SUBTOTAL -URGENT RISK-TANK PUMPING	219,376	238,840	253,844	214,520	209,269	169,652	149,693	137,598	145,087
152	TW04	1210 - 0	TWRS DISPOSAL RL SUPPORT	152	153	159	162	166	170	174	177	181
185	TW04	1210 - 2	TWRS W-151-101-AZ COMPL'N AND READINESS ASSM'T	3,994	195	-	-	-	-	-	-	-
197	TW08	1230 - 0	TWRS PRIV'ZN INFRASTRUCTURE (INCL W-519)(PHASE I)	10,500	14,915	8,147	931	-	-	-	-	-
164	TW03	1100 - 1	TWRS TF RES & SAFE OPS (W-314)	10,500	26,216	40,438	50,220	37,919	35,362	30,426	20,491	4,721
196	TW04	1210 - 3	TWRS INITIAL TK RETRIEVAL SYS (ITRS) DST (W-211)	800	4,900	25,009	29,597	30,325	23,276	17,273	13,295	16,929
168	TW01	1130 - 0	TWRS CHAR'ZN - SUPPT TO RETRIEVAL / PRIVATIZATION	16,260	20,032	25,532	23,658	11,233	14,600	15,544	15,002	14,882
195	TW04	1210 - 0	TWRS DST WASTE RETRIEVAL	16,718	24,815	43,095	38,145	42,008	44,184	54,806	33,876	27,795
163	TW05	1230 - 0	TWRS PRIVATIZATION PROGRAM MGMT (WIT) PHASE 1	7,400	8,800	10,682	17,831	18,296	18,727	16,814	16,940	17,327
162	TW05	1230 - 0	TWRS M AND I VENDOR INTERFACE	700	1,428	1,457	1,488	1,521	1,562	1,590	1,618	1,661
172	TW04	1210 - 0	TWRS HIGH-LEVEL WASTE SUPPORT (M-51) PHASE 1	2,310	2,241	7,249	8,071	8,062	5,298	4,678	3,672	2,656
171	TW04	1210 - 0	TWRS LAW SUPPORT PHASE 1	7,096	2,396	5,915	6,004	6,141	5,952	6,059	6,121	6,071
169	TW08	1230 - 0	TWRS 106/108AP TURNOVER (PROC/ENGRG/ADMIN)	1,645	-	2,041	2,105	1,641	1,730	-	-	-
471	TW08	1230 - 0	SOLID WASTE SUPPORT	458	-	1,813	2,980	3,596	16,123	801	163	168
171	TW04	1210 - 0	TWRS LAW SUPPORT PHASE 1	-	-	-	-	-	-	-	-	-
161	TW09	1250 - 0	TWRS IHLW - PROGRAM, SYSTEMS DEFN/OPS	547	-	728	675	691	776	1,284	22,947	31,444
NEW	TW09	1250 - 0	TWRS W-464, IHLW INTERIM STG FACILITY	535	-	5,324	10,404	37,120	33,015	8,500	1,182	-
167	TW09	1250 - 0	TWRS ILAW PROGRAM, SYSTEMS DEFN/OPS	3,233	-	5,888	3,328	2,380	1,532	1,927	4,123	4,446
NEW	TW09	1250 - 0	TWRS W-465 ILAW INTERIM STG FACILITY	375	-	1,831	5,273	6,960	20,848	10,042	3,370	140
NEW	TW09	1250 - 0	TWRS W-520 ILAW DISPOSAL COMPLEX	60	-	-	-	545	2,249	2,962	6,073	13,586
171	TW04	1210 - 0	TWRS LAW SUPPORT PHASE 1	-	1,410							
			S/T - TARGET - FY 2000		346,343							

TANK WASTE REMEDIATION SYSTEM
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FDH UAS	PBS #	ADS		"UNIT OF ANALYSIS"	FY 1999 TOTAL ESCAL'D	FY 2000 TOTAL ESCAL'D	FY 2001 TOTAL ESCAL'D	FY 2002 TOTAL ESCAL'D	FY 2003 TOTAL ESCAL'D	FY 2004 TOTAL ESCAL'D	FY 2005 TOTAL ESCAL'D	FY 2006 TOTAL ESCAL'D	FY 2007 TOTAL ESCAL'D
171	TW04	1210	- 0	TWRS LAW SUPPORT PHASE 1	-	2,576							
169	TW08	1230	- 0	TWRS 106/108AP TURNOVER (PROC/ENGRG/ADMIN)	-	1,012							
471	TW08	1230	- 0	SOLID WASTE SUPPORT	-	835							
161	TW09	1250	- 0	TWRS IHLW - PROGRAM, SYSTEMS DEFN/OPS	-	904							
NEW	TW09	1250	- 0	TWRS W-464, IHLW INTERIM STG FACILITY	-	1,452							
167	TW09	1250	- 0	TWRS ILAW PROGRAM, SYSTEMS DEFN/OPS	-	4,572							
NEW	TW09	1250	- 0	TWRS W-465 ILAW INTERIM STG FACILITY	-	724							
168	TW04	1210	- 0	TWRS SST PROGRAM DEVELOPMENT	-	7,490							
158	TW05	1250	- 0	TWRS CESIUM & STRONTIUM CAPSULE DISPOSITION	-	13	14	14	116	-	-	-	-
160	TW08	1230	- 0	TWRS PRIVATIZATION INFRASTRUCTURE (PHASE II)	-	-	4,652	2,586	4,097	1,281	1,303	4,615	14,026
180	TW04	1210	- 0	TWRS TANK FARM CLOSURE	-	879	919	934	945	2,459	3,675	3,740	2,559
332	TW02	1110	- 0	FSAR IMPLEMENTATION	-	-	7,096	-	-	-	-	-	-
334	TW08	1230	- 0	TWRS UTIL OPERS SUPPORT	-	2,152	4,473	4,571	4,691	21,930	41,455	25,097	25,751
585	TW03	1100	- 0	RAW WATER FLOW TOTALIZERS INSTALL'N	-	-	116	-	-	-	-	-	-
586	TW03	1100	- 0	TRANSFER PUMP REPLACEMENT 104-AW	-	-	544	-	-	-	-	-	-
NEW	TW04	1210	- 0	RTP RISK ALLOWANCE :TW04	-	-	10,435	42,657	62,668	11,139	6,830	47,700	24,369
				SUBTOTAL -URGENT RISK-PRIVATIZATION - 90 %	302,859	0 388,952	467,400	464,153	490,391	431,867	375,838	367,800	354,398
352	TW03	1100	- 0	TWRS INTEGRITY INSPECTION M-32	3,696	-	47	476	-	283	398	447	416
541	TW03	1100	- 0	TWRS S/RID RECOVERY & MAINT'CE (PHASE I)	1,292	306	319	330	337	344	352	358	367
542	TW03	1100	- 0	TWRS INTEGRATED SAFETY MGMT SYS (PHASE I)	1,636	98	65	67	69	70	74	76	77
548	TW03	1100	- 0	TWRS DST RCRA PART B APPLICATION	310	106	-	-	-	-	-	-	-
654	TW03	1100	- 0	TWRS LEAK DETECTORS FOR ANNULUS IN SY FARM	500	-	-	-	-	-	-	-	-
184	TW03	1100	- 0	TWRS MARKING/MAPPING UNGD LINES	47	83	86	89	90	92	93	95	99
550	TW03	1100	- 0	TWRS WASTE ACCEPTANCE PROGRAM	548	23	24	25	25	26	9	9	10
NEW	TW03	1100	- 0	TWRS AS-BUILT DRAWINGS AND COMPONENT LABELING	1,012	4,571	2,792	1,393	1,423	796	329	273	281
				SUBTOTAL -CRITICAL NEEDS	311,700	374,139	470,733	466,531	492,335	433,479	377,093	369,059	355,647
COMPLIANCE													
166	TW04	1210	- 0	TWRS SST PROGRAM DEVELOPMENT	1,300	-	11,068	8,130	10,087	23,486	40,921	48,249	62,866
NEW	TW01	1130	- 0	TWRS CHAR'ZN SUPPORT TO IMUSTS	-	736	4,174	3,199	-	-	-	-	-
NEW	TW03	1100	- 0	TWRS TANK ISOLATION & ABANDONED EQUIP	-	3,778	-	-	-	-	-	-	-
NEW	TW03	1100	- 0	SRIDS ASSESSMENT PHASE 2 ASSMT	-	577	302	311	318	325	331	339	347
NEW	TW03	1100	- 0	NATURAL PHENOMENON HAZARD MITIG'N	-	148	-	-	-	-	-	-	-
NEW	TW03	1100	- 0	FIRE HAZARD ANALYSIS	-	386	98	101	104	106	110	113	115
NEW	TW03	1100	- 0	METRIFICATION PROGRAM	-	49	-	-	-	-	-	-	-
NEW	TW03	1100	- 0	SUSPECT PARTS	-	199	40	41	41	42	43	44	45
NEW	TW03	1100	- 0	LOW INSTALLATIONS	-	792	244	-	-	-	-	-	-
NEW	TW03	1100	- 0	702 AZ UPGRADES	-	891	8,406	1,077	1,339	4,020	779	38	39
				S/T-TARGET - FY 1999/MYWP SUBMISSION	313,000	381,695							
EM50	RL07	T61		TWRS HANFORD TANKS INITIATIVE: EM-50	7,400	10,000	-	-	-	-	-	-	-

TANK WASTE REMEDIATION SYSTEM
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UNFUNDED COMPLIANCE REQUIREMENTS												
659	TW08	1230 - 0	TWRS PRIVZN INFRASTRUCTURE (INCL W-519)(PHASE I)	214	-	-	-	-	-	-	-	-
660	TW04	1210 - 3	TWRS INITIAL TK RETRIEVAL SYS (ITRS) DST (W-211)	1,800	-	-	-	-	-	-	-	-
661	TW01	1130 - 0	TWRS CHAR'ZN - SUPPORT TO SAFETY SCREENING	1,400	-	-	-	-	-	-	-	-
655	TW04	1210 - 0	TWRS LAW SUPPORT PHASE 1	400	-	-	-	-	-	-	-	-
662	TW09	1250 - 0	TWRS IHLW - STORAGE (INCL'G W-464)	704	-	-	-	-	-	-	-	-
663	TW04	1210 - 0	TWRS HIGH-LEVEL WASTE SUPPORT (M-51) PHASE 1	1,146	-	-	-	-	-	-	-	-
664	TW09	1250 - 0	TWRS ILAW STORAGE/DISPOSAL (INCLG W-465)	1,276	-	-	-	-	-	-	-	-
665	TW04	1210 - 0	TWRS SST PROGRAM DEVELOPMENT	1,700	-	-	-	-	-	-	-	-
666	TW04	1210 - 0	TWRS HANFORD TANKS INITIATIVE: EM-30 - (PHMC)	4,600	-	-	-	-	-	-	-	-
174	TW04	1210 - 0	TWRS HANFORD TANKS INITIATIVE: EM-30 - (DOE-RL)	117	-	-	-	-	-	-	-	-
158	TW05	1230 - 0	TWRS CESIUM & STRONTIUM CAPSULE DISPOSITION	100	-	-	-	-	-	-	-	-
308	TW03	1100 - 0	TWRS AS-BUILT DRAWINGS /LABELING / CONFIG	2,500	4,600	-	-	-	-	-	-	-
214	TW03	1100 - 0	TWRS TANK ISOLATION & ABANDONED EQUIP	3,800	-	-	-	-	-	-	-	-
593	TW03	1100 - 0	SRIDS ASSESSMENT PHASE 2 ASSMT	300	300	-	-	-	-	-	-	-
598	TW03	1100 - 0	TANK PH ISSUE RESOLUTION	3,600	800	-	-	-	-	-	-	-
601	TW02	1110 - 0	SY-101 USQ LEVEL GROWTH	6,000	-	-	-	-	-	-	-	-
604	TW02	1110 - 0	FLAMM. GAS SAFETY ISSUE RESOLUTION	2,700	-	-	-	-	-	-	-	-
332	TW02	1110 - 0	FSAR IMPLEMENTATION	6,811	6,811	-	-	-	-	-	-	-
613	TW01	1130 - 0	TWRS CHAR'ZN SUPPT TO AN-107 (2 Samples)-RL/WIT REG.DQO	1,600	2,002	-	-	-	-	-	-	-
			SUBTOTAL - UNFUNDED EM30 COMPLIANCE	40,768	14,513							
OTHER												
587	TW03	1100 - 0	TWRS DST MINIMUM SAFE OPERATIONS	-	3,522	-	-	-	-	-	-	-
591	TW02	1110 - 0	TWRS SAFETY, USQ, AUTHORIZATION BASIS	-	3,000	-	-	-	-	-	-	-
619	TW03	1100 - 0	SY101 MIXER PUMP MOCK UP QUAL'NS	800	-	-	-	-	-	-	-	-
588	TW03	1100 - 0	TWRS ESH & Q ASSESSMENTS	300	300	-	-	-	-	-	-	-
589	TW03	1100 - 0	SPARE PARTS/ INVENTORY RECOVERY	2,300	-	-	-	-	-	-	-	-
590	TW03	1100 - 0	NATURAL PHENOMENON HAZARD MITIG'N	200	-	-	-	-	-	-	-	-
592	TW03	1100 - 0	FIRE HAZARD ANALYSIS	300	100	-	-	-	-	-	-	-
595	TW03	1100 - 0	METRIFICATION PROGRAM	50	-	-	-	-	-	-	-	-
596	TW03	1100 - 0	SUSPECT PARTS	200	30	-	-	-	-	-	-	-
597	TW03	1100 - 0	LOW INSTALLATIONS	800	300	-	-	-	-	-	-	-
599	TW04	1210 - 0	TWRS SST PROGRAM DEVELOPMENT	2,000	-	-	-	-	-	-	-	-
600	TW02	1110 - 0	TWRS SAFETY RL SUPPORT - INCREMENT	205	-	-	-	-	-	-	-	-
602	TW02	1110 - 0	AUTHORIZATION BASIS FOR ORPHAN FACILITIES	600	-	-	-	-	-	-	-	-
603	TW02	1110 - 0	AUTHORIZATION BASIS UPGR	1,700	-	-	-	-	-	-	-	-
605	TW01	1130 - 0	TWRS CHAR'ZN - SUPP TO SAFETY SCREENING - INCREMENT 1	-	8,640	-	-	-	-	-	-	-
606	TW01	1130 - 0	TWRS CHAR'ZN SUPPT TO VAPOR PROGRAM (REG DQO)	-	3,393	-	-	-	-	-	-	-
607	TW01	1130 - 0	TWRS CHAR'ZN SUPPT TO RETR'VL AE CHAR. SAMP'G (GRAB&V	3,300	-	-	-	-	-	-	-	-
611	TW01	1130 - 0	TWRS CHAR'ZN SUPPT TO RET'VL:REG. DW / DQO REQ'TS	2,500	1,140	-	-	-	-	-	-	-
612	TW02	1110 - 0	TWRS FLAMMABLE GAS ADDIT'L MONIT'G UPGRADES	4,600	-	-	-	-	-	-	-	-
474	TW01	1130 - 0	TWRS CHAR'ZN SUPPT TO TPA M-44/WIRD	-	-	-	-	-	-	-	-	-
418	TW01	1130 - 0	TWRS CHAR'ZN SUPPORT TO IMUSTS	1,400	1,724	-	-	-	-	-	-	-
614	TW05	1230 - 0	TWRS CESIUM & STRONTIUM CAPSULE DISPOSITION	362	-	-	-	-	-	-	-	-
386	TW02	1110 - 0	ORGANIC ANALYSIS FOR ANC. FACILITY	1,400	-	-	-	-	-	-	-	-
615	TW03	1100 - 0	TWRS PONDS CRIBS & DITCHES DEACT'N	400	-	-	-	-	-	-	-	-
616	TW03	1100 - 0	702 AZ UPGRADES	5,600	600	-	-	-	-	-	-	-
617	TW03	1100 - 0	FACILITY DEACTIVATION	1,900	5,000	650	31	43	55	44	29	-
618	TW03	1100 - 0	DRAWINGS/ DOC'N FOR INACTIVE SYSTEMS	300	30	285	245	251	256	257	234	237
199	TW03	1100 - 0	TWRS 242 T STABILIZATION / HAZARD REDN	-	3,359	-	-	-	-	-	-	-
620	TW04	1210 - 0	TWRS HANFORD TANKS INITIATIVE: EM-30 - (PHMC/RL)	1,000	-	-	-	-	-	-	-	-

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621	TW03	1100	- 0	TREND & PREDICTED MAINT.	500		200		187		78		80		81		83		85	87
622	TW03	1100	- 0	TWRS TMACS / ENRAF	1,800		-		2,025		100		-		-		-		-	-
623	TW03	1100	- 0	OE TRAINING (25)	2,500		3,110		-		-		-		-		-		-	-
624	TW10	1200	- 0	WORK MANAGEMENT	2,500		700		-		-		-		-		-		-	-
475	TW10	1200	- 0	RL SUPPT - ICE REVIEW OF TWRS	1,500		-		-		-		-		-		-		-	-
625	TW03	1100	- 0	DST SSC ANALYSIS & DESIGN RECONSTITUTION	2,700		100		2,670		151		156		158		163		209	214
626	TW03	1100	- 0	SST SSC ANALYSIS & DESIGN RECONSTITUTION	1,300		100		1,393		64		65		67		69		70	71
627	TW03	1100	- 0	TANK STRUCTURAL ISSUE RESOLN	900		200		-		-		1,164		882		60		-	-
628	TW03	1100	- 0	CONTAMINATION ZONE REDUCTION	1,000		1,200		-		1,779		670		-		-		-	-
629	TW03	1100	- 0	UPGRADE DST HARDWARE & TECH. BASELINE	3,000		2,500		2,515		1,987		2,378		2,327		2,378		2,412	2,474
630	TW03	1100	- 0	UPGRADE SST HARDWARE & TECH. BASELINE	1,300		1,100		1,376		1,120		1,144		1,170		1,195		1,232	1,264
631	TW03	1100	- 0	REMOVE INACTIVE SYSTEMS FROM OPERATIONS	1,200		1,100		2,140		952		973		995		1,017		-	-
632	TW03	1100	- 0	CORRECTIVE MAINT. BACKLOG ELIMINATION	3,200		-		-		-		-		-		-		-	-
633	TW10	1200	- 0	ES&H/QA INITIATIVES	1,300		1,300		-		-		-		-		-		-	-
634	TW10	1200	- 0	EXECUTIVE MANAGEMENT SUPPORT	250		250		-		-		-		-		-		-	-
635	TW10	1200	- 0	CONSTRUCTION PROJECT MANAGEMENT	1,200		1,200		-		-		-		-		-		-	-
636	TW10	1200	- 0	CONFIGURATION MANAGEMENT	1,200		600		-		-		-		-		-		-	-
638	TW10	1200	- 0	HANDI 2000 INTEGRATION	1,000		610		-		-		-		-		-		-	-
639	TW10	1200	- 0	CASS	300		-		-		-		-		-		-		-	-
640	TW10	1200	- 0	ADVANCED TECHNICAL INITIATIVES	400		130		-		-		-		-		-		-	-
641	TW10	1200	- 0	DESKTOP PC DISTRIBUTION	440		400		-		-		-		-		-		-	-
642	TW10	1200	- 0	COST ESTIMATING & RISK ANALYSIS	600		600		-		-		-		-		-		-	-
643	TW10	1200	- 0	MASTER PLANNING	400		300		-		-		-		-		-		-	-
644	TW10	1200	- 0	ENGINEERING MANAGEMENT	560		500		-		-		-		-		-		-	-
645	TW10	1200	- 0	SYSTEMS ENGINEERING	200		-		-		-		-		-		-		-	-
646	TW01	1130	- 0	TWRS CHAR'ZN SUPPT - EQUIP'T ENGR. UPGRADES	2,600		2,800		2,922		3,199		-		-		-		-	-
647	TW01	1130	- 0	TWRS CHAR'ZN SUPPT - LLCE WILL REMAIN IN STORAGE	1,300		1,300		1,357		3,199		-		-		-		-	-
648	TW01	1130	- 0	TWRS CHAR'ZN SUPPT - UPGRADE OF DATA MANAGEMENT	1,100		1,100		1,148		1,066		-		-		-		-	-
649	TW01	1130	- 0	TWRS CHAR'ZN SUPPT - BEST BASIS INVENTORY IMPROVT'S	4,800		4,800		5,009		3,199		-		-		-		-	-
347	TW04	1210	- 0	TWRS ACCELERATION VADOSE ZONE CHARACTERIZATION	7,200		-		-		-		-		-		-		-	-
349	TW04	1210	- 0	TWRS TANK FARM CLOSURE	1,527		-		-		-		-		-		-		-	-
179	TW03	1100	- 0	TWRS CASS CLOSURE	-		1,607		-		-		-		-		-		-	-
178	TW03	1100	- 0	TWRS LONG LENGTH CONTAMT'S EQUIP	-		1,348		-		-		-		-		-		-	-
294	TW03	1100	- 0	TWRS 209E STABILIZATION / HAZARD REDN	-		1,306		-		-		-		-		-		-	-
				SUBTOTAL - OTHER	82,194		61,599													
				TOTAL TWRS REQUIREMENTS (EM-30)	435,962	0	457,807	0	518,741	0	496,563	0	511,149	0	467,449	0	424,545	0	422,113	423,407
EM50	RL07	WT61		TWRS HANFORD TANKS INITIATIVE: EM-50	7,400		10,000		-		-		-		-		-		-	-
				TOTAL TWRS REQUIREMENTS (EM-30/50)	443,362		467,807		518,741		496,563		511,149		467,449		424,545		422,113	423,407

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TOTAL - TARGET BUDGET												
	TW01		TANK WASTE CHARACTERIZATION PROJECT	40,784	39,937							
	TW02		TANK SAFETY ISSUE RESOLUTION PROJECT	19,927	35,166							
	TW03		TANK FARM OPERATIONS	136,624	143,212							
	TW04		RETRIEVAL PROJECT	51,502	64,308							
	TW05		PROCESS WASTE SUPPORT	8,100	10,228							
	TW08		PRIVATIZATION INFRASTRUCTURE	12,603	14,915							
	TW09		IMMOBILIZED TANK WASTE STORAGE & DISP'L PROJEC	4,750	-							
	TW10		TWRS MANAGEMENT SUPPORT	38,710	38,577							
			TOTAL EM30: REQUIRED FUNDING	313,000	346,343							
			TWRS HANFORD TANKS INITIATIVE: EM-50	7,400	10,000							
			TOTAL EM30 & EM50	320,400	356,343							
TOTAL - URGENT RISK: PRIVATIZATION - 90% CASE												
	TW01		TANK WASTE CHARACTERIZATION PROJECT	40,784	39,937							
	TW02		TANK SAFETY ISSUE RESOLUTION PROJECT	19,927	35,166							
	TW03		TANK FARM OPERATIONS	127,583	143,212							
	TW04		RETRIEVAL PROJECT	50,202	75,253							
	TW05		PROCESS WASTE SUPPORT	8,100	10,241							
	TW08		PRIVATIZATION INFRASTRUCTURE	12,603	18,914							
	TW09		IMMOBILIZED TANK WASTE STORAGE & DISP'L PROJEC	4,750	7,652							
	TW10		TWRS MANAGEMENT SUPPORT	38,710	38,577							
			TOTAL EM30: REQUIRED FUNDING	302,659	368,952							
			TWRS HANFORD TANKS INITIATIVE: EM-50	7,400	10,000							
			TOTAL EM30 & EM50	310,059	378,952							
TWRS TOTAL - COMPLIANCE CASE												
	TW01		TANK WASTE CHARACTERIZATION PROJECT	43,784	42,675							
	TW02		TANK SAFETY ISSUE RESOLUTION PROJECT	35,438	41,977							
	TW03		TANK FARM OPERATIONS	146,824	160,919							
	TW04		RETRIEVAL PROJECT	61,265	75,253							
	TW05		PROCESS WASTE SUPPORT	8,200	10,241							
	TW08		PRIVATIZATION INFRASTRUCTURE	12,817	18,914							
	TW09		IMMOBILIZED TANK WASTE STORAGE & DISP'L PROJEC	6,730	7,652							
	TW10		TWRS MANAGEMENT SUPPORT	38,710	38,577							
			TOTAL EM30: REQUIRED FUNDING	353,768	396,208							
			TWRS HANFORD TANKS INITIATIVE: EM-50	7,400	10,000							
			TOTAL EM30 & EM50	361,168	406,208							
TWRS TOTAL - ALL REQUESTS												
	TW01		TANK WASTE CHARACTERIZATION PROJECT	60,984	67,572	64,042	59,342	28,176	22,651	19,136	18,469	18,321
	TW02		TANK SAFETY ISSUE RESOLUTION PROJECT	43,943	44,977	30,790	9,616	9,084	8,204	8,384	8,568	8,757
	TW03		TANK FARM OPERATIONS	179,374	188,031	207,423	190,036	175,236	155,760	130,066	111,802	102,388
	TW04		RETRIEVAL PROJECT	72,992	75,253	127,477	144,487	174,246	119,675	135,213	156,829	144,026
	TW05		PROCESS WASTE SUPPORT	8,562	10,241	12,152	19,332	19,933	20,289	18,404	18,559	18,988
	TW08		PRIVATIZATION INFRASTRUCTURE	12,817	18,914	21,126	13,172	14,025	41,063	43,559	29,875	39,945
	TW09		IMMOBILIZED TANK WASTE STORAGE & DISP'L PROJEC	6,730	7,652	13,772	19,680	47,696	58,420	24,715	37,695	49,615
	TW10		TWRS MANAGEMENT SUPPORT	50,560	45,167	41,958	40,897	42,753	41,386	45,068	40,315	41,367
			TOTAL EM30: REQUIRED FUNDING	435,962	457,807	518,741	496,563	511,149	467,449	424,545	422,113	423,407
			TWRS HANFORD TANKS INITIATIVE: EM-50	7,400	10,000	-	-	-	-	-	-	-
			TOTAL EM30 & EM50	443,362	467,807	518,741	496,563	511,149	467,449	424,545	422,113	423,407

A.4.3 Summary of Life Cycle Cost Baseline (BCWS) by Project

TANK WASTE REMEDIATION SYSTEM

FY 1999 MYWP COST PROFILE SUMMARY (FY 1999 - 2016/2066)

WBS TITLE		FY 99	FY 00	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 99-16 TOTAL	FY 99-2066 TOTAL
FILE: JANETD_RTP.XLS (11-4 DRAFT)				11/24/98	8:16 AM																
DOLLARS *ESCALATED* LIFECYCLE: DOLLARS IN THOUSANDS																					
TW01	Charact'zn	40,784	40,673	84,042	59,342	28,176	22,651	19,138	18,469	18,321	18,668	17,122	16,902	16,538	16,902	17,243	17,654	18,043	18,473	469,141	631,963
TW02	Safety	19,927	35,168	30,790	8,616	9,084	8,204	8,384	8,568	8,757	8,950	-	-	-	-	-	-	-	-	147,448	147,448
TW03	Oper & Maint	100,124	100,203	139,847	116,181	114,816	99,294	98,040	91,311	97,667	97,583	96,805	98,869	99,900	102,422	103,726	106,501	108,764	111,599	1,883,652	2,877,134
	Expense	5,700	5,700	8,263	7,615	4,109	3,572	3,636	3,701	2,844	-	-	-	-	-	-	-	-	-	45,140	45,140
	Line Item	11,508	20,518	32,175	42,605	33,810	31,790	28,790	16,790	1,877	-	-	-	-	-	-	-	-	-	217,861	217,861
	W-314	17,208	26,216	40,438	50,220	37,919	35,362	30,426	20,491	4,721	-	-	-	-	-	-	-	-	-	263,001	263,001
	S.W.P.	26,000	28,800	27,138	23,635	22,502	21,104	1,599	-	-	-	-	-	-	-	-	-	-	-	150,779	150,779
	TOTAL TW03	143,332	155,219	207,423	190,036	175,236	155,760	130,066	111,802	102,388	97,583	96,805	98,869	99,900	102,422	103,726	106,501	108,764	111,599	2,297,432	3,290,914
TW04	Retreival	38,383	68,119	102,468	114,889	143,921	96,397	117,940	143,534	127,097	139,751	135,115	118,869	75,022	38,817	17,343	16,067	17,048	19,542	1,530,323	2,157,063
W-211	Expense	800	840	1,050	919	3,674	2,382	2,355	2,039	1,457	1,975	2,129	2,890	831	-	-	-	-	-	23,321	23,321
	Line Item	4,100	4,060	23,959	28,678	28,651	20,916	14,918	11,256	15,472	13,856	10,626	2,330	438	-	-	-	-	-	177,360	177,360
	W-211 TOTAL	4,900	4,900	25,009	29,597	30,325	23,278	17,273	13,295	16,929	15,931	12,755	5,220	1,269	-	-	-	-	-	200,681	200,681
	C-106	12,319	2,232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,551	14,551
	TOTAL - TW04	55,602	75,251	127,477	144,487	174,246	119,675	135,213	156,829	144,026	155,681	147,870	124,089	76,292	38,817	17,343	16,067	17,048	19,542	1,745,555	2,372,296
TW05	Proc Wst	8,100	10,241	12,152	19,332	19,933	20,289	18,404	18,559	18,988	17,709	18,098	18,496	18,904	19,319	19,685	13,552	13,850	14,211	299,801	495,954
TW06	Ph 1 Priv- PHMC D&D			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	268,919
TW08	Expense	2,103	3,999	12,491	12,241	13,438	27,676	43,559	26,746	27,443	43,560	44,518	45,499	45,782	131,216	133,569	137,055	140,070	143,721	1,034,689	2,669,125
	Line Item	-	-	488	-	587	13,387	-	3,129	12,502	789	30,016	30,016	-	-	-	-	-	-	90,914	90,914
TW08	Priv Infrast're	2,103	3,999	12,979	12,241	14,025	41,063	43,559	29,875	39,945	44,349	74,534	75,515	45,782	131,216	133,569	137,055	140,070	143,721	1,125,603	2,760,039
W-519	Expense	1,761	926	592	334	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,612	3,612
	Line Item	8,739	13,989	7,555	597	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30,880	30,880
	W-519 TOTAL	10,500	14,915	8,147	931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34,492	34,492
	Expense	3,864	4,925	13,083	12,575	13,438	27,676	43,559	26,746	27,443	43,560	44,518	45,499	45,782	131,216	133,569	137,055	140,070	143,721	1,038,301	2,672,738
	Line Item	8,739	13,989	8,043	597	587	13,387	-	3,129	12,502	789	30,016	30,016	-	-	-	-	-	-	121,794	121,794
	TOTAL - TW08	12,603	18,914	21,126	13,172	14,025	41,063	43,559	29,875	39,945	44,349	74,534	75,515	45,782	131,216	133,569	137,055	140,070	143,721	1,160,095	2,794,532
TW09	Expense	3,780	5,476	6,617	4,003	3,071	2,308	3,211	27,070	17,080	32,789	29,460	45,529	30,762	41,817	34,001	50,404	21,917	58,367	417,663	1,145,661
	Line Item	-	-	-	-	-	-	-	-	18,808	35,297	118,850	152,295	137,111	87,930	118,983	167,472	245,087	200,680	1,280,514	2,404,371
TW09	Immob Tk Wst	3,780	5,476	6,617	4,003	3,071	2,308	3,211	27,070	35,889	68,086	148,310	197,824	167,873	129,747	152,984	217,876	267,004	259,047	1,698,177	3,550,032
W-464	Expense	535	1,452	1,517	2,172	2,374	3,062	2,812	1,182	-	-	-	-	-	-	-	-	-	-	15,126	15,126
	Line Item	-	-	3,807	8,232	34,746	29,933	5,688	-	-	-	-	-	-	-	-	-	-	-	82,406	82,406
	W-464 TOTAL	535	1,452	5,324	10,404	37,120	33,015	8,500	1,182	-	-	-	-	-	-	-	-	-	-	97,532	97,532
W-465	Expense	375	724	1,831	1,763	1,641	2,312	1,020	849	140	-	-	-	-	-	-	-	-	-	10,656	10,656
	Line Item	-	-	-	3,510	5,319	18,536	9,022	2,521	-	-	-	-	-	-	-	-	-	-	38,908	38,908
	W-465 TOTAL	375	724	1,831	5,273	6,960	20,848	10,042	3,370	140	-	-	-	-	-	-	-	-	-	49,564	49,564
W-520	Expense	60	-	-	-	545	2,249	2,962	2,276	1,804	1,448	1,242	3,726	5,333	-	-	-	-	-	21,644	21,644
	Line Item	-	-	-	-	-	-	-	3,797	11,782	24,021	17,502	14,719	1,128	-	-	-	-	-	72,949	72,949
	W-520 TOTAL	60	-	-	-	545	2,249	2,962	6,073	13,586	25,469	18,744	18,445	6,461	-	-	-	-	-	94,593	94,593
	Expense	4,750	7,652	9,965	7,938	7,631	9,951	10,005	31,377	19,024	34,237	30,702	49,256	36,094	41,817	34,001	50,404	21,917	58,367	465,089	1,193,088
	Line Item	-	-	3,807	11,742	40,065	48,469	14,710	6,318	30,591	59,318	134,352	167,014	138,239	87,930	118,983	167,472	245,087	200,680	1,474,777	2,595,634
	TOTAL - TW09	4,750	7,652	13,772	19,680	47,696	58,420	24,715	37,695	49,615	93,555	165,054	216,270	174,333	129,747	152,984	217,876	267,004	259,047	1,939,866	3,791,722
EM-50	HTI	7,400	10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17,400	17,400
TW10	Mgmt Suppt	38,710	38,577	41,958	40,897	42,753	41,386	45,068	40,315	41,367	42,277	42,840	43,783	44,365	45,339	46,153	47,358	48,398	49,660	781,201	1,217,847
TWRS EXPENSE		306,881	353,128	450,757	412,941	410,036	352,887	368,127	384,620	362,865	404,709	387,330	394,564	337,438	395,833	371,701	388,589	368,089	415,572	6,866,148	11,911,143
TWRS LINE ITEM		24,347	38,565	67,984	83,622	101,113	114,562	56,418	37,493	60,442	74,063	174,994	199,360	138,677	87,930	118,983	167,472	245,087	200,680	1,991,792	3,115,649
TOTAL TWRS B/L		331,208	391,693	518,741	496,563	511,149	467,449	424,545	422,113	423,407	478,772	562,324	593,924	476,115	483,763	490,684	556,061	613,176	616,252	8,857,938	15,026,792
TW04	PH 2 RETRIEVAL	-	-	-	-	-	-	-	-	-	-	-	-	255,461	480,100	474,075	467,761	461,151	454,238	2,592,786	3,672,864
TW06	PH 1 PRIVATIZATI	-	50,000	-	-	-	-	-	58,000	188,000	401,000	908,000	1,073,000	1,102,000	1,097,000	1,111,000	1,365,000	1,437,000	1,230,000	10,020,000	10,483,000
TW07	PH 2 PRIVATIZATI	-	-	-	-	-	-	-	-	-	-	-	-	1,362,106	1,362,539	2,248,393	2,282,117	2,316,349	1,291,211	10,862,715	17,893,755
	TOTAL TWRS	331,208	441,693	518,741	496,563	511,149	467,449	424,545	480,113	611,407	879,772	1,470,324	1,666,924	3,195,682	3,443,402	4,324,152	4,670,939	4,827,676	3,591,701	32,353,439	47,076,411 *

* Excludes approximately $ 5.2B for Repository Fees

EXHIBIT 1

TANK WASTE REMEDIATION SYSTEM
SUMMARY OF LIFE CYCLE COST BASELINE (BCWS) BY YEAR
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

MISSION WBS : 1.1

PBS TITLE	PBS NO	ACTUAL FY1997	ACTUAL FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	SUBTOT FY1997-FY2006
TANK WASTE CHARACTERIZATION	RL-TW01	54,897	42,431	40,784	40,673	64,042	59,342	28,176	22,651	19,136	18,469	390,601
TANK SAFETY ISSUE RESOLUTION	RL-TW02	33,042	27,148	19,927	35,166	30,790	9,616	9,084	8,204	8,384	8,568	189,930
TANK FARM OPERATIONS	RL-TW03	150,625	115,042	143,332	151,299	201,274	181,894	168,776	149,685	124,947	108,595	1,495,469
RETRIEVAL	RL-TW04	31,277	55,523	55,602	75,251	122,977	139,888	168,446	115,675	130,613	153,830	1,049,081
PROCESS WASTE SUPPORT	RL-TW05	5,352	9,020	8,100	10,241	12,152	19,332	19,933	20,289	18,404	18,559	141,381
PRIVATIZATION PHASE I	RL-TW06	-	-	-	-	-	-	-	-	-	-	-
PRIVATIZATION PHASE II	RL-TW07	-	-	-	-	-	-	-	-	-	-	-
PRIVATIZATION INFRASTRUCTURE	RL-TW08	1,772	5,132	12,603	16,442	20,438	13,172	14,025	41,063	43,559	29,875	198,081
IMMOBILIZED TANK WASTE STORAGE	RL-TW09	4,687	10,257	4,750	7,652	13,772	19,680	47,696	58,420	24,715	37,695	229,325
TWRS MANAGEMENT SUPPORT	RL-TW10	24,968	37,078	38,710	38,577	41,958	40,897	42,753	41,387	45,067	40,316	391,711
												-
												-
												-
												-
												-
TOTAL BCWS/PMB[1]		306,620	301,631	323,808	375,301	507,405	483,622	498,888	457,374	414,828	415,906	4,085,580
LINE ITEM CONTINGENCY	TW03	-	-	-	3,920	6,148	8,142	6,461	6,075	5,120	3,208	39,073
LINE ITEM CONTINGENCY	TW04	-	-	-	-	4,500	4,600	5,800	4,000	4,600	2,999	26,499
LINE ITEM CONTINGENCY	TW08	-	-	-	2,472	688	-	-	-	-	-	3,160
LI CONTINGENCY SUBTOTAL		-	-	-	6,392	11,336	12,741	12,261	10,075	9,720	6,207	68,732
EM-50 HANFORD TANK INITIATIVE		6,798	6,208	7,400	10,000	-	-	-	-	-	-	30,406
TOTAL		313,418	307,839	331,208	391,693	518,741	496,563	511,149	467,449	424,545	422,113	4,184,718
PRIVATIZATION - RETRIEVAL PROJ'T	RL-TW04	-	-	-	-	-	-	-	-	-	-	-
PRIVATIZATION - PHASE I	RL-TW06	-	58,500	-	50,000	-	-	-	-	-	58,000	166,500
PRIVATIZATION - PHASE II	RL-TW07	-	-	-	-	-	-	-	-	-	-	-
TOTAL		313,418	366,339	331,208	441,693	518,741	496,563	511,149	467,449	424,545	480,113	4,351,218

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is NOT Included.

EXHIBIT 1

TANK WASTE REMEDIATION SYSTEM
SUMMARY OF LIFE CYCLE COST BASELINE (BCWS) BY YEAR
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

MISSION WBS : 1.1

PBS TITLE	PBS NO	FY2007	FY2008	FY2009	FY2010	FY2011-FY2015	FY2016-FY2020	FY2021-FY2025	FY2026-FY2030	FY2031-FY2035	FY2036 FY2040	FY2041-FY2045	FY2046 FY2050
TANK WASTE CHARACTERIZATION	RL-TW01	18,321	18,668	17,122	16,902	86,381	96,346	84,950	-	-	-	-	-
TANK SAFETY ISSUE RESOLUTION	RL-TW02	8,757	8,950	-	-	-	-	-	-	-	-	-	-
TANK FARM OPERATIONS	RL-TW03	102,028	97,583	96,805	98,869	521,313	584,032	520,225	823	-	-	-	-
RETRIEVAL	RL-TW04	144,026	155,681	147,870	124,089	165,567	56,308	139,108	161,741	227,551	10,947	7,932	8,858
PROCESS WASTE SUPPORT	RL-TW05	18,988	17,709	18,098	18,496	85,290	73,953	82,434	53,976	-	-	-	-
PRIVATIZATION PHASE I	RL-TW06	-	-	-	-	-	102,289	164,629	-	-	-	-	-
PRIVATIZATION PHASE II	RL-TW07	-	-	-	-	-	-	-	-	-	-	-	-
PRIVATIZATION INFRASTRUCTURE	RL-TW08	39,945	44,349	74,534	75,515	587,693	666,025	649,744	456,515	5,873	-	-	-
IMMOBILIZED TANK WASTE STORAGE	RL-TW09	49,615	93,555	165,054	216,270	941,944	1,128,115	366,095	189,194	36,358	75,025	154,097	162,020
TWRS MANAGEMENT SUPPORT	RL-TW10	41,366	42,277	42,840	43,783	231,611	258,438	227,669	-	-	-	-	-
TOTAL BCWS/PMB[1]		423,047	478,772	562,324	593,924	2,619,799	2,965,506	2,234,854	862,249	269,782	85,972	162,029	170,878
LINE ITEM CONTINGENCY	TW03	360	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY	TW04	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY	TW08	-	-	-	-	-	-	-	-	-	-	-	-
LI CONTINGENCY SUBTOTAL		360	-	-	-	-	-	-	-	-	-	-	-
EM-50 HANFORD TANK INITIATIVE		-	-	-	-	-	-	-	-	-	-	-	-
TOTAL		423,407	478,772	562,324	593,924	2,619,799	2,965,506	2,234,854	862,249	269,782	85,972	162,029	170,878
PRIVATIZATION - RETRIEVAL PROJ'T	RL-TW04	-	-	-	-	2,138,548	1,058,871	384,627	90,818	-	-	-	-
PRIVATIZATION - PHASE I	RL-TW06	188,000	401,000	908,000	1,073,000	6,112,000	1,693,000	-	-	-	-	-	-
PRIVATIZATION - PHASE II	RL-TW07	-	-	-	-	9,591,504	4,434,731	3,242,841	624,679	-	-	-	-
TOTAL		611,407	879,772	1,470,324	1,666,924	20,461,851	10,152,108	5,862,322	1,577,746	269,782	85,972	162,029	170,878

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is NOT Included.

EXHIBIT 1

TANK WASTE REMEDIATION SYSTEM
SUMMARY OF LIFE CYCLE COST BASELINE (BCWS) BY YEAR
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

MISSION WBS :	1.1						
PBS TITLE	PBS NO	TOTAL FY1997-FY2050	FY2051 FY2055	FY2056 FY2060	FY2061 FY2065	FY2066 FY2070	TOTAL FY1997-FY2070
TANK WASTE CHARACTERIZATION	RL-TW01	729,291					729,291
TANK SAFETY ISSUE RESOLUTION	RL-TW02	207,636					207,636
TANK FARM OPERATIONS	RL-TW03	3,517,149					3,517,149
RETRIEVAL	RL-TW04	2,398,759	9,866	11,008	12,265	700	2,432,597
PROCESS WASTE SUPPORT	RL-TW05	510,326					510,326
PRIVATIZATION PHASE I	RL-TW06	266,919	-	-	-	-	266,919
PRIVATIZATION PHASE II	RL-TW07	-					-
PRIVATIZATION INFRASTRUCTURE	RL-TW08	2,798,276					2,798,276
IMMOBILIZED TANK WASTE STORAGE	RL-TW09	3,806,666					3,806,666
TWRS MANAGEMENT SUPPORT	RL-TW10	1,279,695					1,279,695
		-					-
		-					-
		-					-
		-					-
		-					-
TOTAL BCWS/PMB[1]		15,514,717	9,866	11,008	12,265	700	15,548,556
LINE ITEM CONTINGENCY	TW03	39,432					39,432
LINE ITEM CONTINGENCY	TW04	26,499					26,499
LINE ITEM CONTINGENCY	TW08	3,160					3,160
LI CONTINGENCY SUBTOTAL		69,091	-	-	-	-	69,091
EM-50 HANFORD TANK INITIATIVE		30,406					30,406
TOTAL		15,614,215	9,866	11,008	12,265	700	15,648,053
PRIVATIZATION - RETRIEVAL PROJ'T	RL-TW04	3,672,864					3,672,864
PRIVATIZATION - PHASE I	RL-TW06	10,541,500					10,541,500
PRIVATIZATION - PHASE II	RL-TW07	17,893,755					17,893,755
TOTAL		47,722,334	9,866	11,008	12,265	700	47,756,172

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is NOT Included.

A.4.4 Summary of Life Budget Authority (B/A) by Project

TANK WASTE REMEDIATION SYSTEM

FY 1999 MYWP BUDGET AUTHORITY SUMMARY (FY 1999 - 2016/2066)

BS TITLE		(1) FY 99	FY 00	FY 01	FY 02	FY 03	FY 04	FY 05	FY 06	FY 07	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16	FY 99-16 TOTAL	FY 99-66 TOTAL
FILE: JANETO_RTP.XLS (11-4 DRAFT)				11/24/98	8:39 AM																
11/24/98																					
DOLLARS *ESCALATED* LIFECYCLE: DOLLARS IN THOUSANDS																					
TW01	Charact'zn	40,989	40,673	64,042	59,342	28,176	22,651	19,138	18,469	18,321	18,688	17,122	16,902	16,538	16,902	17,243	17,854	18,043	18,473	469,346	632,168
TW02	Safety	20,614	35,166	30,790	9,616	9,084	8,204	8,384	8,568	8,757	8,950	-	-	-	-	-	-	-	-	148,133	148,133
TW03	Oper & Maint	100,450	100,203	139,847	116,181	114,816	99,294	98,040	91,311	97,867	97,583	98,805	98,869	99,900	102,422	103,726	106,501	108,764	111,599	1,883,978	2,877,460
W-314	Expense	5,700	5,700	8,263	7,615	4,109	3,572	3,638	3,701	2,844	-	-	-	-	-	-	-	-	-	45,140	45,140
	Line Item	12,885	20,516	32,176	42,605	33,810	31,790	26,790	16,790	1,878	-	-	-	-	-	-	-	-	-	219,240	219,240
	W-314 Total	18,585	26,216	40,439	50,220	37,919	35,362	30,428	20,491	4,722	-	-	-	-	-	-	-	-	-	264,380	264,380
	S.W.P.	26,000	28,800	27,138	23,635	22,502	21,104	1,599	-	-	-	-	-	-	-	-	-	-	-	150,779	150,779
	TOTAL TW03	145,035	155,219	207,424	190,036	175,236	155,760	130,066	111,802	102,389	97,583	98,805	98,869	99,900	102,422	103,726	106,501	108,764	111,599	2,299,137	3,292,619
TW04	Retreival	39,147	68,119	102,468	114,889	143,921	98,397	117,940	143,534	127,097	139,751	135,115	118,869	75,022	38,817	17,343	18,087	17,048	19,542	1,531,087	2,157,827
W-211	Expense	800	840	1,050	919	3,674	2,362	2,355	2,039	1,457	1,975	2,129	2,890	831	-	-	-	-	-	23,321	23,321
	Line Item	7,458	4,060	23,959	28,678	28,651	20,916	14,918	11,256	15,472	13,956	14,454	-	-	-	-	-	-	-	181,778	181,778
	W-211 Total	8,258	4,900	25,009	29,597	30,325	23,278	17,273	13,295	16,929	15,931	16,583	2,890	831	-	-	-	-	-	205,099	205,099
	C-106	12,392	2,232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14,624	14,624
	TOTAL - TW04	59,797	75,251	127,477	144,487	174,246	119,675	135,213	156,829	144,026	155,681	151,698	121,759	75,854	38,817	17,343	18,087	17,048	19,542	1,750,810	2,377,551
TW05	Proc Wst	8,377	10,241	12,152	19,332	19,933	20,289	18,404	18,559	18,988	17,709	18,098	18,498	18,904	19,319	19,665	13,552	13,850	14,211	300,078	496,231
TW06	Ph 1 Priv- PHMC D&	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	266,919
TW08	Expense	2,103	3,999	12,491	12,241	13,438	27,676	43,559	28,746	27,443	43,560	44,518	45,499	45,782	131,216	133,569	137,055	140,070	143,721	1,034,689	2,669,125
	Line Item	-	-	488	-	587	13,387	-	3,129	12,502	789	30,016	30,016	-	-	-	-	-	-	90,914	90,914
	Priv Infrast'ro	2,103	3,999	12,979	12,241	14,025	41,063	43,559	29,875	39,945	44,349	74,534	75,515	45,782	131,216	133,569	137,055	140,070	143,721	1,125,603	2,760,039
W-519	Expense	1,761	926	592	334	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,612	3,612
	Line Item	8,739	13,989	7,555	597	-	-	-	-	-	-	-	-	-	-	-	-	-	-	30,880	30,880
	W-519 Total	10,500	14,915	8,147	931	-	-	-	-	-	-	-	-	-	-	-	-	-	-	34,492	34,492
	Expense	3,864	4,925	13,083	12,575	13,438	27,676	43,559	28,746	27,443	43,560	44,518	45,499	45,782	131,216	133,569	137,055	140,070	143,721	1,038,301	2,672,738
	Line Item	8,739	13,989	8,043	597	587	13,387	-	3,129	12,502	789	30,016	30,016	-	-	-	-	-	-	121,794	121,794
	Total - TW08	12,603	18,914	21,126	13,172	14,025	41,063	43,559	29,875	39,945	44,349	74,534	75,515	45,782	131,216	133,569	137,055	140,070	143,721	1,160,095	2,794,532
TW09	Expense	3,956	5,476	6,617	4,003	3,071	2,308	3,211	27,070	17,080	32,789	29,460	45,529	30,762	41,817	34,001	50,404	21,917	58,367	417,839	1,145,837
	Line Item	-	-	-	-	-	-	-	-	18,609	35,297	116,850	152,295	137,111	87,930	118,983	167,472	245,087	200,680	1,280,514	2,404,371
	Immob Tk Wst	3,956	5,476	6,617	4,003	3,071	2,308	3,211	27,070	35,689	68,086	146,310	197,824	167,873	129,747	152,984	217,876	267,004	259,047	1,698,353	3,550,208
W-464	Expense	535	1,452	1,517	2,172	2,374	3,082	2,812	1,182	-	-	-	-	-	-	-	-	-	-	15,126	15,126
	Line Item	-	-	4,500	18,500	46,800	9,600	3,006	-	-	-	-	-	-	-	-	-	-	-	82,406	82,406
	W-464 Total	535	1,452	6,017	20,672	49,174	12,682	5,818	1,182	-	-	-	-	-	-	-	-	-	-	97,532	97,532
W-465	Expense	375	724	1,831	1,763	1,641	2,312	1,020	849	140	-	-	-	-	-	-	-	-	-	10,656	10,656
	Line Item	-	-	-	4,500	9,400	22,500	2,508	-	-	-	-	-	-	-	-	-	-	-	38,908	38,908
	W-465 Total	375	724	1,831	6,263	11,041	24,812	3,528	849	140	-	-	-	-	-	-	-	-	-	49,564	49,564
W-520	Expense	60	-	-	-	545	2,249	2,982	2,276	1,604	1,448	1,242	3,726	5,333	-	-	-	-	-	21,644	21,644
	Line Item	-	-	-	-	-	-	-	3,797	11,782	24,021	17,502	14,719	1,126	-	-	-	-	-	72,949	72,949
	W-520 Total	60	-	-	-	545	2,249	2,982	6,073	13,386	25,469	18,744	18,445	6,461	-	-	-	-	-	94,593	94,593
	Expense	4,926	7,652	9,965	7,938	7,631	9,951	10,005	31,377	19,024	34,237	30,702	49,256	36,094	41,817	34,001	50,404	21,917	58,367	465,265	1,193,284
	Line Item	-	-	4,500	23,000	56,200	32,100	5,514	3,797	30,391	59,318	134,352	167,014	138,239	87,930	118,983	167,472	245,087	200,680	1,474,777	2,598,834
	Total - TW09	4,926	7,652	14,465	30,938	63,831	42,051	15,519	35,174	49,415	93,555	165,054	216,270	174,333	129,747	152,984	217,876	267,004	259,047	1,940,042	3,791,888
EM-50	HTI	8,331	10,000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18,331	18,331
TW10	Mgt Suppt	38,975	38,577	41,958	40,897	42,753	41,388	45,068	40,315	41,367	42,277	42,840	43,783	44,365	45,339	46,153	47,356	48,398	49,660	781,466	1,217,912
	TWRS EXPENSE	310,565	353,128	450,757	412,941	410,936	352,887	368,127	384,620	362,965	404,709	387,330	394,564	337,436	395,833	371,701	388,589	368,089	415,572	6,869,850	11,914,847
	TWRS LINE ITEM	29,082	38,565	68,678	94,880	117,248	98,193	47,222	34,972	60,443	74,063	178,822	197,030	138,239	87,930	118,983	167,472	245,087	200,680	1,997,589	3,121,446
TOTAL TWRS B/L		339,647	391,693	519,435	507,821	527,284	451,080	415,349	419,592	423,408	478,772	566,152	591,594	475,677	483,763	490,684	556,061	613,176	616,252	8,867,439	15,036,293
TW04	PH 2 RETRIEVAL(PRI	-	-	-	-	-	-	40,000	28,000	69,000	136,000	308,000	308,000	271,000	280,000	274,000	268,000	160,000	454,000	2,594,000	3,672,884
TW06	PH 1 PRIVATIZ'N	283,000	474,000	675,000	675,000	610,000	600,000	573,000	529,000	530,000	403,000	711,000	691,000	705,000	661,000	669,000	599,000	498,000	354,000	10,220,000	10,348,000
TW07	PH 2 PRIVATIZ'N	-	-	-	-	-	-	172,000	178,000	186,000	304,000	1,212,000	1,298,000	2,501,000	1,034,000	2,077,000	1,147,000	674,000	809,000	11,590,000	17,893,755
	TOTAL TWRS	602,647	865,693	1,194,435	1,182,821	1,137,284	1,051,080	1,200,349	1,150,592	1,208,408	1,321,772	2,797,152	2,888,594	3,952,677	2,458,763	3,510,684	2,570,061	1,945,176	2,233,252	33,271,439	46,950,912

(1) FY 1999 INCLUDES NEW BA OF $ 313,000K (EM30), 7,400K (EM50), AND $ 113,000K OF TW06 PRIVZN FUNDS; PLUS FY 1999 CARRYOVER OF $19,247K ($ 3,648 EXP/ $15,999 LI), AND $150,000K OF TW06 PRIVZN CARRYOVER

EXHIBIT 4

TANK WASTE REMEDIATION SYSTEM

SUMMARY OF BUDGET AUTHORITY (B/A) BY YEAR
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

MISSION WBS :	1.1				
PBS TITLE	PBS NO	TARGET B/A FY1998	CARRYOVER FROM FY1998	PRESIDENT'S BUDGET FY1999	PRESIDENT'S BUDGET PLUS CARRYOVER[1] FY1999
TANK WASTE CHARACTERIZATION	RL-TW01	42,431	205	40,784	40,989
TANK SAFETY ISSUE RESOLUTION	RL-TW02	27,148	687	19,927	20,614
TANK FARM OPERATIONS	RL-TW03	115,042	8,411	136,624	145,035
RETRIEVAL	RL-TW04	55,523	8,295	51,502	59,797
PROCESS WASTE SUPPORT	RL-TW05	9,020	277	8,100	8,377
PRIVATIZATION PHASE I	RL-TW06	-	-	-	-
PRIVATIZATION PHASE II	RL-TW07	-	-	-	-
PRIVATIZATION INFRASTRUCTURE	RL-TW08	5,132	-	12,603	12,603
IMMOBILIZED TANK WASTE STORAGE & DISPO	RL-TW09	10,257	176	4,750	4,926
TWRS MANAGEMENT SUPPORT	RL-TW10	37,078	265	38,710	38,975
TOTAL B/A		301,631	18,316	313,000	331,316
EM-50 HANFORD TANK INITIATIVE	HTI	6,208	931	7,400	8,331
TOTAL		307,839	19,247	320,400	339,647
PRIVATIZATION - RETRIEVAL PROJ'T	RL-TW04	-		-	-
PRIVATIZATION - PHASE I	RL-TW06	115,000	150,000	113,000	263,000
PRIVATIZATION - PHASE II	RL-TW07	-		-	-
TOTAL		422,839	169,247	433,400	602,647

[1]Estimated Carryover Is NOT Included In Cost Baseline; Change Request For Actual Carryover Submitted After September 30, 1998.

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)
11/24/98 09/24/98 UPDATE
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PBS - ADS PBS TITLE	F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A) *	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2066 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
TW01																		
1.1.1 WASTE CHARACTERIZATION	EX	54,394	42,431	40,989	40,673	64,042	59,342	28,176	22,651	19,136	18,469	390,303	728,993	18,321	18,668	17,122	16,902	71,014
	CE	503	0	0	0	0	0	0	0	0	0	503	503	0	0	0	0	0
	TOTAL	54,897	42,431	40,989	40,673	64,042	59,342	28,176	22,651	19,136	18,469	390,806	729,496	18,321	18,668	17,122	16,902	71,014
				* FY 1999 INCLUDES CARRYOVER OF $205														
TW02																		
1.1.2 TANK SAFETY ISSUE RESOL'N	EX	23,976	24,968	20,614	32,472	30,790	9,616	9,084	8,204	8,384	8,568	176,677	194,383	8,757	8,950	0	0	17,707
	CE	9,066	2,180	0	2,694	0	0	0	0	0	0	13,940	13,940	0	0	0	0	0
	TOTAL	33,042	27,148	20,614	35,166	30,790	9,616	9,084	8,204	8,384	8,568	190,617	208,323	8,757	8,950	0	0	17,707
				* FY 1999 INCLUDES CARRYOVER OF $687														
TW03																		
1.1.3 TANK FARM OPERATIONS	EX	111,463	93,172	126,393	129,003	166,985	139,816	137,317	120,398	99,640	91,311	1,215,498	3,232,816	97,667	97,583	96,805	98,869	390,925
	CE	3,126	298	0	0	0	0	0	0	0	0	3,424	3,424	0	0	0	0	0
	TOTAL	114,589	93,470	126,393	129,003	166,985	139,816	137,317	120,398	99,640	91,311	1,218,922	3,236,240	97,667	97,583	96,805	98,869	390,925
1.1.3.1.1.10 Project W-314	EX	2,377	1,790	5,700	5,700	8,263	7,615	4,109	3,572	3,636	3,701	46,463	49,307	2,844	0	0	0	2,844
	LI	3,864	9,596	12,885	16,596	26,028	34,463	27,349	25,715	21,670	13,583	191,749	193,266	1,518	0	0	0	1,517
	LI CONT	0	0	0	3,920	6,148	8,142	6,461	6,075	5,120	3,207	39,073	39,433	360	0	0	0	360
	TOTAL	6,241	11,386	18,585	26,216	40,439	50,220	37,919	35,362	30,426	20,491	277,285	282,006	4,722	0	0	0	4,721
1.1.3.1.1.11 Project W-030	EX	4,597	1,754	0	0	0	0	0	0	0	0	6,351	6,351	0	0	0	0	0
	LI	3,327	3,362	56	0	0	0	0	0	0	0	6,745	6,745	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	7,924	5,116	56	0	0	0	0	0	0	0	13,096	13,096	0	0	0	0	0
1.1.3.X Project W-058	EX	2,305	1,711	1	0	0	0	0	0	0	0	4,017	4,017	0	0	0	0	0
	LI	19,566	3,359	0	0	0	0	0	0	0	0	22,925	22,925	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	21,871	5,070	1	0	0	0	0	0	0	0	26,942	26,942	0	0	0	0	0
1.1.3 TANK FARM OPS TOTAL	EX	120,742	98,427	132,094	134,703	175,248	147,431	141,426	123,970	103,276	95,012	1,272,329	3,292,492	100,511	97,583	96,805	98,869	393,769
	CE	3,126	298	0	0	0	0	0	0	0	0	3,424	3,424	0	0	0	0	0
	LI	26,757	16,317	12,941	16,596	26,028	34,463	27,349	25,715	21,670	13,583	221,419	222,936	1,518	0	0	0	1,517
	LI CONT	0	0	0	3,920	6,148	8,142	6,461	6,075	5,120	3,207	39,073	39,433	360	0	0	0	360
	TOTAL	150,625	115,042	145,035	155,219	207,424	190,036	175,236	155,760	130,066	111,802	1,536,245	3,558,285	102,389	97,583	96,805	98,869	395,646
				* FY 1999 INCLUDES CARRYOVER OF $270 EXP, $8,141 LI														
TW04																		
1.1.4 WASTE RETRIEVAL PROJECT	EX	14,180	33,000	35,154	67,923	102,469	114,889	143,921	96,397	117,940	143,534	869,407	2,200,819	127,097	139,751	135,115	118,869	520,832
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	(669)	0	0	0	0	0	0	0	0	(669)	(669)	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	14,180	32,331	35,154	67,923	102,469	114,889	143,921	96,397	117,940	143,534	868,738	2,200,150	127,097	139,751	135,115	118,869	520,832
1.1.4.1.1.4 Project W-151	EX	465	225	3,993	196	0	0	0	0	0	0	4,879	4,879	0	0	0	0	0
	LI	399	42	0	0	0	0	0	0	0	0	441	441	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	864	267	3,993	196	0	0	0	0	0	0	5,320	5,320	0	0	0	0	0
1.1.4.1.1.5 Project W-211	EX	808	1,072	800	840	1,049	919	3,674	2,362	2,355	2,039	15,919	25,200	1,457	1,975	2,129	2,890	8,450
	LI	6,231	7,671	7,458	4,060	19,459	24,078	20,851	16,916	10,318	8,256	125,298	169,180	15,472	13,956	14,454	0	43,882
	LI CONT	0	0	0	0	4,500	4,600	5,800	4,000	4,600	3,000	26,500	26,500	0	0	0	0	0
	TOTAL	7,039	8,743	8,258	4,900	25,008	29,597	30,325	23,278	17,273	13,295	167,717	220,880	16,929	15,931	16,583	2,890	52,332

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

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PBS - ADS PBS TITLE	F/T	FY 2011- FY 2015 B/A PROFILE (B/A)	FY 2016- FY 2020 B/A PROFILE (B/A)	FY 2021- FY 2025 B/A PROFILE (B/A)	FY 2026- FY 2030 B/A PROFILE (B/A)	FY 2031- FY 2035 B/A PROFILE (B/A)	FY 2036- FY 2040 B/A PROFILE (B/A)	FY 2041- FY 2045 B/A PROFILE (B/A)	FY 2046- FY 2050 B/A PROFILE (B/A)	FY 2051- FY 2055 B/A PROFILE (B/A)	FY 2056- FY 2060 B/A PROFIL (B/A)	FY 2061- FY 2065 B/A PROFILE (B/A)	FY 2066- FY 2066 B/A PROFILE (B/A)
TW01													
1.1.1 WASTE CHARACTERIZATION	EX	86,381	96,346	84,950	0	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	86,381	96,346	84,950	0	0	0	0	0	0	0	0	0
TW02													
1.1.2 TANK SAFETY ISSUE RESOL'N	EX	0	0	0	0	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
TW03													
1.1.3 TANK FARM OPERATIONS	EX	521,313	584,032	520,225	823	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	521,313	584,032	520,225	823	0	0	0	0	0	0	0	0
1.1.3.1.1.10 Project W-314	EX	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.3.1.1.11 Project W-030	EX	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.3.X Project W-058	EX	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.3 TANK FARM OPS TOTAL	EX	521,313	584,032	520,225	823	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	521,313	584,032	520,225	823	0	0	0	0	0	0	0	0
TW04													
1.1.4 WASTE RETRIEVAL PROJECT	EX	164,298	56,308	139,108	161,741	227,551	10,947	7,932	8,858	9,866	11,008	12,265	700
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	164,298	56,308	139,108	161,741	227,551	10,947	7,932	8,858	9,866	11,008	12,265	700
1.1.4.1.1.4 Project W-151	EX	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.4.1.1.5 Project W-211	EX	831	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	831	0	0	0	0	0	0	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
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($000's)

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PBS - ADS PBS TITLE	F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A) *	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2068 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
1.1.4.1.1.10.1 Project W-320 (LEVEL7)	EX	9,194	14,182	12,392	2,232	0	0	0	0	0	0	38,000	38,000	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	9,194	14,182	12,392	2,232	0	0	0	0	0	0	38,000	38,000	0	0	0	0	0
1.1.4 WASTE RETRIEVAL TOTAL	EX	24,647	48,479	52,339	71,191	103,518	115,809	147,595	98,759	120,295	145,573	928,205	2,268,899	128,554	141,725	137,244	121,759	529,282
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LI	6,630	7,044	7,458	4,060	19,459	24,078	20,851	16,916	10,318	8,256	125,070	168,952	15,472	13,956	14,454	0	43,882
	LI CONT	0	0	0	0	4,500	4,600	5,800	4,000	4,600	3,000	26,500	26,500	0	0	0	0	0
	TOTAL	31,277	55,523	59,797	75,251	127,477	144,487	174,246	119,675	135,213	156,829	1,079,775	2,464,351	144,026	155,681	151,698	121,759	573,164
				* FY 1999 INCLUDES CARRYOVER OF $837 EXP, $7,458 LI														
TW05 1.1.5 PROCESS WASTE SUPPT	EX	5,352	9,020	8,377	10,241	12,152	19,332	19,933	20,289	18,404	18,559	141,658	510,603	18,988	17,709	18,098	18,496	73,291
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	5,352	9,020	8,377	10,241	12,152	19,332	19,933	20,289	18,404	18,559	141,658	510,603	18,988	17,709	18,098	18,496	73,291
				* FY 1999 INCLUDES CARRYOVER OF $277														
TW06 - PHMC 1.1.5.1.4 D & D	EX	0	0	0	0	0	0	0	0	0	0	0	266,919	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	266,919	0	0	0	0	0
				* FY 1999 INCLUDES CARRYOVER OF $150,000														
TW08 1.1.8 PRIV. INFRASTRUCTURE	EX	1,772	5,132	2,103	3,999	12,491	12,241	13,438	27,676	43,559	26,746	149,158	2,676,029	27,443	43,560	44,518	45,499	161,020
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	488	0	587	13,387	0	3,129	17,591	90,914	12,502	789	30,016	30,016	73,323
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1,772	5,132	2,103	3,999	12,979	12,241	14,025	41,063	43,559	29,875	166,749	2,766,943	39,945	44,349	74,534	75,515	234,343
1.1.8.1.1.1.3 Project W-519 (level 7)	EX	0	0	1,761	926	592	334	0	0	0	0	3,612	3,612	0	0	0	0	0
	LI	0	0	8,739	11,517	6,867	597	0	0	0	0	27,720	27,720	0	0	0	0	0
	LI CONT	0	0	0	2,472	688	0	0	0	0	0	3,160	3,160	0	0	0	0	0
	TOTAL	0	0	10,500	14,915	8,147	931	0	0	0	0	34,492	34,492	0	0	0	0	0
1.1.8 PRIV. INFRASTRUCTURE W-519	EX	1,772	5,132	3,864	4,925	13,083	12,575	13,438	27,676	43,559	26,746	152,770	2,679,642	27,443	43,560	44,518	45,499	161,020
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	8,739	11,517	7,355	597	587	13,387	0	3,129	45,311	118,634	12,502	789	30,016	30,016	73,323
	LI CONT	0	0	0	2,472	688	0	0	0	0	0	3,160	3,160	0	0	0	0	0
	TOTAL	1,772	5,132	12,603	18,914	21,126	13,172	14,025	41,063	43,559	29,875	201,241	2,801,436	39,945	44,349	74,534	75,515	234,343
				* FY 1999 INCLUDES CARRYOVER OF $0														
TW09 1.1.9 IMMOB. TW STOR. & DISP'SL	EX	4,687	9,977	3,956	5,409	6,325	3,721	3,071	2,308	3,211	27,070	69,736	1,159,860	17,061	32,789	29,459	45,529	124,858
	CE	0	280	0	67	291	283	0	0	0	0	921	921	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	2,404,371	18,808	35,297	116,851	152,295	323,251
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	4,687	10,257	3,956	5,476	6,617	4,003	3,071	2,308	3,211	27,070	70,657	3,565,152	35,689	68,086	146,310	197,824	448,109
1.1.9.1.1.4 Project W-520	EX	0	0	60	0	0	0	545	2,249	2,962	2,276	8,091	20,370	1,804	1,448	1,242	2,705	7,199
	CE	0	0	0	0	0	0	0	0	0	0	0	1,275	0	0	0	1,022	1,022
	LI	0	0	0	0	0	0	0	0	0	3,797	3,797	72,949	11,782	24,021	17,502	14,719	68,024
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	60	0	0	0	545	2,249	2,962	6,073	11,888	94,593	13,586	25,469	18,744	18,445	76,244

TANK WASTE REMEDIATION SYSTEM
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PBS - ADS PBS TITLE	F/T	FY 2011- FY 2015 B/A PROFILE (B/A)	FY 2016- FY 2020 B/A PROFILE (B/A)	FY 2021- FY 2025 B/A PROFILE (B/A)	FY 2026- FY 2030 B/A PROFILE (B/A)	FY 2031- FY 2035 B/A PROFILE (B/A)	FY 2036- FY 2040 B/A PROFILE (B/A)	FY 2041- FY 2045 B/A PROFILE (B/A)	FY 2046- FY 2050 B/A PROFILE (B/A)	FY 2051- FY 2055 B/A PROFILE (B/A)	FY 2056- FY 2060 B/A PROFIL (B/A)	FY 2061- FY 2065 B/A PROFILE (B/A)	FY 2066- FY 2068 B/A PROFILE (B/A)
1.1.4.1.1.10.1 Project W-320 (LEVEL7)	EX	0	0	0	0	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.4 WASTE RETRIEVAL TOTAL	EX	165,129	56,308	139,108	161,741	227,551	10,947	7,932	8,858	9,866	11,008	12,265	700
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	165,129	56,308	139,108	161,741	227,551	10,947	7,932	8,858	9,866	11,008	12,265	700
TW05 1.1.5 PROCESS WASTE SUPPT	EX	85,290	73,953	82,434	53,976	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	85,290	73,953	82,434	53,976	0	0	0	0	0	0	0	0
TW06 - PHMC 1.1.8.1.4 D & D	EX	0	102,289	164,629	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	102,289	164,629	0	0	0	0	0	0	0	0	0
TW08 1.1.8 PRIV. INFRASTRUCTURE	EX	587,693	666,025	649,744	456,515	5,873	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	587,693	666,025	649,744	456,515	5,873	0	0	0	0	0	0	0
1.1.8.1.1.1.3 Project W-519 (level 7)	EX	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.8 PRIV. INFRASTRUCTURE W-519	EX	587,693	666,025	649,744	456,515	5,873	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	587,693	666,025	649,744	456,515	5,873	0	0	0	0	0	0	0
TW09 1.1.9 IMMOB. TW STOR. & DISP'SL	EX	178,899	145,939	133,641	83,285	32,359	75,025	154,097	162,020	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	756,584	982,175	232,453	105,908	4,000	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	935,483	1,128,114	366,094	189,193	36,359	75,025	154,097	162,020	0	0	0	0
1.1.9.1.1.4 Project W-520	EX	5,080	0	0	0	0	0	0	0	0	0	0	0
	CE	253	0	0	0	0	0	0	0	0	0	0	0
	LI	1,128	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	6,461	0	0	0	0	0	0	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
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PBS - ADS PBS TITLE	F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A) *	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2066 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
1.1.9.1.5.1 Project W-465	EX	0	0	375	724	1,831	1,763	1,641	1,749	1,020	849	9,952	10,093	140	0	0	0	140
	CE	0	0	0	0	0	0	0	564	0	0	564	564	0	0	0	0	0
	LI	0	0	0	0	0	4,500	9,400	22,500	2,508	0	38,908	38,908	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	375	724	1,831	6,263	11,041	24,812	3,528	849	49,424	49,564	140	0	0	0	140
1.1.9.2.1.3 Project W-464	EX	0	0	535	1,452	1,517	2,172	2,374	3,082	2,812	1,182	15,126	15,126	0	0	0	0	0
	LI	0	0	0	0	4,500	18,500	46,800	9,600	3,006	0	82,406	82,406	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	535	1,452	6,017	20,672	49,174	12,682	5,818	1,182	97,532	97,532	0	0	0	0	0
1.1.9 IMMOB. TW STOR. & DISP'SL	EX	4,687	9,977	4,926	7,585	9,674	7,656	7,631	9,388	10,005	31,377	102,906	1,205,449	19,025	34,237	30,701	48,234	132,197
	CE	0	280	0	67	291	283	0	564	0	0	1,484	2,759	0	0	0	1,022	1,022
	LI	0	0	0	0	4,500	23,000	56,200	32,100	5,514	3,797	125,111	2,598,634	30,590	59,318	134,353	167,014	391,275
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	4,687	10,257	4,926	7,652	14,465	30,938	63,831	42,051	15,519	35,174	229,501	3,806,842	49,615	93,555	165,054	216,270	524,494
				* FY 1999 INCLUDES CARRYOVER OF $176														
TW10 1.1.10 TWRS MANAGEMENT SUPP'T	EX	24,968	37,051	38,975	38,577	41,958	40,897	42,753	41,386	45,068	40,315	391,948	1,279,931	41,367	42,277	42,840	43,783	170,266
	CE	0	27	0	0	0	0	0	0	0	0	27	27	0	0	0	0	0
	TOTAL	24,968	37,078	38,975	38,577	41,958	40,897	42,753	41,386	45,068	40,315	391,975	1,279,958	41,367	42,277	42,840	43,783	170,266
				* FY 1999 INCLUDES CARRYOVER OF $265														
EM-50 HANFORD TANK INITIATIVE	EX	6,798	6,208	8,331	10,000	0	0	0	0	0	0	31,337	31,337	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	6,798	6,208	8,331	10,000	0	0	0	0	0	0	31,337	31,337	0	0	0	0	0
				* FY 1999 INCLUDES CARRYOVER OF $931														
RESERVE		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TWRS	EX	287,336	281,693	310,509	350,367	450,468	412,658	410,036	352,323	368,127	384,620	3,588,133	12,458,647	362,966	404,709	387,329	393,543	1,548,546
	CE	12,695	2,785	0	2,761	291	283	0	564	0	0	19,378	20,653	0	0	0	1,022	1,022
	LI	33,387	23,361	29,138	32,173	57,342	82,138	104,997	88,118	37,502	28,765	516,911	3,109,156	60,082	74,063	178,823	197,030	509,997
	LI CONT	0	0	0	6,392	11,336	12,742	12,281	10,075	9,720	6,207	68,733	69,093	360	0	0	0	360
	TOTAL	313,418	307,839	339,647	391,693	519,435	507,821	527,284	451,080	415,349	419,592	4,193,156	15,657,549	423,408	478,772	566,152	591,594	2,059,925
				* FY 1999 INCLUDES CARRYOVER OF $3,648 EXP, $15,599 LI														
TW04 1.1.4.1.1.11/1.1.4.1.2.8 PRIVTZ'N PHASE II	EX	0	0	0	0	0	0	0	0	40,000	26,000	66,000	3,673,000	69,000	136,000	308,000	308,000	821,000
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	40,000	26,000	66,000	3,673,000	69,000	136,000	308,000	308,000	821,000
TW08 1.1.6 PRIVTIZATION PHASE I	EX	170,000	115,000	113,000	474,000	675,000	675,000	610,000	600,000	573,000	529,000	4,534,000	10,483,000	530,000	403,000	711,000	691,000	2,335,000
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	170,000	115,000	113,000	474,000	675,000	675,000	610,000	600,000	573,000	529,000	4,534,000	10,483,000	530,000	403,000	711,000	691,000	2,335,000
TW07 1.1.7 PRIVTIZATION PHASE II	EX	0	0	0	0	0	0	0	0	172,000	176,000	348,000	17,893,755	186,000	304,000	1,212,000	1,298,000	3,000,000
	CE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	172,000	176,000	348,000	17,893,755	186,000	304,000	1,212,000	1,298,000	3,000,000

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

11/24/98 09/24/98 UPDATE

10:53 AM

PBS - ADS PBS TITLE	F/T	FY 2011- FY 2015 B/A PROFILE (B/A)	FY 2016- FY 2020 B/A PROFILE (B/A)	FY 2021- FY 2025 B/A PROFILE (B/A)	FY 2026- FY 2030 B/A PROFILE (B/A)	FY 2031- FY 2035 B/A PROFILE (B/A)	FY 2036- FY 2040 B/A PROFILE (B/A)	FY 2041- FY 2045 B/A PROFILE (B/A)	FY 2046- FY 2050 B/A PROFILE (B/A)	FY 2051- FY 2055 B/A PROFILE (B/A)	FY 2056- FY 2060 B/A PROFIL (B/A)	FY 2061- FY 2065 B/A PROFILE (B/A)	FY 2066- FY 2068 B/A PROFILE (B/A)
1.1.9.1.5.1 Project W-485	EX	0	0	0	0	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.9.2.1.3 Project W-464	EX	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.9 IMMOB. TW STOR. & DISP'SL	EX	183,979	145,939	133,641	83,285	32,359	75,025	154,097	162,020	0	0	0	0
	CE	253	0	0	0	0	0	0	0	0	0	0	0
	LI	757,712	982,175	232,453	105,908	4,000	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	941,944	1,128,114	366,094	189,193	36,359	75,025	154,097	162,020	0	0	0	0
TW10 1.1.10 TWRS MANAGEMENT SUPP'T	EX	231,611	258,438	227,668	0	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	231,611	258,438	227,668	0	0	0	0	0	0	0	0	0
EM-50 HANFORD TANK INITIATIVE	EX	0	0	0	0	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
RESERVE		0	0	0	0	0	0	0	0	0	0	0	0
TOTAL TWRS	EX	1,861,398	1,983,331	2,002,399	756,341	265,783	85,972	162,029	170,878	9,866	11,008	12,265	700
	CE	253	0	0	0	0	0	0	0	0	0	0	0
	LI	757,712	982,175	232,453	105,908	4,000	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	2,619,361	2,965,506	2,234,852	862,249	269,783	85,972	162,029	170,878	9,866	11,008	12,265	700
TW04 1.1.4.1.1.11/1.1.4.1.2.8 PRIVTZ'N PHASE II	EX	1,253,000	1,059,000	384,000	90,000	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	1,253,000	1,059,000	384,000	90,000	0	0	0	0	0	0	0	0
TW06 1.1.6 PRIVITIZATION PHASE I	EX	3,132,000	482,000	0	0	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	3,132,000	482,000	0	0	0	0	0	0	0	0	0	0
TW07 1.1.7 PRIVITIZATION PHASE II	EX	7,433,000	3,244,000	3,242,000	626,755	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	7,433,000	3,244,000	3,242,000	626,755	0	0	0	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)
11/24/98 09/24/98 UPDATE
18:53 AM
PBS - ADS
PBS TITLE

	F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A) *	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2066 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
TOTAL TWRS W/ PRVTZN	EX	437,336	398,693	423,509	824,387	1,125,466	1,087,658	1,020,036	952,323	1,153,127	1,115,620	8,536,133	44,508,402	1,147,966	1,247,709	2,618,329	2,690,543	7,704,546
	CE	12,695	2,785	0	2,761	291	283	0	564	0	0	19,378	20,653	0	0	0	1,022	1,022
	LI	33,387	23,381	29,138	32,173	57,342	82,138	104,997	88,118	37,502	28,765	516,911	3,109,158	60,082	74,063	178,823	197,030	509,997
	LI CONT	0	0	0	6,392	11,338	12,742	12,251	10,075	9,720	6,207	68,733	69,093	360	0	0	0	360
	TOTAL	483,418	422,839	452,647	865,693	1,194,435	1,182,821	1,137,284	1,051,080	1,200,349	1,150,592	9,141,156	47,707,304	1,208,408	1,321,772	2,797,152	2,888,594	8,215,925

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR5A: 9764BOBA.XLS(SUMMARY)

09/24/98 09/24/98 UPDATE

10:53 AM

PBS - ADS

PBS TITLE	F/T	FY 2011-FY 2015 B/A PROFILE (B/A)	FY 2016-FY 2020 B/A PROFILE (B/A)	FY 2021-FY 2025 B/A PROFILE (B/A)	FY 2026-FY 2030 B/A PROFILE (B/A)	FY 2031-FY 2035 B/A PROFILE (B/A)	FY 2036-FY 2040 B/A PROFILE (B/A)	FY 2041-FY 2045 B/A PROFILE (B/A)	FY 2046-FY 2050 B/A PROFILE (B/A)	FY 2051-FY 2055 B/A PROFILE (B/A)	FY 2056-FY 2060 B/A PROFIL (B/A)	FY 2061-FY 2065 B/A PROFILE (B/A)	FY 2066-FY 2066 B/A PROFILE (B/A)
TOTAL TWRS W/ PRVTZ'N	EX	13,679,398	6,768,331	5,628,399	1,473,096	285,783	85,972	162,029	170,878	9,866	11,008	12,265	700
	CE	253	0	0	0	0	0	0	0	0	0	0	0
	LI	757,712	982,175	232,453	105,908	4,000	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	14,437,361	7,750,506	5,860,852	1,579,004	289,783	85,972	162,029	170,878	9,866	11,008	12,265	700

A.4.5 TWRS Contractor Split

TANK WASTE REMEDIATION SYSTEM
FY 1999 CONTRACTOR FUNDING SPLIT (NEW BA ONLY)

PBS	DOE-RL/ RL-PNNL	NATIONAL LABS	TOTAL
TW01	$ 175	$ -	$ 175
TW02	1,225	1,432	2,657
TW03	2,764	-	2,764
TW04	1,183	260	1,443
TW05	7,400	-	7,400
TW06	-	-	-
TW07	-	-	-
TW08	179	-	179
TW09	-	175	175
TW10	1,745	-	1,745
	14,671	1,867	16,538
EM50 HTI	219	-	219
TWRS TOTAL	$ 14,890	$ 1,867	$ 16,757

REFLECTS FY 1999 NEW BA ONLY

A.4.6 TWRS Staffing Profile

TANK WASTE REMEDIATION SYSTEM

PLANNED STAFFING LEVELS

		ACTUAL FY 1998 FTE's	PLAN FY 1999 FTE's	PLAN FY 2000 FTE's	PLAN FY 2001 FTE's	PLAN FY 2002 FTE's	PLAN FY 2003 FTE's	PLAN FY 2004 FTE's	PLAN FY 2005 FTE's	PLAN FY 2006 FTE's	PLAN FY 2007 FTE's
TW01	CHARACTERIZATION	175.0	205.1	179.4	288.1	267.4	129.4	91.9	64.7	62.5	57.5
TW02	SAFETY	47.0	79.6	139.2	109.3	41.5	37.7	33.3	33.3	33.3	33.3
TW03	OPERATIONS	742.0	877.1	966.2	1,071.3	1,025.4	871.9	750.8	657.2	593.7	626.4
TW04	RETRIEVAL	150.0	215.8	185.9	216.0	206.4	234.9	231.8	213.4	168.4	153.2
TW05	PROCESS WASTE SUPP	1.0	4.1	4.6	4.3	4.3	4.6	4.2	4.2	4.2	4.2
TW08	PRIV. INFRASTRUCTURE	4.0	14.5	11.0	26.9	46.5	48.2	✧✧ 152.2	✧✧ 174.1	20.1	20.2
TW09	STORAGE & DISP	9.0	8.6	12.5	15.3	18.2	17.9	24.2	35.7	53.5	67.4
TW10	MGMT SUPPORT	95.0	123.3	122.7	107.1	102.4	105.1	94.3	114.5	88.5	88.6
	TOTAL TWRS ✧	1,223	1,528	1,622	1,838	1,712	1,450	1,383	1,297	1,024	1,051

✧ Excludes Unit Billed Labs.

✧✧ Staffing increase due to training of personnel in support of Privatization.

B.1 Tank Waste Characterization (RL-TW01)
B.1.1.0 Tank Waste Characterization Technical Baseline
B.1.1.1 Tank Waste Characterization Project Mission TW01-1
B.1.1.2 Tank Waste Characterization End Point Targets from Hanford Strategic Plan TW01-1
B.1.1.3 Tank Waste Characterization Major Facilities TW01-1
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B.1 Tank Waste Characterization (RL-TW01)

B.1.1.0 Tank Waste Characterization Technical Baseline

This section describes the technical baseline for this project. It identifies the mission, the end point targets, the site major facilities, technical logic, functions, requirements, and forecasts for this project.

B.1.1.1 Tank Waste Characterization Mission

The Tank Waste Characterization Project was established to characterize the Hanford Site high-level radioactive waste and to ensure safe storage and retrieval / disposal of this waste. This waste is stored in large, underground, radioactive waste storage double-shell tanks (DSTs) and single-shell tanks (SSTs). The work involved is to plan, sample, analyze, and report tank waste contents. Activities include; program management, characterization data development, sampling equipment, acquire samples and measurements, and sample analyses.

B.1.1.2 Tank Waste Characterization End Point Targets from Hanford Strategic Plan

-None-

B.1.1.3 Tank Waste Characterization Major Facilities

This Project is responsible for one or more sub-systems of the Major Facility(ies) described below. Further functional and architectural decomposition will yield hardware unique to this project. This incongruity in the MYWP report is a direct result of reporting technical baseline information at the major facility level while attempting to create MYWPs for PBS level TWRS projects.

B.1.1.3.1 Tank Farm System Facility

B.1.1.3.1.1 Tank Farm System Facility Description

The Tank Farm System consists of the new and existing equipment required to operate the SST farms and DST farms for the entire tank farm mission. The Tank Farm System is comprised of the following systems located in the 200 Area Central Plateau of the Hanford Site:

- Double Shell Tanks (DSTs) grouped as follows:
  (a) 25 tanks in five separate tank farms located in the 200 East Area (AN, AP, AW, AY & AZ);
  (b) 3 tanks in one tank farm located in the 200 West Area (SY);
  (c) Double Contained Receiver Tanks (DCRTs) in various 200 Area locations (244-TX, 244-BX, 244-U, 244-S, 244-A);
  (d) 200 Area vaults (244-AR, 244-CR, 209-E);
  (e) The cross-site transfer system Vent Station Catch Tank (241-EW-151); and

- Single Shell Tanks (SSTs) grouped as follows:

(a) 67 tanks in six separate tank farms located in the 200 East Area (A, AX, B, BX, BY & C);
(b) 82 tanks in six separate tank farms located in the 200 West Area (S, SX, T, TX, TY and U);
(c) Miscellaneous Underground Storage Tanks; and
(d) SST retrieval support facilities
(e) Future Waste Receiver Facilities (WRFs) to support retrieval

- Waste Transfer System network that includes:
  (a) Underground waste transfer network including the cross-site transfer system; and
  (b) Low activity waste receiving and unloading facility (204-AR)

- Retrieval Systems which includes the hardware required to mobilize/alter the wastes stored in SSTs and DSTs such that the stored wastes can be transferred to the DSTs and on to the treatment facilities.

- SST and DST Closure Systems which include any hardware required to complete closure actions.

- Utilities Distribution System inside tank farms which includes the hardware required to distribute electrical power, service/raw water, steam and potable water.

- Monitoring and control systems in support of tank farm operations and closure including vadose zone.

B.1.1.3.1.2 Tank Farm System Facility Technical Logic:

The Department of Energy (DOE), in partnership with its contractors, shall plan, acquire, operate, maintain, and dispose of physical assets as valuable national resources. Stewardship of these physical assets shall be accomplished in a cost-effective manner to meet the DOE mission. This shall incorporate industry standards, a graded approach, and performance objectives.

This diagram displays the primary work activities (functions) that are performed in each life cycle phase of the facility. The diagram also reflects the technical logic (functional flow) for the facility through its remaining life cycle phases.

Project responsibility for the life cycle phases of the Tank Farm System components are assigned as follows:

Table B.1-1 Responsibility Assignment Matrix for Tank Farm System

Facility	Life Cycle Phase *								
				Execute				Close Out	
	Program Planning	Pre Conceptual	Conceptual	Design	Construction	Turnover	O&M	Post Ops	D&D
Tank Farm System	(tbd)						**RL-TW03** RL-TW01 RL-TW02 RL-TW04	**RL-TW03**	**RL-TW04**

* RL PBS Identifier Index:

RL-TW01 - Tank Waste Characterization
RL-TW02 - Tank Safety Issue Resolution
RL-TW03 - Tank Farm Operations
RL-TW04 - Retrieval

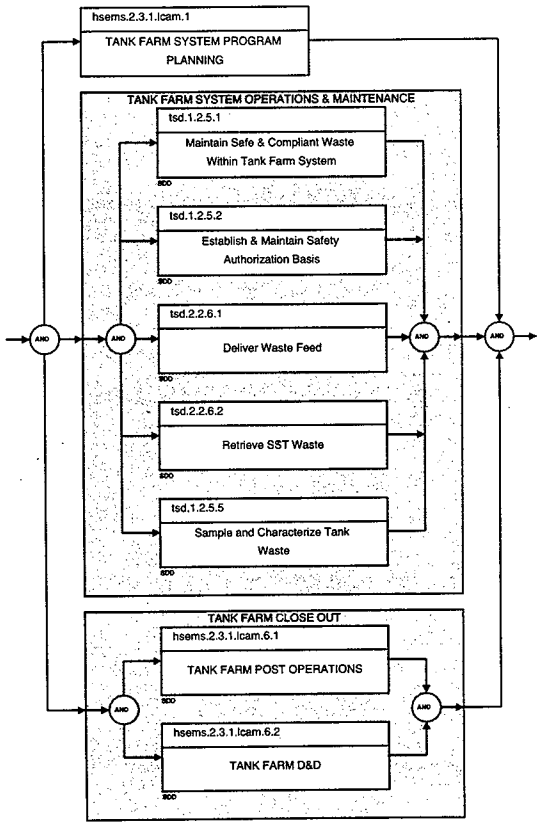

Figure B.1_1 TANK FARM

B.1.1.3.1.3 Tank Farm System Life Cycle Functional Descriptions and Requirements

The Life Cycle Functional Descriptions table describes the life cycle phases and the functions performed during each phase. The Life Cycle Requirements table describes the requirements that trace to the functions listed in the Life Cycle Functional Descriptions table.

Table B.1-2 Tank Farm System Life Cycle Functional Descriptions

hsems.2.3.1.lcam.5 TANK FARM SYSTEM OPERATIONS & MAINTENANCE

tsd.1.2.5.5 Sample and Characterize Tank Waste

Tank waste contents are to be characterized to ensure an acceptable level of public and worker health and safety in conjunction with safe storage of waste, and safe and cost-effective waste retrieval. This waste is stored in large, underground, radioactive waste storage double-shell tanks (DSTs) and single-shell tanks (SSTs). Objectives include the development of plans to characterize tank waste, acquire samples and measurements of the tank waste, analyze the tank waste samples, and report tank contents.

Samples of waste in a double-shell tank (DST) or single-shell tank (SST) are obtained and shipped to a laboratory for analysis of selected physical and chemical properties. Sampling includes accessing the tank, obtaining a sample, restoration of the tank containment, placement of the sample in a shipping container, and shipment to a laboratory. This is a cyclic process. A cycle begins when the need for a sample is identified and continues until the sample is delivered to the laboratory receiving area, analyzed and the results assessed (where applicable).

The Waste Characterization Project consists of the following activities: Project Management, Characterization Data Development, Sampling Equipment, Acquire Samples and Measurements, and Sample Analyses.

Project Management provides management of the project and scope includes project management, which includes environmental, health, safety, quality assurance, radiological control, and Facility Evaluation Board support; and financial control.

Characterization Data Development develops technical bases and provides information management. Scope includes characterization data review activities; characterization basis planning and scheduling; tank characterization reports; management and upgrades of tank characterization data; and historical data, models and inventory.

Sampling Equipment provides analysis of equipment and operational techniques and implements improvements to optimize sampling efficiency. Scope includes characterization equipment engineering; removal, storage and disposal of Long-Length Contaminated Equipment (LLCE); and storage of inactive sampling equipment.

Acquire Samples and Measurements performs specific sampling methodologies for sampling tank contents and for sampling vapor in tank dome spaces. Scope includes: obtaining physical samples by core sampling, grab sampling, and vapor sampling; and maintenance of sampling equipment.

Sample Analyses performs timely sample analyses to support safe storage and disposal of tank wastes; develops and implements new or improved analytical methods; and maintains analytical capabilities. Samples will be received, analyzed, archived/stored or disposed. A laboratory analysis report will be issued to document results. In addition, analysis and packages for shipment will be prepared for samples shipped to private vendors where applicable. Scope includes accomplish laboratory capability upgrades; maintain laboratory capability; provide sample archive storage and disposal; and samples analysis for core, grab, and vapor samples.

The Characterization Project integrates all TWRS tank waste information needs in developing the Project schedule and workscope. Because of this integration, any individual activity on the Project schedule frequently supports more than one TWRS program or project. Because of this, there is not a one-to-one correlation between Characterization Project Work Breakdown Structure and items on the TWRS Integrated Priority List. In addition, the TWRS information needs are defined in a Waste Information Requirements Document submitted annually to Ecology. The Tri-Party Agreement Change Order M-44-97-03 allows the program to set and change priorities of tanks to maximize the benefit to TWRS program. If needed, internal project approved (Characterization Project Director) change control will be utilized for tank sequence changes.

Table B.1-3 Tank Farm System Life Cycle Requirements

Requirement	Function
The Hanford radioactive tank wastes, presently stored in 177 underground storage tanks, shall be characterized.	tsd.1.2.5.5

B.1.1.3.1.4 Tank Farm System Boundary Diagram

This section identifies the other facilities (onsite and offsite) that have an interface (either input or output) with this facility.

Table B.1-4 Tank Farm System Boundary Diagram

Major Input Interfaces	Facility	Major Output Interfaces
External Interfaces -None- Hanford Site Environmental System Interfaces -None-	Tank Farm System	External Interfaces -None- Hanford Site Environmental System Interfaces 222-S Laboratory

B.1.1.3.1.5 Tank Farm System Interface Descriptions and Summary Level Forecasts

This section contains the material, waste, and infrastructure forecasts for this facility. It identifies the interface type, the period of time for the forecasts, the life cycle total forecast value, and the execution year forecast quantity.

OFFSITE INPUTS

-None-

ONSITE INPUTS

-None-

OFFSITE OUTPUTS

-None-

ONSITE OUTPUTS

Table B.1-5 Onsite Outputs for Tank Farm System

Stream	Category	Period	Total	FY99	Units
hsems.2.5.1 222-S Laboratory					
SST Samples	(none forecasted)				
DST Samples	(none forecasted)				

B.1.1.4 Drivers for Tank Waste Characterization

Table B.1-6 Source Documents for Tank Waste Characterization

Name	Title
DE-AC06-96RL13200	Project Hanford Management Contract, Fluor Daniel Hanford, Inc.

B.1.2.0 Tank Waste Characterization Work Breakdown Structure (WBS)

B.1.2.1 Tank Waste Characterization WBS Hierarchy

RL PBS	RL WBS	Title
RL-TW01	1.01.01	Tank Waste Characterization
	1.01.01.01	Tank Farm System
	1.01.01.01.01	Sample and Characterize Tank Waste

B.1.2.2 Tank Waste Characterization WBS Dictionary

The following pages contain the WBS dictionary for RL-TW01

B.1-7 WBS Dictionary for Sample and Characterize Tank Waste

1. Dictionary Title Sample and Characterize Tank Waste		2. Date 12 November 1998	3. PBS Number RL-TW01	4. Dict Rev
5. WBS No. 1.01.01.01.01	6. B & R No. EW02J116		7. Baseline CR No.	
8. Organization Name Tank Waste Characterization				

9. Scope of Work

Tank waste contents are to be characterized to ensure an acceptable level of public and worker health and safety in conjunction with safe storage of waste, and safe and cost-effective waste retrieval. This waste is stored in large, underground, radioactive waste storage double-shell tanks (DSTs) and single-shell tanks (SSTs). Objectives include the development of plans to characterize tank waste, acquire samples and measurements of the tank waste, analyze the tank waste samples, and report tank contents.

Samples of waste in a double-shell tank (DST) or single-shell tank (SST) are obtained and shipped to a laboratory for analysis of selected physical and chemical properties. Sampling includes accessing the tank, obtaining a sample, restoration of the tank containment, placement of the sample in a shipping container, and shipment to a laboratory. This is a cyclic process. A cycle begins when the need for a sample is identified and continues until the sample is delivered to the laboratory receiving area, analyzed and the results assessed (where applicable).

The Waste Characterization Project consists of the following activities: Project Management, Characterization Data Development, Sampling Equipment, Acquire Samples and Measurements, and Sample Analyses.

Project Management provides management of the project and scope includes project management, which includes environmental, health, safety, quality assurance, radiological control, and Facility Evaluation Board support; and financial control.

Characterization Data Development develops technical bases and provides information management. Scope includes characterization data review activities; characterization basis planning and scheduling; tank characterization reports; management and upgrades of tank characterization data; and historical data, models and inventory.

Sampling Equipment provides analysis of equipment and operational techniques and implements improvements to optimize sampling efficiency. Scope includes characterization equipment engineering; removal, storage and disposal of Long-Length Contaminated Equipment (LLCE); and storage of inactive sampling equipment.

Acquire Samples and Measurements performs specific sampling methodologies for sampling tank contents and for sampling vapor in tank dome spaces. Scope includes: obtaining physical samples by core sampling, grab sampling, and vapor sampling; and maintenance of sampling equipment.

Sample Analyses performs timely sample analyses to support safe storage and disposal of tank wastes; develops and implements new or improved analytical methods; and maintains analytical capabilities. Samples will be received, analyzed, archived/stored or disposed. A laboratory analysis report will be issued to document results. In addition, analysis and packages for shipment will be prepared for samples shipped to private vendors where applicable. Scope includes accomplish laboratory capability upgrades; maintain laboratory capability; provide sample archive storage and disposal; and samples analysis for core, grab, and vapor samples.

The Characterization Project integrates all TWRS tank waste information needs in developing the Project schedule and workscope. Because of this integration, any individual activity on the Project schedule frequently supports more

B.1-7 WBS Dictionary for Sample and Characterize Tank Waste (Continued)

1. Dictionary Title Sample and Characterize Tank Waste		2. Date 12 November 1998	3. PBS Number RL-TW01	4. Dict Rev
5. WBS No. 1.01.01.01.01	6. B & R No. EW02J116		7. Baseline CR No.	
8. Organization Name Tank Waste Characterization				

than one TWRS program or project. Because of this, there is not a one-to-one correlation between Characterization Project Work Breakdown Structure and items on the TWRS Integrated Priority List. In addition, the TWRS information needs are defined in a Waste Information Requirements Document submitted annually to Ecology. The Tri-Party Agreement Change Order M-44-97-03 allows the program to set and change priorities of tanks to maximize the benefit to TWRS program. If needed, internal project approved (Characterization Project Director) change control will be utilized for tank sequence changes.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- The Hanford radioactive tank wastes, presently stored in 177 underground storage tanks, shall be characterized.

B.1.3.1 Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26 FY27
1			Hanford Site
1.01			TWRS
1.01.01			Waste Characterization Project
1.01.01.01			Tank Farm System
1.01.01.01.01			Sample & Characterize Tank Waste
1.01.01.01.01.01			Characterization Project Management
01010101A	01OCT98*	30SEP24	Char Program Management
01010102A	01OCT98*	30SEP24	Characterization Process Engineering Management
01010103A	01OCT98*	30SEP24	Characterization Sampling Management
01010103AA		30SEP99*	Complete 21 Core Samples (PA 6.2.1) T01-99-123
01010103AB		30SEP99*	Complete 21 Grab Samples (PA 6.2.1) T01-99-125
01010103AC		30NOV99*	Vapor Sampling of all SSTs (5.4.3.4.d) T01-00-100
01010103AD		31DEC99*	Vapor Sampling of All SSTs (5.4.3.4.d) T01-00-101
01010103AE		30NOV00*	Completion Letter for DST Vap Samp (5.4.3.4.f) T01-01-100
01010103AF		31DEC00*	Completion Letter for DST Vap Samp (5.4.3.4.f) T01-01-101
01010103AG		30NOV02*	Comp Core Sampling all Tanks (5.6.3.1.j) T01-03-300
01010103AH		31DEC02*	Comp Core Sampling all Tanks (5.6.3.1.j) T01-03-301

Project Start	01OCT98	Early Bar
Project Finish	30SEP24	Progress Bar
Data Date	01OCT98	Critical Activity
Run Date	17NOV98	

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Sheet 1 of 11

Tank Waste Remediation System
PMBS - Life of Project
TW01 - Tank Waste Characterization

Activity ID	Early Start	Early Finish	FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26 FY27
01010104A	01OCT98*	30SEP24	Characterization Sample Analysis Management
01010104AA		30SEP99*	Issue 10 LARs for Core Samples (PA 6.2.4) ◇ T01-99-131
01010104AB		30SEP99*	Issue 12 LARs for Grab (PA 6.2.4) ◇ T01-99-133
01010105A	01OCT98*	30SEP24	Characterization ESH&QA Oversight Supt
01010106A	01OCT98*	30SEP24	QA Support for Quality Document System
01010107A	01OCT98*	30SEP24	Characterization DOE-RL Support
01010108A	01OCT98*	30SEP24	ESH & QA
01010109A	01OCT98*	30SEP24	Provide Safety & Health Oversight
01010110A	01OCT98*	30SEP24	Rad Con
01010111A	01OCT98*	30SEP24	FEB Support
01010201A	01OCT98*	30SEP24	Characterization Baseline Work Planning & Integ
01010202A	01OCT98*	30SEP24	Characterization Financial Control & Supt
01010203A	01OCT98*	30SEP24	Characterization Schedule Control & Supt
01010301A	01OCT98*	29JUN99	Close DNSFB Reqmendations
01010301AA		30JUN99*	Issue Report to Close DNFSB 5.6.3.1.j (PA6.2.3) ◇ T01-99-146

Activity ID	Early Start	Early Finish	FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26 FY27
1.01.01.01.01.02			Characterization Data Development
01020101A	01OCT98*	30SEP24	Evaluate Data to Determine Safe Stor Impacts
01020201A	01OCT98*	30SEP24	Provide Technical Basis Program Mgmt
01020202A	01OCT98*	30SEP24	Establish & Maintain DQO Process
01020203A	15DEC98*	30SEP24	Dev/Issue/Update Tech Samp Priority Basis Doc
01020204A	02NOV98*	30SEP24	Devop/Issue/Update Characterization Proj
01020205A	01OCT98*	30SEP24	Schedule Field Sampling Activities
01020206A	15MAR99*	30SEP24	Develop & Issue WIRD
01020206AA		15JUN99*	Submit Draft WIRD to Ecology M-44-13C ◇ T01-99-102
01020206AB		23AUG99*	Submit Final WIRD to Ecology for FY2000 M-44-14C ◇ T01-99-100
01020206AC		20SEP99*	Issue Char Del Consist w/99 WIRD M-44-15C ◇ T01-99-144
01020206AD		30JUN00*	Submit Draft WIRD for FY2001 to Ecol (M-44-13D) ◇ T01-00-103
01020206AE		31AUG00*	Submit Final WIRD for FY2001 to Ecol (M-44-14D) ◇ T01-00-104
01020206AF		29JUN01*	Submit Draft WIRD for FY2002 to Ecol (M-44-13E) ◇ T01-01-106
01020206AG		31AUG01*	Submit Final WIRD for FY2002 to Ecol (M-44-14E) ◇ T01-01-107
01020207A	04JAN99*	30SEP24	Report Status of WIRD Rqmts to RL & Ecology

Activity ID	Early Start	Early Finish	Activity
01020207AA		29SEP00*	Iss Char Del Cons with WIRD/FY2000 (M-44-15D) T01-00-105
01020207AB		29SEP00*	Comp HLW Tank Input Per WIRD FY2000 (M-44-16D) T01-00-106
01020207AC		28SEP01*	Iss Char Del Cons with WIRD/FY2001 (M-44-15E) T01-01-102
01020207AD		28SEP01*	Comp HLW Tank Input Per WIRD FY2001 (M-44-16E) T01-01-103
01020207AE		30SEP02*	Iss Char Del Cons with WIRD/FY2002 (M-44-15F) T01-02-200
01020207AF		30SEP02*	Comp HLW Tank Input Per WIRD FY2002 (M-44-16F) T01-02-201
01020207AG		30SEP02*	Comp Del of Inf Req Identified in WIRD (M-44-00A T01-01-104
01020301A	01OCT98*	30SEP24	Write/Rewrite TCR
01020301AA		20SEP99*	Issue 17 TCRs (PA 6.2.2) T01-99-116
01020302A	01OCT98*	17DEC04	Data Assessment & Evaluation
01020303A	01OCT98*	30SEP24	Manage Data Assessment/Interpretation
01020305A	27APR00*	15AUG00	BBI Update
01020401A	01OCT98*	30SEP24	Accomplish Database Improvements
01020401AA		30SEP99*	Complete Char Data Input M-44-16C T01-99-145
01020402A	01OCT98*	30SEP24	Conduct Data Quality Assurance Activities

FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26 FY27

Activity ID	Early Start	Early Finish	FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26 FY27
01020403A	01OCT98*	30SEP24	Conduct Database Operations & Maintenance
01020404A	01OCT98*	30SEP24	Administer Characterization Data Program
01020405A	02OCT00*	30SEP24	Manage Characterization Sample Archive
01020406A	01OCT98*	30SEP24	Disseminate Data Information
01020501A	01OCT98*	28SEP01	Benchmark & Verification of BB Tank Data
01020501AA		30OCT98*	Iss Ltr to DOE-RL Rep updates to TCM (5.6.3.1.i) T01-99-113
01020501AB		31DEC98*	Iss DOE-RL Ltr to DNFSB Rep TCM Upd (5.6.3.1.i) T01-99-138
01020502A	02OCT00*	28SEP01	Develop Inventories by Waste Phase
01020503A	01OCT01*	30SEP02	Develop IMUST Inventories
01020504A	01OCT01*	30SEP02	Provide Expanded Parameter and Analyte Reportin
01020505A	01OCT01*	30SEP02	Define Leaked Waste Inventories
01020506A	01OCT01*	30SEP02	Expand Database for Data Integration & Control
01020507A	01OCT98*	30SEP24	Provide Annual Update to BB Tank Data
01020508A	02OCT00*	28SEP01	Update Wash/Leach Factors
01020509A	01OCT01*	30SEP02	Develop Waste Volume Data Authority

Activity ID	Early Start	Early Finish	FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26 FY27
01020510A	01OCT98*	30SEP24	Provide BBI Maintenance Sys/Reporting
01020601A	01OCT98*	30SEP24	Prepare & Maintain DQOs
01020602A	01OCT98*	30SEP24	Prepare & Maintain Tank Information Docs
1.01.01.01.01.03			Sampling Equipment
01030101A	01OCT98*	30SEP24	Provide Sampling Equipment Engineering Manageme
01030102A	01OCT98*	30SEP24	Conduct Staff Training & Qualification Card Cer
01030103A	01OCT98*	27SEP24	Provide Design Authority & Eng Compliance
01030104A	01OCT98*	30SEP24	Provide Core Sampling Systems Project Managemen
01030107A	01OCT98*	30SEP02	Provide Eng for Truck No 3/4 RMCS Sys
01030108A	01OCT98*	26MAR02	Provide Eng for Supt of Auth & Safety Basis
01030109A	01OCT98*	30SEP24	Provide Eng for Troubleshooting & Des Assist
01030110A	01OCT98*	30SEP24	Provide Proj Mgmt for Equip Avail/Effect Improv
01030111A	01OCT99*	01OCT02	Provide Eng for Truck Sampler Improv
01030112A	02OCT00*	28SEP01	Provide Eng for Equip Safety Improv
01030113A	01OCT98*	01OCT02	Provide Eng for Equip Avail/Effect Improv
01030114A	01OCT98*	01OCT02	Conduct Eng Studies & Testing

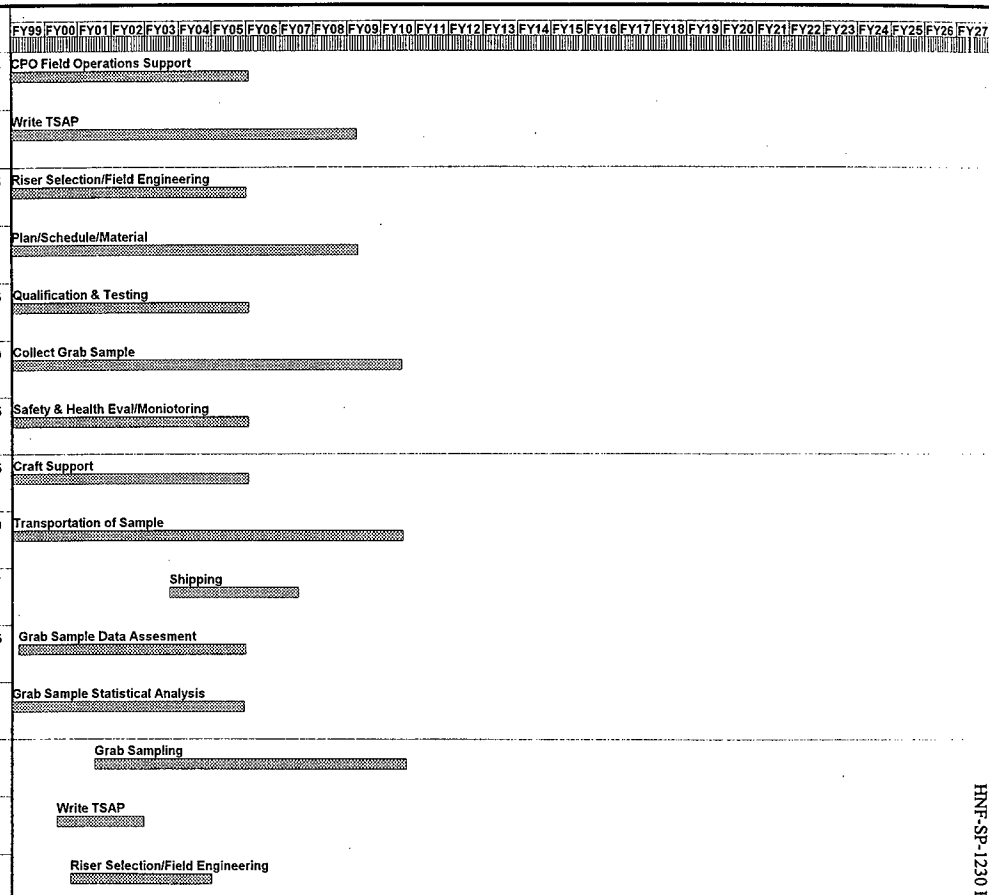
Activity ID	Early Start	Early Finish	
01030115A	02OCT00*	28SEP01	Provide Eng for X-Ray Cart Improv
01030116A	01OCT99*	01OCT02	Provide New Samp Sys Project Mgmt
01030117A	04JAN99*	01OCT02	Provide Eng for New Sampling Sys
01030201A	01OCT98*	29SEP00	Provide Maintenance Inventory/Planning
01030202A	02OCT00*	30SEP08	Implement Pre/Corr Maintenance Program
01030203A	01OCT98*	30SEP08	Configuration Control Engineering
01030204A	02OCT00*	01OCT08	Develop Schedule & Work Plans
01030301A	01OCT98*	01OCT03	Store Cone Penetrameter
01030302A	01OCT98*	01OCT03	Store Core Sample Trucks
01030303A	01OCT98*	01OCT03	Accomplish Equipment Storage
01030304A	01OCT98*	01OCT03	Prov Eng for Portable Struc to store LDUA/CONE P
10122A10		30AUG01*	TIP-Deployment Dec for Nested, Fixed-Depth Samp T01-01-108
1.01.01.01.01.04			Acquire Samples & Measurements
01040100A	01OCT98*	05MAR04	Dome Loading
01040101A	01OCT98*	14OCT05	Write TSAP
01040102A	01OCT98*	05OCT05	Riser Selection/Field Engineering

FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26 FY27

Activity ID	Early Start	Early Finish	
01040103A	06OCT98*	04NOV05	Plan/Schedule/Material
01040104A	13OCT98*	19OCT05	Riser Preparation
01040105A	05NOV98*	09NOV05	Exhauster Setup
01040106A	05NOV98*	09NOV05	Truck Setup
01040107A	10NOV98*	05DEC05	Qualification & Testing
01040108A	10NOV98*	05DEC05	Collect Core Sample
01040109A	10NOV98*	05DEC05	Preventive/Corrective Maintenance
01040110A	10NOV98*	05DEC05	Health & Safety Monitoring
01040111A	04DEC98*	07DEC05	Teardown Exhauster
01040112A	04DEC98*	07DEC05	Teardown Truck
01040113A	04DEC98*	12DEC05	Transport Sample
01040115A	01OCT98*	14MAR06	Shipping
01040123A	01OCT98*	05JUN07	Receive Sample Material from Vendor
01040124A	01NOV00*	03JUL02	Complex Riser Access
010401A	03SEP02*	13MAY04	Core Sampling

FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26 FY27

Activity ID	Early Start	Early Finish
01040201A	01OCT98*	25OCT05
01040202A	01OCT98*	12JAN09
01040203A	01OCT98*	05OCT05
01040204A	01OCT98*	26JAN09
01040206A	15OCT98*	26OCT05
01040207A	15OCT98*	14MAY10
01040208A	15OCT98*	26OCT05
01040209A	15OCT98*	26OCT05
01040210A	22OCT98*	25MAY10
01040219A	23JUN03*	27APR07
01040220A	16DEC98*	04OCT05
01040221A	01OCT98*	13SEP05
010402A	02APR01*	08JUL10
01040301A	18FEB00*	16SEP02
01040302A	05JUL00*	30SEP04



Activity ID	Early Start	Early Finish	FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26 FY27
01040303A	10JUL00*	30SEP04	Plan/Schedule/Materials
01040304A	19JUL00*	28JUN01	Qualification & Testing
01040305A	19JUL00*	30SEP04	Collect Vapor Sample
01040306A	19JUL00*	30SEP04	Safety & Health Eval & Monitoring
01040307A	19JUL00*	30SEP02	Maintenance
01040308A	02AUG00*	30SEP04	Transportation of Sample
1.01.01.01.01.05			Sample Analysis
01050101A	01OCT98*	30SEP24	Implementation of Na Assay Method
01050102A	01OCT99*	30SEP24	Implementation of INa Method by Erf
01050103A	01OCT98*	30SEP24	Develop Spec ICP/MS in Supt of LAW/HLW DQO Rqmt
01050104A	01OCT98*	30SEP24	Implement of Organics in Supt of LAW DQO
01050105A	01OCT99*	30SEP24	Develop Rapid in Hot Cell Raman Analysis
01050106A	01OCT99*	30SEP24	Improve LAW DQO Hot Cell Samp Prep Methods
01050107A	01OCT99*	30SEP24	Improve LAW DQO Analytical Methods
01050108A	01OCT98*	30SEP24	Improve HLW DQO Hot Cell Samp Prep Methods
01050109A	01OCT98*	30SEP24	Improve HLW DQO Analytical Methods

Activity ID	Early Start	Early Finish	Activity
01050110A	01OCT99*	30SEP24	Dev New Rad Sep/Prep Procedures
01050111A	01OCT99*	30SEP24	Develop Rapid Solid Analysis to Supt Sludge Was
01050112A	01OCT98*	30SEP24	Trade Study
01050113A	01OCT99*	30SEP24	Test for PCBs
01050114A	01OCT99*	30SEP24	Lab Upgrades
010501A	01OCT99*	10JUL02	Accomplish Laboratory Capability Upgrades
01050201A	01OCT98*	30SEP24	Maint Equuuip/pers/Proc to Prov Reqd Prog Analy
01050301A	01OCT98*	30SEP24	Provide Sample Archive Storage
01050302A	01OCT98*	30SEP24	Conduct Annual Inventory & Review
01050303A	01OCT98*	30SEP24	Dispose of Arch Samples as Dir by Cust Prog
01050401A	01OCT98A	10NOV04	Core Sample Analysis
01050402A	01OCT98*	29AUG05	Grab Sample Analysis
01050403A	20MAR00*	25NOV02	Vapor Sample Analysis

FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12 FY13 FY14 FY15 FY16 FY17 FY18 FY19 FY20 FY21 FY22 FY23 FY24 FY25 FY26 FY27

B.1.3.2 Execution Year Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY00 OCT
1			Hanford Site												
1.01			TWRS												
1.01.01			Waste Characterization Project												
1.01.01.01			Tank Farm System												
1.01.01.01.01			Sample & Characterize Tank Waste												
1.01.01.01.01.01			Characterization Project Management												
01010101A	01OCT98*	30SEP24	Char Program Management												
01010102A	01OCT98*	30SEP24	Characterization Process Engineering Management												
01010103A	01OCT98*	30SEP24	Characterization Sampling Management												
01010103AA		30SEP99*	Complete 21 Core Samples (PA 6.2.1) T01-99-123												
01010103AB		30SEP99*	Complete 21 Grab Samples (PA 6.2.1) T01-99-125												
01010104A	01OCT98*	30SEP24	Characterization Sample Analysis Management												
01010104AA		30SEP99*	Issue 10 LARs for Core Samples (PA 6.2.4) T01-99-131												
01010104AB		30SEP99*	Issue 12 LARs for Grab (PA 6.2.4) T01-99-133												
01010105A	01OCT98*	30SEP24	Characterization ESH&QA Oversight Supt												
01010106A	01OCT98*	30SEP24	QA Support for Quality Document System												
01010107A	01OCT98*	30SEP24	Characterization DOE-RL Support												

Project Start 01OCT98
Project Finish 30SEP24
Data Date 01OCT98
Run Date 17NOV98

Early Bar
Progress Bar
Critical Activity

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Tank Waste Remediation System
PMBS - FY 1999
TW01 - Tank Waste Characterization

Activity ID	Early Start	Early Finish	FY99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY00 OCT
01010108A	01OCT98*	30SEP24	ESH & QA												
01010109A	01OCT98*	30SEP24	Provide Safety & Health Oversight												
01010110A	01OCT98*	30SEP24	Rad Con												
01010111A	01OCT98*	30SEP24	FEB Support												
01010201A	01OCT98*	30SEP24	Characterization Baseline Work Planning & Integ												
01010202A	01OCT98*	30SEP24	Characterization Financial Control & Supt												
01010203A	01OCT98*	30SEP24	Characterization Schedule Control & Supt												
01010301A	01OCT98*	29JUN99	Close DNSFB Reqmendations												
01010301AA		30JUN99*										Issue Report to Close DNFSB 5.6.3.1.j (PA6.2.3) T01-99-146			
1.01.01.01.01.02			Characterization Data Development												
01020101A	01OCT98*	30SEP24	Evaluate Data to Determine Safe Stor Impacts												
01020201A	01OCT98*	30SEP24	Provide Technical Basis Program Mgmt												
01020202A	01OCT98*	30SEP24	Establish & Maintain DQO Process												
01020203A	15DEC98*	30SEP24			Dev/Issue/Update Tech Samp Priority Basis Doc										
01020204A	02NOV98*	30SEP24		Devop/Issue/Update Characterization Proj											
01020205A	01OCT98*	30SEP24	Schedule Field Sampling Activities												

Activity ID	Early Start	Early Finish	Activity
01020206A	15MAR99*	30SEP24	Develop & Issue WIRD
01020206AA		15JUN99*	Submit Draft WIRD to Ecology M-44-13C (T01-99-102)
01020206AB		23AUG99*	Submit Final WIRD to Ecology for FY2000 M-44-14C (T01-99-100)
01020206AC		20SEP99*	Issue Char Del Consist w/99 WIRD M-44-15C (T01-99-144)
01020207A	04JAN99*	30SEP24	Report Status of WIRD Rqmts to RL & Ecology
01020301A	01OCT98*	30SEP24	Write/Rewrite TCR
01020301AA		20SEP99*	Issue 17 TCRs (PA 6.2.2) (T01-99-116)
01020302A	01OCT98*	17DEC04	Data Assessment & Evaluation
01020303A	01OCT98*	30SEP24	Manage Data Assessment/Interpretation
01020401A	01OCT98*	30SEP24	Accomplish Database Improvements
01020401AA		30SEP99*	Complete Char Data Input M-44-16C (T01-99-145)
01020402A	01OCT98*	30SEP24	Conduct Data Quality Assurance Activities
01020403A	01OCT98*	30SEP24	Conduct Database Operations & Maintenance
01020404A	01OCT98*	30SEP24	Administer Characterization Data Program
01020406A	01OCT98*	30SEP24	Disseminate Data Information

FY99: OCT, NOV, DEC, JAN, FEB, MAR, APR, MAY, JUN, JUL, AUG, SEP; FY00: OCT

Activity ID	Early Start	Early Finish	FY99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY00 OCT
01020501A	01OCT98*	28SEP01	Benchmark & Verification of BB Tank Data												
01020501AA		30OCT98*	Iss Ltr to DOE-RL Rep updates to TCM (5.6.3.1.i) T01-99-113												
01020501AB		31DEC98*	Iss DOE-RL Ltr to DNFSB Rep TCM Upd (5.6.3.1.i) T01-99-138												
01020507A	01OCT98*	30SEP24	Provide Annual Update to BB Tank Data												
01020510A	01OCT98*	30SEP24	Provide BBI Maintenance Sys/Reporting												
01020601A	01OCT98*	30SEP24	Prepare & Maintain DQOs												
01020602A	01OCT98*	30SEP24	Prepare & Maintain Tank Information Docs												
1.01.01.01.01.03			Sampling Equipment												
01030101A	01OCT98*	30SEP24	Provide Sampling Equipment Engineering Manageme												
01030102A	01OCT98*	30SEP24	Conduct Staff Training & Qualification Card Cer												
01030103A	01OCT98*	27SEP24	Provide Design Authority & Eng Compliance												
01030104A	01OCT98*	30SEP24	Provide Core Sampling Systems Project Managemen												
01030107A	01OCT98*	30SEP02	Provide Eng for Truck No 3/4 RMCS Sys												
01030108A	01OCT98*	26MAR02	Provide Eng for Supt of Auth & Safety Basis												
01030109A	01OCT98*	30SEP24	Provide Eng for Troubleshooting & Des Assist												
01030110A	01OCT98*	30SEP24	Provide Proj Mgmt for Equip Avail/Effect Improv												

Activity ID	Early Start	Early Finish	FY99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY00 OCT
01030113A	01OCT98*	01OCT02	Provide Eng for Equip Avail/Effect Improv												
01030114A	01OCT98*	01OCT02	Conduct Eng Studies & Testing												
01030117A	04JAN99*	01OCT02				Provide Eng for New Sampling Sys									
01030201A	01OCT98*	29SEP00	Provide Maintenance Inventory/Planning												
01030203A	01OCT98*	30SEP08	Configuration Control Engineering												
01030301A	01OCT98*	01OCT03	Store Cone Penetrameter												
01030302A	01OCT98*	01OCT03	Store Core Sample Trucks												
01030303A	01OCT98*	01OCT03	Accomplish Equipment Storage												
01030304A	01OCT98*	01OCT03	Prov Eng for Portable Struc to store LDUA/CONE P												
1.01.01.01.01.04			Acquire Samples & Measurements												
01040100A	01OCT98*	05MAR04	Dome Loading												
01040101A	01OCT98*	14OCT05	Write TSAP												
01040102A	01OCT98*	05OCT05	Riser Selection/Field Engineering												
01040103A	06OCT98*	04NOV05	Plan/Schedule/Material												
01040104A	13OCT98*	19OCT05	Riser Preparation												
01040105A	05NOV98*	09NOV05	Exhauster Setup												

Activity ID	Early Start	Early Finish	Activity
01040106A	05NOV98*	09NOV05	Truck Setup
01040107A	10NOV98*	05DEC05	Qualification & Testing
01040108A	10NOV98*	05DEC05	Collect Core Sample
01040109A	10NOV98*	05DEC05	Preventive/Corrective Maintenance
01040110A	10NOV98*	05DEC05	Health & Safety Monitoring
01040111A	04DEC98*	07DEC05	Teardown Exhauster
01040112A	04DEC98*	07DEC05	Teardown Truck
01040113A	04DEC98*	12DEC05	Transport Sample
01040115A	01OCT98*	14MAR06	Shipping
01040123A	01OCT98*	05JUN07	Receive Sample Material from Vendor
01040201A	01OCT98*	25OCT05	CPO Field Operations Support
01040202A	01OCT98*	12JAN09	Write TSAP
01040203A	01OCT98*	05OCT05	Riser Selection/Field Engineering
01040204A	01OCT98*	26JAN09	Plan/Schedule/Material
01040206A	15OCT98*	26OCT05	Qualification & Testing

FY99: OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP
FY00: OCT

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Activity ID	Early Start	Early Finish	FY99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY00 OCT
01040207A	15OCT98*	14MAY10	Collect Grab Sample												
01040208A	15OCT98*	26OCT05	Safety & Health Eval/Moniotoring												
01040209A	15OCT98*	26OCT05	Craft Support												
01040210A	22OCT98*	25MAY10	Transportation of Sample												
01040220A	16DEC98*	04OCT05			Grab Sample Data Assesment										
01040221A	01OCT98*	13SEP05	Grab Sample Statistical Analysis												
1.01.01.01.01.05			Sample Anaysis												
01050101A	01OCT98*	30SEP24	Implementation of Na Assay Method												
01050103A	01OCT98*	30SEP24	Develop Spec ICP/MS in Supt of LAW/HLW DQO Rqmt												
01050104A	01OCT98*	30SEP24	Implement of Organics in Supt of LAW DQO												
01050108A	01OCT98*	30SEP24	Improve HLW DQO Hot Cell Samp Prep Methods												
01050109A	01OCT98*	30SEP24	Improve HLW DQO Analytical Methods												
01050112A	01OCT98*	30SEP24	Trade Study												
01050201A	01OCT98*	30SEP24	Maint Equuuip/pers/Proc to Prov Reqd Prog Analy												
01050301A	01OCT98*	30SEP24	Provide Sample Archive Storage												
01050302A	01OCT98*	30SEP24	Conduct Annual Inventory & Review												

Activity ID	Early Start	Early Finish	FY99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY00 OCT
01050303A	01OCT98*	30SEP24	Dispose of Arch Samples as Dir by Cust Prog												
01050402A	01OCT98*	29AUG05	Grab Sample Analysis												

B.1.3.3 Milestone List

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/TPA Date
T01-99-113	Update Tank Content Models (5.6.3.1.i)	RL	5.6.3.1.i	30-Oct-98	31-Oct-98
T01-99-138	Update Tank Content Models (5.6.3.1.i)	HQ	5.6.3.1.i	31-Dec-98	31-Dec-98
T01-99-102	Submit Draft WIRD for FY 2O00 to Ecology	HQ-I	M-44-13C	15-Jun-99	30-Jun-99
T01-99-146	TWR 6.2.3 Complete and Issue a Report to Provide Basis for DOE to Recommend Closure of DNFSB 93-05 Milestone 5.6.3.1.j	RL	-	30-Jun-99	-
T01-99-100	Submit Final WIRD for FY 2O00 to Ecology	HQ-I	M-44-14C	23-Aug-99	31-Aug-99
T01-99-116	TWR 6.2.2 Issue 17 Tank Characterization Reports	RL	-	20-Sep-99	-
T01-99-144	Issue Characterization Deliverables Consistent with WIRD Developed for FY99	HQ-I	M-44-15C	20-Sep-99	30-Sep-99
T01-99-123	TWR 6.2.1 Complete 21 Core Samples	RL	-	30-Sep-99	-
T01-99-125	TWR 6.2.1 Complete 21 Grab Samples	RL	-	30-Sep-99	-
T01-99-131	TWR 6.2.4 Issue 10 Lab Analysis Reports for Core Samples	RL	-	30-Sep-99	-
T01-99-133	TWR 6.2.4 Issue 12 Lab Analysis Reports for Grab Mode Samples	RL	-	30-Sep-99	-
T01-99-145	Complete Input of Characterization Information for HLW Tanks for which Sampling and Analysis Were Completed per WIRD	HQ-I	M-44-16C	30-Sep-99	30-Sep-99
T01-00-100	Vapor Sampling of all SSTs (5.4.3.4.d)	RL	5.4.3.4.d	30-Nov-99	-
T01-00-101	Vapor Sampling of all SSTs (5.4.3.4.d)	HQ	5.4.3.4.d	31-Dec-99	31-Dec-99
T01-00-103	Submit Draft WIRD for FY 2O01 to Ecology	HQ-I	M-44-13D	30-Jun-00	30-Jun-00
T01-00-104	Submit Final WIRD for FY 2O01 to Ecology	HQ-I	M-44-14D	31-Aug-00	31-Aug-00
T01-00-105	Issue Characterization Deliverables Consistent with WIRD Developed for FY 2000	HQ-I	M-44-15D	29-Sep-00	30-Sep-00
T01-00-106	Complete Input of Characterization Information for HLW Tanks for which Sampling and Analysis Were Completed per WIRD	HQ-I	M-44-16D	29-Sep-00	30-Sep-00
T01-01-100	Letter Reporting Completion of Vapor Sampling of all DSTs (5.4.3.4f)	RL	5.4.3.4.f	30-Nov-00	-
T01-01-101	Letter Reporting Completion of Vapor Sampling of All DSTs (5.4.3.4.f)	HQ	5.4.3.4.f	31-Dec-00	31-Dec-00

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/TPA Date
T01-01-106	Submit Draft WIRD for FY 2002 to Ecology	HQ-I	M-44-13E	29-Jun-01	30-Jun-01
T01-01-108	TIP - Deployment Decision for Nested, Fixed Depth Sampler	RL	-	30-Aug-01	-
T01-01-107	Submit Final WIRD for FY 2002 to Ecology	HQ-I	M-44-14E	31-Aug-01	31-Aug-01
T01-01-102	Issue Characterization Deliverables Consistent with WIRD Developed for FY 2001	HQ-I	M-44-15E	28-Sep-01	30-Sep-01
T01-01-103	Complete Input of Characterization Information for HLW Tanks for which Sampling and Analysis Were Completed per WIRD	HQ-I	M-44-16E	28-Sep-01	30-Sep-01
T01-02-200	Issue Characterization Deliverables Consistent with WIRD Developed for FY 2002	HQ-I	M-44-15F	30-Sep-02	30-Sep-02
T01-02-201	Complete Input of Characterization Information for HLW Tanks for which Sampling and Analysis Were Completed per WIRD	HQ-I	M-44-16F	30-Sep-02	30-Sep-02
T01-01-104	Complete Delivery of Information Requirement Identified in WIRD	HQ-M	M-44-00A	30-Sep-02	30-Sep-02
T01-03-300	Completion of Core Sampling of all Tanks (5.6.3.1.j)	RL	5.6.3.1.j	30-Nov-02	-
T01-03-301	Completion of Core Sampling of all Tanks (5.6.3.1.j)	HQ	5.6.3.1.j	31-Dec-02	31-Dec-02

B.1.3.4 Milestone Description Sheets

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Contractor Letter to DOE-RL Reporting Updates to the Tank Content Models or Define Limitations of the Models (DNFSB 5.6.3.1.i)

Schedule Date: 10/30/98

WBS Number: 1.01.01.01.01.02.05.02
Milestone Control Number: T01-99-113

DNFSB #: 93-5, 5.6.3.1i

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

DOE/RL-94-0001, Rev. 1, *Recommendation 93-5 Implementation Plan*, Commitment 5.6.3.1.i, "Update Tank Contents Model or Define Limitations of the Models." Existing models for estimating tank contents are based primarily on historical records, process knowledge, and chemical principles. In some cases, simplifying assumptions are made in modeling due to a lack of data on actual waste characteristics. The results of sample analyses will provide insights into the mechanics of the models and help determine if modifications are required in modeling algorithms to more accurately predict tank contents and more closely match the results of sample analyses. Also, as engineering analysis continues in support of developing the "best basis" standard inventory estimates, portions of the models which contain inaccurate process flowsheet information or other erroneous assumptions are being identified for later revisions to the models.

Description of what constitutes completion of the commitment:

Update Tank Content Models or define limitations of the models. This task will take the results of comparisons of model predictions against actual sample results and determine if modifications are needed to the model to allow it to more closely predict what we are finding in the tanks based on actual sample analyses. Alternatively, if no model modifications are warranted, the limitations of existing models will be documented.

Contractor submittal to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by October 30, 1998, of a report following review, comment incorporation, and approval by TWRS Process Engineering management. The report must be submitted by DOE-RL to the Defense Nuclear Facilities Safety Board (DNFSB) by December 1998 in accordance with DNFSB Recommendation 93-5 Implementation Plan.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: DOE-RL Letter to DNFSB Reporting Updates to the Tank Content Models or Define Limitations of the Models (DNFSB 5.6.3.1.i)

Schedule/DNFSB Date: 12/31/98

WBS Number: 1.01.01.01.01.02.05.02

Milestone Control Number: T01-99-138

DNFSB #: 93-5, 5.6.3.1.i

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[X] DOE-HQ
[X] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

DOE/RL-94-0001, Rev. 1, *Recommendation 93-5 Implementation Plan*, Commitment 5.6.3.1.i, "Update Tank Contents Model or Define Limitations of the Models." Existing models for estimating tank contents are based primarily on historical records, process knowledge, and chemical principles. In some cases, simplifying assumptions are made in modeling due to a lack of data on actual waste characteristics. The results of sample analyses will provide insights into the mechanics of the models and help determine if modifications are required in modeling algorithms to more accurately predict tank contents and more closely match the results of sample analyses. Also, as engineering analysis continues in support of developing the "best basis" standard inventory estimates, portions of the models which contain inaccurate process flowsheet information or other erroneous assumptions are being identified for later revisions to the models.

Description of what constitutes completion of the commitment:

DOE-RL submittal of a letter to the Defense Nuclear Facilities Safety Board (DNFSB) following review, comment incorporation, and approval of the tank content model updates by DOE-RL management. The report must be submitted to DNFSB by December 1998 in accordance with DNFSB Recommendation 93-5 Implementation Plan.

DOE-RL letter to DNFSB based on Contractor delivery for milestone T01-99-113, due October 30, 1998, documenting the update of Tank Content Models or definition of limitations of the models. This task will take the results of comparisons of model predictions against actual sample results and determine if modifications are needed to the model to allow it to more closely predict what we are finding in the tanks based on actual sample analyses. Alternatively, if no model modifications are warranted, the limitations of existing models will be documented. Documentation in completion of this commitment shall be based on comment resolution on product delivery to DOE-RL in October 1998 for milestone T01-99-113. Unless the Contractor is given sufficient time to resolve any DOE-RL comments on the T01-99-113 input, the Contractor shall not be held responsible for completion of milestone T01-99-138.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Submit Draft Waste Information Requirements Document (WIRD) to Ecology for FY 2000 (M-44-13C)

Schedule Date: 6/15/99

TPA Due Date: 6/30/99

WBS Number: 1.01.01.01.01.02.02.06

Milestone Control Number: T01-99-102

TPA #: M-44-13C

Milestone Type	Deliverables	Addressed to
[X] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, commitment M-44-13C, "Submit Draft WIRD to Ecology for FY 2000."

The Tank Waste Remediation System (TWRS) information needs are defined in a Waste Information Requirements Document (WIRD) submitted annually to the Washington State Department of Ecology (Ecology). The document will specify annual characterization deliverables to support safe storage, retrieval, and disposal of tank waste. The Draft WIRD will identify the tank waste behavior information needs for subsequent years. The Draft WIRD will describe characterization deliverables to be issued for each year based on existing Tri-Party Agreement milestones and will specify the content of each deliverable which is subject to Ecology approval.

That portion of the Draft WIRD which identifies waste characterization activities outside the scope of the Tri-Party Agreement shall not be subject to Ecology approval or concurrence, but rather will be included for information purposes only.

The content and format for the Draft WIRD will continue to be developed through negotiations among DOE-RL, Ecology, and the Contractor, and will include but not be limited to the following: Introduction; Background; Scope; Review and summary of changes to previous WIRD edition; TWRS program drivers requiring characterization information; TWRS issues with characterization information requirements; Information requirements matrix; Description of Characterization Project deliverables; Acceptance criteria; and References.

T01-99-102 (continued)

Title: Submit Draft Waste Information Requirements Document (WIRD) to Ecology for FY 2000 (M-44-13C)

Description of what constitutes completion of the commitment:

The Draft WIRD containing the elements described above will be submitted to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by June 15, 1999. DOE-RL will provide comment for Contractor resolution in a manner sufficiently timely for the Contractor to resubmit the Draft WIRD to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by June 29, 1999. As possible, verbal coordination among RL, Ecology, and Contractor will occur during development of the Draft WIRD and prior to June 15, 1999. Delivery of the Draft WIRD to Ecology by June 30, 1999 shall be the responsibility of DOE-RL, not the Contractor. The dates herein described shall be subject to negotiation between DOE-RL and the Contractor.

The Draft WIRD will meet the quality standards as defined in the latest revision of HNF-SD-WM-PROC-021, TWRS Process Engineering Instruction Manual, and will include the elements described above.

The Draft WIRD will be considered complete when DOE-RL comments have been resolved and the document redelivered to Fluor Daniel Hanford Inc. for delivery to DOE-RL by 6/15/99. DOE-RL shall ensure timely comment to permit Contractor resolution by dates stated, or otherwise negotiated, as above.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete and Issue a Report to Provide Basis for DOE to Recommend Closure of DNFSB 93-5 Milestone 5.6.3.1.j (TWR6.2.3)

Schedule Date: 6/30/99

WBS Number: 1.01.01.01.01.01.03.01

Control Number: T01-99-146

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Prepare a report that will provide the technical basis and rationale for closing the DNFSB 93-5 Implementation Plan Milestone 5.6.3.1.j actions by June 30, 1999. The report will contain the necessary information to support the conclusion that the basis for the initial safety screening sampling and specific sampling for safety issues and near term retrieval design needs have been met and that there is not a priority for sampling the remaining tanks. The report will list which tanks have been sampled, which have not and provide an evaluation of why the associated DNFSB 93-5 milestones does not need to remain open.

The Contractor will provide to Fluor Daniel Hanford Inc. for their delivery to DOE-RL a draft report by April 30, 1999. DOE-RL will review and coordinate obtaining DNFSB staff comments and provide all Government comments within 30 days of receipt of the document.

Description of what constitutes completion of the commitment:

A draft report containing the elements described above will be submitted to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by April 30, 1999. DOE-RL will provide comments for Contractor resolution within 30 days of receipt of draft document.

Contractor will incorporate and/or disposition all DOE-RL comments, all comments from the DNFSB staff, and deliver final report.

Contractor letter transmitting the report to Fluor Daniel Hanford Inc. for their delivery to DOE-RL.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Submit Final Waste Information Requirements Document (WIRD) for FY 2000 to Ecology (M-44-14C) (supports TWR6.2.2)

Schedule Date: 8/23/99

TPA Due Date: 8/31/99

WBS Number: 1.01.01.01.01.02.02.06

Milestone Control Number: T01-99-100

TPA #: M-44-14C

Milestone Type	Deliverables	Addressed to
[X] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, commitment M-44-14C, "Submit Final WIRD for FY 2000 to Ecology."

The Tank Waste Remediation System (TWRS) information needs are defined in a Waste Information Requirements Document (WIRD) submitted annually to the Washington State Department of Ecology (Ecology). The document will specify annual characterization deliverables to support safe storage, retrieval, and disposal of tank waste. The Final WIRD will identify for approval the tank waste behavior information needs for subsequent years. The Final WIRD will describe characterization deliverables to be issued for each year based on existing Tri-Party Agreement milestones and will specify the content of each deliverable which is subject to Ecology approval.

That portion of the Final WIRD which identifies waste characterization activities outside the scope of the Tri-Party Agreement shall not be subject to Ecology approval or concurrence, but rather will be included for information purposes only.

The content and format for the Final WIRD will continue to be developed through negotiations among DOE-RL, Ecology, and the Contractor, and will include but not be limited to the following: Introduction; Background; Scope; Summary report of progress for FY 1999; Review and summary of changes to previous WIRD edition; TWRS program drivers requiring characterization information; TWRS issues with characterization information requirements; Information requirements matrix; Description of Characterization Project deliverables; Acceptance criteria; and References.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

T01-99-100 (continued)
Title: Submit Final Waste Information Requirements Document (WIRD) for FY 2000 to Ecology (M-44-14C)
(supports TWR6.2.2)

Description of what constitutes completion of the commitment:

The Final WIRD containing the elements described above will be submitted to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by August 23, 1999 and will include resolution of additional DOE-RL and/or Ecology comments on the Draft WIRD submitted in June 1999. Comments on the Draft WIRD will be delivered to the Contractor by DOE-RL and Ecology by July 30, 1999 to provide time for the Contractor to resolve comments and submit the Final WIRD to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by August 23, 1999. Delivery of the Final WIRD to Ecology by August 31, 1999 shall be the responsibility of DOE-RL, not the Contractor. The dates herein described shall be subject to negotiation between DOE-RL and the Contractor.

The Final WIRD will meet the quality standards as defined in the latest revision of HNF-SD-WM-PROC-021, TWRS Process Engineering Instruction Manual, and will include the elements described above.

The Final WIRD will be considered complete when DOE-RL and/or Ecology comments on the Draft WIRD have been resolved and the document delivered to Fluor Daniel Hanford Inc. for delivery to DOE-RL by August 23, 1999. DOE-RL and Ecology shall ensure timely comment to permit Contractor resolution by dates stated, or otherwise negotiated, as above.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: TWR 6.2.2, Issue 17 Tank Characterization Reports Schedule Date: 9/20/99

WBS Number: 1.01.01.01.01.02.03.01

Control Number: T01-99-116

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Generate and issue 17 Tank Characterization Reports (TCRs).

Description of what constitutes completion of the commitment:

1) Provide a draft TCR to Fluor Daniel Hanford Inc. for their delivery to DOE-RL during review process so DOE-RL can perform a concurrent review.

2) Transmit each TCR through Fluor Daniel Hanford Inc. to DOE-RL as it is issued.

3) The TCRs must include both the relevant historical data and the information obtained by the characterization effort. The TCRs will be similar in content and format (revised as new information is made available) to that prepared for tank 241-T-109 and issued as supporting documents. One copy of each TCR will be transmitted through Fluor Daniel Hanford Inc. to DOE-RL for formal submittal to the Washington State Department of Ecology. All other internal and external distribution of the TCRs (up to 100 copies) will be performed by the Characterization Program.

4) Provide a final letter after transmission of all TCRs to Fluor Daniel Hanford Inc. for their delivery to DOE-RL, documenting completion of the milestone and the date when each TCR was transmitted.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Issue Characterization Deliverables Consistent with Waste Information Requirements Document (WIRD) Developed for FY 1999 (M-44-15C) (supports TWR6.2.2)

Schedule Date: 9/20/99

TPA Date: 9/30/99

WBS Number: 1.01.01.01.01.02.02.06

Milestone Control Number: T01-99-144

TPA #: M-44-15C

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, commitment M-44-15C, "Issue Characterization deliverables consistent with Waste Information Requirements Document (WIRD) developed for FY 1999."

Description of what constitutes completion of the commitment:

Provide a summary report reflecting FY 1999 Characterization deliverables identified in the most current version of the WIRD and the extent to which each of those deliverables were completed. The report will identify specific issues and/or tanks to which deliverables were applied. Provide this summary information in a letter report to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by September 20, 1999.

Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of Characterization deliverables.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: TWR 6.2.1, Complete 21 Core Samples

Schedule Date: 9/30/99

WBS Number: 1.01.01.01.01.01.03

Control Number: T01-99-123

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

High-level tank waste core samples will be collected.

Description of what constitutes completion of the commitment:

Twenty-one (21) core samples retrieved in accordance with an approved Tank Sampling and Analysis Plan.

Relinquishment of all required waste samples to the laboratory via a transportation chain of custody document constitutes completion of the sampling commitment.

Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of core sampling.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: TWR, 6.2.1, Complete 21 Grab Samples

Schedule Date: 9/30/99

WBS Number: 1.01.01.01.01.01.03

Control Number: T01-99-125

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

High-level tank waste supernate and light sludge will be collected using the grab sampling method. Samples will be collected in support of privatization project, characterization, process, and compatibility issues in addition to RCRA campaign sampling.

Description of what constitutes completion of the commitment:

Twenty-one (21) grab samples retrieved in accordance with an approved Tank Sampling and Analysis Plan.

Relinquishment of all required waste samples to the laboratory via transportation chain of custody document constitutes completion of the sampling commitment.

Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of grab samples.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Issue 10 Laboratory Analysis Reports for Core Samples per Tank Sampling and Analysis Plan Requirements (Supports 6.2.4)

Due Date: 9/30/99

WBS Number: 1.01.01.01.01.01.01.04

Control Number: T01-99-131

(9) Milestone Type	(10) Deliverables	(11) Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

The laboratory will receive, extrude, prepare and analyze samples, and generate laboratory analysis reports (LARs). LARs will be issued to satisfy analytical data reporting requirements specified in the tank sampling and analysis plans (TSAPs). The TSAPs integrate the data quality objectives (DQOs) and test plans and/or other information. The number of core LARs to be issued in FY 1999 is based on the approved TSAPs, the currently approved Tank Sampling Schedule, Revision 5.4, and the laboratory analytical equivalency unit (AEU) schedule.

Changes to the sampling schedule may effect the number of LARs issued.

Description of what constitutes completion of the commitment:

Transmit core LARs completed by the 222-S Laboratory in FY 1999 to the TWRS Process Characterization Project and as directed by the TSAP. The LARs will be issued to meet the project needs and priorities. Through implementation of TPA Change Order M-44-97-03 analysis activities are linked directly to the projects' tank submitted annually to Ecology. The TPA Change Order M-44-97-03 allows the program to set and change priorities of the completion of LARs to maximize the benefit to TWRS program. The official release and date of issue given by Configuration Control will document the completion of LARs.

The LARs will comply with the criteria as identified in TSAPs and DOE/RL-96-68, Revision 1, *Hanford Analytical Services Quality Assurance Requirements Document* (HASQARD).

A contractor letter to Fluor Daniel Hanford Inc. documenting the delivery of LARs to DOE-RL in FY 1999 will constitute completion of this milestone.

Title: Issue 12 Laboratory Analysis Reports for Grab Mode Samples per Tank Sampling and Analysis Plan Requirements (TWR 6.2.4)

Schedule Date: 9/30/99

WBS Number: 1.01.01.01.01.01.04

Control Number: T01-99-133

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

The laboratory will receive, prepare and analyze samples, and generate laboratory analysis reports (LARs). LARs will be issued to satisfy analytical data reporting requirements specified in the tank sampling and analysis plans (TSAPs). The TSAPs integrate the data quality objectives (DQOs) and test plans and/or other information. The number of Grab Mode LARs to be issued in FY 1999 is based on the approved TSAPs, the currently approved Tank Sampling Schedule, Revision 5.4, and the laboratory analytical equivalency unit (AEU) schedule.

Changes to the sampling schedule may effect the number of LARs issued.

Description of what constitutes completion of the commitment:

Transmit grab sample LARs completed by the 222-S Laboratory in FY 1999 to the TWRS Process Characterization Project and as directed by the TSAP. The LARs will be issued to meet the project needs and priorities. Through implementation of TPA Change Order M-44-97-03 analysis activities are linked directly to the projects' tank submitted annually to Ecology. The TPA Change Order M-44-97-03 allows the program to set and change priorities of the completion of LARs to maximize the benefit to TWRS program. The official release and date of issue given by Configuration Control will document the completion of LARs.

The LARs will comply with the criteria as identified in TSAPs and DOE/RL-96-68, Revision 1, *Hanford Analytical Services Quality Assurance Requirements Document* (HASQARD).

A contractor letter to Fluor Daniel Hanford Inc. documenting the delivery of LARs to DOE-RL in FY 1999 will constitute completion of this milestone.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete input of characterization data for HLW Tanks for which sampling and analysis were completed per the Waste Information Requirements Document (WIRD) into electronic database. Provide off-site access to the database to EPA and Ecology. (M-44-16C) (Supports TWR6.2.1)

Schedule / TPA Date: 9/30/99

WBS Number: 1.01.01.01.01.02.04.01

Milestone Control Number: T01-99-145

TPA #: M-44-16C

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, commitment M-44-16C, "Complete input of Characterization Information for HLW tanks for which sampling and analysis were completed per the FY 1999 WIRD into electronic database. Off-site internet access to the database containing tank waste characterization information will be made available to the EPA and Ecology."

Description of what constitutes completion of the commitment:

Provide a letter addressing loading of FY 1999 Characterization information, identified in the most current version of the WIRD into the Tank Characterization Database, accessible to the U.S. Environmental Protection Agency (EPA) and Washington State Department of Ecology (Ecology) via the internet. Provide this letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by September 30, 1999.

Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of information entry into electronic databases.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Contractor Letter to DOE-RL Reporting Completion of Vapor Sampling of All Single-Shell Tanks (SSTs)

Schedule Date: 11/30/99

WBS Number: 1.01.01.02.04.06.01

Milestone Control Number: T01-00-100

DNFSB #: 93-5, 5.4.3.4d:

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

DOE/RL-94-0001, Rev. 1, *Recommendation 93-5 Implementation Plan*, Commitment 5.4.3.4.d, "Letter reporting completion of vapor sampling of all single-shell tanks (SSTs)."

Description of what constitutes completion of the commitment:

Complete vapor sampling of all SSTs for the presence of organic solvent. Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of vapor sampling of all SSTs.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: DOE-RL Letter to DNFSB Reporting Completion of Vapor Sampling of All Single-Shell Tanks (SSTs) (DNFSB 93-5, 5.4.3.4.d)

Schedule/DNFSB Date: 12/31/99

WBS Number: 1.01.01.02.04.06.01

Milestone Control Number: T01-00-101

DNFSB #: 93-5, 5.4.3.4d

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[X] DOE-HQ
[X] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

DOE/RL-94-0001, Rev. 1, *Recommendation 93-5 Implementation Plan*, Commitment 5.4.3.4.d, "Letter reporting completion of vapor sampling of all single-shell tanks (SSTs)."

Description of what constitutes completion of the commitment:

Complete vapor sampling of all SSTs for the presence of organic solvent. DOE-RL letter to Defense Nuclear Safety Board (DNFSB) reporting completion of vapor sampling of all SSTs.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Submit Draft Waste Information Requirements Document (WIRD) to Ecology for FY 2001 (M-44-13D)

Schedule Date: 6/30/00

TPA Due Date: 6/30/00

WBS Number: 1.01.01.01.01.02.02.06

Milestone Control Number: T01-00-103

TPA #: M-44-13D

Milestone Type	Deliverables	Addressed to
[X] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, Commitment M-44-13D, "Submit Draft WIRD to Ecology for FY 2001."

The Tank Waste Remediation System (TWRS) information needs are defined in a Waste Information Requirements Document (WIRD) submitted annually to the Washington State Department of Ecology (Ecology). The document will specify annual characterization deliverables to support safe storage, retrieval, and disposal of tank waste. The Draft WIRD will identify the tank waste behavior information needs for subsequent years. The Draft WIRD will describe characterization deliverables to be issued for each year based on existing Tri-Party Agreement milestones and will specify the content of each deliverable which is subject to Ecology approval.

That portion of the Draft WIRD which identifies waste characterization activities outside the scope of the Tri-Party Agreement shall not be subject to Ecology approval or concurrence, but rather will be included for information purposes only.

The content and format for the Draft WIRD will continue to be developed through negotiations among DOE-RL, Ecology, and the Contractor, and will include but not be limited to the following: Introduction; Background; Scope; Review and summary of changes to previous WIRD edition; TWRS program drivers requiring characterization information; TWRS issues with characterization information requirements; Information requirements matrix; Description of Characterization Project deliverables; Acceptance criteria; and References.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

T01-00-103 (continued)

Title: Submit Draft Waste Information Requirements Document (WIRD) to Ecology for FY 2001 (M-44-13D)

Description of what constitutes completion of the commitment:

The Draft WIRD containing the elements described above will be submitted to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by June 15, 2000. DOE-RL will provide comment for Contractor resolution in a manner sufficiently timely for the Contractor to resubmit the Draft WIRD to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by June 29, 2000. As possible, verbal coordination among RL, Ecology, and Contractor will occur during development of the Draft WIRD and prior to June 15, 2000. Delivery of the Draft WIRD to Ecology by June 30, 2000 shall be the responsibility of DOE-RL, not the Contractor. The dates herein described shall be subject to negotiation between DOE-RL and the Contractor.

The Draft WIRD will meet the quality standards as defined in the latest revision of HNF-SD-WM-PROC-021, TWRS Process Engineering Instruction Manual, and will include the elements described above.

The Draft WIRD will be considered complete when DOE-RL comments have been resolved and the document redelivered to Fluor Daniel Hanford Inc. for delivery to DOE-RL by 6/15/00. DOE-RL shall ensure timely comment to permit Contractor resolution by dates stated, or otherwise negotiated, as above.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Submit Final Waste Information Requirements Document (WIRD) for FY 2001 to Ecology (M-44-14D)

Schedule Date: 8/31/00

TPA Due Date: 8/31/00

WBS Number: 1.01.01.01.01.02.02.06

Milestone Control Number: T01-00-104

TPA #: M-44-14D

Milestone Type	Deliverables	Addressed to
[X] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, commitment M-44-14D, "Submit Final WIRD for FY 2001 to Ecology."

The Tank Waste Remediation System (TWRS) information needs are defined in a Waste Information Requirements Document (WIRD) submitted annually to the Washington State Department of Ecology (Ecology). The document will specify annual characterization deliverables to support safe storage, retrieval, and disposal of tank waste. The Final WIRD will identify for approval the tank waste behavior information needs for subsequent years. The Final WIRD will describe characterization deliverables to be issued for each year based on existing Tri-Party Agreement milestones and will specify the content of each deliverable which is subject to Ecology approval.

That portion of the Final WIRD which identifies waste characterization activities outside the scope of the Tri-Party Agreement shall not be subject to Ecology approval or concurrence, but rather will be included for information purposes only.

The content and format for the Final WIRD will continue to be developed through negotiations among DOE-RL, Ecology, and the Contractor. The Final WIRD will include but not be limited to the following: Introduction, Background, Scope, Summary report of progress for FY 2000, Review and summary of changes to previous WIRD edition, TWRS program drivers requiring characterization information, TWRS issues with characterization information requirements, Information requirements matrix, Description of Characterization Project deliverables, Acceptance criteria, and References.

T01-00-104 (continued)
Title: Submit Final Waste Information Requirements Document (WIRD) for FY 2001 to Ecology (M-44-14D)

Description of what constitutes completion of the commitment:

The Final WIRD containing the elements described above will be submitted to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by August 23, 2000 and will include resolution of additional DOE-RL and/or Ecology comments on the Draft WIRD submitted in June 2000. Comments on the Draft WIRD will be delivered to the Contractor by DOE-RL and Ecology by July 30, 2000 to provide time for the Contractor to resolve comments and submit the Final WIRD to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by August 23, 2000. Delivery of the Final WIRD to Ecology by August 31, 2000 shall be the responsibility of DOE-RL, not the Contractor. The dates herein described shall be subject to negotiation between DOE-RL and the Contractor.

The Final WIRD will meet the quality standards as defined in the latest revision of HNF-SD-WM-PROC-021, TWRS Process Engineering Instruction Manual, and will include the elements described above.

The Final WIRD will be considered complete when DOE-RL and/or Ecology comments on the Draft WIRD have been resolved and the document delivered to Fluor Daniel Hanford Inc. for delivery to DOE-RL by August 23, 2000. DOE-RL and Ecology shall ensure timely comment to permit Contractor resolution by dates stated, or otherwise negotiated, as above.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Issue Characterization Deliverables Consistent with Waste Information Requirements Document (WIRD) Developed for FY 2000 (M-44-15D)

Schedule Date: 9/29/00

TPA Date: 9/30/00

WBS Number: 1.01.01.02.04.07.01

Milestone Control Number: T01-00-105

TPA #: M-44-15D

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, commitment M-44-15D, "Issue Characterization deliverables consistent with Waste Information Requirements Document (WIRD) developed for FY 2000."

Description of what constitutes completion of the commitment:

Provide a summary report reflecting FY 2000 Characterization deliverables identified in the most current version of the WIRD and the extent to which each of those deliverables were completed. The report will identify specific issues and/or tanks to which deliverables were applied. Provide this summary information in a letter report to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by September 30, 2000.

Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of Characterization deliverables.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Input of Characterization Information for HLW Tanks for which sampling and analysis were completed per the Waste Information Requirements Document (WIRD) into electronic database. Off-site access to the database containing Tank Waste Characterization Information will be made available to EPA and Ecology. (M-44-16D)

Schedule Date: 9/29/00

TPA Date: 9/30/00

WBS Number: 1.01.01.02.04.07.05

Milestone Control Number: T01-00-106

TPA #: M-44-16D

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, commitment M-44-16D, "Complete input of Characterization Information for HLW tanks for which sampling and analysis were completed per the FY 2000 WIRD into electronic database. Off-site access to the database containing tank waste characterization information will be made available to the EPA and Ecology."

Description of what constitutes completion of the commitment:

Provide a letter addressing loading of FY 2000 Characterization information, identified in the most current version of the WIRD into the Tank Characterization Database, accessible to the U.S. Environmental Protection Agency (EPA) and Washington State Department of Ecology (Ecology) via the internet. Provide this letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by September 30, 2000.

Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of information entry into electronic databases.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Contractor Letter to DOE-RL Reporting Completion of Vapor Sampling of All Double-Shell Tanks (DSTs) (DNFSB 93-5, 5.4.3.4.f)

Schedule Date: 11/30/00

WBS Number: 1.01.01.02.04.06.01

Milestone Control Number: T01-01-100

DNFSB #: 93-5, 5.4.3.4f

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

DOE/RL-94-0001, Rev. 1, *Recommendation 93-5 Implementation Plan*, Commitment 5.4.3.4.f, "Letter reporting completion of vapor sampling of all double-shell tanks (DSTs)."

Description of what constitutes completion of the commitment:

Complete vapor sampling of all DSTs for the presence of organic solvent. Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of vapor sampling of all DSTs.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: DOE-RL Letter to DNFSB Reporting Completion of Vapor Sampling of All Double-Shell Tanks (DSTs) (DNFSB 93-5, 5.4.3.4.f)

Schedule / DNFSB Date: 12/31/00

WBS Number: 1.01.01.02.04.06.01

Milestone Control Number: T01-01-101

DNFSB #: 93-5, 5.4.3.4f

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[X] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

DOE/RL-94-0001, Rev. 1, *Recommendation 93-5 Implementation Plan*, Commitment 5.4.3.4.f,? Letter reporting completion of vapor sampling of all double-shell tanks (DSTs)."

Description of what constitutes completion of the commitment:

Complete vapor sampling of all DSTs for the presence of organic solvent. DOE-RL letter to DNFSB reporting completion of vapor sampling of all DSTs.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Submit Draft Waste Information Requirements Document (WIRD) to Ecology for FY 2002 (M-44-13E)

Schedule Date: 6/29/01

TPA Due Date: 6/30/01

WBS Number: 1.01.01.01.01.02.02.06

Milestone Control Number: T01-01-106

TPA #: M-44-13E

Milestone Type	Deliverables	Addressed to
[X] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, Commitment M-44-13E, "Submit Draft WIRD to Ecology for FY 2002."

The Tank Waste Remediation System (TWRS) information needs are defined in a Waste Information Requirements Document (WIRD) submitted annually to the Washington State Department of Ecology (Ecology). The document will specify annual characterization deliverables to support safe storage, retrieval, and disposal of tank waste. The Draft WIRD will identify the tank waste behavior information needs for subsequent years. The Draft WIRD will describe characterization deliverables to be issued for each year based on existing Tri-Party Agreement milestones and will specify the content of each deliverable which is subject to Ecology approval.

That portion of the Draft WIRD which identifies waste characterization activities outside the scope of the Tri-Party Agreement shall not be subject to Ecology approval or concurrence, but rather will be included for information purposes only.

The content and format for the Draft WIRD will continue to be developed through negotiations among DOE-RL, Ecology, and the Contractor, and will include but not be limited to the following: Introduction; Background; Scope; Review and summary of changes to previous WIRD edition; TWRS program drivers requiring characterization information; TWRS issues with characterization information requirements; Information requirements matrix; Description of Characterization Project deliverables; Acceptance criteria; and References.

T01-01-106 (continued)

Title: Submit Draft Waste Information Requirements Document (WIRD) to Ecology for FY 2002 (M-44-13E)

Description of what constitutes completion of the commitment:

The Draft WIRD containing the elements described above will be submitted to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by June 15, 2001. DOE-RL will provide comment for Contractor resolution in a manner sufficiently timely for the Contractor to resubmit the Draft WIRD to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by June 29, 2001. As possible, verbal coordination among RL, Ecology, and Contractor will occur during development of the Draft WIRD and prior to June 15, 2001. Delivery of the Draft WIRD to Ecology by June 30, 2001 shall be the responsibility of DOE-RL, not the Contractor. The dates herein described shall be subject to negotiation between DOE-RL and the Contractor.

The Draft WIRD will meet the quality standards as defined in the latest revision of HNF-SD-WM-PROC-021, TWRS Process Engineering Instruction Manual, and will include the elements described above.

The Draft WIRD will be considered complete when DOE-RL comments have been resolved and the document redelivered to Fluor Daniel Hanford Inc. for delivery to DOE-RL by 6/15/01. DOE-RL shall ensure timely comment to permit Contractor resolution by dates stated, or otherwise negotiated, as above.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: TIP - Deployment Decision for Nested, Fixed-Depth Sampler

Schedule Date: 8/30/01

WBS Number: 1.01.01.01.01.03.02.01

Control Number: T01-01-108

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete a Systems Engineering based assessment in accordance with PHMC Team procedures to document the decision on whether to incorporate the Nested, Fixed-Depth Sampler System into the Characterization Project baseline for deployment in a Hanford, TWRS Phase 1 Privatization waste feed source tank or feed staging tank.

Description of what constitutes completion of the commitment:

(1) Complete revisions to Alternatives Generation and Analysis (Reference 1) to incorporate development and cold demonstration results of the Nested Fixed Depth Sampler System co-funded by EM-30 and EM-50.
(2) Prepare a decision plan that will produce a decision of whether to proceed with deployment of the Nested Fixed Depth Sampler to either supplement or replace the current grab sample baseline approach.
(3) Implement the plan upon approval of the decision-maker (TBD), and concurrence from DOE-RL.
(4) Complete the decision analysis.

Reference:
R. D. Claghorn, J. D. Galbraith, and T. B. Salzano, 1997, "Alternatives Generation and Analysis for the Phase 1 Intermediate Waste Feed Staging System Design Requirements," HNF-SD-TWR-AGA-001, Rev. 1, prepared by Numatec Hanford Corporation for Fluor Daniel Hanford, Inc., Richland, Washington.

Title: Submit Final Waste Information Requirements Document (WIRD) for FY 2002 to Ecology (M-44-14E)

Schedule Date: 8/31/01

TPA Due Date: 8/31/01

WBS Number: 1.01.01.01.01.02.02.06

Milestone Control Number: T01-01-107

TPA #: M-44-14E

Milestone Type	Deliverables	Addressed to
[X] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, commitment M-44-14E, "Submit Final WIRD for FY 2002 to Ecology."

The Tank Waste Remediation System (TWRS) information needs are defined in a Waste Information Requirements Document (WIRD) submitted annually to the Washington State Department of Ecology (Ecology). The document will specify annual characterization deliverables to support safe storage, retrieval, and disposal of tank waste. The Final WIRD will identify for approval the tank waste behavior information needs for subsequent years. The Final WIRD will describe characterization deliverables to be issued for each year based on existing Tri-Party Agreement milestones and will specify the content of each deliverable which is subject to Ecology approval.

That portion of the Final WIRD which identifies waste characterization activities outside the scope of the Tri-Party Agreement shall not be subject to Ecology approval or concurrence, but rather will be included for information purposes only.

The content and format for the Final WIRD will continue to be developed through negotiations among DOE-RL, Ecology, and the Contractor. The Final WIRD will include but not be limited to the following: Introduction, Background, Scope, Summary report of progress for FY 2001, Review and summary of changes to previous WIRD edition, TWRS program drivers requiring characterization information, TWRS issues with characterization information requirements, Information requirements matrix, Description of Characterization Project deliverables, Acceptance criteria, and References.

T01-01-107 (continued)
Title: Submit Final Waste Information Requirements Document (WIRD) for FY 2002 to Ecology (M-44-14E)

Description of what constitutes completion of the commitment:

The Final WIRD containing the elements described above will be submitted to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by August 23, 2001 and will include resolution of additional DOE-RL and/or Ecology comments on the Draft WIRD submitted in June 2001. Comments on the Draft WIRD will be delivered to the Contractor by DOE-RL and Ecology by July 30, 2001 to provide time for the Contractor to resolve comments and submit the Final WIRD to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by August 23, 2001. Delivery of the Final WIRD to Ecology by August 31, 2001 shall be the responsibility of DOE-RL, not the Contractor. The dates herein described shall be subject to negotiation between DOE-RL and the Contractor.

The Final WIRD will meet the quality standards as defined in the latest revision of HNF-SD-WM-PROC-021, TWRS Process Engineering Instruction Manual, and will include the elements described above.

The Final WIRD will be considered complete when DOE-RL and/or Ecology comments on the Draft WIRD have been resolved and the document delivered to Fluor Daniel Hanford Inc. for delivery to DOE-RL by August 23, 2001. DOE-RL and Ecology shall ensure timely comment to permit Contractor resolution by dates stated, or otherwise negotiated, as above.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Issue Characterization Deliverables Consistent with Waste Information Requirements Document (WIRD) Developed for FY 2001 (M-44-15E)

Schedule Date: 9/28/01

TPA Date: 9/30/01

WBS Number: 1.01.01.02.04.07.01

Milestone Control Number: T01-01-102

TPA #: M-44-15E

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, commitment M-44-15E, "Issue Characterization deliverables consistent with Waste Information Requirements Document (WIRD) developed for FY 2001."

Description of what constitutes completion of the commitment:

Provide a summary report reflecting FY 2001 Characterization deliverables identified in the most current version of the WIRD and the extent to which each of those deliverables were completed. The report will identify specific issues and/or tanks to which deliverables were applied. Provide this summary information in a letter report to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by September 30, 2001.

Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of Characterization deliverables.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Input of Characterization Information for HLW Tanks for which sampling and analysis were completed per the Waste Information Requirements Document (WIRD) into electronic database. Off-site access to the database containing Tank Waste Characterization Information will be made available to EPA and Ecology. (M-44-16E)

Schedule Date: 9/28/01

TPA Date: 9/30/01

WBS Number: 1.01.01.02.04.07.05

Milestone Control Number: T01-01-103

TPA #: M-44-16E

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, commitment M-44-16E, "Complete input of Characterization Information for HLW tanks for which sampling and analysis were completed per the FY 2001 WIRD into electronic database. Off-site access to the database containing tank waste characterization information will be made available to the EPA and Ecology."

Description of what constitutes completion of the commitment:

Provide a letter addressing loading of FY 2001 Characterization information, identified in the most current version of the WIRD into the Tank Characterization Database, accessible to the U.S. Environmental Protection Agency (EPA) and Washington State Department of Ecology (Ecology) via the internet. Provide this letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by September 30, 2001.

Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of information entry into electronic databases.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Issue Characterization Deliverables Consistent with Waste Information Requirements Document (WIRD) Developed for FY 2002 (M-44-15F)

Schedule/TPA Date: 9/30/02

WBS Number: 1.01.01.02.04.07.01

Milestone Control Number: T01-02-200

TPA #: M-44-15F

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, commitment M-44-15F, "Issue Characterization deliverables consistent with Waste Information Requirements Document (WIRD) developed for FY 2002."

Description of what constitutes completion of the commitment:

Provide a summary report reflecting FY 2002 Characterization deliverables identified in the most current version of the WIRD and the extent to which each of those deliverables were completed. The report will identify specific issues and/or tanks to which deliverables were applied. Provide this summary information in a letter report to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by September 30, 2002.

Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of Characterization deliverables.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Input of Characterization Information for HLW Tanks for which sampling and analysis were completed per the Waste Information Requirements Document (WIRD) into electronic database. Off-site access to the database containing Tank Waste Characterization Information will be made available to EPA and Ecology. (M-44-16F)

Schedule / TPA Date: 9/30/02

WBS Number: 1.01.01.02.04.07.05

Milestone Control Number: T01-02-201

TPA #: M-44-16F

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, commitment M-44-16F, "Complete input of Characterization Information for HLW tanks for which sampling and analysis were completed per the FY 2002 WIRD into electronic database. Off-site access to the database containing tank waste characterization information will be made available to the EPA and Ecology."

Description of what constitutes completion of the commitment:

Provide a letter addressing loading of FY 2002 Characterization information, identified in the most current version of the WIRD into the Tank Characterization Database, accessible to the U.S. Environmental Protection Agency (EPA) and Washington State Department of Ecology (Ecology) via the internet. Provide this letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by September 30, 2002.

Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of information entry into electronic databases.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Delivery of Information Requirements as Identified in the Annually Submitted Waste Information Requirements Document (WIRD) (M-44-00A)

Schedule/TPA Date: 9/30/02

WBS Number: 1.01.01.02.04.07.01

Milestone Control Number: T01-01-104

TPA #: M-44-00A

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

Hanford Federal Facility Agreement and Consent Order change control form M-44-97-03, commitment M-44-00A, "Complete delivery of information requirements as identified in the annually submitted WIRD."

Description of what constitutes completion of the commitment:

Provide a summary report reflecting all Characterization Project deliverables identified in the most current version of the WIRD. It is assumed that this version of the WIRD will represent completion of the Characterization Project in FY 2001. The content and format of this final report will be negotiated among DOE-RL, Ecology, and the Contractor. Provide this summary report to Fluor Daniel Hanford Inc. for their delivery to DOE-RL by September 30, 2001.

Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of Characterization Project deliverables.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Contractor Letter to DOE-RL Reporting Completion of Core Sampling of All Tanks

Schedule Date: 11/30/02

WBS Number: 1.01.01.02.04.06.01

Milestone Control Number: T01-03-300

DNFSB #: 93-5, 5.6.3.1j

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

DOE/RL-94-0001, Rev. 1, *Recommendation 93-5 Implementation Plan*, Commitment 5.6.3.1.j, "Letter reporting completion of core sampling of all tanks." Minimum of two cores per tank for those tanks requiring cores (assumes no repeat sampling). Any cores taken since May 1989 meet this commitment.

Description of what constitutes completion of the commitment:

Obtain a minimum of two cores per tank in accordance with an approved tank sampling and analysis plan (TSAP). Contractor letter to Fluor Daniel Hanford Inc. for their delivery to DOE-RL reporting completion of core sampling of all tanks (assumes no repeat sampling).

NOTE: The U. S. Department of Energy, Richland Operations Office (DOE-RL) plans are to sample and analyze condensed phase waste from a sufficient number of the 177 Hanford Site waste tanks to support privatization phase 1 and to resolve all safety issues except flammable gas. Sufficient sampling will be conducted to provide an adequate understanding of flammable gas retention.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: DOE-RL Letter to DNFSB Reporting Completion of Core Sampling of All Tanks (DNFSB 93-5, 5.6.3.1.j)

Schedule/DNFSB Date: 12/31/02

WBS Number: 1.01.01.02.04.06.01

Milestone Control Number: T01-03-301

DNFSB #: 93-5, 5.6.3.1j

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[X] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Milestone Description:

DOE/RL-94-0001, Rev. 1, *Recommendation 93-5 Implementation Plan*, Commitment 5.6.3.1.j, "Letter reporting completion of core sampling of all tanks." Minimum of two cores per tank for those tanks requiring cores (assumes no repeat sampling). Any cores taken since May 1989 meet this commitment.

Description of what constitutes completion of the commitment:

Obtain a minimum of two cores per tank in accordance with an approved tank sampling and analysis plan (TSAP). DOE-RL letter to DNFSB reporting completion of core sampling of all tanks (assumes no repeat sampling).

NOTE: The U. S. Department of Energy, Richland Operations Office (DOE-RL) plans are to sample and analyze condensed phase waste from a sufficient number of the 177 Hanford Site waste tanks to support privatization phase 1 and to resolve all safety issues except flammable gas. Sufficient sampling will be conducted to provide an adequate understanding of flammable gas retention.

B.1.4.1 Project Priority List

TANK WASTE REMEDIATION SYSTEM
FY 1999 - 2007 MYWP PRIORITY LIST BY PBS

11/23/98 'FY 99 MYWP

EXCEL: 10YRPR49.XLS

FDH 11/24/98 4:02 PM

UAS	PBS #	ADS	"UNIT OF ANALYSIS"	FY 99 TOTAL ESCAL'D	FY 00 TOTAL ESCAL'D	FY 01 TOTAL ESCAL'D	FY 02 TOTAL ESCAL'D	FY 03 TOTAL ESCAL'D	FY 04 TOTAL ESCAL'D	FY 05 TOTAL ESCAL'D	FY 06 TOTAL ESCAL'D	FY 07 TOTAL ESCAL'D
TW01												
133	TW01	1130 - 0	TWRS CHAR'ZN -SUPPT TO MIN SAFE OPS	1,518	2,783	2,383	2,209	2,180	2,228	2,668	2,576	2,556
139	TW01	1130 - 0	TWRS CHAR'ZN - SUPPT TO INTERIM STABILIZ'N	500	500	522	533	545	557	-	-	-
135	TW01	1130 - 0	TWRS CHAR'ZN - SUPPORT TO FLAMMABLE GAS	162	303	255	236	112	90	76	73	73
147	TW01	1130 - 0	TWRS CHAR'ZN - SUPPORT TO EVAPORATOR	1,631	552	2,561	2,373	1,127	906	765	739	732
			SUBTOTAL - MIN SAFE	**3,811**	**4,138**	**5,720**	**5,350**	**3,964**	**3,780**	**3,510**	**3,388**	**3,361**
151	TW01	1130 - 0	TWRS CHAR'ZN SUPPT TO RL	175	145	274	255	121	97	82	79	78
			SUBTOTAL - ESSENTIAL SERVICES	**3,986**	**4,283**	**5,995**	**5,605**	**4,085**	**3,877**	**3,592**	**3,467**	**3,440**
140	TW01	1130 - 0	TWRS CHAR'ZN - SUPPORT TO SAFETY SCREENING	16,898	13,840	11,928	10,724	10,542	2,432	-	-	-
			SUBTOTAL -URGENT RISK- SAFETY	**20,884**	**18,123**	**17,923**	**16,329**	**14,627**	**6,309**	**3,592**	**3,467**	**3,440**
139	TW01	1130 - 0	TWRS CHAR'ZN - SUPPT TO INTERIM STABILIZ'N	3,640	1,782	5,979	5,491	2,315	1,742	-	-	-
			SUBTOTAL -URGENT RISK-TANK PUMPING	**24,524**	**19,905**	**23,902**	**21,820**	**16,942**	**8,051**	**3,592**	**3,467**	**3,440**
168	TW01	1130 - 0	TWRS CHAR'ZN - SUPPT TO RETRIEVAL / PRIVATIZATION	16,260	20,032	25,532	23,658	11,233	14,600	15,544	15,002	14,882
			SUBTOTAL: URGENT RISK: PRIV'ZN	**40,784**	**39,937**	**49,434**	**45,478**	**28,176**	**22,651**	**19,136**	**18,469**	**18,321**
			FY 1999 / 2000 TARGET	**40,784**	**39,937**							
NEW	TW01	1130 - 0	TWRS CHAR'ZN SUPPORT TO IMUSTS	-	736	4,174	3,199	-	-	-	-	-
651	TW01	1130 - 0	TWRS CHAR'ZN - SUPPORT TO SAFETY SCREENING	1,400	-	-	-	-	-	-	-	-
613	TW01	1130 - 0	TWRS CHAR'ZN SUPPT TO AN-107 (2 Samples)-RL/WIT REG.DQO	1,600	2,002	-	-	-	-	-	-	-
			SUBTOTAL - EM30 COMPLIANCE	**43,784**	**42,675**							
605	TW01	1130 - 0	TWRS CHAR'ZN - SUPP TO SAFETY SCREENING - INCREMENT 1	-	8,640	-	-	-	-	-	-	-
606	TW01	1130 - 0	TWRS CHAR'ZN SUPPT TO VAPOR PROGRAM (REG DQO)	-	3,393	-	-	-	-	-	-	-
607	TW01	1130 - 0	TWRS CHAR'ZN SUPPT TO RETRVL AE CHAR. SAMP'G (GRAB&VA	3,300	-	-	-	-	-	-	-	-
611	TW01	1130 - 0	TWRS CHAR'ZN SUPPT TO RETVL:REG. DW / DQO REQ'TS	2,500	1,140	-	-	-	-	-	-	-
474	TW01	1130 - 0	TWRS CHAR'ZN SUPPT TO TPA M-44/WIRD	-	-	-	-	-	-	-	-	-
418	TW01	1130 - 0	TWRS CHAR'ZN SUPPORT TO IMUSTS	1,400	1,724	-	-	-	-	-	-	-
646	TW01	1130 - 0	TWRS CHAR'ZN SUPPT - EQUIP'T ENGR. UPGRADES	2,800	2,800	2,922	3,199	-	-	-	-	-
647	TW01	1130 - 0	TWRS CHAR'ZN SUPPT - LLCE WILL REMAIN IN STORAGE	1,300	1,300	1,357	3,199	-	-	-	-	-
648	TW01	1130 - 0	TWRS CHAR'ZN SUPPT - UPGRADE OF DATA MANAGEMENT	1,100	1,100	1,148	1,066	-	-	-	-	-
649	TW01	1130 - 0	TWRS CHAR'ZN SUPPT - BEST BASIS INVENTORY IMPROV'TS	4,800	4,800	5,009	3,199	-	-	-	-	-
			TOTAL TWRS REQUIREMENTS (EM-30)	**60,984**	**67,572**	**64,042**	**59,342**	**28,176**	**22,651**	**19,136**	**18,469**	**18,321**

B.1.4.2 Life Cycle Cost Baseline by PBS

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.1										
PBS NO:	RL-TW01										
PBS TITLE:	TANK WASTE CHARACTERIZATION										SUBTOT
FUND TYPE	*ACTUAL* FY1997	*ACTUAL* FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997-FY2006
OPERATING EXPENSE	54,394	42,431	40,784	39,836	61,375	55,646	25,852	20,336	16,810	15,875	373,339
CENRTC	503	-	-	-	-	-	-	-	-	-	503
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*											
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	837	2,667	3,696	2,324	2,315	2,326	2,594	16,759
TOTAL BCWS/PMB[1]	54,897	42,431	40,784	40,673	64,042	59,342	28,176	22,651	19,136	18,469	390,601
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-
TOTAL	54,897	42,431	40,784	40,673	64,042	59,342	28,176	22,651	19,136	18,469	390,601

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2]Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.1
PBS NO:	RL-TW01
PBS TITLE:	TANK WASTE CHARACTERIZATION

FUND TYPE	FY2007	FY2008	FY2009	FY2010	FY2011-FY2015	FY2016-FY2020	FY2021-FY2025	FY2026-FY2030	FY2031-FY2035	FY2036 FY2040	FY2041-FY2045	FY2046 FY2050	TOTAL FY1997-FY2050
OPERATING EXPENSE	15,409	15,363	13,787	13,317	63,727	63,750	50,976	-	-	-	-	-	609,668
CENRTC	-	-	-	-	-	-	-	-	-	-	-	-	503
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*													
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-	-	-
Escalation	2,912	3,305	3,335	3,585	22,654	32,596	33,974	-	-	-	-	-	119,120
TOTAL BCWS/PMB[1]	18,321	18,668	17,122	16,902	86,381	96,346	84,950	-	-	-	-	-	729,291
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	18,321	18,668	17,122	16,902	86,381	96,346	84,950	-	-	-	-	-	729,291

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2]Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

HNF-SP-1230 Rev. 1

TW01-75

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.1																	
RL-TW01																	
WASTE CHARACTERIZATION																	
1.1.1.1.1.1	Chart'zn Proj Mgmt	OE	5,616	5,516	6,091	6,237	1,404	1,436	1,461	1,486	29,246	62,478	1,525	1,559	1,593	1,628	6,306
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		5,616	5,516	6,091	6,237	1,404	1,436	1,461	1,486	29,246	62,478	1,525	1,559	1,593	1,628	6,306
1.1.1.1.1.2	Chart'zn Data Develop	OE	7,008	6,305	9,814	10,157	3,865	3,880	3,514	3,399	47,941	123,929	3,487	3,564	3,642	3,723	14,416
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		7,008	6,305	9,814	10,157	3,865	3,880	3,514	3,399	47,941	123,929	3,487	3,564	3,642	3,723	14,416
1.1.1.1.1.3	Sampling Equipment	OE	4,533	4,570	8,112	8,102	2,663	2,311	2,352	2,394	35,036	58,983	2,456	2,509	1,008	1,026	7,000
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		4,533	4,570	8,112	8,102	2,663	2,311	2,352	2,394	35,036	58,983	2,456	2,509	1,008	1,026	7,000
1.1.1.1.1.4	Acq Samples & Meas'mt	OE	14,793	12,322	25,063	21,548	12,452	7,214	3,522	3,332	100,246	108,215	2,490	2,473	1,927	1,079	7,969
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		14,793	12,322	25,063	21,548	12,452	7,214	3,522	3,332	100,246	108,215	2,490	2,473	1,927	1,079	7,969
1.1.1.1.1.5	Sample Analysis	OE	8,834	11,960	14,963	13,298	7,793	7,810	8,287	7,858	80,803	278,359	8,362	8,563	8,950	9,447	35,323
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		8,834	11,960	14,963	13,298	7,793	7,810	8,287	7,858	80,803	278,359	8,362	8,563	8,950	9,447	35,323
1.1.1 WASTE CHARACTERIZ'N		OE	40,784	40,673	64,042	59,342	28,176	22,651	19,136	18,469	293,273	631,963	18,321	18,668	17,122	16,902	71,014
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL		40,784	40,673	64,042	59,342	28,176	22,651	19,136	18,469	293,273	631,963	18,321	18,668	17,122	16,902	71,014

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/98
07:35 AM

		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.1														
RL-TW01														
WASTE CHARACTERIZATION														
1.1.1.1.1.1	Chart'zn Proj Mgmt	OE	8,689	9,695	8,542	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		8,689	9,695	8,542	0	0	0	0	0	0	0	0	0
1.1.1.1.1.2	Chart'zn Data Develop	OE	19,866	22,168	19,538	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		19,866	22,168	19,538	0	0	0	0	0	0	0	0	0
1.1.1.1.1.3	Sampling Equipment	OE	5,468	6,103	5,376	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		5,468	6,103	5,376	0	0	0	0	0	0	0	0	0
1.1.1.1.1.4	Acq Samples & Meas'mt	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.1.1.1.5	Sample Analysis	OE	52,358	58,380	51,494	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		52,358	58,380	51,494	0	0	0	0	0	0	0	0	0
1.1.1 WASTE CHARACTERIZ'N		OE	86,381	96,346	84,950	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL		86,381	96,346	84,950	0	0	0	0	0	0	0	0	0

B.1.4.3 Life Cycle Budget Authority by PBS

EXHIBIT 4a

TANK WASTE REMEDIATION SYSTEM
BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.1	
PBS NO:	RL-TW01	
PBS TITLE:	TANK WASTE CHARACTERIZATION	
FUND TYPE	TARGET B/A FY1998	PRESIDENT'S BUDGET PLUS CARRYOVER[1] FY1999
OPERATING EXPENSE	42,431	40,784
CENRTC	-	-
GENERAL PLANT PROJECT	-	-
LINE ITEM *(List Each One)*		
0	-	-
0	-	-
0	-	-
0	-	-
0	-	-
0	-	-
Subtotal Line Items	-	-
TOTAL NEW B/A	42,431	40,784
ESTIMATED FY 1998 CARRYOVER		205
TOTAL NEW B/A+CARRYOVER	42,431	40,989

[1]Estimated Carryover Is NOT Included In Cost Baseline; Change Request For Actual Carryover Submitted After September 30, 1998.

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

11/24/98 09/24/98 UPDATE

10:28 AM

PBS - ADS

PBS TITLE	F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A) *	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2066 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
TW01																		
1.1.1 WASTE CHARACTERIZATION	EX	54,394	42,431	40,989	40,673	64,042	59,342	28,176	22,651	19,136	18,469	390,303	728,993	18,321	18,668	17,122	16,902	71,014
	CE	503	0	0	0	0	0	0	0	0	0	503	503	0	0	0	0	0
	TOTAL	54,897	42,431	40,989	40,673	64,042	59,342	28,176	22,651	19,136	18,469	390,806	729,496	18,321	18,668	17,122	16,902	71,014

* FY 1999 INCLUDES CARRYOVER OF $205

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

11/24/98 | 09/24/98 UPDATE

10:29 AM

PBS - AD9

PBS TITLE	F/T	FY 2011-FY 2015 B/A PROFILE (B/A)	FY 2016-FY 2020 B/A PROFILE (B/A)	FY 2021-FY 2025 B/A PROFILE (B/A)	FY 2026-FY 2030 B/A PROFILE (B/A)	FY 2031-FY 2035 B/A PROFILE (B/A)	FY 2036-FY 2040 B/A PROFILE (B/A)	FY 2041-FY 2045 B/A PROFILE (B/A)	FY 2046-FY 2050 B/A PROFILE (B/A)	FY 2051-FY 2055 B/A PROFILE (B/A)	FY 2056-FY 2060 B/A PROFIL (B/A)	FY 2061-FY 2065 B/A PROFILE (B/A)	FY 2066-FY 2066 B/A PROFILE (B/A)
TW01													
1.1.1 WASTE CHARACTERIZATION	EX	86,381	96,346	84,950	0	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	86,381	96,346	84,950	0	0	0	0	0	0	0	0	0

B.1.4.4 Project (PBS) Contractor Split

TANK WASTE REMEDIATION SYSTEM
FY 1999 CONTRACTOR FUNDING SPLIT (NEW BA ONLY)

PBS	DOE-RL/ RL-PNNL	NATIONAL LABS	TOTAL
TW01	$ 175	$ -	$ 175

REFLECTS FY 1999 NEW BA ONLY

B.2 Tank Safety Issue Resolution (RL-TW02)
B.2.1.0 Tank Safety Issue Resolution Technical Baseline
B.2.1.1 Tank Safety Issue Resolution Project Mission TW02-1
B.2.1.2 Tank Safety Issue Resolution End Point Targets from Hanford Strategic Plan TW02-1
B.2.1.3 Tank Safety Issue Resolution Major Facilities TW02-1
B.2.1.4 Drivers for Tank Safety Issue Resolution TW02-8
B.2.2.0 Tank Safety Issue Resolution Work Breakdown Structure (WBS)
B.2.2.1 Tank Safety Issue Resolution WBS Hierarchy TW02-9
B.2.2.2 Tank Safety Issue Resolution WBS Dictionary TW02-9
B.2.3.0 Schedule Baseline
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B.2.3.2 Execution Year Project Master Baseline Schedule TW02-16
B.2.3.3 Milestone List TW02-19
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B.2.4.2 Life Cycle Cost Baseline by PBS TW02-33
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B.2 Tank Safety Issue Resolution (RL-TW02)

B.2.1.0 Tank Safety Issue Resolution Technical Baseline

This section describes the technical baseline for this project. It identifies the mission, the end point targets, the site major facilities, technical logic, functions, requirements, and forecasts for this project.

B.2.1.1 Tank Safety Issue Resolution Mission

The purpose of this project is to provide an adequate, comprehensive, and reliable safety basis for the management and storage of waste by Tank Waste Remediation System (TWRS). This will be accomplished by developing and maintaining an integrated Authorization Basis (AB) and by resolving outstanding safety issues to ensure safe storage of waste.

The Tank Safety Issue Resolution Project was established to address hazards associated with the storage of radioactive mixed waste in the large underground storage tanks at the Hanford Site. Safety issues have been raised for both single-shell tanks (SSTs) and double-shell tanks (DSTs) with regard to flammable gas, organic complexants, organic solvents, nuclear criticality, and high heat. In response to Public Law 101-510, Section 3137, "Safety Measures for Waste Tanks at Hanford Nuclear Reservation", tanks of the highest concern have been placed on the Watch List. This project develops the technical basis for closure of the Unreviewed Safety Questions (USQ) and removal of all tanks from the Watch List. It also supports upgrades to the Final Safety Analysis Report, which is the authorization basis for monitoring for safe operations of the tank farms and continued safe storage of the tank contents.

B.2.1.2 Tank Safety Issue Resolution End Point Targets from Hanford Strategic Plan

-None-

B.2.1.3 Tank Safety Issue Resolution Major Facilities

This Project is responsible for one or more sub-systems of the Major Facility(ies) described below. Further functional and architectural decomposition will yield hardware unique to this project. This incongruity in the MYWP report is a direct result of reporting technical baseline information at the major facility level while attempting to create MYWPs for PBS level TWRS projects.

B.2.1.3.1 Tank Farm System Facility

B.2.1.3.1.1 Tank Farm System Facility Description

The Tank Farm System consists of the new and existing equipment required to operate the SST farms and DST farms for the entire tank farm mission. The Tank Farm System is comprised of the following systems located in the 200 Area Central Plateau of the Hanford Site:

- Double Shell Tanks (DSTs) grouped as follows:
  (a) 25 tanks in five separate tank farms located in the 200 East Area (AN, AP, AW, AY & AZ);
  (b) 3 tanks in one tank farm located in the 200 West Area (SY);
  (c) Double Contained Receiver Tanks (DCRTs) in various 200 Area locations (244-TX, 244-BX, 244-U, 244-S, 244-A);
  (d) 200 Area vaults (244-AR, 244-CR, 209-E);
  (e) The cross-site transfer system Vent Station Catch Tank (241-EW-151); and

- Single Shell Tanks (SSTs) grouped as follows:
  (a) 67 tanks in six separate tank farms located in the 200 East Area (A, AX, B, BX, BY & C);
  (b) 82 tanks in six separate tank farms located in the 200 West Area (S, SX, T, TX, TY and U);
  (c) Miscellaneous Underground Storage Tanks; and
  (d) SST retrieval support facilities
  (e) .Future Waste Receiver Facilities (WRFs) to support retrieval

- Waste Transfer System network that includes:
  (a) Underground waste transfer network including the cross-site transfer system; and
  (b) Low activity waste receiving and unloading facility (204-AR)

- Retrieval Systems which includes the hardware required to mobilize/alter the wastes stored in SSTs and DSTs such that the stored wastes can be transferred to the DSTs and on to the treatment facilities.

- SST and DST Closure Systems which include any hardware required to complete closure actions.

- Utilities Distribution System inside tank farms which includes the hardware required to distribute electrical power, service/raw water, steam and potable water.

- Monitoring and control systems in support of tank farm operations and closure including vadose zone.

B.2.1.3.1.2 Tank Farm System Facility Technical Logic:

The Department of Energy (DOE), in partnership with its contractors, shall plan, acquire, operate, maintain, and dispose of physical assets as valuable national resources. Stewardship of these physical assets shall be accomplished in a cost-effective manner to meet the DOE mission. This shall incorporate industry standards, a graded approach, and performance objectives.

This diagram displays the primary work activities (functions) that are performed in each life cycle phase of the facility. The diagram also reflects the technical logic (functional flow) for the facility through its remaining life cycle phases.

Project responsibility for the life cycle phases of the Tank Farm System components are assigned as follows:

Table B.2-1 Responsibility Assignment Matrix for Tank Farm System

Facility	Life Cycle Phase *								
	Program Planning	Pre Conceptual	Conceptual	Execute			O&M	Close Out	
				Design	Construction	Turnover		Post Ops	D&D
Tank Farm System	(tbd)						**RL-TW03** RL-TW01 RL-TW02 RL-TW04	**RL-TW03**	**RL-TW04**

* RL PBS Identifier Index:

RL-TW01 - Tank Waste Characterization
RL-TW02 - Tank Safety Issue Resolution
RL-TW03 - Tank Farm Operations
RL-TW04 - Retrieval

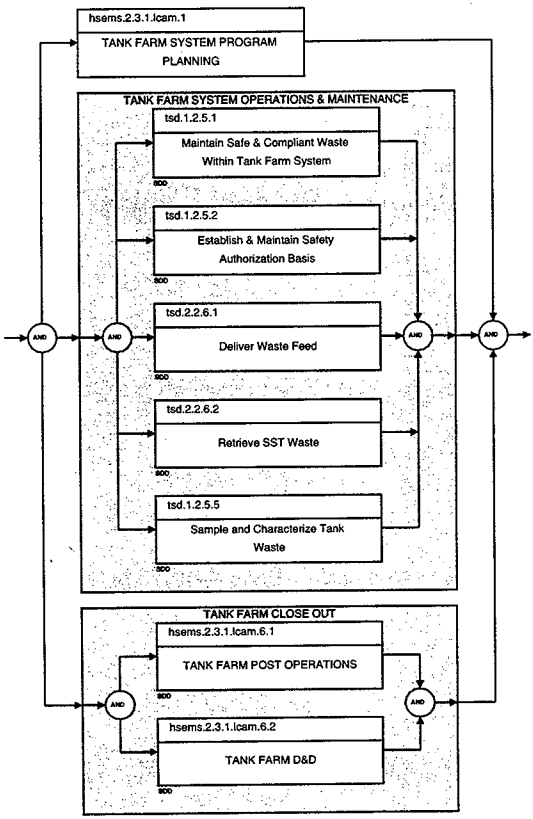

Figure B.2_1 TANK FARM

B.2.1.3.1.3 Tank Farm System Life Cycle Functional Descriptions and Requirements

The Life Cycle Functional Descriptions table describes the life cycle phases and the functions performed during each phase. The Life Cycle Requirements table describes the requirements that trace to the functions listed in the Life Cycle Functional Descriptions table.

Table B.2-2 Tank Farm System Life Cycle Functional Descriptions

hsems.2.3.1.lcam.5 TANK FARM SYSTEM OPERATIONS & MAINTENANCE

tsd.1.2.5.2 Establish & Maintain Safety Authorization Basis

The function of the Nuclear Safety and Licensing organization is to establish and maintain a technically defensible safety authorization basis (AB) for the management and storage of waste within the Tank Farm System. This will be accomplished by establishing and maintaining an integrated AB and resolving outstanding safety issues. The current condition for this function has numerous open safety issues and unreviewed safety questions (USQ) along with a Basis for Interim Operation (BIO) as the AB. The end condition will have all waste tank storage safety issues and USQs closed, a Final Safety Analysis Report (FSAR) implemented as the AB, and a transition to disposal operations for maintenance of the AB.

This function consists of the following activities; Flammable Gas, Project Management, Organic, High-Heat, Authorization Basis, and Criticality.

The Flammable Gas Activity will conduct laboratory testing, waste characterization, and data analyses to define the flammable gas hazard in double-shell tanks (DSTs), single-shell tanks (SSTs) and ancillary facilities. This covers collecting and analyzing SST and DST flammable gas data, preparing a SST and DST flammable gas refined safety analysis and AB amendment, providing safety-related monitoring and/or mitigation equipment upgrades, and addressing the level growth USQ for SY-101. Scope also includes addressing the potential hazards associated with the Tank Farm ancillary facilities and closing the flammable gas USQ for double-contained receiver tanks (DCRT), catch tanks, inactive miscellaneous underground storage tanks (IMUST), vaults, and inactive evaporators.

The Project Management Activity provides management support for establishing and maintaining a safety authorization basis and for resolving safety issues.

The Organic Activity has determined through data analysis, laboratory testing, and waste characterization, that the risk associated with organic complexants and organic solvents in DSTs and SSTs is acceptably small. Remaining scope includes resolution of all comments on safety documentation already submitted to close the organic complexant USQ for DSTs and SSTs and to resolve the organic complexant and organic solvent safety issues for these tanks. Scope also includes addressing the potential hazards associated with the Tank Farm ancillary facilities, especially IMUSTs, and closing the organic complexant USQ for these ancillary facilities.

The High-Heat Activity uses a thermal hydraulic model for predicting long-term thermal behavior of tank C-106 following sluicing of a portion of the waste by Project W-320, and provides for the submittal of documentation to resolve the high-heat safety issue.

The Authorization Basis Activity provides for the developing and maintaining of an authorization basis (AB) for the Tank Farm System. This covers updating/upgrading of the AB, maintenance of the USQ process, maintenance of the AB baseline, administration of the criticality safety program, managing of the licensing process, and approval and implementation of the Final Safety Analysis Report (FSAR).

The Criticality Activity provides for the submittal of documentation and for the resolution of comments to resolve the nuclear criticality safety issue.

The FY 1999 funding target does not meet all required work. The work that will be completed was arrived at by utilizing decision logic. This logic is as follows:

- Work associated with Operating Facilities (e.g., DSTs, SSTs, DCRTs, Catch Tanks, Transfer Systems) was addressed.

- Work associated with the waste level growth USQ in tank SY-101 was addressed.

- DOE-RL approval of the FSAR was addressed.

Table B.2-2 Tank Farm System Life Cycle Functional Descriptions (Continued)

	· Selected BIO window 4 activities were addressed. · Work for several Non-Operating Facilities (e.g., IMUSTs, 244-AR) was deferred to FY 2000. · FSAR implementation was deferred to FY 2000. · Completion of the DOE-RL directed enhancements to the BIO was deferred to FY 2000. · Flammable gas monitoring equipment upgrades were deferred to FY 2000. This WBS supports the following technical baseline requirements for the Hanford clean up mission: · Tank safety issues for high priority tanks shall be resolved by September 28, 2001. · Central Plateau (200 Area) tank waste safety issues shall be resolved.

Table B.2-3 Tank Farm System Life Cycle Requirements

Requirement	Function
Tank safety issues for high priority tanks shall be resolved by Sep 30, 2001	tsd.1.2.5.2
Central Plateau tank waste safety issues shall be resolved	tsd.1.2.5.2

B.2.1.3.1.4 Tank Farm System Boundary Diagram

This section identifies the other facilities (onsite and offsite) that have an interface (either input or output) with this facility.

Table B.2-4 Tank Farm System Boundary Diagram

Major Input Interfaces	Facility	Major Output Interfaces
External Interfaces -None- Hanford Site Environmental System Interfaces -None-	Tank Farm System	External Interfaces -None- Hanford Site Environmental System Interfaces -None-

B.2.1.3.1.5 Tank Farm System Interface Descriptions and Summary Level Forecasts

This section contains the material, waste, and infrastructure forecasts for this facility. It identifies the interface type, the period of time for the forecasts, the life cycle total forecast value, and the execution year forecast quantity.

OFFSITE INPUTS

-None-

ONSITE INPUTS

-None-

OFFSITE OUTPUTS

-None-

ONSITE OUTPUTS

-None-

B.2.1.4 Drivers for Tank Safety Issue Resolution

Table B.2-5 Source Documents for Tank Safety Issue Resolution

Name	Title
DE-AC06-96RL13200	Project Hanford Management Contract, Fluor Daniel Hanford, Inc.
DOE/RL-89-10	Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)

B.2.2.0 Tank Safety Issue Resolution Work Breakdown Structure (WBS)

B.2.2.1 Tank Safety Issue Resolution WBS Hierarchy

RL PBS	RL WBS	Title
RL-TW02	1.01.02	Tank Safety Issue Resolution
	1.01.02.01	Tank Farm System
	1.01.02.01.01	Establish & Maintain Safety Authorization Basis

B.2.2.2 Tank Safety Issue Resolution WBS Dictionary

The following pages contain the WBS dictionary for RL-TW02

B.2-6 WBS Dictionary for Establish & Maintain Safety Authorization Basis

1. Dictionary Title Establish & Maintain Safety Authorization Basis		2. Date 2 November 1998	3. PBS Number RL-TW02	4. Dict Rev
5. WBS No. 1.01.02.01.01	6. B & R No. EW02J117		7. Baseline CR No.	
8. Organization Name Tank Safety Issue Resolution				

9. Scope of Work

The function of the Nuclear Safety and Licensing organization is to establish and maintain a technically defensible safety authorization basis (AB) for the management and storage of waste within the Tank Farm System. This will be accomplished by establishing and maintaining an integrated AB and resolving outstanding safety issues. The current condition for this function has numerous open safety issues and unreviewed safety questions (USQ) along with a Basis for Interim Operation (BIO) as the AB. The end condition will have all waste tank storage safety issues and USQs closed, a Final Safety Analysis Report (FSAR) implemented as the AB, and a transition to disposal operations for maintenance of the AB.

This function consists of the following activities; Flammable Gas, Project Management, Organic, High-Heat, Authorization Basis, and Criticality.

The Flammable Gas Activity will conduct laboratory testing, waste characterization, and data analyses to define the flammable gas hazard in double-shell tanks (DSTs), single-shell tanks (SSTs) and ancillary facilities. This covers collecting and analyzing SST and DST flammable gas data, preparing a SST and DST flammable gas refined safety analysis and AB amendment, providing safety-related monitoring and/or mitigation equipment upgrades, and addressing the level growth USQ for SY-101. Scope also includes addressing the potential hazards associated with the Tank Farm ancillary facilities and closing the flammable gas USQ for double-contained receiver tanks (DCRT), catch tanks, inactive miscellaneous underground storage tanks (IMUST), vaults, and inactive evaporators.

The Project Management Activity provides management support for establishing and maintaining a safety authorization basis and for resolving safety issues.

The Organic Activity has determined through data analysis, laboratory testing, and waste characterization, that the risk associated with organic complexants and organic solvents in DSTs and SSTs is acceptably small. Remaining scope includes resolution of all comments on safety documentation already submitted to close the organic complexant USQ for DSTs and SSTs and to resolve the organic complexant and organic solvent safety issues for these tanks. Scope also includes addressing the potential hazards associated with the Tank Farm ancillary facilities, especially IMUSTs, and closing the organic complexant USQ for these ancillary facilities.

The High-Heat Activity uses a thermal hydraulic model for predicting long-term thermal behavior of tank C-106 following sluicing of a portion of the waste by Project W-320, and provides for the submittal of documentation to resolve the high-heat safety issue.

The Authorization Basis Activity provides for the developing and maintaining of an authorization basis (AB) for the Tank Farm System. This covers updating/upgrading of the AB, maintenance of the USQ process, maintenance of the AB baseline, administration of the criticality safety program, managing of the licensing process, and approval and implementation of the Final Safety Analysis Report (FSAR).

The Criticality Activity provides for the submittal of documentation and for the resolution of comments to resolve the nuclear criticality safety issue.

B.2-6 WBS Dictionary for Establish & Maintain Safety Authorization Basis (Continued)

1. Dictionary Title Establish & Maintain Safety Authorization Basis		2. Date 2 November 1998	3. PBS Number RL-TW02	4. Dict Rev
5. WBS No. 1.01.02.01.01	6. B & R No. EW02J117		7. Baseline CR No.	
8. Organization Name Tank Safety Issue Resolution				

The FY 1999 funding target does not meet all required work. The work that will be completed was arrived at by utilizing decision logic. This logic is as follows:

- Work associated with Operating Facilities (e.g., DSTs, SSTs, DCRTs, Catch Tanks, Transfer Systems) was addressed.
- Work associated with the waste level growth USQ in tank SY-101 was addressed.
- DOE-RL approval of the FSAR was addressed.
- Selected BIO window 4 activities were addressed.
- Work for several Non-Operating Facilities (e.g., IMUSTs, 244-AR) was deferred to FY 2000.
- FSAR implementation was deferred to FY 2000.
- Completion of the DOE-RL directed enhancements to the BIO was deferred to FY 2000.
- Flammable gas monitoring equipment upgrades were deferred to FY 2000.

This WBS supports the following technical baseline requirements for the Hanford clean up mission:

- Tank safety issues for high priority tanks shall be resolved by September 28, 2001.
- Central Plateau (200 Area) tank waste safety issues shall be resolved.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Tank safety issues for high priority tanks shall be resolved by Sep 30, 2001
- Central Plateau tank waste safety issues shall be resolved

B.2.3.1 Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	
1			HANFORD
1.01			TWRS
1.01.02			TANK SAFETY ISSUE RESOLUTION PROJECT
1.01.02.01			TANK FARM SYSTEM
1.01.02.01.01			ESTABLISH AND MAINTAIN SAFETY AUTH BASIS
1.01.02.01.01.01			FLAMMABLE GAS
030.441	07OCT98*	05OCT00	Close Flam. Gas USQ for DCRTs
030.444	01OCT98*	15DEC00	FG Monitoring EQ Upgrades
030.446	01OCT98*	28SEP01	Collect & Analyze SST & DST FG Data
030.446E35		23AUG99*	Provide Report on FG Vapor Space Data PA 6.1.1 ◇ T02-99-202
030.447	01OCT98*	01MAY00	Close FG USQ for Catch Tank
030.449	01OCT99*	30SEP03	Close FG USQ ofr IMUSTs
030.451	01OCT99*	28SEP01	Close FG USQ for Vaults
030.453	01OCT99*	28SEP01	Close FG USQ for Evaporator
030.454	01OCT98*	29SEP00	SST/DST FG MITIGATION EQUIP UPGRADES
030.454A40		01MAR99*	Submit Path Forward AWA or BCR (PA 6.1.5 #2) ◇ T02-99-205
030.456	01OCT98*	28SEP01	FG Refined Safety Analysis & AB Amendment

FY99 FY00 FY01 FY02 FY03 FY04 FY05 FY06 FY07 FY08

t Start 01OCT99
t Finish 30SEP08
rata 01OCT98
ate 17NOV98

Early Bar
Progress Bar
Critical Activity

2BP2

Sheet 1 of 3

Tank Waste Remediation System
PMBS - Life of Project
TW02 - Tank Safety Issue Resolution

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Activity ID	Early Start	Early Finish	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
030.456E70		28SEP01*				Mitigate/Resolve Tank Safety Issues M-40-00 T02-01-100						
030.Y47	01OCT98*	28SEP01			Level Growth USQ for TAnk 241SY-101							
1.01.02.01.01.02			NS&L PROJECT MANAGEMENT									
180.802	01OCT98*	30SEP08	Provide Nuclear Safety & Licensing Program Mgmt.									
1.01.02.01.01.03			ORGANIC									
020.491	01OCT99*	28SEP01			Eval. Ancillary Facilities for organics							
020.497	01OCT98*	29SEP00	Closure Org. Complexant USQ/Safety Issue									
020.497A20		30NOV98*	Confirm Org Safety Storage Crit DNFSB 5.4.3.3b T02-99-101									
020.497C40		30SEP99*		Org Solvent Topical CN-032 DNFSB 5.4.3.4e,d,f T02-99-103								
1.01.02.01.01.04			HIGH HEAT									
050.482	01OCT98*	14FEB00	Close High heat Safety Issue									
050.482B60		31AUG99*		Issue High Heat Technical Basis Rpt (PA 6.1.2) T02-99-203								
050.482B90		31DEC99*		Transmit Rpt to Resolve HH SI DNFSB 5.4.3.6.d T02-99-100								
1.01.02.01.01.05			AUTHORIZATION BASIS									
180.806	01OCT98*	30SEP08	Manage the TWRS Licensing Process									
180.808	01OCT98*	30SEP08	Update & Upgrade Authorization Basis									
180.810	01OCT98*	30SEP08	Maintain the USQ Process									
180.812	01OCT98*	29SEP08	Maintain the AB Baseline									

Activity ID	Early Start	Early Finish	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07	FY08
180.826	01OCT98*	28SEP01	FSAR Implementation									
180.826C30		29JAN99*	RL Approval of FSAR DNFSB 5.4.3.1d (SER) T02-98-111									
180.830	01OCT98*	30SEP08	Administer the Criticality Safety Program									
1.01.02.01.01.06			CRITICALITY									
010.475	01OCT98*	30SEP99	Criticality Safety Issue Resolution									
010.475A20		30SEP99*	Resolve Nuclear Criticality Safety Issue M-40-12 T02-99-102									

B.2.3.2 Execution Year Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY99 / FY00
1			HANFORD
1.01			TWRS
1.01.02			TANK SAFETY ISSUE RESOLUTION PROJECT
1.01.02.01			TANK FARM SYSTEM
1.01.02.01.01			ESTABLISH AND MAINTAIN SAFETY AUTH BASIS
1.01.02.01.01.01			FLAMMABLE GAS
030.441	07OCT98*	05OCT00	Close Flam. Gas USQ for DCRTs
030.444	01OCT98*	15DEC00	FG Monitoring EQ Upgrades
030.446	01OCT98*	28SEP01	Collect & Analyze SST & DST FG Data
030.446E35		23AUG99*	Provide Report on FG Vapor Space Data PA 6.1.1 ◇ T02-99-202
030.447	01OCT98*	01MAY00	Close FG USQ for Catch Tank
030.454	01OCT98*	29SEP00	SST/DST FG MITIGATION EQUIP UPGRADES
030.454A40		01MAR99*	Submit Path Forward AWA or BCR (PA 6.1.5 #2) ◇ T02-99-205
030.456	01OCT98*	28SEP01	FG Refined Safety Analysis & AB Amendment
030.Y47	01OCT98*	28SEP01	Level Growth USQ for TAnk 241SY-101
1.01.02.01.01.02			NS&L PROJECT MANAGEMENT
180.802	01OCT98*	30SEP08	Provide Nuclear Safety & Licensing Program Mgmt.

Start 01OCT98 — Early Bar
Finish 30SEP08 — Progress Bar
* 01OCT98 — Critical Activity
* 17NOV98

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Tank Waste Remediation System
PMBS - FY 1999
TW02 - Tank Safety Issue Resolution

Activity ID	Early Start	Early Finish	FY99 / FY00
1.01.02.01.01.03			ORGANIC
020.497	01OCT98*	29SEP00	Closure Org. Complexant USQ/Safety Issue
020.497A20		30NOV98*	Confirm Org Safety Storage Crit DNFSB 5.4.3.3b ◇ T02-99-101
020.497C40		30SEP99*	Org Solvent Topical CN-032 DNFSB 5.4.3.4e,d,f ◇ T02-99-103
1.01.02.01.01.04			HIGH HEAT
050.482	01OCT98*	14FEB00	Close High heat Safety Issue
050.482B60		31AUG99*	Issue High Heat Technical Basis Rpt (PA 6.1.2) ◇ T02-99-203
1.01.02.01.01.05			AUTHORIZATION BASIS
180.806	01OCT98*	30SEP08	Manage the TWRS Licensing Process
180.808	01OCT98*	30SEP08	Update & Upgrade Authorization Basis
180.810	01OCT98*	30SEP08	Maintain the USQ Process
180.812	01OCT98*	29SEP08	Maintain the AB Baseline
180.826	01OCT98*	28SEP01	FSAR Implementation
180.826C30		29JAN99*	RL Approval of FSAR DNFSB 5.4.3.1d (SER) ◇ T02-98-111
180.830	01OCT98*	30SEP08	Administer the Criticality Safety Program
1.01.02.01.01.06			CRITICALITY
010.475	01OCT98*	30SEP99	Criticality Safety Issue Resolution
010.475A20		30SEP99*	Resolve Nuclear Criticality Safety Issue M-40-12 ◇ T02-99-102

B.2.3.3 Milestone List

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/TPA Date
T02-99-101	Transmit Letter to DNFSB Reporting Results of Testing Completion to Confirm Organic Safe Storage Criteria	FO	5.4.3.3.b	30-Nov-98	30-Nov-98
T02-98-111	RL Approval of TWRS FSAR	FO	5.4.3.1.d	29-Jan-99	30-Jun-97
T02-99-205	TWR 6.1.5 Submit Recommended Path Forward and an AWA or BCR for SY-101 USQ	RL	-	1-Mar-99	-
T02-99-202	TWR 6.1.1 Provide Technical Report on Flammable Gas Vapor Space Data from Flammable Gas Tanks	RL	-	23-Aug-99	-
T02-99-203	TWR 6.1.2 Issue High-Heat Technical Basis Report	RL	-	31-Aug-99	-
T02-99-102	Resolve Nuclear Criticality Safety Issue	HQ-I	M-40-12	30-Sep-99	30-Sep-99
T02-99-103	Transmit Letter to DNFSB Reporting Completion of Organic Solvent CN-032 to Resolve Safety Issue	FO	5.4.3.4.d, e, f	d, e, f - 30-Sep-99	d- 31-Dec-99; e - 30-Apr-00; f - 31-Dec-00
T02-99-100	Transmit Letter to DNFSB Reporting Completion of Topical Report to Resolve High Heat Safety Issue	FO	5.4.3.6.d	31-Dec-99	31-May-98
T02-01-100	Mitigate/Resolve Tank Safety Issues High Priority Watch List Tanks	HQ-M	M-40-00	28-Sep-01	30-Sep-01

B.2.3.4 Milestone Description Sheets

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Transmit Letter to DNFSB Reporting Results of Testing Completion to Confirm Organic Safe Storage Criteria

Schedule Date: 11/30/98
DNFSB date: 11/30/98

Assigned to: Tank Safety Issue Resolution

WBS Number: 1.01.02

Milestone Control Number: T02-99-101

DNFSB No.: 93-5.4.3.3.b:

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[x] Letter	[ ] DOE-RL
[x] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[x] Other (Specify)
		DNFSB

Description of this Commitment:

Letter reporting results of testing completion (using real waste samples) to confirm safe storage criteria, and organic solubility and aging effects on fuel content. If models are confirmed, an assessment of tank wastes compared to safe storage criteria will be scheduled. This is DNFSB milestone 93-5.4.3.3.b in "Recommendation 93-5 Implementation Plan, DOE/RL-94-001, Rev. 1." This milestone will be satisfied by completion of the organic complexant topical report HNF-SD-WM-CN-058.

Description of what constitutes completion of the commitment:

DOE-RL to transmit a letter by 11/30/98 to the DNFSB reporting completion of the organic complexant topical report CN-058 to close the organic complexant safety issue.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: RL Approval of TWRS FSAR

Schedule Date: 1/29/99
DNFSB date: 6/30/97

Assigned to: Tank Safety Issue Resolution

WBS Number: 1.01.02

Milestone Control Number: T02-98-111

DNFSB No.: 93-5.4.3.1.d

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[x] Letter	[ ] DOE-RL
[x] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[x] Other (Specify)
	_____	DNFSB

Description of this Commitment:

This milestone provides RL Manager approval of the Tank Waste Remediation System (TWRS) Final Safety Analysis Report (FSAR). RL approval includes issuance of a Safety Evaluation Report (SER). Contractor scope includes providing (1) expertise to both the RL Tier II technical review and Tier III independent review teams regarding the content of the FSAR and its supporting documentation, and (2) resources necessary to perform a limited release of the FSAR. This is DNFSB milestone 93-5.4.3.1.d in "Recommendation 93-5 Implementation Plan, DOE/RL-94-001, Rev. 1."

Description of what constitutes completion of the commitment:

DOE-RL to transmit a letter by 1/29/99 to the DNFSB reporting approval of the FSAR.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Submit Recommended Path Forward and an AWA or BCR for SY-101 USQ (TWR6.1.5)

Schedule Date: 3/1/99

Assigned to: Tank Safety Issue Resolution

WBS Number: 1.01.02

Milestone Control Number: T02-99-205

Milestone Type	Deliverables	Addressed to
[ ] TPA	[x] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Tank 241-SY-101 is exhibiting a slow rise in the crust surface level. A continued rise will impact existing authorization basis controls. Recent tank level responses to mixer pump operations is not consistent with the behavior assumed in the safety analysis and an Unreviewed Safety Question (USQ) has been declared on the tank. Gas is most likely accumulating in or just under the floating crust. Various options are being evaluated to resolve the surface level growth issue and those options and evaluations will be documented in a report to RL. A recommended path forward will also be submitted along with an Advance Work Authorization (AWA) or Baseline Change Request (BCR) for RL approval.

Description of what constitutes completion of the commitment:

By December 31, 1998 submit a report documenting the options and evaluations being undertaken to close the surface level growth USQ for tank 241-SY-101.

By March 1, 1999 submit a recommended path forward and an AWA or BCR for RL approval.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Provide Technical Report on Flammable Gas Vapor Space Data from Flammable Gas Tanks (TWR6.1.1)

Schedule Date: 8/23/99

Assigned to: Tank Safety Issue Resolution

WBS Number: 1.01.02

Milestone Control Number: T02-99-202

Milestone Type	Deliverables	Addressed to
[ ] TPA	[x] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Maintain Standard Hydrogen Monitoring Systems (SHMS) for monitoring the vapor space in flammable gas tanks. Collect SHMS data through 6/30/99 for the approximately 40 on-line SHMS units. Issue vapor space data report.

Description of what constitutes completion of the commitment:

Issue a Contractor approved report to RL by August 23, 1999. The technical report shall include the following:

1) Data obtained from SHMS, and grab samples, as available, from flammable gas tanks for the period from July 1, 1998 through June 30, 1999;

2) SHMS data for the period of October 1, 1998 through June 30, 1999, for a minimum of 9,600 data days;

3) Data from pump pit flammable gas monitors installed to support salt well pumping for the period of July 1, 1998 to June 30, 1999;

4) Analysis of SHMS reliability to include a discussion of corrective maintenance actions and frequency; and

5) The technical report is expected to be similar in format to HNF-SD-WM-TI-797, Rev. 2, or latest revision.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Issue High Heat Technical Basis Report (TWR6.1.2) Schedule Date: 8/31/99

Assigned to: Tank Safety Issue Resolution

WBS Number: 1.01.02

Milestone Control Number: T02-99-203

Milestone Type	Deliverables	Addressed to
[ ] TPA	[x] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[x] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Submit a contractor reviewed and approved technical basis report (topical report) to DOE-RL for resolution of the High Heat Safety Issue. This milestone requires Project W-320 to complete removal of a sufficient amount of waste from tank 241-C-106 by March 31, 1999 in order to allow a sufficient time period to complete the technical basis report.

Earlier thermal modeling had shown that removal of two feet of sludge would be sufficient to stop water additions for cooling and to resolve the high-heat safety issue. Following phase 1 sluicing, the High-Heat Activity will monitor the temperatures within tank C-106 and perform thermal hydraulic analyses to determine if water additions can be permanently discontinued. The analyses will evaluate the expected thermal response of the tank following elimination of water additions and subsequent dryout of the tank waste. If these analyses show tank waste temperatures can exceed the applicable temperature safety limits defined by the organic calc note (HNF-SD-WM-CN-058, Rev 2) under dryout conditions, additional sludge will be removed and thermal analyses will be repeated to show that the maximum waste temperatures will remain acceptable. These analyses will thus allow resolution of the safety issue prior to completion of waste retrieval.

A technical basis report will be issued documenting that water additions are no longer needed to keep the maximum waste temperature below the applicable temperature safety limits under dryout conditions. An Authorization Basis amendment will be prepared and submitted early in FY 2000.

The technical basis report will be submitted to RL by 8/31/99 in order to meet DNFSB milestone 93-5.4.3.6.d by 12/31/99.

Description of what constitutes completion of the commitment:

Submit a contractor reviewed and approved technical basis report (topical report) to DOE-RL by 8/31/99 to resolve the High Heat Safety Issue.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Resolve Nuclear Criticality Safety Issue (M-40-12)

Schedule Date: 9/30/99
TPA date: 9/30/99

Assigned to: Tank Safety Issue Resolution

WBS Number: 1.01.02

Milestone Control Number: T02-99-102

TPA No.: M-40-12

Milestone Type	Deliverables	Addressed to
[x] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[x] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Document closure of technical questions about the potential for a criticality within TWRS and for implementation of the TWRS Administrative Controls for criticality prevention.

Description of what constitutes completion of the commitment:

Completion of Milestone T02-99-206, "Submit Criticality Safety Issue Resolution Package," due 05/28/99.

DOE-RL to transmit a letter for safety issue resolution to Washington State Department of Ecology and the U.S. Environmental Protection Agency by 09/31/99.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Transmit Letter to DNFSB Reporting Completion of Organic Solvent Topical CN-032 to Resolve Safety Issue

Schedule Date: 9/30/99
DNFSB date: 5.4.3.4d 12/31/1999
5.4.3.4e 4/30/2000; 5.4.3.4f 12/31/2000

Assigned to: Tank Safety Issue Resolution

WBS Number: 1.01.02

Milestone Control Number: T02-99-103

DNFSB No.: 93-5.4.3.4.d / e / f

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[x] Letter	[ ] DOE-RL
[x] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[x] Other (Specify)
		DNFSB

Description of this Commitment:

The Organic Solvent Topical HNF-SD-WM-CN-032 will satisfy the remaining three organic solvent milestones in "Recommendation 93-5 Implementation Plan, DOE/RL-94-001, Rev. 1": These are;

(1) Letter reporting adequate vent path in all single-shell tanks (SST) suspected of containing organic solvents (93-5.4.3.4.e) due April 2000,

(2) Letter reporting completion of vapor sampling of all SSTs (93-5.4.3.4.d) due December 1999, and

(3) Letter reporting completion of vapor sampling of all double-shell tanks (DST) (93-5.4.3.4.f) due December 2000.

Description of what constitutes completion of the commitment:

DOE-RL to transmit a letter by 9/30/99 to the DNFSB reporting completion of an organic solvent topical to close the safety issue and the three remaining 93-5.4.3.4 milestones identified above.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Transmit Letter to DNFSB Reporting Completion of Topical Report to Resolve the High Heat Safety Issue

Schedule Date: 12/31/99
DNFSB date: 5/31/98

Assigned to: Tank Safety Issue Resolution

WBS Number: 1.01.02

Milestone Control Number: T02-99-100

DNFSB No.: 93-5.4.3.6.d

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[x] Letter	[ ] DOE-RL
[x] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[x] Other (Specify)
		DNFSB

Description of this Commitment:

Transmit letter from FDH to RL reporting completion of technical basis (topical report) to resolve the High-Heat Safety Issue. This is DNFSB milestone 93-5.4.3.6.d in "Recommendation 93-5 Implementation Plan," DOE/RL-94-0001, Rev. 1.

Description of what constitutes completion of the commitment:

Transmit a letter to the Defense Nuclear Facilities Safety Board (DNFSB) reporting completion of a topical report to resolve the High-Heat Safety Issue.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Mitigate/Resolve Tank Safety Issues for High-Priority Watch List Tanks (M-40-00)

Schedule Date: 9/28/2001
TPA date: 9/30/2001

Assigned to: Tank Safety Issue Resolution

WBS Number: 1.01.02

Milestone Control Number: T02-01-100

TPA No.: M-40-00

Milestone Type	Deliverables	Addressed to
[x] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[x] Letter	[x] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

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

This milestone will be reviewed on an annual basis to identify any potential schedule enhancements.

Description of what constitutes completion of the commitment:

(1) Transmit letter to RL by 8/01/2001 indicating that all high priority Watch List tanks have been mitigated and/or that their safety issues have been resolved. Note: Separate letters will be transmitted to RL as each safety issue is resolved.
(2) RL transmittal of closure notification by 9/30/2001 to Washington State Department of Ecology and the U.S. Environmental Protection Agency (EPA).

Documented results that (1) all 4 of the Unreviewed Safety Questions (USQs) (identified as of 9/30/93) are closed per DOE Order 5480.21; (2) all 6 parts of the DNFSB Recommendation 90-7 are closed per DOE/RL-94-110, Rev. 1; (3) approval is received from RL for removal of approximately 50 tanks (as of 7/15/96) from the Watch List except those tanks requiring retrieval; (4) an adequate safety basis is established to bound the known hazards associated with safety issues; and (5) approval is received from RL to resolve the safety issues after either controlling or eliminating the hazards except in those tanks requiring retrieval.

B.2.4.1 Project Priority List

TANK WASTE REMEDIATION SYSTEM
FY 1999 - 2007 MYWP PRIORITY LIST BY PBS

11/23/98 'FY 99 MYWP

EXCEL: 10YRPR49.XLS

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UAS	PBS #	ADS	"UNIT OF ANALYSIS"	FY 99 TOTAL ESCAL'D	FY 00 TOTAL ESCAL'D	FY 01 TOTAL ESCAL'D	FY 02 TOTAL ESCAL'D	FY 03 TOTAL ESCAL'D	FY 04 TOTAL ESCAL'D	FY 05 TOTAL ESCAL'D	FY 06 TOTAL ESCAL'D	FY 07 TOTAL ESCAL'D
TW02												
132	TW02	1110 - 0	TWRS FLAMMABLE GAS MINIMUM SAFE OPERATIONS	9,164	13,177	9,470	1,166	1,057	-	-	-	-
580	TW02	1110 - 0	SY 101 USQ LEVEL GROWTH	2,500	5,000	5,217	-	-	-	-	-	-
150	TW02	1110 - 0	TWRS SAFETY RL SUPPORT	1,225	1,430	-	-	-	-	-	-	-
145	TW02	1110 - 0	TWRS SAFETY, USQ, AUTHORIZATION BASIS	6,415	7,084	7,888	8,450	8,027	8,204	8,384	8,568	8,757
			SUBTOTAL - MIN SAFE	**19,304**	**26,691**	**22,575**	**9,616**	**9,084**	**8,204**	**8,384**	**8,568**	**8,757**
131	TW02	1110 - 0	TWRS ORGANIC OPERATIONS	275	3,932	1,120	-	-	-	-	-	-
188	TW02	1110 - 0	TWRS FLAMMABLE GAS ADDIT'L MONIT'G UPGRADES	348	4,543	-	-	-	-	-	-	-
			SUBTOTAL -URGENT RISK- SAFETY	**19,927**	**35,166**	**23,695**	**9,616**	**9,084**	**8,204**	**8,384**	**8,568**	**8,757**
			FY 1999 / 2000 TARGET	**19,927**	**35,166**							
332	TW02	1110 - 0	FSAR IMPLEMENTATION	-	-	7,096	-	-	-	-	-	-
601	TW02	1110 - 0	SY-101 USQ LEVEL GROWTH	6,000	-	-	-	-	-	-	-	-
604	TW02	1110 - 0	FLAMM. GAS SAFETY ISSUE RESOLUTION	2,700	-	-	-	-	-	-	-	-
332	TW02	1110 - 0	FSAR IMPLEMENTATION	6,811	6,811	-	-	-	-	-	-	-
			SUBTOTAL - EM30 COMPLIANCE	**35,438**	**41,977**							
591	TW02	1110 - 0	TWRS SAFETY, USQ, AUTHORIZATION BASIS	-	3,000	-	-	-	-	-	-	-
600	TW02	1110 - 0	TWRS SAFETY RL SUPPORT - INCREMENT	205	-	-	-	-	-	-	-	-
602	TW02	1110 - 0	AUTHORIZATION BASIS FOR ORPHAN FACILITIES	600	-	-	-	-	-	-	-	-
603	TW02	1110 - 0	AUTHORIZATION BASIS UPGR	1,700	-	-	-	-	-	-	-	-
612	TW02	1110 - 0	TWRS FLAMMABLE GAS ADDIT'L MONIT'G UPGRADES	4,600	-	-	-	-	-	-	-	-
386	TW02	1110 - 0	ORGANIC ANALYSIS FOR ANC. FACILITY	1,400	-	-	-	-	-	-	-	-
			TOTAL TWRS REQUIREMENTS (EM-30)	**43,943**	**44,977**	**30,790**	**9,616**	**9,084**	**8,204**	**8,384**	**8,568**	**8,757**

B.2.4.2 Life Cycle Cost Baseline by PBS

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.2										
PBS NO:	RL-TW02										
PBS TITLE:	TANK SAFETY ISSUE RESOLUTION										SUBTOT
FUND TYPE	*ACTUAL* FY1997	*ACTUAL* FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997-FY2006
OPERATING EXPENSE	23,976	24,968	19,927	31,804	29,508	9,017	8,335	7,365	7,365	7,365	169,630
CENRTC	9,066	2,180	-	2,639	-	-	-	-	-	-	13,885
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*											
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	723	1,282	599	749	839	1,019	1,203	6,415
TOTAL BCWS/PMB[1]	33,042	27,148	19,927	35,166	30,790	9,616	9,084	8,204	8,384	8,568	189,930
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-
TOTAL	33,042	27,148	19,927	35,166	30,790	9,616	9,084	8,204	8,384	8,568	189,930

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2]Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4]Estimate for FY1999 National Lab Transfers attached.

HNF-SP-1230 Rev. 1

TW02-34

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.2
PBS NO:	RL-TW02
PBS TITLE:	TANK SAFETY ISSUE RESOLUTION

FUND TYPE	FY2007	FY2008	FY2009	FY2010	FY2011-FY2015	FY2016-FY2020	FY2021-FY2025	FY2026-FY2030	FY2031-FY2035	FY2036 FY2040	FY2041-FY2045	FY2046 FY2050	TOTAL FY1997-FY2050
OPERATING EXPENSE	7,365	7,365	-	-	-	-	-	-	-	-	-	-	184,360
CENRTC	-	-	-	-	-	-	-	-	-	-	-	-	13,885
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*													
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-	-	-
Escalation	1,392	1,585	-	-	-	-	-	-	-	-	-	-	9,392
TOTAL BCWS/PMB[1]	8,757	8,950	-	-	-	-	-	-	-	-	-	-	207,636
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	-	-	-	-	-	-	-	-	-	-
Escalation	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	8,757	8,950	-	-	-	-	-	-	-	-	-	-	207,636

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2]Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4]Estimate for FY1999 National Lab Transfers attached.

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
1/24/98
07:35 AM

		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.2																	
RL-TW02																	
TANK SAFETY ISSUE RESOL'TN PROJ																	
1.1.2.1.1.1	Flammable Gas	OE	11,340	19,630	14,070	1,166	1,057	0	0	0	47,263	47,263	0	0	0	0	0
		C/E	0	2,694	0	0	0	0	0	0	2,694	2,694	0	0	0	0	0
	S/T		11,340	22,324	14,070	1,166	1,057	0	0	0	49,957	49,957	0	0	0	0	0
1.1.2.1.1.2	Project Management	OE	892	1,055	882	1,021	1,043	1,066	1,089	1,113	8,161	10,461	1,138	1,162	0	0	2,300
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		892	1,055	882	1,021	1,043	1,066	1,089	1,113	8,161	10,461	1,138	1,162	0	0	2,300
1.1.2.1.1.3	Organic	OE	590	4,408	1,120	0	0	0	0	0	6,118	6,118	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		590	4,408	1,120	0	0	0	0	0	6,118	6,118	0	0	0	0	0
1.1.2.1.1.4	High Heat	OE	397	142	0	0	0	0	0	0	539	539	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		397	142	0	0	0	0	0	0	539	539	0	0	0	0	0
1.1.2.1.1.5	Authorization Basis	OE	6,622	7,237	14,719	7,430	6,984	7,138	7,295	7,455	64,879	80,286	7,619	7,788	0	0	15,407
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		6,622	7,237	14,719	7,430	6,984	7,138	7,295	7,455	64,879	80,286	7,619	7,788	0	0	15,407
1.1.2.1.1.6	Criticality	OE	86	0	0	0	0	0	0	0	86	86	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		86	0	0	0	0	0	0	0	86	86	0	0	0	0	0
1.1.2	**SAFETY ISSUE RESOL'TN**	OE	19,927	32,472	30,790	9,616	9,084	8,204	8,384	8,568	127,046	144,752	8,757	8,950	0	0	17,707
		C/E	0	2,694	0	0	0	0	0	0	2,694	2,694	0	0	0	0	0
	TOTAL		19,927	35,166	30,790	9,616	9,084	8,204	8,384	8,568	129,740	147,446	8,757	8,950	0	0	17,707

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
11/24/99
07:35 AM

		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.2														
RL-TW02														
TANK SAFETY ISSUE RESOL'TN PROJ														
1.1.2.1.1.1	Flammable Gas	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.2.1.1.2	Project Management	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.2.1.1.3	Organic	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.2.1.1.4	High Heat	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.2.1.1.5	Authorization Basis	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.2.1.1.6	Criticality	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.2	**SAFETY ISSUE RESOL'TN**	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL		0	0	0	0	0	0	0	0	0	0	0	0

B.2.4.3 Life Cycle Budget Authority by PBS

EXHIBIT 4a

TANK WASTE REMEDIATION SYSTEM
BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.2	
PBS NO:	RL-TW02	
PBS TITLE:	TANK SAFETY ISSUE RESOLUTION	
FUND TYPE	TARGET B/A FY1998	PRESIDENT'S BUDGET PLUS CARRYOVER[1] FY1999
OPERATING EXPENSE	24,968	19,927
CENRTC	2,180	
GENERAL PLANT PROJECT	-	
LINE ITEM *(List Each One)*		
0	-	
0	-	
0	-	
0	-	
0	-	
0	-	
Subtotal Line Items	-	
TOTAL NEW B/A	27,148	19,927
ESTIMATED FY 1998 CARRYOVER		687
TOTAL NEW B/A+CARRYOVER	27,148	20,614

[1]Estimated Carryover Is NOT Included In Cost Baseline; Change Request For Actual Carryover Submitted After September 30, 1998.

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)
11/24/98 09/24/98 UPDATE
10:29 AM

PBS - ADS PBS TITLE	F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A) *	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2068 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
TW02																		
1.1.2 TANK SAFETY ISSUE RESOL'N	EX	23,976	24,968	20,614	32,472	30,790	9,616	9,084	8,204	8,384	8,568	176,677	194,383	8,757	8,950	0	0	17,707
	CE	9,066	2,180	0	2,694	0	0	0	0	0	0	13,940	13,940	0	0	0	0	0
	TOTAL	33,042	27,148	20,614	35,166	30,790	9,616	9,084	8,204	8,384	8,568	190,617	208,323	8,757	8,950	0	0	17,707

* FY 1999 INCLUDES CARRYOVER OF $687

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

[illegible]	09/24/98 UPDATE

10:28 AM

PBS - ADS

PBS TITLE

TW02

1.1.2 TANK SAFETY ISSUE RESOL'N

F/T	FY 2011-FY 2015 B/A PROFILE (B/A)	FY 2016-FY 2020 B/A PROFILE (B/A)	FY 2021-FY 2025 B/A PROFILE (B/A)	FY 2026-FY 2030 B/A PROFILE (B/A)	FY 2031-FY 2035 B/A PROFILE (B/A)	FY 2036-FY 2040 B/A PROFILE (B/A)	FY 2041-FY 2045 B/A PROFILE (B/A)	FY 2046-FY 2050 B/A PROFILE (B/A)	FY 2051-FY 2055 B/A PROFILE (B/A)	FY 2056-FY 2060 B/A PROFIL (B/A)	FY 2061-FY 2065 B/A PROFILE (B/A)	FY 2066-FY 2066 B/A PROFILE (B/A)
EX	0	0	0	0	0	0	0	0	0	0	0	0
CE	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0	0	0

B.2.4.4 Project (PBS) Contractor Split

TANK WASTE REMEDIATION SYSTEM
FY 1999 CONTRACTOR FUNDING SPLIT (NEW BA ONLY)

PBS	DOE-RL/ RL-PNNL	NATIONAL LABS	TOTAL
TW02	$ 1,225	$ 1,432	$ 2,657

REFLECTS FY 1999 NEW BA ONLY

B.3 Tank Farm Operations (RL-TW03)
B.3.1.0 Tank Farm Operations Technical Baseline
B.3.1.1 Tank Farm Operations Project Mission TW03-1
B.3.1.2 Tank Farm Operations End Point Targets from Hanford Strategic Plan TW03-1
B.3.1.3 Tank Farm Operations Major Facilities TW03-1
B.3.1.4 Drivers for Tank Farm Operations TW03-9
B.3.2.0 Tank Farm Operations Work Breakdown Structure (WBS)
B.3.2.1 Tank Farm Operations WBS Hierarchy TW03-10
B.3.2.2 Tank Farm Operations WBS Dictionary TW03-10
B.3.3.0 Schedule Baseline
B.3.3.1 Project Master Baseline Schedule by PBS TW03-15
B.3.3.2 Execution Year Project Master Baseline Schedule TW03-75
B.3.3.3 Milestone List TW03-101
B.3.3.4 Milestone Description Sheets TW03-105
B.3.4.0 Cost Baseline
B.3.4.1 Project Priority List TW03-149
B.3.4.2 Life Cycle Cost Baseline by PBS TW03-152
B.3.4.3 Life Cycle Budget Authority by PBS TW03-159
B.3.4.4 Project (PBS) Contractor Split TW03-163

B.3 Tank Farm Operations (RL-TW03)

B.3.1.0 Tank Farm Operations Technical Baseline

This section describes the technical baseline for this project. It identifies the mission, the end point targets, the site major facilities, technical logic, functions, requirements, and forecasts for this project.

B.3.1.1 Tank Farm Operations Mission

This project's primary objective is to operate, maintain, and upgrade the tank farm facilities to assure the safe storage of the tank wastes until it is retrieved; ongoing activities include: maintenance of tank farm facilities, receipt and transfer of radioactive liquid waste from other Hanford facilities.

In addition, the program is pumping interstitial liquid from the single-shell tanks (SSTs) (interim stabilization), disconnecting piping to prevent further liquid intrusion (isolation), and reducing surface contamination above the tanks to bring them to a controlled, clean, and interim stable condition.

B.3.1.2 Tank Farm Operations End Point Targets from Hanford Strategic Plan

- Transition high cost surplus facilities to a low cost, stable, deactivated condition.

B.3.1.3 Tank Farm Operations Major Facilities

B.3.1.3.1 Tank Farm System Facility

B.3.1.3.1.1 Tank Farm System Facility Description

The Tank Farm System consists of the new and existing equipment required to operate the SST farms and DST farms for the entire tank farm mission. The Tank Farm System is comprised of the following systems located in the 200 Area Central Plateau of the Hanford Site:

- Double Shell Tanks (DSTs) grouped as follows:
  (a) 25 tanks in five separate tank farms located in the 200 East Area (AN, AP, AW, AY & AZ);
  (b) 3 tanks in one tank farm located in the 200 West Area (SY);
  (c) Double Contained Receiver Tanks (DCRTs) in various 200 Area locations (244-TX, 244-BX, 244-U, 244-S, 244-A);
  (d) 200 Area vaults (244-AR, 244-CR, 209-E);
  (e) The cross-site transfer system Vent Station Catch Tank (241-EW-151); and

- Single Shell Tanks (SSTs) grouped as follows:
  (a) 67 tanks in six separate tank farms located in the 200 East Area (A, AX, B, BX, BY & C);

(b) 82 tanks in six separate tank farms located in the 200 West Area (S, SX, T, TX, TY and U);
(c) Miscellaneous Underground Storage Tanks; and
(d) SST retrieval support facilities
(e) Future Waste Receiver Facilities (WRFs) to support retrieval

- Waste Transfer System network that includes:
  (a) Underground waste transfer network including the cross-site transfer system; and
  (b) Low activity waste receiving and unloading facility (204-AR)

- Retrieval Systems which includes the hardware required to mobilize/alter the wastes stored in SSTs and DSTs such that the stored wastes can be transferred to the DSTs and on to the treatment facilities.

- SST and DST Closure Systems which include any hardware required to complete closure actions.

- Utilities Distribution System inside tank farms which includes the hardware required to distribute electrical power, service/raw water, steam and potable water.

- Monitoring and control systems in support of tank farm operations and closure including vadose zone.

B.3.1.3.1.2 Tank Farm System Facility Technical Logic:

The Department of Energy (DOE), in partnership with its contractors, shall plan, acquire, operate, maintain, and dispose of physical assets as valuable national resources. Stewardship of these physical assets shall be accomplished in a cost-effective manner to meet the DOE mission. This shall incorporate industry standards, a graded approach, and performance objectives.

This diagram displays the primary work activities (functions) that are performed in each life cycle phase of the facility. The diagram also reflects the technical logic (functional flow) for the facility through its remaining life cycle phases.

Project responsibility for the life cycle phases of the Tank Farm System components are assigned as follows:

Table B.3-1 Responsibility Assignment Matrix for Tank Farm System

Facility	Life Cycle Phase *								
	Program Planning	Pre Conceptual	Conceptual	Execute			O&M	Close Out	
				Design	Construction	Turnover		Post Ops	D&D
Tank Farm System	(tbd)						**RL-TW03** RL-TW01 RL-TW02 RL-TW04	**RL-TW03**	**RL-TW04**

* RL PBS Identifier Index:

RL-TW01 - Tank Waste Characterization
RL-TW02 - Tank Safety Issue Resolution
RL-TW03 - Tank Farm Operations
RL-TW04 - Retrieval

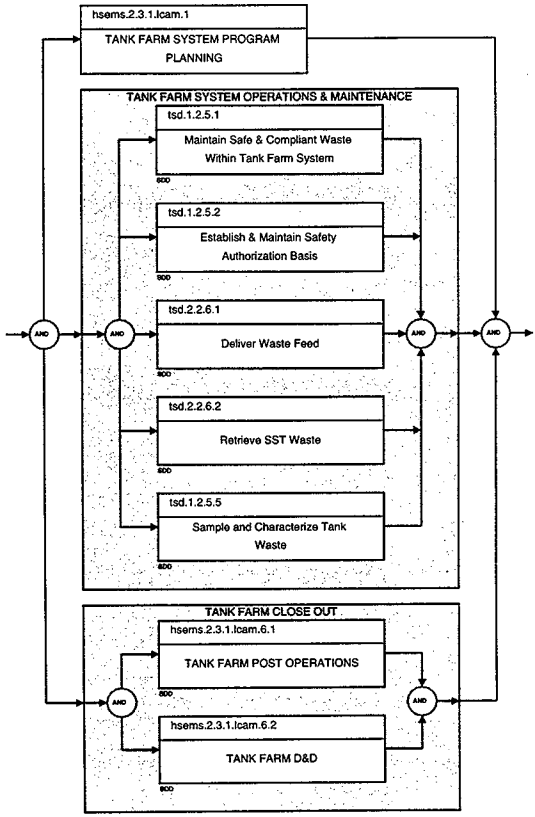

Figure B.3_1 TANK FARM

B.3.1.3.1.3 Tank Farm System Life Cycle Functional Descriptions and Requirements

The Life Cycle Functional Descriptions table describes the life cycle phases and the functions performed during each phase. The Life Cycle Requirements table describes the requirements that trace to the functions listed in the Life Cycle Functional Descriptions table.

Table B.3-2 Tank Farm System Life Cycle Functional Descriptions

hsems.2.3.1.lcam.5 TANK FARM SYSTEM OPERATIONS & MAINTENANCE	
	tsd.1.2.5.1 Maintain Safe & Compliant Waste Within Tank Farm System The Tank Farm System stores and manages existing tank waste (SST and DST) and receives waste from on-site waste generators to be stored in the Double Shell Tanks (DSTs). On-site waste generators include B Plant, T Plant, the Plutonium Finishing Plant, the 222-S Laboratories, the 242-A Evaporator, the 100 K Area, the 100 N Area, the 300 Area, the 400 Area, the LAW Treatment Plant, and the LAW/HLW Treatment Plant. Managing waste in the Tank Farm System includes 1) confinement during receipt, transfer and storage of waste; and 2) monitoring and control of selected waste chemical and physical properties, system leakage, gaseous discharges, flammable gas/air bubble accumulation, and other parameters to protect workers, the public, and the environment. Both the storage of waste and the receipt of additional waste are in progress. The storage of waste will continue until sufficient wastes have been removed from the SSTs, MUSTs, and DSTs, by the delivery of waste feed to the treatment plants, to meet tank farm closure requirements.
hsems.2.3.1.lcam.6 TANK FARM CLOSE OUT	
hsems.2.3.1.lcam.6.1 TANK FARM POST OPERATIONS	
	tsd.1.2.4.2.1 Maintain Safe & Compliant Tank Farm System The Tank Farm system is maintained in a safe, compliant condition following operations until the system is ready for decontamination and decommissioning (D&D).
	tsd.2.2.4.2.1 Transition Tank Farm Facilities At the completion of the Operations and Maintenance phase of the Tank Farm System, activities are performed as necessary to place the Tank Farm System into a safe, stable and environmentally sound condition pending final disposition of the system. Activities for this function are limited to those that optimize surveillance and maintenance costs for the Tank Farm System during the time between system operations and D&D. Tank Farm System elements will be placed in a de-energized state if possible.

Table B.3-3 Tank Farm System Life Cycle Requirements

Requirement	Function
Central Plateau high cost surplus facilities shall be transitioned to a low cost, stable, deactivated condition	tsd.2.2.4.2.1
Single shell tanks shall be stabilized	tsd.1.2.5.1
Single shell tank liquid intrusion shall be prevented	tsd.1.2.5.1
Single shell tank pumpable liquid shall be removed	tsd.1.2.5.1
Central Plateau gaseous effluent releases shall be monitored	tsd.1.2.4.2.1 tsd.1.2.5.1
Central Plateau facilities shall be maintained within the approved safety envelope	tsd.1.2.4.2.1 tsd.1.2.5.1
Double Shell Tank facilities shall be maintained within the approved safety envelope	tsd.1.2.5.1
Miscellaneous Underground Storage Tanks shall be maintained within the approved safety envelope	tsd.1.2.4.2.1 tsd.1.2.5.1

Table B.3-3 Tank Farm System Life Cycle Requirements (Continued)

Requirement	Function
Single Shell Tank facilities shall be maintained within the approved safety envelope	tsd.1.2.4.2.1 tsd.1.2.5.1
Tank Farm upgrades shall be completed by Jun 30, 2005	tsd.1.2.5.1
Tank Farm ventilation upgrades shall be completed.	tsd.1.2.5.1
Tank Farm cross site transfer line replacement shall be completed.	tsd.1.2.5.1
Tank safety issues for high priority tanks shall be resolved by Sep 30, 2001	tsd.1.2.5.1
244AR interim actions shall be completed.	tsd.1.2.4.2.1
The Hanford radioactive tank waste (current and future tank waste) shall be safely stored pending retrieval for treatment.	tsd.1.2.5.1
Central Plateau tank waste safety issues shall be resolved	tsd.1.2.5.1
Phase II liquid effluent streams shall be treated using "Best Available Technology/All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment (BAT/AKART)"	tsd.1.2.4.2.1
Complete interim stabilzation activities for all single-shell tanks except 241-C-106 (to be retrieved in accordance with milestone M-45-03). Complete intrusion prevention for all single-shell tanks except 241-C-106. Due Date: 9/30/2000	tsd.1.2.5.1
Provide additonal Doubl-Shell Tank Capacity, TBD.	tsd.1.2.5.1
Start construction for upgrades in the second tank farm. Due Date: 6/30/2000	tsd.1.2.5.1
Start construction for upgrades in the third tank farm. Due Date: 3/31/2001	tsd.1.2.5.1
Start construction for upgrades in the fourth tank farm. Due Date: 3/31/2002	tsd.1.2.5.1
Start construction for upgrades in the fifth tank farm. Due Date: 6/30/2003	tsd.1.2.5.1
Establish a comprehensive safety basis that will ensure that all activities comply with environmental regulations and result in safe and environmentally sound operations.	tsd.1.2.5.1

B.3.1.3.1.4 Tank Farm System Boundary Diagram

This section identifies the other facilities (onsite and offsite) that have an interface (either input or output) with this facility.

Table B.3-4 Tank Farm System Boundary Diagram

Major Input Interfaces	Facility	Major Output Interfaces
External Interfaces	Tank Farm System	External Interfaces
Hanford Legacy		Hazardous Waste Disposal Contracts
Hanford Site Environmental System Interfaces		Hanford Site Environmental System Interfaces
100 K Area Facilities		222-S Laboratory
222-S Laboratory		242-A Evaporator
242-A Evaporator		Central Waste Complex
324 Facility		Low-Level Waste Burial Grounds
325 Facility		
327 Facility		
340 Waste Handling Facility		
B Plant		
CP General Purpose Office		
CP General Purpose Shop		
CP General Purpose Warehouse		
CP Road System		
CP Steam System		
CP-ES 480 V Distribution System		
CP-Water Potable Water Piping Network		
FFTF		
LAW/HLW Plant, Phase 1		
Misc Radiological Laboratories		
PFP		
PUREX		
RoR Soil Site Operable Units		
T-Plant Facility		
Water Systems in Central Plateau		
WESF		

B.3.1.3.1.5 Tank Farm System Interface Descriptions and Summary Level Forecasts

This section contains the material, waste, and infrastructure forecasts for this facility. It identifies the interface type, the period of time for the forecasts, the life cycle total forecast value, and the execution year forecast quantity.

OFFSITE INPUTS

Table B.3-5 Offsite Inputs for Tank Farm System

Stream	Category	Period	Total	FY99	Units
X.0 Hanford Legacy					
Existing DST Waste	(none forecasted)				

ONSITE INPUTS

Table B.3-6 Onsite Inputs for Tank Farm System

Stream	Category	Period	Total	FY99	Units
hsems.1.1.2 RoR Soil Site Operable Units					
100-N, HLW	(none forecasted)				
105-F & 105-H Basin TCO, HLW	HLW	2000 - 2005	910.0		cubic meters
hsems.1.2.1 100 K Area Facilities					
SNFSLG, HLW	HLW	1999 - 2003	1320	0.0	cubic meters
hsems.2.2.2 LAW/HLW Plant, Phase 1					
Pretreated Low-Activity Waste	HLW	2004 - 2006	4160		cubic meters
LAW/HLW Plant Phase I, Entrained Solides for Return to DSTs	HLW	2006 - 2015	3330		cubic meters
hsems.2.2.5.1 242-A Evaporator					
Concentrated Tank Waste	HLW	1999 - 2011	46200	10400.0	cubic meters
242-A HLW from Training Runs	HLW	1999 - 2011	9350	719.0	cubic meters
Emergency Purge at 242-A Evaporator	(none forecasted)				
hsems.2.2.6 PUREX					
PUREX-TCO (DN), HLW	HLW	1999 - 20018	381.0	20.0	cubic meters

Table B.3-6 Onsite Inputs for Tank Farm System (Continued)

Stream	Category	Period	Total	FY99	Units
hsems.2.2.7 B Plant					
BPlant-TCO (DN), HLW	(none forecasted)				
BPlant, LLMW (Liquid)	(none forecasted)				
BPlant, LLW (Liquid)	(none forecasted)				
hsems.2.2.8 WESF					
WESF-Misc, HLW	HLW	1999 - 2018	742.0	20.0	cubic meters
hsems.2.2.9 PFP					
PFP Stabilization, HLW	HLW	1999 - 2005	79.0	44.0	cubic meters
PFP Deactivation, HLW	HLW	2006 - 2006	113.0		cubic meters
hsems.2.2.12 T-Plant Facility					
Liquid Waste From 221-T to West Area DSTs	(none forecasted)				
Waste from 221-T to 204-AR	HLW	1999 - 2018	1950	64.4	cubic meters
hsems.2.5.1 222-S Laboratory					
Liquid Waste From 222-S Lab to West Area DSTs	(none forecasted)				
Waste from 222-S Lab to 204-AR	HLW	1999 - 2018	1010	60.0	cubic meters
hsems.4.2.1.3 340 Waste Handling Facility					
340 Bldg, LLMW (Liquid)	(none forecasted)				
hsems.4.3.1 FFTF					
FFTF, HLW	HLW	1999 - 2018	184.0	28.0	cubic meters
hsems.4.5.1 324 Facility					
324 Building HLW	(none forecasted)				
hsems.4.5.2 325 Facility					
325 Building, HLW	HLW	1999 - 2018	449.0	92.0	cubic meters
hsems.4.5.4 327 Facility					
327 Radioactive/Mixed Liquid Waste to DSTs	(none forecasted)				
hsems.4.5.7 Misc Radiological Laboratories					
Radioactive Standards (Calibrations) for TWRS-200E	Radioactive Standards Lab Services			4200.0	calibrations
Bioassay and Dosimetry Services for TWRS-200E	Bioassay and Dosimetry Services			3600.0	samples
Radioactive Standards (Calibrations) for TWRS-200W	Radioactive Standards Lab Services			3000.0	calibrations
Bioassay and Dosimetry Services for TWRS-200W	Bioassay and Dosimetry Services			2400.0	samples
hsems.5.1.1.1 CP Steam System					
Steam for TWRS-200E	Steam			0.003656	Mlbs
hsems.5.1.2.2 Water Systems in Central Plateau					
Potable Water for TWRS-200E	Potable Water			1.7	Mgal
Potable Water for TWRS-MGMT	Potable Water			15.5	Mgal
Potable Water for TWRS-200W	Potable Water			1.3	Mgal
hsems.5.1.2.2.11.2 CP-Water Potable Water Piping Network					
Potable Water for TWRS-200E	Potable Water			1.7	Mgal
Potable Water for TWRS-MGMT	Potable Water			15.5	Mgal
Potable Water for TWRS-200W	Potable Water			1.3	Mgal
hsems.5.1.4.2.5 CP-ES 480 V Distribution System					
Electricity for TWRS-MGMT	Electricity			4.6	MW-hr
Electricity for TWRS-200W	Electricity			3000.0	MW-hr
Electricity for TWRS-200E	Electricity			5980.0	MW-hr
hsems.5.2.2.1 CP General Purpose Office					
Office Space (Leased) for TWRS-2704HV	(none forecasted)				
Office Space (Program Owned) for TWRS-2704HV	Office Space (Program Owned)			14200.0	sq. ft.
Office Space (Infrastructure Owned) for TWRS-200E	Office Space (Infrastructure Owned)			30000.0	sq. ft.
Office Space (Program Owned) for TWRS-200E	Office Space (Program Owned)			40000.0	sq. ft.
Office Space (Program Owned) for TWRS-200W	Office Space (Program Owned)			30000.0	sq. ft.
Office Space (Infrastructure Owned) for TWRS-200W	Office Space (Infrastructure Owned)			25000.0	sq. ft.
Office Space (Program Owned) for TWRS-MGMT	Office Space (Program Owned)			3500.0	sq. ft.
hsems.5.2.3.1 CP General Purpose Shop					
Custodial Services for TWRS-200E	Custodial Services			40000.0	sq. ft.
Building Maintenance for TWRS-MGMT	Maintenance Services (Other)			3500.0	sq. ft.

Table B.3-6 Onsite Inputs for Tank Farm System (Continued)

Stream	Category	Period	Total	FY99	Units
Fab Shop Services for TWRS-200W	Fabrication Services (Other)			5000.0	labor-hrs
Lifting (Cranes) for TWRS-200W	Lifting Services			375.0	crane days
Building Maintenance for TWRS-200E	Maintenance Services (Other)			35000.0	sq. ft.
Custodial Services for TWRS-200W	Custodial Services			55000.0	sq. ft.
Lifting (Cranes) for TWRS-200E	Lifting Services			121.0	crane days
Building Maintenance for TWRS-200W	Maintenance Services (Other)			25000.0	sq. ft.
Fab Shop Services for TWRS-200E	Fabrication Services (Other)			6000.0	labor-hrs
Custodial Services for TWRS-MGMT	Custodial Services			3500.0	sq. ft.
Custodial Services for TWRS-2704HV	Custodial Services			8550.0	sq. ft.
hsems.5.2.4.1 CP General Purpose Warehouse					
Storage Space (Infrastructure Owned) for TWRS-200E	Allocated Storage			5400.0	sq. ft.
Storage Space (Infrastructure Owned) for TWRS-200W	Allocated Storage			4300.0	sq. ft.
Storage Space (Program Owned) for TWRS-200E	(none forecasted)				
Storage Space (Program Owned) for TWRS-200W	(none forecasted)				
hsems.5.3.1.2 CP Road System					
Heavy Trucks for TWRS-200E	Heavy Trucks			70.0	vehicle-hrs
Heavy Equipment for TWRS-200W	Heavy Equipment (Other)			400.0	equipment days
Sedans/Light Trucks for TWRS-200W	Sedans/Light Trucks			35.0	no. of vehicles
Heavy Equipment for TWRS-200E	Heavy Equipment (Other)			50.0	equipment days
Sedans/Light Trucks for TWRS-200E	Sedans/Light Trucks			37.0	no. of vehicles
Heavy Trucks for TWRS-200W	Heavy Trucks			1250.0	vehicle-hrs

OFFSITE OUTPUTS

Table B.3-7 Offsite Outputs for Tank Farm System

Stream	Category	Period	Total	FY99	Units
X Hazardous Waste Disposal Contracts					
TF OPER, HAZ	HAZ	1999 - 2031	216.0	8.09	cubic meters

ONSITE OUTPUTS

Table B.3-8 Onsite Outputs for Tank Farm System

Stream	Category	Period	Total	FY99	Units
hsems.2.2.5.1 242-A Evaporator					
Dilute Tank Waste	HLW	1999 - 2018	72500	10200.0	cubic meters
hsems.2.3.5.1 Central Waste Complex					
TF OPER, CH-LLMW-I	CH LLMW I	1999 - 2032	2460	93.2	cubic meters
DST RET, CH LLMW III	CH LLMW III	2009 - 2018	335.0		cubic meters
TF OPER, RH-LLMW-I	RH LLMW I	1999 - 2032	658.0	20.6	cubic meters
TWP W058, CH-LLMW-I	(none forecasted)				
TWP W314, CH-LLW-I	CH LLW I	1999 - 2005	60.7	4.05	cubic meters
TWP W314, CH-LLMW-I	CH LLMW I	1999 - 2004	129.0	7.96	cubic meters
TWP W314, RH-LLMW-I	RH LLMW I	1999 - 2004	55.7	4.11	cubic meters
TF OPER, RH-LLMW-III	RH LLMW III	1999 - 2031	432.0	13.1	cubic meters
WELL DRL, CH-LLMW-I	(none forecasted)				
TWP W314, CH-LLMW-III	CH LLMW III	1999 - 2005	750.0	39.0	cubic meters
TF OPER, CH-LLMW-III	CH LLMW III	1999 - 2032	1480	51.3	cubic meters
TF OPER, CH-LLW-I	CH LLW I	1999 - 2032	7020	270.0	cubic meters
TWP W314, RH-LLMW-III	RH LLMW III	1999 - 2005	322.0	16.9	cubic meters
TWP W030, CH-LLMW-I	(none forecasted)				
hsems.2.4.1.1 Low-Level Waste Burial Grounds					
TF OPER, CH-LLW-I	CH LLW I	1999 - 2032	7020	270.0	cubic meters
TWP W314, CH-LLW-I	CH LLW I	1999 - 2005	60.7	4.05	cubic meters
hsems.2.5.1 222-S Laboratory					
Analytical Laboratory Services for TWRS	Analytical Laboratory Services			10100.0	samples
In-Field Laboratory Services for TWRS	In-Field Laboratory Services			1960.0	samples

B.3.1.4 Drivers for Tank Farm Operations

Table B.3-9 Source Documents for Tank Farm Operations

Name	Title
DE-AC06-96RL13200	Project Hanford Management Contract, Fluor Daniel Hanford, Inc.
DOE/EIS-0222D	Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan
DOE/RL-89-10	Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement)
DOE/RL-96-92	Hanford Strategic Plan
DOE/RL-97-55	Hanford Site Environmental Management Specification

B.3.2.0 Tank Farm Operations Work Breakdown Structure (WBS)

B.3.2.1 Tank Farm Operations WBS Hierarchy

RL PBS	RL WBS	Title
RL-TW03	1.01.03	Tank Farm Operations
	1.01.03.01	Tank Farm System
	1.01.03.01.01	Maintain Safe & Compliant Waste Within Tank Farm System
	1.01.03.01.02	Maintain Safe & Compliant Tank Farm System
	1.01.03.01.03	Transition Tank Farm Facilities

B.3.2.2 Tank Farm Operations WBS Dictionary

The following pages contain the WBS dictionary for RL-TW03

B.3-10 WBS Dictionary for Maintain Safe & Compliant Waste Within Tank Farm System

1. Dictionary Title	2. Date	3. PBS Number	4. Dict Rev
Maintain Safe & Compliant Waste Within Tank Farm System	9 November 1998	RL-TW03	

5. WBS No.	6. B & R No.	7. Baseline CR No.
1.01.03.01.01	EW02J118	

8. Organization Name
Tank Farm Operations

9. Scope of Work

The Tank Farm System stores and manages existing tank waste (SST and DST) and receives waste from on-site waste generators to be stored in the Double Shell Tanks (DSTs). On-site waste generators include B Plant, T Plant, the Plutonium Finishing Plant, the 222-S Laboratories, the 242-A Evaporator, the 100 K Area, the 100 N Area, the 300 Area, the 400 Area, the LAW Treatment Plant, and the LAW/HLW Treatment Plant. Managing waste in the Tank Farm System includes 1) confinement during receipt, transfer and storage of waste; and 2) monitoring and control of selected waste chemical and physical properties, system leakage, gaseous discharges, flammable gas/air bubble accumulation, and other parameters to protect workers, the public, and the environment.

Both the storage of waste and the receipt of additional waste are in progress. The storage of waste will continue until sufficient wastes have been removed from the SSTs, MUSTs, and DSTs, by the delivery of waste feed to the treatment plants, to meet tank farm closure requirements.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Single shell tanks shall be stabilized
- Single shell tank liquid intrusion shall be prevented
- Single shell tank pumpable liquid shall be removed
- Central Plateau gaseous effluent releases shall be monitored
- Central Plateau facilities shall be maintained within the approved safety envelope
- Double Shell Tank facilities shall be maintained within the approved safety envelope
- Miscellaneous Underground Storage Tanks shall be maintained within the approved safety envelope
- Single Shell Tank facilities shall be maintained within the approved safety envelope
- Tank Farm upgrades shall be completed by Jun 30, 2005
- Tank Farm ventilation upgrades shall be completed.
- Tank Farm cross site transfer line replacement shall be completed.
- Tank safety issues for high priority tanks shall be resolved by Sep 30, 2001
- The Hanford radioactive tank waste (current and future tank waste) shall be safely stored pending retrieval for treatment.
- Central Plateau tank waste safety issues shall be resolved
- Complete interim stabilzation activities for all single-shell tanks except 241-C-106 (to be retrieved in accordance with milestone M-45-03). Complete intrusion prevention for all single-shell tanks except 241-C-106.

  Due Date: 9/30/2000
- Provide additonal Doubl-Shell Tank Capacity, TBD.
- Start construction for upgrades in the second tank farm. Due Date: 6/30/2000
- Start construction for upgrades in the third tank farm. Due Date: 3/31/2001

B.3-10 WBS Dictionary for Maintain Safe & Compliant Waste Within Tank Farm System (Continued)

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
Maintain Safe & Compliant Waste Within Tank Farm System		9 November 1998	RL-TW03	
5. WBS No. 1.01.03.01.01	6. B & R No. EW02J118		7. Baseline CR No.	
8. Organization Name Tank Farm Operations				

- Start construction for upgrades in the fourth tank farm. Due Date: 3/31/2002
- Start construction for upgrades in the fifth tank farm. Due Date: 6/30/2003
- Establish a comprehensive safety basis that will ensure that all activities comply with environmental regulations and result in safe and environmentally sound operations.

B.3-11 WBS Dictionary for Maintain Safe & Compliant Tank Farm System

1. Dictionary Title		2. Date	3. PBS Number	4. Dict Rev
Maintain Safe & Compliant Tank Farm System		29 October 1998	RL-TW03	
5. WBS No.	6. B & R No.		7. Baseline CR No.	
1.01.03.01.02	EW02J118			
8. Organization Name				
Tank Farm Operations				

9. Scope of Work

The Tank Farm system is maintained in a safe, compliant condition following operations until the system is ready for decontamination and decommissioning (D&D).

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau gaseous effluent releases shall be monitored
- Central Plateau facilities shall be maintained within the approved safety envelope
- Miscellaneous Underground Storage Tanks shall be maintained within the approved safety envelope
- Single Shell Tank facilities shall be maintained within the approved safety envelope
- 244AR interim actions shall be completed.
- Phase II liquid effluent streams shall be treated using "Best Available Technology/All Known, Available, and Reasonable Methods of Prevention, Control, and Treatment (BAT/AKART)"

B.3-12 WBS Dictionary for Transition Tank Farm Facilities

1. Dictionary Title Transition Tank Farm Facilities		2. Date 15 July 1998	3. PBS Number RL-TW03	4. Dict Rev
5. WBS No. 1.01.03.01.03	6. B & R No. EW02J118		7. Baseline CR No.	
8. Organization Name Tank Farm Operations				

9. Scope of Work

At the completion of the Operations and Maintenance phase of the Tank Farm System, activities are performed as necessary to place the Tank Farm System into a safe, stable and environmentally sound condition pending final disposition of the system. Activities for this function are limited to those that optimize surveillance and maintenance costs for the Tank Farm System during the time between system operations and D&D. Tank Farm System elements will be placed in a de-energized state if possible.

This WBS covers work necessary to support satisfying the following technical baseline requirements for the Hanford clean up mission:

- Central Plateau high cost surplus facilities shall be transitioned to a low cost, stable, deactivated condition

B.3.3.1 Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
1			Hanford Environmental Management
1.01			Tank Waste Remediation System
1.01.03			Tank Farm Operations
1.01.03.01			Tank Farm System
1.01.03.01.01			Waste Feed Delivery
1.01.03.01.01.01			Project Management
190.205	01OCT98*	30SEP24	RadCon Prog Mgmt/General Admin
190.305	01OCT98*	30SEP24	Engineering Program Mgmt and Gen Admin
190.310	01OCT98*	04MAY00	Provide Y2K Project Support
190.315	01OCT98*	30SEP03	Impl/Maint HNF-SD-WM-CM-014, Conf Mgmt
190.505	01OCT98*	30SEP25	Maintenance Program Mgmt/General Admin
190.602	01OCT98*	30SEP24	QA Program Management/General Admin
190.604	01OCT98*	30SEP24	Safety and Health Prog Mgmt/Gen Admin
190.606	01OCT98*	30SEP24	Provide Environmental Program Mgmt/Gen Admin
190.902	01OCT98*	30SEP24	Ops Program Management/General Admin
190.911	01OCT98*	30SEP24	Patrol Rover
190.918	01OCT98*	30SEP24	Attend Personnel Training

ect Start 01OCT97
ect Finish 30SEP27
Date 01OCT98
Date 18NOV98

Early Bar
Progress Bar
Critical Activity

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3BP2

Sheet 1 of 58

Tank Waste Remediation System
PMBS - Life of Project
TW03 - Tank Farm Operations

Activity ID	Early Start	Early Finish	Provide Safe Storage Strategic Planning
190.922	01OCT99*	30SEP24	
190.924	01OCT98*	30SEP24	Perf Indicator Rptg/Communication Admin
190.930	01OCT98*	30SEP24	Prov BIO/Emergency Response Staffing
190.999	01OCT98*	30SEP24	Perform TFO Project Fin Plan Assessments
190.A51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for A/AX Farms
190.B51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for B/BX/BY Farms
190.C51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for C Farms
190.D51	01OCT98*	30SEP03	Perf Surv/Eqmt Monit for Deactivation
190.E51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for 244-S
190.F51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for 200E Anc Fcls
190.G51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for 200W Anc Fcls
190.N51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for AN Farms
190.P51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for AP Farms
190.R51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for 204-AR
190.S51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for S/SX Farms

FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30

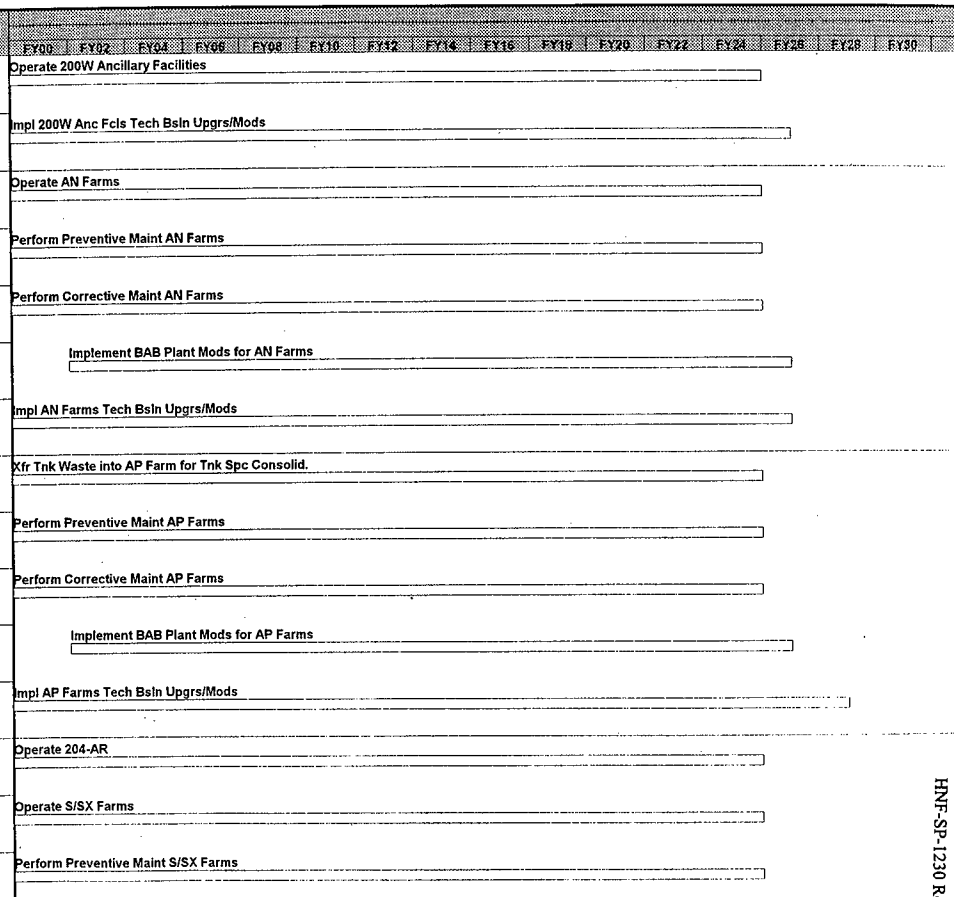
Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
190.T51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for T/TX/TY Farms
190.U51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for U Farms
190.W51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for AW Farms
190.Y51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for SY Farms
190.Z51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for AY/AZ Farms
680.210	01OCT98*	30SEP24	Implement the RadCon Improvement Plan
680.305	01OCT99*	30SEP24	Impl Suspect Parts Mitigation Compliance
680.310	01OCT99*	31MAY00	Impl Natuaral Phenomena Hazards Mit Compliance
680.315	01OCT99*	23FEB00	Implement the Metrification Program
680.625	01OCT98*	29SEP00	Implement PHMC Chemical Management System
1.01.03.01.01.02			Ancillary Facilities
190.F56	02OCT00*	30SEP03	Repair/Replace Failed Double-Encased Transfer
190.F60	01OCT98*	30SEP24	Perform Preventive Maint 200E Anc Fcls
190.F61	01OCT98*	30SEP24	Perform Corrective Maint 200E Anc Fcls
190.F81	02OCT00*	30SEP25	Implement BAB Plant Mods for 200E Anc Facils
190.G60	01OCT98*	30SEP24	Perform Preventive Maint 200W Anc Fcls

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
190.G61	01OCT98*	30SEP24	Perform Corrective Maint 200W Anc Fcls
190.G81	02OCT00*	30SEP25	Implement BAB Plant Mods for 200W Anc Facils
240.F60	02OCT00*	30NOV00	Install ENRAF Level Instrument 200E Anc Facils
240.F65	02OCT00*	28NOV00	Compl INstall/Connect TMACS 200E Anc Facilities
240.F67	01OCT98*	11NOV98	Perf Cont. Air Monitor (CAM) Upgrs 2E Anc Facil
1.01.03.01.01.03			Deactivating Facilities
190.D60	01OCT98*	30SEP24	Perform Preventive Maint Deactivation Facils
190.D61	01OCT98*	30SEP24	Perform Corrective Maint Deactivation Facils
670.D40	02OCT00*	29SEP06	Devel TWRS Facil Deact Program Plan
670.D42	02OCT00*	30SEP03	Bldg PreDeact WP/Accept Criteria Obt Approval
670.D45	02OCT00*	28SEP01	Transition Sites/Facil Pre-Deact Work Plan
670.D52	02OCT00*	28SEP01	PCD Pre-Deact WP/Accept Criteria/Obtain Approval
670.D62	02OCT00*	28SEP01	IMUSTs Pre-Deact WP/Accept Criteria/Obt Approval
670.D72	02OCT00*	28SEP01	URSs PreDeact WP/Accept Criteria/Obtain Approval
1.01.03.01.01.04			Waste Processing Facilities
190.E60	01OCT98*	30SEP24	Perform Preventive Maint S-244

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
190.E61	01OCT98*	30SEP24	Perform Corrective Maint S-244
190.E81	02OCT00*	30SEP25	Implement BAB Plant Mods for 242-S
190.R60	01OCT98*	30SEP24	Perform Preventive Maint 204-AR
190.R61	01OCT98*	30SEP24	Perform Corrective Maint 204-AR
190.R81	02OCT00*	30SEP25	Implement BAB Plant Mods for 204-AR
240.E67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs 242-S
240.R67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs 204-AR
1.01.03.01.01.05			Tank Farm Complexes
190.A52	01OCT98*	30SEP24	Operate A/AX Farms
190.A60	01OCT98*	30SEP24	Perform Preventive Maint A/AX Farms
190.A61	01OCT98*	30SEP24	Perform Corrective Maint A/AX Farms
190.A81	02OCT00*	30SEP25	Implement BAB Plant Mods for A/AX Frms
190.A85	01OCT98*	30SEP25	Impl A/AX Farms Tech Bsln Upgrs/Mods
190.A90	01OCT99*	28OCT99	Rem Abandoned/Excess Eqmt from A/AX
190.B52	01OCT98*	30SEP24	Operate B/BX/BY Farms
190.B60	01OCT98*	30SEP24	Perform Preventive Maint B/BX/BY Farms

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
190.B61	01OCT98*	30SEP24	Perform Corrective Maint B/BX/BY Farms
190.B81	02OCT00*	28SEP07	Implement BAB Plant Mods for B/BY/BX Farms
190.B85	01OCT98*	30SEP25	Impl B/BX/BY Farms Tech Bsln Upgrs/Mods
190.B90	01OCT99*	28OCT99	Rem Abandoned/Excess Eqmt from B/BX/BY
190.C52	01OCT98*	30SEP24	Operate C Farms
190.C60	01OCT98*	30SEP24	Perform Preventive Maint C Farms
190.C61	01OCT98*	30SEP24	Perform Corrective Maint C Farms
190.C81	02OCT00*	30SEP25	Implement BAB Plant Mods for C Farms
190.C85	01OCT98*	30SEP25	Impl C Farms Tech Bsln Upgrs/Mods
190.C90	01OCT99*	28OCT99	Rem Abandoned/Excess Eqmt from C Farms
190.D52	01OCT98*	30SEP03	Operate Deactivation Facilities
190.E52	01OCT98*	30SEP24	Operate 242-S
190.E85	01OCT98*	30SEP25	Impl 244-S Tech Bsln Upgrs/Mods
190.F52	01OCT98*	30SEP24	Operate 200E Ancillary Facilities
190.F85	01OCT98*	30SEP25	Impl 200E Anc Fcls Tech Bsln Upgrs/Mods

Activity ID	Early Start	Early Finish	Activity
190.G52	01OCT98*	30SEP24	Operate 200W Ancillary Facilities
190.G85	01OCT98*	30SEP25	Impl 200W Anc Fcls Tech Bsln Upgrs/Mods
190.N52	01OCT98*	30SEP24	Operate AN Farms
190.N60	01OCT98*	30SEP24	Perform Preventive Maint AN Farms
190.N61	01OCT98*	30SEP24	Perform Corrective Maint AN Farms
190.N81	02OCT00*	30SEP25	Implement BAB Plant Mods for AN Farms
190.N85	01OCT98*	30SEP25	Impl AN Farms Tech Bsln Upgrs/Mods
190.P52	01OCT98*	30SEP24	Xfr Tnk Waste into AP Farm for Tnk Spc Consolid.
190.P60	01OCT98*	30SEP24	Perform Preventive Maint AP Farms
190.P61	01OCT98*	30SEP24	Perform Corrective Maint AP Farms
190.P81	02OCT00*	30SEP25	Implement BAB Plant Mods for AP Farms
190.P85	01OCT98*	29SEP27	Impl AP Farms Tech Bsln Upgrs/Mods
190.R52	01OCT98*	30SEP24	Operate 204-AR
190.S52	01OCT98*	30SEP24	Operate S/SX Farms
190.S60	01OCT98*	30SEP24	Perform Preventive Maint S/SX Farms



Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
190.S61	01OCT98*	30SEP24	Perform Corrective Maint S/SX Farms
190.S81	02OCT00*	30SEP25	Implement BAB Plant Mods for S/SX Farms
190.S85	01OCT98*	30SEP25	Impl S/SX Farms Tech Bsln Upgrs/Mods
190.S90	01OCT99*	17JAN00	Rem Abandoned/Excess Eqmt from S/SX Farms
190.T52	01OCT98*	30SEP24	Operate T/TX/TY Farms
190.T60	01OCT98*	30SEP24	Perform Preventive Maint T/TX/TY Farms
190.T61	01OCT98*	30SEP24	Perform Corrective Maint T/TX/TY Farms
190.T81	02OCT00*	30SEP25	Implement BAB Plant Mods for T/TX/TY Farms
190.T85	01OCT98*	30SEP25	Impl T/TX/TY Farms Tech Bsln Upgrs/Mods
190.U52	01OCT98*	30SEP24	Operate U Farms
190.U60	01OCT98*	30SEP24	Perform Preventive Maint U Farms
190.U61	01OCT98*	30SEP24	Perform Corrective Maint U Farms
190.U81	02OCT00*	30SEP25	Implement BAB Plant Mods for U Farms
190.U85	01OCT98*	30SEP25	Impl U Farms Tech Bsln Upgrs/Mods
190.U90	01OCT99*	28OCT99	Rem Abandoned/Excess Eqmt from U Farms

Activity ID	Early Start	Early Finish	Operate AW Farms	Perform Preventive Maint AW Farms	Perform Corrective Maint AW Farms	Replace the AW-104 Transfer Pump	Implement BAB Plant Mods for AW Farms	Impl AW Farms Tech Bsln Upgrs/Mods	Rem Abandoned/Excess Eqmt from AW Farms	Operate SY Farms	Perform Preventive Maint SY Farms	Perform Corrective Maint SY Farms	Implement BAB Plant Mods for SY Farms	Impl SY Farms Tech Bsln Upgrs/Mods	Leak Detectors Annulus SY Farm	Operate AY/AZ Farms	Perform Preventive Maint AY/AZ Farms
190.W52	01OCT98*	30SEP24	Operate AW Farms														
190.W60	01OCT98*	30SEP24		Perform Preventive Maint AW Farms													
190.W61	01OCT98*	30SEP24			Perform Corrective Maint AW Farms												
190.W75	02OCT00*	19MAR01				Replace the AW-104 Transfer Pump											
190.W81	02OCT00*	30SEP25					Implement BAB Plant Mods for AW Farms										
190.W85	01OCT98*	30SEP25						Impl AW Farms Tech Bsln Upgrs/Mods									
190.W90	01OCT99*	28OCT99							Rem Abandoned/Excess Eqmt from AW Farms								
190.Y52	01OCT98*	30SEP24								Operate SY Farms							
190.Y60	01OCT98*	30SEP24									Perform Preventive Maint SY Farms						
190.Y61	01OCT98*	30SEP24										Perform Corrective Maint SY Farms					
190.Y81	02OCT00*	30SEP25											Implement BAB Plant Mods for SY Farms				
190.Y85	01OCT98*	30SEP25												Impl SY Farms Tech Bsln Upgrs/Mods			
190.Y99	01OCT98*	30SEP99													Leak Detectors Annulus SY Farm		
190.Z52	01OCT98*	30SEP24														Operate AY/AZ Farms	
190.Z60	01OCT98*	30SEP24															Perform Preventive Maint AY/AZ Farms

FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30

Activity ID	Early Start	Early Finish	Activity
190.Z61	01OCT98*	30SEP24	Perform Corrective Maint AY/AZ Farms
190.Z75	01OCT99*	30SEP25	Perform 702-AZ Upgrade
190.Z81	02OCT00*	30SEP25	Implement BAB Plant Mods for AY/AZ Farms
190.Z85	01OCT98*	30SEP25	Impl AY/AZ Farms Tech Bsln Upgrs/Mods
190.Z90	01OCT99*	28OCT99	Rem Abandoned/Excess Eqmt from AY/AZ Farms
210.Y50	01OCT98*	29NOV05	Compl Cross-Site Slurry Xfr Line SY to 244-A
240.A60	02OCT00*	16MAR01	Install ENRAF Level Instrument A/AX Farms
240.A62	01OCT01*	13DEC01	Install LOWs and Monit Equipment for A/AX Farms
240.A65	02OCT00*	21MAY01	Compl INstall/Connect TMACS A/AY Farms
240.A67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs A/AX
240.B60	01OCT01*	13JAN04	Install ENFRAF Level Instrument for B Farms
240.B62	01OCT99*	28MAR01	Install LOWs and Monit Equipment B Farms
240.B65	01OCT01*	25FEB03	Compl Install/Connections to TMACS for B/BX/BY
240.B67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs B/BX/BY
240.C60	01OCT02*	23SEP03	Install ENFRAF Level Instrument for C Farms

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Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
240.C62	01OCT02*	09SEP03	Install LOWs and Monit Equipment for C Farms
240.C65	01OCT02*	20MAY03	Compl Install/Connections to TMACS for C Farms
240.C67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs C Farms
240.N60	01OCT01*	14JAN02	Install ENRAF Level Instrument AN Farms
240.N61	01OCT01*	09NOV01	Install Raw Water Flow Totalizers AN Farms
240.N65	01OCT01*	12MAR02	Compl INstall/Connect TMACS AN Farms
240.N67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs AN Farms
240.P60	01OCT98*	18JUN99	Install ENRAF Level Instrument AP Farms
240.P60A8M		30SEP99*	PA 6.3.7 Install 8 ENRAFs in S/SX, AP Tank Farms T03-99-637
240.P61	02OCT00*	10NOV00	Install Raw Water Flow Totalizers AP Farms
240.P65	01OCT98*	19MAR99	Compl INstall/Connect TMACS AP Farms
240.P67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs AP Farms
240.S60	01OCT98*	13AUG99	Install ENRAF Level Instrument S/SX Farms
240.S62	01OCT99*	05NOV01	Install LOWs and Monit Equipment S/SX Farms
240.S65	01OCT98*	30SEP99	Compl Install/Connect TMACS S/SX Farms

Activity ID	Early Start	Early Finish	Activity
240.S67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs S/SX
240.T60	02OCT00*	16MAR01	Install ENRAF Level Instrument T/TX/TY Farms
240.T62	02OCT00*	22FEB02	Install LOWs and Monit Equipment T/TX/TY Farms
240.T65	02OCT00*	19JUN01	Compl INstall/Connect TMACS T/TY/TY Farms
240.T67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs T/TX/TY
240.U60	01OCT02*	16MAY03	Install ENRAF Level Instrument for U Farms
240.U62	01OCT02*	28APR03	Install LOWs and Monitor Equipment for U Farms
240.U65	01OCT02*	22APR03	Compl Install/Connect TMACS U Farms
240.W61	02OCT00*	10NOV00	Install Raw Water Flow Totalizers AW Farms
240.W65	02OCT00*	28NOV00	Compl Install/Connect TMACS AW Farms
240.W67	01OCT99*	11NOV99	Perf Continuous Air Monitor (CAM) Upgrs AW Farms
240.Y61	02OCT00*	10NOV00	Install Raw Water Flow Totalizers SY Farms
240.Y65	02OCT00*	28DEC00	Compl Install/Connect TMACS SY Farms
240.Y67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs SY Farms
240.Z60	01OCT02*	13JAN03	Install ENRAF Level Instrument for AY/AZ Farms

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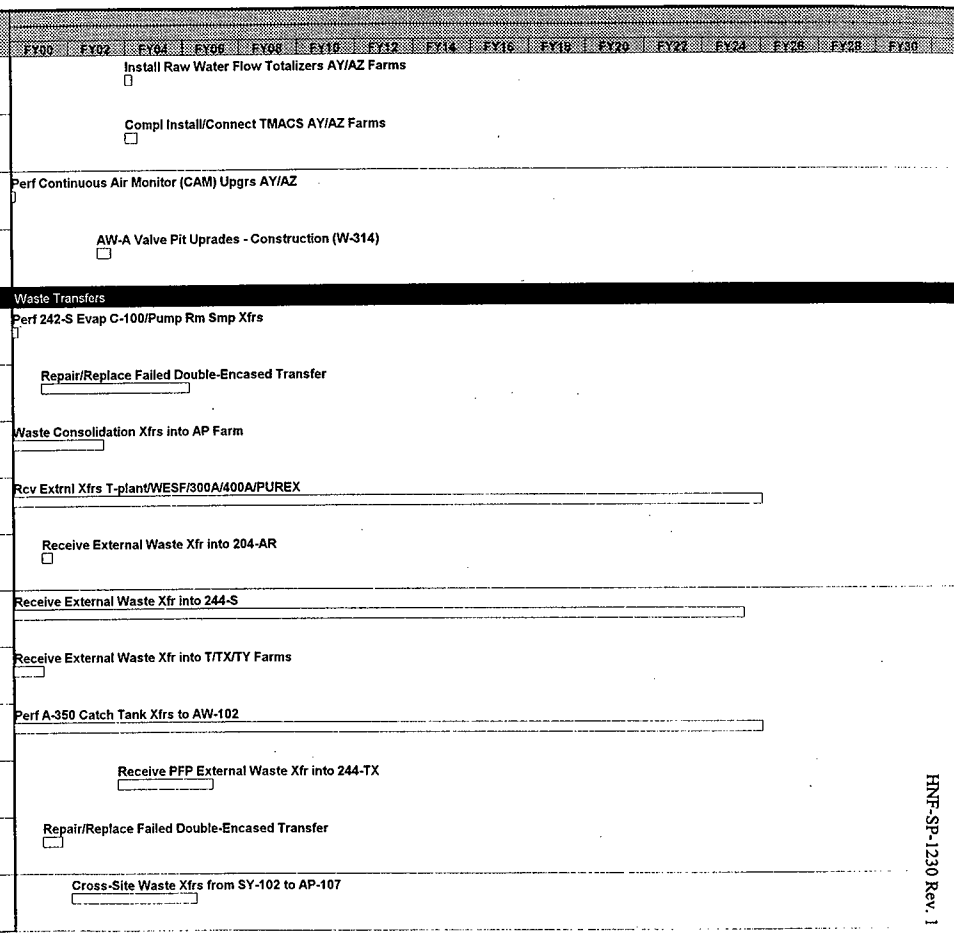
Activity ID	Early Start	Early Finish	Activity
240.Z61	01OCT02*	27DEC02	Install Raw Water Flow Totalizers AY/AZ Farms
240.Z65	01OCT02*	25FEB03	Compl Install/Connect TMACS AY/AZ Farms
240.Z67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs AY/AZ
250.W50	01OCT01*	25MAR02	AW-A Valve Pit Uprades - Construction (W-314)
1.01.03.01.01.06			Waste Transfers
190.E53	01OCT98*	04DEC98	Perf 242-S Evap C-100/Pump Rm Smp Xfrs
190.N56	01OCT99*	16DEC04	Repair/Replace Failed Double-Encased Transfer
190.P56	01OCT98*	07DEC01	Waste Consolidation Xfrs into AP Farm
190.R53	01OCT98*	30SEP24	Rcv Extrnl Xfrs T-plant/WESF/300A/400A/PUREX
190.R54	01OCT99*	14FEB00	Receive External Waste Xfr into 204-AR
190.S54	01OCT98*	06FEB24	Receive External Waste Xfr into 244-S
190.T54	01OCT98*	15OCT99	Receive External Waste Xfr into T/TX/TY Farms
190.W53	01OCT98*	30SEP24	Perf A-350 Catch Tank Xfrs to AW-102
190.W54	03JUN02*	30SEP05	Receive PFP External Waste Xfr into 244-TX
190.W56	01OCT99*	14JUN00	Repair/Replace Failed Double-Encased Transfer
190.Y55	02OCT00*	16FEB05	Cross-Site Waste Xfrs from SY-102 to AP-107



Activity ID	Early Start	Early Finish	Replace SY-101 Mixer Pump
190.Y57	02OCT00*	28SEP01	
190.Z53	01OCT98*	30SEP24	Perf 151-AZ Catch Tank to 102-AZ
320.N64	01OCT01*	16AUG05	Transfer Evap Slurries for 106AW into AN Farms
320.P64	01OCT98*	31MAR10	Transfer Evap Slurries From 106AW into AP Farms
320.W60	01OCT98*	30SEP10	Stage Wst AW-102 for 242-A Evap Campaigns
320.W62	01OCT98*	30JUN10	242-A Evap Recycle Xfrs AW-106 AW-102
320.W64	02OCT00*	19DEC08	Transfer Evap Slurries for 106AW into AW Farms
1.01.03.01.01.07			Essential Services
190.320	01OCT98*	30SEP24	Update and Maintain the OWVP
190.320A1M		30SEP99*	M-46-00F Double-Shell Tank Space Evaluation T03-99-103
190.320A2M		29SEP00*	M-46-00G Double-Shell Tank Space Evaluation T03-00-105
190.320A3M		28SEP01*	M-46-00H Double-Shell Tank Space Evaluation T03-01-100
190.320A4M		30SEP02*	M-46-00I Double-Shell Tank Space Evaluation T03-02-100
190.320A5M		30SEP03*	M-46-00J Double-Shell Tank Space Evaluation T03-03-100
190.320B1M		30NOV98*	M-46-01E Concurence of Add'l Tank Acquisition T03-99-102
190.320B2M		30NOV99*	M-46-01F Concurence of Add'l Tank Acquisition T03-00-104

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Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
190.320B3M		30NOV00*	M-46-01G Concurence of Add'l Tank Acquisition T03-01-104
190.320B4M		30NOV01*	M-46-01H Concurence of Add'l Tank Acquisition T03-02-104
190.320B5M		27NOV02*	M-46-01I Concurence of Add'l Tank Acquisition T03-03-104
190.320B6M		01DEC03*	M-46-01J Concurence of Add'l Tank Acquisition T03-04-104
190.330	01OCT98*	30SEP24	Provide Waste Tank Summary Reports
190.335	01OCT98*	30SEP24	Integrity Assessment
190.335C1M		30JUL99*	PA 6.3.1 Perf Ultrasonic Examination of Four DST T03-99-631
190.335C2M		30SEP99*	PA 6.3.4 Perf Integrity Assessments of 28 DSTs T03-99-632
190.510	01OCT98*	30SEP24	Control Inventory of Spare Parts/Eqmt
190.608	01OCT98*	30SEP24	Maintain Emergency Preparedness Prog
190.610	01OCT98*	30SEP24	Prov Safety Sub-Contractor Oversight
190.612	01OCT98*	30SEP24	Perform Environmental Records Mgmt
190.614	01OCT98*	30SEP24	Impl/Maint. TWRS Air Permitting
190.616	01OCT98*	30SEP24	Prov Environmental Regulatory Reports
190.618	01OCT98*	30SEP24	Perf RCRA Map Undrgrnd Danger Wst Lns

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
190.620	01OCT98*	30SEP24	Prov Environ Sub-Contractor Oversight
190.622	01OCT98*	30SEP24	Eval/Monitor TWRS Facility Hazards
190.624	01OCT98*	30SEP05	Perf Hazardous Material Coordination
190.626	01OCT98*	30SEP24	Conduct TWRS Emerg Preparedness Drills
190.904	01OCT98*	30SEP24	Perf Corrective Action Mgmt for TWRS
190.908	01OCT98*	30SEP24	Support External Assessments of TWRS
190.910	01OCT98*	30SEP24	Prov Infrastructure Services to TWRS
190.912	01OCT98*	30SEP24	Manage/Maint TWRS Training Program
190.914	01OCT98*	30SEP24	Prov Continuous/Init Facil Spec Trng
190.916	01OCT98*	30SEP24	Develop and Maintain Training Material
190.920	01OCT98*	30SEP24	Provide CASS/TMACS/SACS Support
190.926	01OCT98*	30SEP24	Prov Safe Tank Ops Baseline Controls
190.928	01OCT98*	30SEP24	Manage and Maintain TWRS Procedures
190.932	01OCT98*	30SEP24	Provide LMSI Document Control
190.936	01OCT98*	30SEP24.	Prov Waste Generator Srvs Prog Mgmt

Activity ID	Early Start	Early Finish	Activity
190.938	01OCT98*	30SEP24	Prepare and Manage Waste Containers
190.A40	02OCT00*	30SEP25	Perf A/AX Tech Bsln Systems Analysis
190.B40	02OCT00*	30SEP25	Perf B/BX/BY Tech Bsln Systems Analysis
190.C40	02OCT00*	30SEP25	Perf C Farms Tech Bsln Systems Analysis
190.E40	02OCT00*	30SEP25	Perf 242-S Tech Bsln Systems Analysis
190.F40	02OCT00*	30SEP25	Perf 200E Anc Fcls Tech Bsln Systems Analysis
190.F45	01OCT99*	28SEP01	Resolve 2E Anc Fcl Tks pH Out-of-Spec Issue
190.G40	02OCT00*	30SEP25	Perf 200W Anc Fcls Tech Bsln Systems Analysis
190.G45	01OCT99*	29SEP06	Resolve 2E Anc Fcl Tks pH Out-of-Spec Issue
190.N40	02OCT00*	30SEP25	Perf AN Farms Tech Bsln Systems Analysis
190.N45	01OCT98*	29SEP06	Resolve AN Farm Tanks Corrosion Issues
190.N48	01OCT02*	08FEB05	Resolve DST Complex Dome Load Tech Bsln Issue
190.P40	01OCT99*	30SEP25	Perf AP Farms Tech Bsln Systems Analysis
190.P45	01OCT98*	29SEP06	Resolve 2E Anc Fcl Tks Corrosion Issues
190.R40	02OCT00*	30SEP25	Perf 204-AR Tech Bsln Systems Analysis

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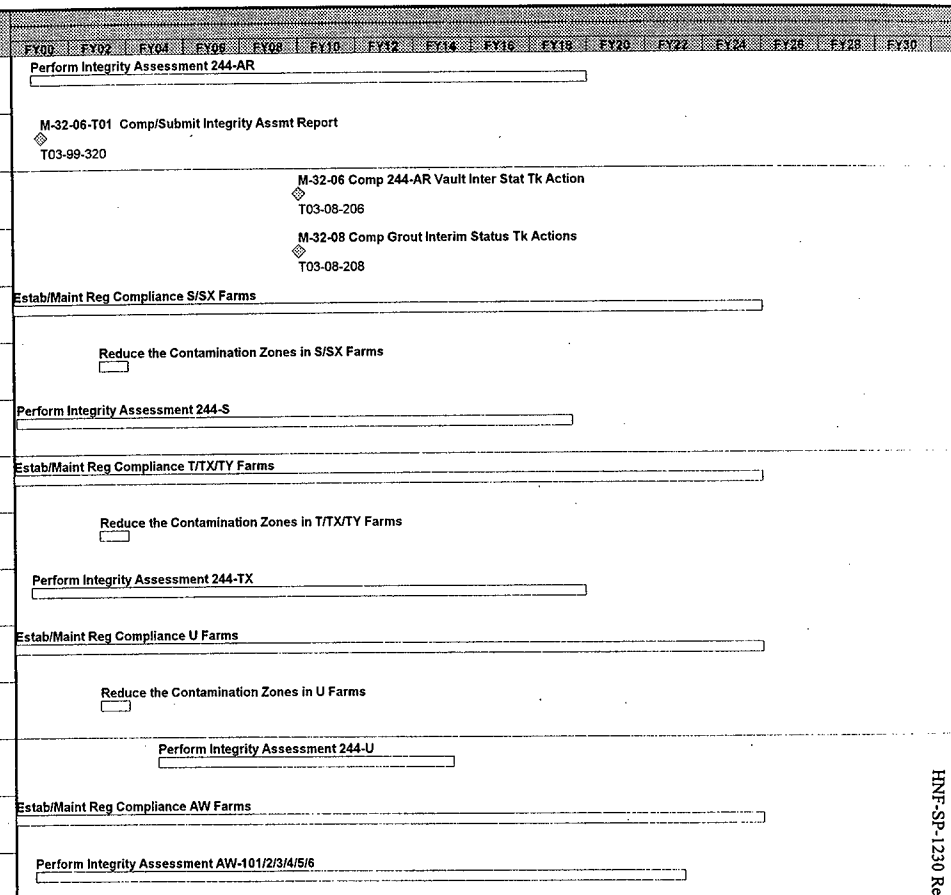
Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
190.R85	01OCT98*	30SEP25	Impl 204-AR Tech Bsln Upgrs/Mods
190.S40	02OCT00*	30SEP25	Perf S/SX Tech Bsln Systems Analysis
190.S48	02OCT02*	03OCT05	Resolve SST Complex Dome Load Tech Bsln Issue
190.T40	02OCT00*	30SEP25	Perf T/TX/TY Farms Tech Bsln Systems Analysis
190.U40	02OCT00*	30SEP25	Perf U Farms Tech Bsln Systems Analysis
190.W40	02OCT00*	30SEP25	Perf AW Farms Tech Bsln Systems Analysis
190.W45	01OCT98*	29SEP06	Resolve 2E Anc Fcl Tks Corrosion Issues
190.Y40	02OCT00*	30SEP25	Perf SY Farms Tech Bsln Systems Analysis
190.Y45	01OCT98*	29SEP06	Resolve SY Tank Farms Corrosion Issues
190.Z40	02OCT00*	30SEP25	Perf AY/AZ Farms Tech Bsln Systems Analysis
190.Z45	01OCT98*	29SEP06	Resolve 2E Anc Fcl Tks pH Out-of-Spec Issue
680.320	01OCT99*	30SEP24	Conduct Fire Hazards Analysis Implementation
680.325	01OCT98*	30SEP24	Provide Waste Acceptance Program
680.612	01OCT98*	30SEP99	Implement S/RID Recovery Plan
680.612A1M		30SEP99*	PA 5.1.1 Compl HLW Storage S/RIDs Phase II T03-99-511

Activity ID	Early Start	Early Finish	Activity
680.615	01OCT98*	30SEP24	Impl PHMC Price Anderson Act Admin Program
680.620	01OCT98*	29SEP00	Submit RCRA DST Part B Permit Approval
680.635	01OCT98*	30SEP24	Maintain/Update S/RID Program
680.638	01OCT98*	30SEP24	Conduct ESH&Q/Radcon Compliance Assessments
680.640	01OCT98*	30SEP99	Resolve Emerging Regulatory Compliance Issues
680.677AAM		30SEP08*	M-32-08-T01 Comp/Submt Intg Ass Rep Grout T03-08-209
680.905	01OCT98*	09FEB24	Implement Integr Safety Management System (ISMS)
680.905A1M		14JUL99*	PA 5.1.2 Cmpl TWRS Impl DNFSB 95-2 (ISMS) PH II T03-99-512
680.A40	01OCT98*	30SEP24	Estab/Maint Reg Compliance A/AX Farms
680.A70	01OCT01*	30SEP02	Reduce the Contamination Zones in A/AX Farms
680.A77	01OCT98*	03APR18	Perform Integrity Assessment 244-A/A-350
680.B40	01OCT98*	30SEP24	Estab/Maint Reg Compliance B Farms
680.B70	01OCT01*	30SEP02	Reduce the Contamination Zones in B Farms
680.B77	04JAN99*	30APR18	Perform Integrity Assessment B/BY/BX Farms
680.C40	01OCT98*	30SEP24	Estab/Maint Reg Compliance C Farms

FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
680.C70	01OCT01*	30SEP02	Reduce the Contamination Zones in C Farms
680.D40	01OCT98*	30SEP24	Estab/Maint Reg Compliance Deactivating Facils
680.E40	01OCT98*	30SEP24	Estab/Maint Reg Compliance 242-S
680.F40	01OCT98*	30SEP24	Estab/Maint Reg Compliance 200E Ancillary Facil
680.F70	01OCT01*	30SEP02	Reduce the Contamination Zones in 200E Anc Facil
680.F77	01OCT98*	27JUN18	Perform Integrity Assessment AZ-151/ER311
680.G40	01OCT98*	30SEP24	Estab/Maint Reg Compliance 200W Ancillary Facil
680.G70	01OCT02*	30SEP03	Reduce the Contamination Zones in 200W Anc Facil
680.G77	01DEC98*	02MAR18	Perf Integ Assmt EW151/TX302C/U310B/UX302A/S304
680.N40	01OCT98*	30SEP24	Estab/Maint Reg Compliance AN Farms
680.N70	01OCT02*	30SEP03	Reduce the Contamination Zones in AN Farms
680.N77	01OCT98*	31DEC21	Perform Integrity Assessment AN-101/2/3/4/5/6/7
680.P40	01OCT98*	30SEP24	Estab/Maint Reg Compliance AP Farms
680.P77	01OCT01*	31DEC21	Perform Integrity Assmt AP-101/2/3/4/5/6/7/8
680.R40	01OCT98*	30SEP24	Estab/Maint Reg Compliance 204-AR

Activity ID	Early Start	Early Finish	Activity
680.R77	01JUN99*	28SEP18	Perform Integrity Assessment 244-AR
680.R77A1N		29SEP99*	M-32-06-T01 Comp/Submit Integrity Assmt Report T03-99-320
680.R77A7M		30SEP08*	M-32-06 Comp 244-AR Vault Inter Stat Tk Action T03-08-206
680.R77A9M		30SEP08*	M-32-08 Comp Grout Interim Status Tk Actions T03-08-208
680.S40	01OCT98*	30SEP24	Estab/Maint Reg Compliance S/SX Farms
680.S70	01OCT01*	30SEP02	Reduce the Contamination Zones in S/SX Farms
680.S77	02NOV98*	06MAR18	Perform Integrity Assessment 244-S
680.T40	01OCT98*	30SEP24	Estab/Maint Reg Compliance T/TX/TY Farms
680.T70	01OCT01*	30SEP02	Reduce the Contamination Zones in T/TX/TY Farms
680.T77	03MAY99*	28AUG18	Perform Integrity Assessment 244-TX
680.U40	01OCT98*	30SEP24	Estab/Maint Reg Compliance U Farms
680.U70	01OCT01*	30SEP02	Reduce the Contamination Zones in U Farms
680.U77	01OCT03*	31JAN14	Perform Integrity Assessment 244-U
680.W40	01OCT98*	30SEP24	Estab/Maint Reg Compliance AW Farms
680.W77	01JUN99*	31DEC21	Perform Integrity Assessment AW-101/2/3/4/5/6



Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
680.Y40	01OCT98*	30SEP24	Estab/Maint Reg Compliance SY Farms
680.Y70	01OCT01*	30SEP02	Reduce the Contamination Zones in SY Farms
680.Y77	01OCT01*	31DEC21	Perform Integrity Assessment SY-101/2/3
680.Z40	01OCT98*	30SEP24	Estab/Maint Reg Compliance AY/AZ Farms
680.Z70	01OCT02*	30SEP03	Reduce the Contamination Zones in AY/AZ Farms
680.Z77	01OCT98*	31DEC21	Perform Integrity Assessment AY/AZ Farms
1.01.03.01.01.08			Drawing and Labeling
190.325	01OCT98*	30SEP24	As-Building Project Management/Admin
190.A41	01OCT99*	02FEB01	Compl Drawings Upgr/Tagging/Labeling for A Cmplx
190.A42	02OCT00*	14OCT04	Prov Drwgs/Doc Inact Systems A/AX Farms
190.A43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog A/AX Farms
190.B41	04OCT99*	20JUL01	Compl Drawings Upgr/Tag/Labeling for B/BX/BY
190.B42	02OCT00*	14OCT04	Prov Drwgs/Doc Inact Systems B/BX/BY Farms
190.B43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog B/BX/BY Farms
190.C41	08NOV99*	22DEC00	Compl Drawings Upgr/Tagging/Labeling for C Farms
190.C42	02OCT00*	14OCT04	Prov Drwgs/Doc Inact Systems C Farms

Activity ID	Early Start	Early Finish	Activity
190.C43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog C Farms
190.E42	02OCT00*	14OCT04	Prov Drwgs/Doc Inact Systems 244-S
190.E43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog 244-S
190.F42	02OCT00*	14OCT04	Prov Drwgs/Doc Inact Systems 200E Anc Fcls
190.F43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog 200E Anc Fcls
190.G42	02OCT00*	14OCT03	Prov Drwgs/Doc Inact Systems 200W Anc Fcls
190.G43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog 200W Anc Fcls
190.N42	03OCT05*	15OCT10	Prov Drwgs/Doc Inact Systems AN Farms
190.N43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog AN Farms
190.P42	03OCT05*	15OCT10	Prov Drwgs/Doc Inact Systems AP Farms
190.P43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog AP Farms
190.R41	06DEC99*	17SEP01	Compl Drawings Upgr/Tagging/Labeling for 204-AR
190.R42	02OCT00*	14OCT04	Prov Drwgs/Doc Inact Systems 204-AR
190.R43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog 204-AR
190.S41	24JAN00*	05MAR01	Compl Drawings Upgr/Tagging/Labeling for S/SX

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
190.S42	02OCT00*	14OCT05	Prov Drwgs/Doc Inact Systems S/SX Farms
190.S43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog S/SX Farms
190.S43A1M		30SEP99*	PA 6.3.5 Perf Drawing & Labeling Upgrades T03-99-635
190.S43A1N		30SEP99*	SI 4c Complete Accelerated Walk-Downs and Field T03-99-400
190.T41	01DEC99*	30MAR01	Compl Drawings Upgr/Tag/Labeling for T/TX/TY
190.T42	02OCT00*	14OCT04	Prov Drwgs/Doc Inact Systems T/TX/TY Farms
190.T43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog T/TX/TY Farms
190.U41	16NOV99*	05JUN01	Compl Drawings Upgr/Tagging/Labeling for U Farms
190.U42	02OCT00*	14OCT04	Prov Drwgs/Doc Inact Systems U Farms
190.U43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog U Farms
190.W42	03OCT05*	15OCT10	Prov Drwgs/Doc Inact Systems AW Farms
190.W43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog AW Farms
190.Y42	03OCT05*	15OCT10	Prov Drwgs/Doc Inact Systems SY Farms
190.Y43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog SY Farms
190.Z41	01OCT99*	25OCT00	Compl Drawings Upgr/Tagging/Labeling for AY/AZ

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
190.Z42	03OCT05*	15OCT10	Prov Drwgs/Doc Inact Systems AY/AZ Farms
190.Z43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog AY/AZ Farms
1.01.03.01.01.09			SST Interim Stablization
230.010	01OCT98*	30SEP99	Approval to Combine Complex Wastes
230.055	01OCT98*	30SEP99	DOE-RL ORR for Pumping A-101
230.057	01OCT98*	30SEP99	Provide Controls/TSRs to Pump A-101 per SAD-036
230.060	01OCT98*	30SEP02	Provide Emerg. Pump Plan for New Assumed Leakers
230.066	01MAR99*	06MAY99	Install Overgrnd Xfr Line if Route Fails Hydro
230.070	01OCT98*	30JUN05	Provide I.S. Program Mgt & Tech Functions
230.070N2A	01OCT98*		Start Interim Stabilization of 6 SSTs (M-41-22) T03-97-150
230.070N2B	01OCT98*		Start Interim Stabilization of 8 SSTs (M-41-23) T03-98-151
230.070N2C	01OCT98*		Start Interim Stabilization of 9 SSTs (M-41-24) T03-98-152
230.070N2D	01APR99*		Start Interim Stabilization of 3 SSTs M-41-25 T03-99-191
230.070N2E	01OCT99*		Start Interim Stabilization of 2 SSTs M-41-26 T03-99-192
230.070N2F		30SEP98*	Complete Salt Well Pumping of 5 Single Shell T03-98-154
230.070N2G		30SEP99*	Complete Salt Well Pumping of 8 Single Shell T03-99-194

Activity ID	Early Start	Early Finish	Activity
230.070N2H		30SEP99*	TWR6.4.1 Initiate Interim Stab of SSTs # TBD RL T03-99-706
230.070N3B		29SEP00*	Compl Salt Well Pumping of Single Shell M-41-27 T03-00-196
230.070N3C		29SEP00*	Cmpl Salt Well Pumping 16 Sngl Shell M-41-27-T05 T03-00-195
230.071	01OCT98*	28SEP01	Engineering Studies
230.078	01OCT98*	14JUN05	Risk Mitigation
230.080	01OCT98*	25JAN99	RL Review/Approve NOCs for I.S. Exhausters
230.085	01OCT03*	27JAN04	Perform Isolation on Remaining SSTs
230.090	01OCT98*	18MAR99	Design the Interim Stabilization Exhausters
230.095	01OCT98*	25MAR99	Procure the Interim Stabilization Exhausters
230.0MS01		14JUN05*	M-41-00 COMPL SST INTERIM STABILIZATION T03-00-193
230.110	19MAR99*	06MAY99	Design A-101 Saltwell System Components
230.115	07MAY99*	18JUN99	Procure/Fab/Upgrade Stabil. Equip. A-101
230.120	01APR99*	21APR99	Run-In Saltwell Pump for A-101
230.123	04JAN99*	15JUN99	Approve the SER for Pumping A-101
230.125	01OCT98*	01JUN99	Grab Sample & Analyze A-101

FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
230.130	04JAN99*	06JAN99	Install/Test the A-101 FGM
230.142	21JUN99*	15JUL99	Install/Test Waste Stream Dilution Sys for A-101
230.152	04JAN99*	12FEB99	Upgrade A-Farm Infrastructure (for A-101)
230.154	02JUN99*	11AUG99	End State Analysis/Compat. Studies for A-101
230.156	21MAY99*	15JUL99	OTP Saltwell Control System for A-101
230.164	15JUL99*	23JUL99	Waterlance Screen / Install Pump A-101
230.168	01SEP99*	24MAY02	Saltwell Sys Maint & Operability A-101 Pumping
230.172	11MAY99*	24MAY02	Stabilize A-101 by Pumping to AP-108
230.174	01APR99*	17JUL01	Perform Annual Hydro on Transfer Lines A-101
230.178	28MAY02*	05SEP02	Perform Post-Stabilization Activities on A-101
230.180	01OCT03*	27JAN04	Perform Interim Isolation on A-101
230.210	01JUN99*	21JUL99	Design AX-101 Saltwell System Components
230.215	22JUL99*	01SEP99	Procure/Fab/Upgrade Stabil. Equip AX-101
230.225	01OCT98*	06JAN99	Grab Sample & Analyze AX-101
230.230	01JUN99*	28JUN99	Install/Test the AX-101 FGM

Activity ID	Early Start	Early Finish	Activity
230.240	03MAY99*	02JUN99	Install/Test the Exhauster for AX-101
230.242	22JUL99*	13SEP99	Install/Test Waste Stream Dilution System AX-101
230.245	15JUL99*	11AUG99	Install PIC Skid AX-101
230.254	30JUL99*	07OCT99	End State Analysis/Compat. Studies for AX-101
230.256	07JUN99*	13SEP99	OTP the Saltwell Control System for AX-101
230.264	01JUN99*	21SEP99	Waterlance Screen / Install Pump AX-101
230.268	01DEC99*	07JAN02	Saltwell System Maint & Operabilty AX-101Pumping
230.272	15JUL99*	07JAN02	Stabilize AX-101 by Pumping to AN-101
230.274	01JUN99*	13JUL00	Perform Annual Hydro Test Trans Lines AX-101
230.278	08JAN02*	16APR02	Perform Post-Stabilization Activities on AX-101
230.280	01OCT03*	27JAN04	Perform Interim Isolation on AX-101
230.305	08FEB99*	12FEB99	Walkdown BY-Farm and BY-105 Systems
230.307	23DEC98*	10SEP99	Devel Tech/Tool to Cut Thru BY-105 Cement Layer
230.310	16FEB99*	22JUN99	Design BY-105 Saltwell System Components
230.315	16FEB99*	12APR99	Procure/Fab/Upgrade Stabil. Equip BY-105

FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
230.320	13APR99*	03MAY99	Run-In the Saltwell Pump for BY-105
230.325	26OCT98*	15JUL99	Grab Sample & Analyze BY-105
230.330	23MAR99*	19APR99	Install/Test the BY-105 FGM
230.345	23JUN99*	05AUG99	Install PIC Skid or Upgrd WFIE Cabinet BY-105
230.350	23MAR99*	16SEP99	Wtrlance/Install the Saltwell Screen for BY-105
230.354	16JUL99*	23SEP99	End State Analysis/Compat. Studies for BY-105
230.356	16FEB99*	07SEP99	Test (OTP) the Saltwell Control Sys for BY-105
230.360	16FEB99*	31MAR99	Hydro Test Saltwell Lines , BY-105 to 244-BX
230.364	30MAR99*	27SEP99	Wtrlance SW Screen / Install SW Pump BY-105
230.366	04JAN99*	12MAR99	Overgrnd XFR , BY-105 if Exst. Rte Fails Hydro
230.368	01OCT99*	06MAR01	Saltwell Sys Maint. & Oprabilty , BY-105 Pmpg
230.372	27JUL99*	06MAR01	Stabilize BY-105 by Pmpg to 244-BX
230.374	31MAR00*	26APR00	Perf Anual Hydro Test SW Transf Lines, BY Frm
230.378	07MAR01*	13JUN01	Perform Post Stabil. Activities on BY-105
230.380	01OCT03*	27JAN04	Perform Interim Isolation on BY-105

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
230.405	01FEB99*	05FEB99	Walkdown SST Farm and BY-106 System
230.410	08FEB99*	29MAR99	Design BY-106 Saltwell Sys Components
230.415	08FEB99*	05APR99	Procure/Fab /Upgrd Req. Stabil. Equip. BY-106
230.420	06APR99*	26APR99	Run-In the Saltwell Pump for BY-106
230.425	01OCT98*	18JUN99	Grab Sample & Analyze BY-106
230.430	16MAR99*	12APR99	Install/Test the BY-106 FGM
230.432	01OCT99*	06AUG01	Perf. DCRT Maint & Oprabilty Checks for 244-BX
230.440	12MAR99*	19APR99	Install/Test the Exhauster for BY-106
230.445	23MAR99*	03MAY99	Install PIC Skid or Upgrd WFIE Cabinet BY-106
230.452	30MAR99*	10MAY99	Upgrd BY Tank Farm Infrastructure as Required
230.454	01JUL99*	10SEP99	End State Analysis/Compat. Studies for BY-106
230.456	21JUN99*	05AUG99	Test (OTP) the Saltwell Control Sys for BY-106
230.460	08FEB99*	24MAR99	Hydro Test Saltwell Lines , BY-106 to 244-BX
230.464	23MAR99*	12AUG99	Wtrlance SW Screen / Install SW Pump BY-106
230.468	01NOV99*	06AUG01	Saltwell Sys Maint. & Oprabilty , BY-106 Pmpg

Activity ID	Early Start	Early Finish	Activity
230.472	23JUN99*	06AUG01	Stabilize BY-106 by Pmpg to 244-BX
230.478	07AUG01*	13NOV01	Perform Post Stabil. Activities on BY-106
230.480	01OCT03*	27JAN04	Perform Interim Isolation on BY-106
230.505	02JAN01*	23JAN01	Walkdown SST Farm and C-103 System
230.510	24JAN01*	14MAR01	Design C-103 Saltwell Sys Components
230.511	01OCT99*	24MAR00	Document Basis Remvng Fling Org Layer in C-103
230.513	27MAR00*	21SEP00	Approve Removal of Floating Organic Layer C-103
230.514	02OCT00*	23APR01	Remove the C-103 Floating Organic Layer
230.515	24JAN01*	21MAR01	Procure/Fab /Upgrd Req. Stabil. Equip. C-103
230.520	22MAR01*	11APR01	Run-In the Saltwell Pump for C-103
230.525	01MAY00*	18JAN01	Grab Sample & Analyze C-103
230.530	15MAR01*	11APR01	Install/Test the C-103 FGM
230.540	03JAN01*	01FEB01	Install/Test the Exhauster for C-103
230.545	08MAR01*	04APR01	Install PIC Skid , Upgrd WFIE Cabinet C-103
230.552	15MAR01*	25APR01	Upgrd C Tank Farm Infrastructure as Required

FY00 | FY02 | FY04 | FY06 | FY08 | FY10 | FY12 | FY14 | FY16 | FY18 | FY20 | FY22 | FY24 | FY26 | FY28 | FY30

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
230.554	01MAY01*	10JUL01	End State Analysis/Compat. Studies for C-103
230.556	17JAN01*	09MAY01	Test (OTP) the Saltwell Control Sys for C-103
230.560	17JAN01*	02MAR01	Hydro Test Saltwell Lines from C-103 to CR-003
230.564	08MAR01*	17MAY01	Wtrlance SW Screen / Install SW Pump C-103
230.566	02OCT00*	11DEC00	Overgrnd XFR Line C-103 if Ex. Rte Fails Hydro
230.568	31AUG01*	20DEC01	Saltwell Sys Maint. & Operability , C-103 Pmpg
230.572	15JUN01*	21DEC01	Stabilize C-103 by Pmpg to CR-003
230.578	27DEC01*	05APR02	Perform Post Stabil. Activities on C-103
230.580	01OCT03*	27JAN04	Perform Interim Isolation on C-103
230.655	01OCT98*	25AUG04	Cross Site Transfers
230.A05	01APR99*	07APR99	Walkdown SST Farm and S-101 System
230.A10	08APR99*	19MAY99	Design S-101 Saltwell Sys Components
230.A15	08APR99*	19MAY99	Procure/Fab /Upgrd Req. Stabil. Equip. S-101
230.A20	20MAY99*	10JUN99	Run-In the Saltwell Pump for S-101
230.A25	16NOV98*	20JUL99	Grab Sample & Analyze S-101

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
230.A30	13MAY99*	10JUN99	Install/Test the S-101 FGM
230.A40	08APR99*	14MAY99	Install/Test the Exhauster for S-101
230.A45	13MAY99*	17JUN99	Install PIC Skid , Upgrd WFIE Cabinet S-101
230.A54	21JUL99*	28SEP99	End State Analysis/Compat. Studies for S-101
230.A56	08APR99*	14JUL99	Test (OTP) the Saltwell Control Sys for S-101
230.A60	08APR99*	21MAY99	Hydro Test Saltwell Lines from S-101 to 244-S
230.A64	20MAY99*	22JUL99	Wtrlance SW Screen / Install SW Pump S-101
230.A68	01OCT99*	08DEC00	Saltwell Sys Maint. & Operability , S-101 Pmpg
230.A72	01JUN99*	08DEC00	Stabilize S-101 by Pmpg to 244-S
230.A78	11DEC00*	22MAR01	Perform Post Stabil. Activities on S-101
230.A80	01OCT03*	27JAN04	Perform Interim Isolation on S-101
230.B10	01OCT98*	18NOV98	Design S-102 Saltwell Sys Components
230.B15	19NOV98*	20JAN99	Procure/Fab /Upgrd Req. Stabil. Equip. S-102
230.B20	01OCT98*	21OCT98	Run-In the Saltwell Pump for S-102
230.B25	01OCT98*	25NOV98	Grab Sample & Analyze S-102

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
230.B30	01OCT98*	25NOV98	Install/Test the S-102 FGM
230.B40	01OCT98*	23OCT98	Install/Test the Exhauster for S-102
230.B45	01OCT98*	11NOV98	Install PIC Skid , Upgrd WFIE Cabinet S-102
230.B50	01OCT98*	20OCT98	Wtrlance/Install the Saltwell Screen for S-102
230.B52	01OCT98*	11NOV98	Upgrd S Tank Farm Infrastructure as Required
230.B54	30NOV98*	09FEB99	End State Analysis/Compat. Studies for S-102
230.B56	10NOV98*	11DEC98	Test (OTP) the Saltwell Control Sys for S-102
230.B60	21JAN99*	12FEB99	Hydro Test Saltwell Lines from S-102 to 244-S
230.B64	01OCT98*	21DEC98	Wtrlance SW Screen / Install SW Pump S-102
230.B68	18FEB99*	03JAN01	Saltwell Sys Maint. & Operability , S-102 Pmpg
230.B72	09NOV98*	03JAN01	Stabilize S-102 by Pmpg to 244-S
230.B74	15FEB00*	17MAY01	Perf Anul Hydro Test of SW Transf Lines S-102
230.B78	04JAN01*	12APR01	Perform Post Stabil. Activities on S-102
230.B80	01OCT03*	27JAN04	Perform Interim Isolation on S-102
230.C25	01OCT98*	13JAN99	Grab Sample & Analyze S-103

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
230.C30	01OCT98*	25NOV98	Install/Test the S-103 FGM
230.C45	01OCT98*	11DEC98	Install PIC Skid , Upgrd WFIE Cabinet S-103
230.C52	01OCT98*	11NOV98	Upgrade Infrasturcture if Req. - S-103
230.C54	14JAN99*	24MAR99	End State Analysis/Compat. Studies for S-103
230.C56	15OCT98*	29DEC98	Test (OTP) the Saltwell Control Sys for S-103
230.C60	27OCT98*	11DEC98	Hydro Test Saltwell Lines from S-103 to 244-S
230.C64	01OCT98*	07JAN99	Wtrlance SW Screen / Install SW Pump S-103
230.C68	29MAR99*	21JAN00	Saltwell Sys Maint. & Operability , S-103 Pmpg
230.C72	12NOV98*	21JAN00	Stabilize S-103 by Pmpg to 244-S
230.C78	24JAN00*	01MAY00	Perform Post Stabil. Activities on S-103
230.C80	01OCT03*	27JAN04	Perform Interim Isolation on S-103
230.D20	01OCT98*	21OCT98	Run-In the Saltwell Pump for S-106
230.D25	01OCT98*	01DEC98	Grab Sample & Analyze S-106
230.D30	01OCT98*	25NOV98	Install/Test the S-106 FGM
230.D40	01OCT98*	30OCT98	Install/Test the Exhauster for S-106

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
230.D45	01OCT98*	11DEC98	Install PIC Skid , Upgrd WFIE Cabinet S-106
230.D50	01OCT98*	20OCT98	Wtrlance/Install the Saltwell Screen for S-106
230.D52	01OCT98*	11NOV98	Upgrade Infrastructure if Req. - S-106
230.D54	02DEC98*	11FEB99	End State Analysis/Compat. Studies for S-106
230.D56	24NOV98*	29DEC98	Test (OTP) the Saltwell Control Sys for S-106
230.D60	01OCT98*	07OCT98	Hydro Test Saltwell Lines from S-106 to 244-S
230.D64	01OCT98*	07JAN99	Wtrlance SW Screen / Install SW Pump S-106
230.D68	17FEB99*	17NOV00	Saltwell Sys Maint. & Operability , S-106 Pmpg
230.D72	12NOV98*	20NOV00	Stabilize S-106 by Pmpg to 244-S
230.D78	21NOV00*	06MAR01	Perform Post Stabil. Activities on S-106
230.D80	01OCT03*	27JAN04	Perform Interim Isolation on S-106
230.E05	15MAR00*	21MAR00	Walkdown SST Farm and S-107 System
230.E10	22MAR00*	02MAY00	Design S-107 Saltwell Sys Components
230.E15	22MAR00*	02MAY00	Procure/Fab /Upgrd Req. Stabil. Equip. S-107
230.E20	03MAY00*	23MAY00	Run-In the Saltwell Pump for S-107

Activity ID	Early Start	Early Finish	Activity
230.E25	13AUG99*	01MAY00	Grab Sample & Analyze S-107
230.E30	26APR00*	23MAY00	Install/Test the S-107 FGM
230.E45	03MAY00*	31MAY00	Install PIC Skid , Upgrd WFIE Cabinet S-107
230.E54	30MAY00*	08AUG00	End State Analysis/Compat. Studies for S-107
230.E56	22MAR00*	14JUN00	Test (OTP) the Saltwell Control Sys for S-107
230.E60	22MAR00*	04MAY00	Hydro Test Saltwell Lines from S-107 to 244-S
230.E64	03MAY00*	22JUN00	Wtrlance SW Screen / Install SW Pump S-107
230.E68	01SEP00*	09JUL01	Saltwell Sys Maint. & Operability , S-107 Pmpg
230.E72	03MAY00*	09JUL01	Stabilize S-107 by Pmpg to 244-S
230.E78	10JUL01*	16OCT01	Perform Post Stabil. Activities on S-107
230.E80	01OCT03*	27JAN04	Perform Interim Isolation on S-107
230.F05	01FEB00*	07FEB00	Walkdown SST Farm and S-109 System
230.F10	01MAR99*	21MAR00	Design S-109 Saltwell Sys Components
230.F15	08FEB00*	21MAR00	Procure/Fab /Upgrd Req. Stabil. Equip. S-109
230.F20	22MAR00*	11APR00	Run-In the Saltwell Pump for S-109

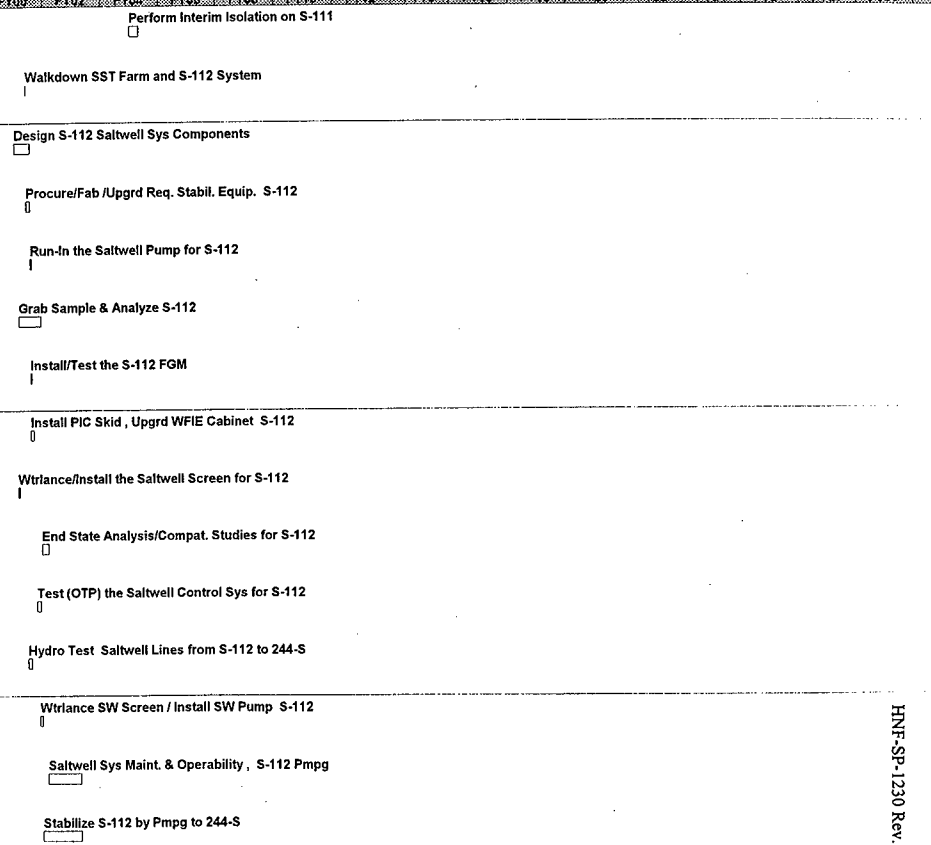
FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
230.F25	19JUL99*	04APR00	Grab Sample & Analyze S-109
230.F30	15MAR00*	11APR00	Install/Test the S-109 FGM
230.F40	08FEB00*	09MAR00	Install/Test the Exhauster for S-109
230.F45	15MAR00*	18APR00	Install PIC Skid , Upgrd WFIE Cabinet S-109
230.F50	05APR99*	22APR99	Wtrlance/Install the Saltwell Screen for S-109
230.F54	08MAY00*	18JUL00	End State Analysis/Compat. Studies for S-109
230.F56	08FEB00*	11MAY00	Test (OTP) the Saltwell Control Sys for S-109
230.F60	08FEB00*	23MAR00	Hydro Test Saltwell Lines from S-109 to 244-S
230.F64	22MAR00*	19MAY00	Wtrlance SW Screen / Install SW Pump S-109
230.F68	01AUG00*	21DEC01	Saltwell Sys Maint. & Operability , S-109 Pmpg
230.F72	31MAR00*	21DEC01	Stabilize S-109 by Pmpg to 244-S
230.F78	27DEC01*	05APR02	Perform Post Stabil. Activities on S-109
230.F80	01OCT03*	27JAN04	Perform Interim Isolation on S-109
230.G05	01MAR00*	07MAR00	Walkdown SST Farm and S-111 System
230.G10	01JUL99*	18APR00	Design S-111 Saltwell Sys Components

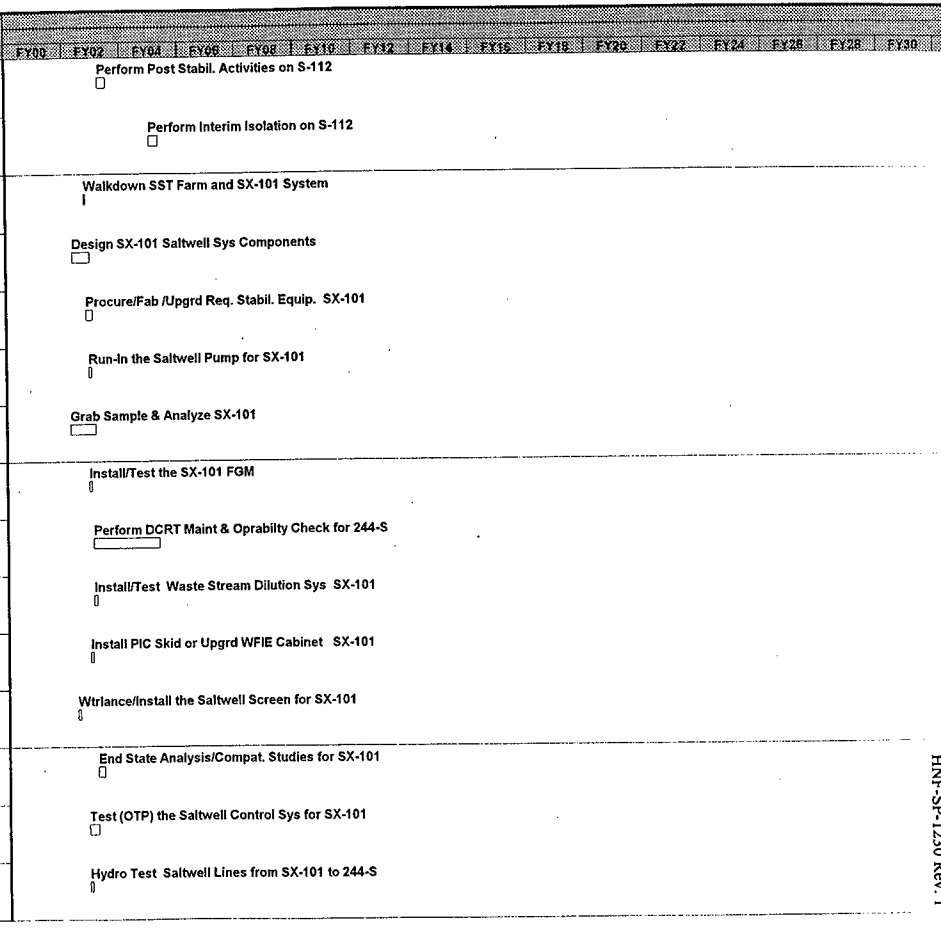
Activity ID	Early Start	Early Finish	Activity
230.G15	08MAR00*	18APR00	Procure/Fab /Upgrd Req. Stabil. Equip. S-111
230.G20	19APR00*	09MAY00	Run-In the Saltwell Pump for S-111
230.G25	23AUG99*	07JUN00	Grab Sample & Analyze S-111
230.G30	12APR00*	09MAY00	Install/Test the S-111 FGM
230.G32	02OCT00*	28SEP01	Perform DCRT Maint & Oprabilty Check for 244-S
230.G40	22MAR00*	20APR00	Install/Test the Exhauster for S-111
230.G45	19APR00*	16MAY00	Install PIC Skid , Upgrd WFIE Cabinet S-111
230.G50	09AUG99*	26AUG99	Wtrlance/Install the Saltwell Screen for S-111
230.G54	08JUN00*	17AUG00	End State Analysis/Compat. Studies for S-111
230.G56	08MAR00*	31MAY00	Test (OTP) the Saltwell Control Sys for S-111
230.G60	08MAR00*	20APR00	Hydro Test Saltwell Lines from S-111 to 244-S
230.G64	19APR00*	08JUN00	Wtrlance SW Screen / Install SW Pump S-111
230.G68	01SEP00*	07JUN02	Saltwell Sys Maint. & Operability , S-111 Pmpg
230.G72	19JUN00*	07JUN02	Stabilize S-111 by Pmpg to 244-S
230.G78	10JUN02*	18SEP02	Perform Post Stabil. Activities on S-111

FY00 | FY02 | FY04 | FY06 | FY08 | FY10 | FY12 | FY14 | FY16 | FY18 | FY20 | FY22 | FY24 | FY26 | FY28 | FY30

Activity ID	Early Start	Early Finish	Activity
230.G80	01OCT03*	27JAN04	Perform Interim Isolation on S-111
230.H05	01MAR00*	07MAR00	Walkdown SST Farm and S-112 System
230.H10	01OCT99*	18APR00	Design S-112 Saltwell Sys Components
230.H15	08MAR00*	18APR00	Procure/Fab /Upgrd Req. Stabil. Equip. S-112
230.H20	19APR00*	09MAY00	Run-In the Saltwell Pump for S-112
230.H25	15NOV99*	07SEP00	Grab Sample & Analyze S-112
230.H30	12APR00*	09MAY00	Install/Test the S-112 FGM
230.H45	19APR00*	16MAY00	Install PIC Skid , Upgrd WFIE Cabinet S-112
230.H50	05NOV99*	24NOV99	Wtrlance/Install the Saltwell Screen for S-112
230.H54	08SEP00*	15NOV00	End State Analysis/Compat. Studies for S-112
230.H56	26JUN00*	10AUG00	Test (OTP) the Saltwell Control Sys for S-112
230.H60	08MAR00*	20APR00	Hydro Test Saltwell Lines from S-112 to 244-S
230.H64	01AUG00*	23AUG00	Wtrlance SW Screen / Install SW Pump S-112
230.H68	01NOV00*	02JAN02	Saltwell Sys Maint. & Operability , S-112 Pmpg
230.H72	01SEP00*	02JAN02	Stabilize S-112 by Pmpg to 244-S



Activity ID	Early Start	Early Finish	Activity
230.H78	03JAN02*	11APR02	Perform Post Stabil. Activities on S-112
230.H80	01OCT03*	27JAN04	Perform Interim Isolation on S-112
230.J05	02JUL01*	09JUL01	Walkdown SST Farm and SX-101 System
230.J10	01FEB01*	27AUG01	Design SX-101 Saltwell Sys Components
230.J15	10JUL01*	09OCT01	Procure/Fab /Upgrd Req. Stabil. Equip. SX-101
230.J20	21AUG01*	11SEP01	Run-In the Saltwell Pump for SX-101
230.J25	02JAN01*	06NOV01	Grab Sample & Analyze SX-101
230.J30	14AUG01*	11SEP01	Install/Test the SX-101 FGM
230.J32	01OCT01*	08JAN04	Perform DCRT Maint & Oprabilty Check for 244-S
230.J42	10OCT01*	01NOV01	Install/Test Waste Stream Dilution Sys SX-101
230.J45	21AUG01*	18SEP01	Install PIC Skid or Upgrd WFIE Cabinet SX-101
230.J50	09MAR01*	28MAR01	Wtrlance/Install the Saltwell Screen for SX-101
230.J54	07NOV01*	22JAN02	End State Analysis/Compat. Studies for SX-101
230.J56	10JUL01*	01NOV01	Test (OTP) the Saltwell Control Sys for SX-101
230.J60	10JUL01*	22AUG01	Hydro Test Saltwell Lines from SX-101 to 244-S



Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
230.J64	21AUG01*	09NOV01	Wtrlance SW Screen / Install SW Pump SX-101
230.J68	01MAR02*	18JUL03	Saltwell Sys Maint. & Oprabilty , SX-101 Pmpg
230.J72	07JAN02*	18JUL03	Stabilize SX-101 by Pmpg to 244-S
230.J78	21JUL03*	27OCT03	Perform Post Stabil. Activities on SX-101
230.J80	01OCT03*	27JAN04	Perform Interim Isolation on SX-101
230.K05	02APR01*	06APR01	Walkdown SST Farm and SX-102 System
230.K10	15NOV00*	25MAY01	Design SX-102 Saltwell Sys Components
230.K15	09APR01*	10JUL01	Procure/Fab /Upgrd Req. Stabil. Equip. SX-102
230.K20	21MAY01*	11JUN01	Run-In the Saltwell Pump for SX-102
230.K25	15NOV00*	27JUL01	Grab Sample & Analyze SX-102
230.K30	14MAY01*	11JUN01	Install/Test the SX-102 FGM
230.K42	11JUL01*	02AUG01	Install/Test Waste Stream Dilution Sys SX-102
230.K45	21MAY01*	18JUN01	Install PIC Skid or Upgrd WFIE Cabinet SX-102
230.K50	22DEC00*	15JAN01	Wtrlance/Install the Saltwell Screen for SX-102
230.K54	11SEP01*	16NOV01	End State Analysis/Compat. Studies for SX-102

Activity ID	Early Start	Early Finish	Activity
230.K56	09APR01*	02AUG01	Test (OTP) the Saltwell Control Sys for SX-102
230.K60	09APR01*	22MAY01	Hydro Test Saltwell Lines from SX-102 to 244-S
230.K64	21MAY01*	10AUG01	Wtrlance SW Screen / Install SW Pump SX-102
230.K68	03DEC01*	26SEP03	Saltwell Sys Maint. & Oprabilty , SX-102 Pmpg
230.K72	24SEP01*	26SEP03	Stabilize SX-102 by Pmpg to 244-S
230.K78	29SEP03*	09JAN04	Perform Post Stabil. Activities on SX-102
230.K80	01OCT03*	08MAR04	Perform Interim Isolation on SX-102
230.L05	01FEB01*	07FEB01	Walkdown SST Farm and SX-103 System
230.L10	08FEB01*	29MAR01	Design SX-103 Saltwell Sys Components
230.L15	08FEB01*	10MAY01	Procure/Fab /Upgrd Req. Stabil. Equip. SX-103
230.L20	23MAR01*	12APR01	Run-In the Saltwell Pump for SX-103
230.L25	05JUL00*	22MAR01	Grab Sample & Analyze SX-103
230.L30	16MAR01*	24MAY01	Install/Test the SX-103 FGM
230.L42	11MAY01*	05JUN01	Install/Test Waste Stream Dilution Sys SX-103
230.L45	13APR01*	10MAY01	Install PIC Skid or Upgrd WFIE Cabinet SX-103

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Activity ID	Early Start	Early Finish	Activity
230.L52	30MAR01*	10MAY01	Upgrade Infrastructure if Req. - SX-103
230.L54	01JUN01*	09AUG01	End State Analysis/Compat. Studies for SX-103
230.L56	08FEB01*	08JUN01	Test (OTP) the Saltwell Control Sys for SX-103
230.L60	08FEB01*	26MAR01	Hydro Test Saltwell Lines from SX-103 to 244-S
230.L64	23MAR01*	18JUN01	Wtrlance SW Screen / Install SW Pump SX-103
230.L68	01OCT01*	08JAN04	Saltwell Sys Maint. & Oprabilty , SX-103 Pmpg
230.L72	09JUL01*	08JAN04	Stabilize SX-103 by Pmpg to 244-S
230.L78	09JAN04*	16APR04	Perform Post Stabil. Activities on SX-103
230.L80	01OCT03*	14JUN04	Perform Interim Isolation on SX-103
230.M32	01OCT98*	29SEP00	Perf. DCRT Maint & Oprability Checks for 244-SX
230.M68	01OCT98*	15MAY00	Saltwell Sys Maint. & Oprabilty , SX-104 Pmpg
230.M72	01OCT98*	15MAY00	Stabilize SX-104 by Pmpg to 244-S
230.M74	01MAR99*	19AUG02	Perf Annual Hydro Test SW Trans. Lines SX-104
230.M78	16MAY00*	24AUG00	Perform Post Stabil. Activities on SX-104
230.M80	01OCT03*	27JAN04	Review/Approve the NOC for SX-104 Exhaust.

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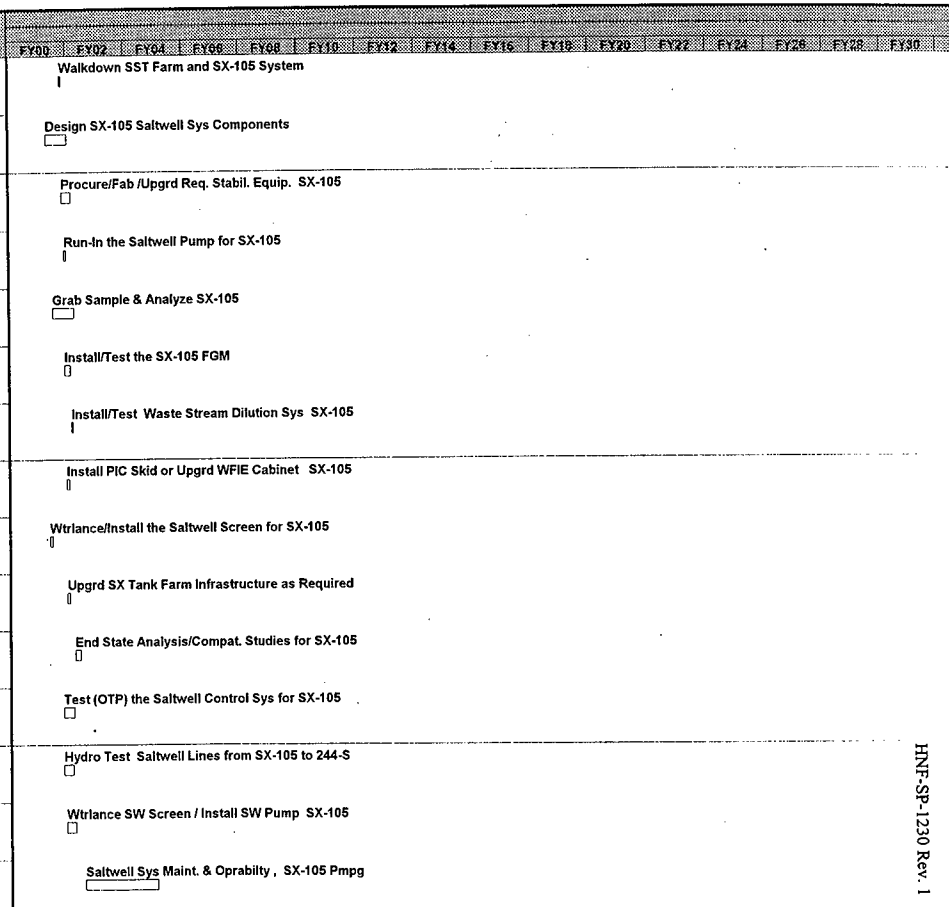
Activity ID	Early Start	Early Finish	Activity
230.N05	01AUG00*	07AUG00	Walkdown SST Farm and SX-105 System
230.N10	01FEB00*	17OCT00	Design SX-105 Saltwell Sys Components
230.N15	08AUG00*	30NOV00	Procure/Fab /Upgrd Req. Stabil. Equip. SX-105
230.N20	20SEP00*	10OCT00	Run-In the Saltwell Pump for SX-105
230.N25	17APR00*	08JAN01	Grab Sample & Analyze SX-105
230.N30	13SEP00*	21NOV00	Install/Test the SX-105 FGM
230.N42	01DEC00*	27DEC00	Install/Test Waste Stream Dilution Sys SX-105
230.N45	11OCT00*	07NOV00	Install PIC Skid or Upgrd WFIE Cabinet SX-105
230.N50	08MAR00*	27MAR00	Wtrlance/Install the Saltwell Screen for SX-105
230.N52	27SEP00*	07NOV00	Upgrd SX Tank Farm Infrastructure as Required
230.N54	10JAN01*	20MAR01	End State Analysis/Compat. Studies for SX-105
230.N56	08AUG00*	27DEC00	Test (OTP) the Saltwell Control Sys for SX-105
230.N60	08AUG00*	04DEC00	Hydro Test Saltwell Lines from SX-105 to 244-S
230.N64	20SEP00*	05JAN01	Wtrlance SW Screen / Install SW Pump SX-105
230.N68	01MAY01*	04NOV03	Saltwell Sys Maint. & Oprabilty , SX-105 Pmpg



Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
230.N72	12FEB01*	04NOV03	Stabilize SX-105 by Pmpg to 244-S
230.N78	05NOV03*	18FEB04	Perform Post Stabil. Activities on SX-105
230.N80	01OCT03*	14APR04	Perform Interim Isolation on SX-105
230.P54	01OCT98*	16OCT98	End State Analysis/Compat. Studies for SX-106
230.P64	01OCT98*	06OCT98	Wtrlance SW Screen / Install SW Pump SX-106
230.P68	23OCT98*	31JUL00	Saltwell Sys Maint. & Oprabilty , SX-106 Pmpg
230.P72	15OCT98*	31JUL00	Stabilize SX-106 by Pmpg to 244-S
230.P78	01AUG00*	12JAN01	Perform Post Stabil. Activities on SX-106
230.P80	01OCT03*	27JAN04	Perform Interim Isolation on SX-106
230.Q32	01OCT98*	15JAN99	Perf. DCRT Maint & Oprabilty Checks for 244-TX
230.Q68	01OCT98*	23DEC98	Saltwell Sys Maint. & Operability , T-104 Pmpg
230.Q72	01OCT98*	23DEC98	Stabilize T-104 by Pmpg to 244-TX
230.Q76	28DEC98*	06APR99	Perform Post Stabil. Activities on T-104
230.Q80	01OCT03*	27JAN04	Perform Interim Isolation on T-104
230.R68	01OCT98*	15JAN99	Saltwell Sys Maint. & Operability , T-110 Pmpg

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
230.R72	01OCT98*	15JAN99	Stabilize T-110 by Pmpg to 244-TX
230.R78	18JAN99*	26APR99	Perform Post Stabil. Activities on T-110
230.R80	01OCT03*	27JAN04	Perform Interim Isolation on T-110
230.S05	01APR02*	05APR02	Walkdown SST Farm and U-102 System
230.S10	01OCT01*	17MAY02	Design U-102 Saltwell Sys Components
230.S15	08APR02*	10JUL02	Procure/Fab /Upgrd Req. Stabil. Equip. U-102
230.S20	04JUN02*	24JUN02	Run-In the Saltwell Pump for U-102
230.S25	15NOV01*	09SEP02	Grab Sample & Analyze U-102
230.S30	13MAY02*	10JUN02	Install/Test the U-102 FGM
230.S45	20MAY02*	01JUL02	Install PIC Skid , Upgrd WFIE Cabinet U-102
230.S50	05NOV01*	26NOV01	Wtrlance/Install the Saltwell Screen for U-102
230.S54	10SEP02*	15NOV02	End State Analysis/Compat. Studies for U-102
230.S56	08APR02*	02AUG02	Test (OTP) the Saltwell Control Sys for U-102
230.S60	08APR02*	26JUL02	Hydro Test Saltwell Lines from U-102 to 244-U
230.S64	20MAY02*	12AUG02	Wtrlance SW Screen / Install SW Pump U-102

Activity ID	Early Start	Early Finish	Activity
230.S68	02DEC02*	18MAR04	Saltwell Sys Maint. & Operability , U-102 Pmpg
230.S72	23SEP02*	18MAR04	Stabilize U-102 by Pmpg to 244-U
230.S78	19MAR04*	25JUN04	Perform Post Stabil. Activities on U-102
230.S80	05FEB04*	24AUG04	Perform Interim Isolation on U-102
230.T05	01OCT01*	05DEC01	Walkdown SST Farm and U-103 System
230.T10	01MAR01*	20FEB02	Design U-103 Saltwell Sys Components
230.T15	06DEC01*	13MAR02	Procure/Fab /Upgrd Req. Stabil. Equip. U-103
230.T17	02APR01*	31OCT01	Place the 244-U DCRT in Service
230.T18	02APR01*	03JUL01	Modify the U Farm Clean-Out Boxes (COBs)
230.T20	06FEB02*	27FEB02	Run-In the Saltwell Pump for U-103
230.T25	01JUN01*	20FEB02	Grab Sample & Analyze U-103
230.T30	16JAN02*	20MAR02	Install/Test the U-103 FGM
230.T32	01JUL02*	14SEP04	Perform DCRT Maint & Oprabilty Check for 244-U
230.T40	28FEB02*	29MAR02	Install/Test the Exhauster for U-103
230.T45	30JAN02*	13MAR02	Install PIC Skid , Upgrd WFIE Cabinet U-103

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Activity ID	Early Start	Early Finish	Activity
230.T50	05APR01*	24APR01	Wtrlance/Install the Saltwell Screen for U-103
230.T52	13DEC01*	13MAR02	Upgrade U-Farm Infrastructure
230.T54	01MAR02*	08MAY02	End State Analysis/Compat. Studies for U-103
230.T56	06DEC01*	12APR02	Test (OTP) the Saltwell Control Sys for U-103
230.T60	06DEC01*	05APR02	Hydro Test Saltwell Lines from U-103 to 244-U
230.T64	07MAR02*	22APR02	Wtrlance SW Screen / Install SW Pump U-103
230.T68	01JUL02*	23MAR04	Saltwell Sys Maint. & Operability , U-103 Pmpg
230.T72	22APR02*	23MAR04	Stabilize U-103 by Pmpg to 244-U
230.T74	08APR03*	27MAY03	Perf Anul Hydro Test of SW Transf Lines U-103
230.T78	24MAR04*	30JUN04	Perform Post Stabil. Activities on U-103
230.T80	10FEB04*	27AUG04	Perform Interim Isolation on U-103
230.U05	03JUN02*	07JUN02	Walkdown SST Farm and U-105 System
230.U10	02JAN02*	23JUL02	Design U-105 Saltwell Sys Components
230.U15	10JUN02*	11SEP02	Procure/Fab /Upgrd Req. Stabil. Equip. U-105
230.U20	07AUG02*	27AUG02	Run-In the Saltwell Pump for U-105

FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30

Activity ID	Early Start	Early Finish	Activity
230.U25	31JAN02*	22OCT02	Grab Sample & Analyze U-105
230.U30	17JUL02*	13AUG02	Install/Test the U-105 FGM
230.U45	24JUL02*	04SEP02	Install PIC Skid , Upgrd WFIE Cabinet U-105
230.U50	06FEB02*	26FEB02	Wtrlance/Install the Saltwell Screen for U-105
230.U54	23OCT02*	06JAN03	End State Analysis/Compat. Studies for U-105
230.U56	10JUN02*	04OCT02	Test (OTP) the Saltwell Control Sys for U-105
230.U60	10JUN02*	04OCT02	Hydro Test Saltwell Lines from U-105 to 244-U
230.U64	05DEC02*	31DEC02	Wtrlance SW Screen / Install SW Pump U-105
230.U68	03FEB03*	30JUL04	Saltwell Sys Maint. & Operability , U-105 Pmpg
230.U72	23AUG02*	30JUL04	Stabilize U-105 by Pmpg to 244-U
230.U78	02AUG04*	08NOV04	Perform Post Stabil. Activities on U-105
230.U80	17JUN04*	10JAN05	Perform Interim Isolation on U-105
230.V05	01APR03*	07APR03	Walkdown SST Farm and U-106 System
230.V10	03SEP02*	19MAY03	Design U-106 Saltwell Sys Components
230.V15	08APR03*	10JUL03	Procure/Fab /Upgrd Req. Stabil. Equip. U-106

FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30

Activity ID	Early Start	Early Finish	Activity
230.V20	04JUN03*	24JUN03	Run-In the Saltwell Pump for U-106
230.V25	15OCT02*	08AUG03	Grab Sample & Analyze U-106
230.V30	13MAY03*	10JUN03	Install/Test the U-106 FGM
230.V45	20MAY03*	01JUL03	Install PIC Skid , Upgrd WFIE Cabinet U-106
230.V50	08OCT02*	25OCT02	Wtrlance/Install the Saltwell Screen for U-106
230.V54	11AUG03*	17OCT03	End State Analysis/Compat. Studies for U-106
230.V56	08APR03*	04AUG03	Test (OTP) the Saltwell Control Sys for U-106
230.V60	08APR03*	04AUG03	Hydro Test Saltwell Lines from U-106 to 244-U
230.V64	09SEP03*	01OCT03	Wtrlance SW Screen / Install SW Pump U-106
230.V68	03NOV03*	23JUL04	Saltwell Sys Maint. & Operability , U-106 Pmpg
230.V72	22SEP03*	23JUL04	Stabilize U-106 by Pmpg to 244-U
230.V78	26JUL04*	01NOV04	Perform Post Stabil. Activities on U-106
230.V80	11JUN04*	31DEC04	Perform Interim Isolation on U-106
230.W05	01FEB02*	07FEB02	Walkdown SST Farm and U-107 System
230.W10	02JUL01*	22MAR02	Design U-107 Saltwell Sys Components

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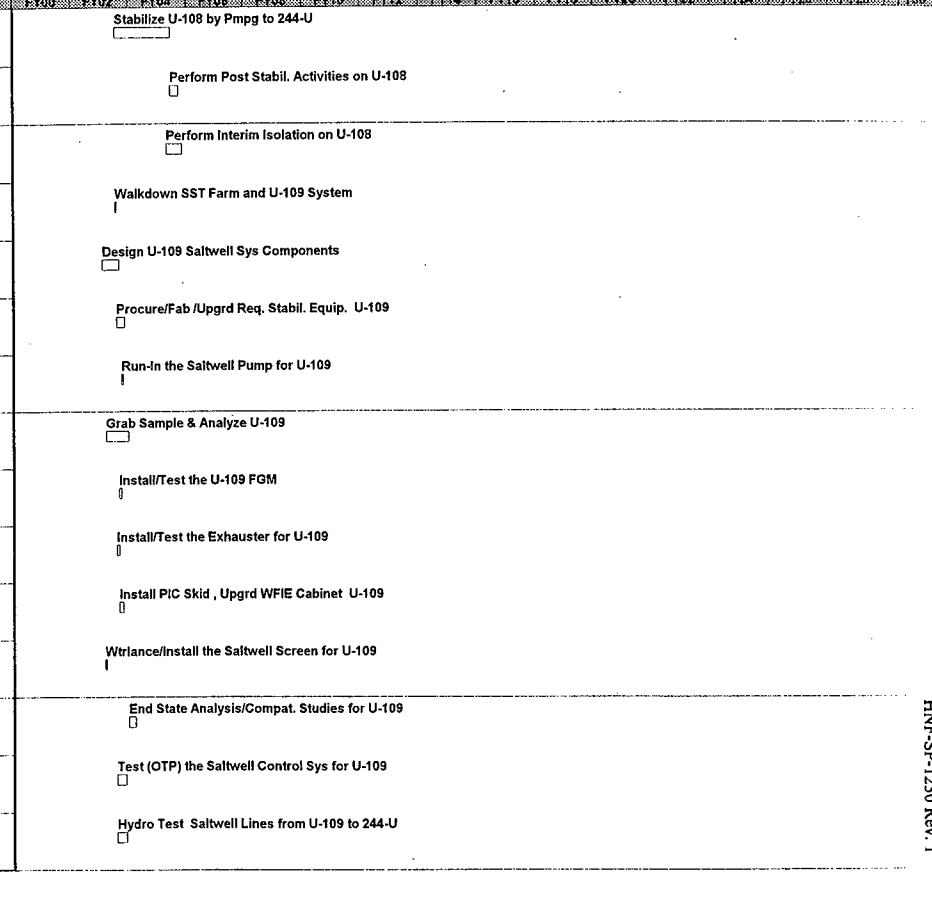
Activity ID	Early Start	Early Finish	Activity
230.W15	08FEB02*	10MAY02	Procure/Fab /Upgrd Req. Stabil. Equip. U-107
230.W20	08APR02*	26APR02	Run-In the Saltwell Pump for U-107
230.W25	17SEP01*	07JUN02	Grab Sample & Analyze U-107
230.W30	18MAR02*	12APR02	Install/Test the U-107 FGM
230.W45	25MAR02*	03MAY02	Install PIC Skid , Upgrd WFIE Cabinet U-107
230.W50	07AUG01*	24AUG01	Wtrlance/Install the Saltwell Screen for U-107
230.W52	13DEC01*	29JAN02	Upgrade Infrastructure if Req. - U-107
230.W54	10JUN02*	19AUG02	End State Analysis/Compat. Studies for U-107
230.W56	08FEB02*	05JUN02	Test (OTP) the Saltwell Control Sys for U-107
230.W60	25MAR02*	29MAY02	Hydro Test Saltwell Lines from U-107 to 244-U
230.W64	07AUG02*	29AUG02	Wtrlance SW Screen / Install SW Pump U-107
230.W68	01OCT02*	16MAR04	Saltwell Sys Maint. & Operability , U-107 Pmpg
230.W72	26JUL02*	16MAR04	Stabilize U-107 by Pmpg to 244-U
230.W78	17MAR04*	23JUN04	Perform Post Stabil. Activities on U-107
230.W80	03FEB04*	20AUG04	Perform Interim Isolation on U-107

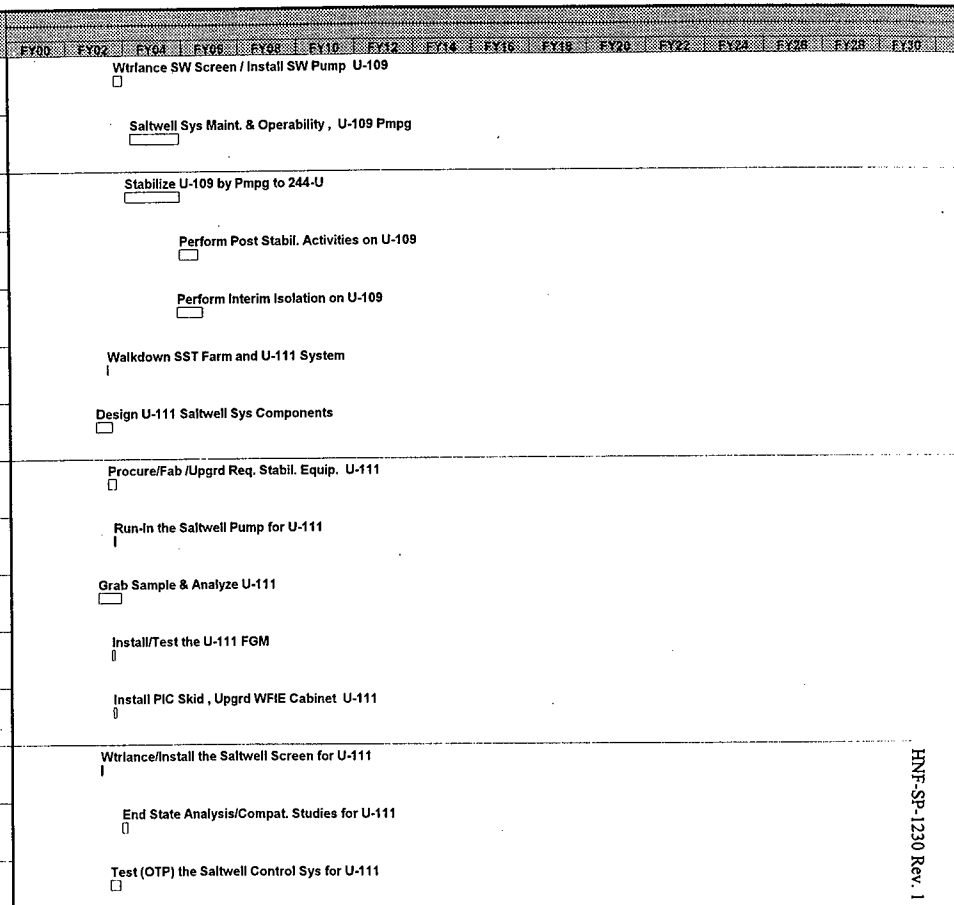
FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
230.X05	16OCT01*	22OCT01	Walkdown SST Farm and U-108 System
230.X10	01MAR01*	12DEC01	Design U-108 Saltwell Sys Components
230.X15	23OCT01*	29JAN02	Procure/Fab /Upgrd Req. Stabil. Equip. U-108
230.X20	20DEC01*	15JAN02	Run-In the Saltwell Pump for U-108
230.X25	21JUN01*	12MAR02	Grab Sample & Analyze U-108
230.X30	29NOV01*	12FEB02	Install/Test the U-108 FGM
230.X40	21JAN02*	27FEB02	Install/Test the Exhauster for U-108
230.X45	30JAN02*	13MAR02	Install PIC Skid , Upgrd WFIE Cabinet U-108
230.X50	05APR01*	24APR01	Wtrlance/Install the Saltwell Screen for U-108
230.X52	13DEC01*	29JAN02	Upgrd U Tank Farm Infrastructure as Required
230.X54	19MAR02*	24MAY02	End State Analysis/Compat. Studies for U-108
230.X56	23OCT01*	12APR02	Test (OTP) the Saltwell Control Sys for U-108
230.X60	23OCT01*	22FEB02	Hydro Test Saltwell Lines from U-108 to 244-U
230.X64	06DEC01*	22APR02	Wtrlance SW Screen / Install SW Pump U-108
230.X68	01JUL02*	19MAR04	Saltwell Sys Maint. & Operability , U-108 Pmpg

Activity ID	Early Start	Early Finish	Activity
230.X72	24APR02*	19MAR04	Stabilize U-108 by Pmpg to 244-U
230.X78	22MAR04*	28JUN04	Perform Post Stabil. Activities on U-108
230.X80	09FEB04*	25AUG04	Perform Interim Isolation on U-108
230.Y05	01MAY02*	07MAY02	Walkdown SST Farm and U-109 System
230.Y10	01NOV01*	19JUN02	Design U-109 Saltwell Sys Components
230.Y15	08MAY02*	09AUG02	Procure/Fab /Upgrd Req. Stabil. Equip. U-109
230.Y20	08JUL02*	26JUL02	Run-In the Saltwell Pump for U-109
230.Y25	31DEC01*	10OCT02	Grab Sample & Analyze U-109
230.Y30	13JUN02*	12JUL02	Install/Test the U-109 FGM
230.Y40	08MAY02*	07JUN02	Install/Test the Exhauster for U-109
230.Y45	20JUN02*	02AUG02	Install PIC Skid , Upgrd WFIE Cabinet U-109
230.Y50	10DEC01*	02JAN02	Wtrlance/Install the Saltwell Screen for U-109
230.Y54	11OCT02*	20DEC02	End State Analysis/Compat. Studies for U-109
230.Y56	08MAY02*	04SEP02	Test (OTP) the Saltwell Control Sys for U-109
230.Y60	08MAY02*	04SEP02	Hydro Test Saltwell Lines from U-109 to 244-U



Activity ID	Early Start	Early Finish	Activity
230.Y64	20JUN02*	12SEP02	Wtrlance SW Screen / Install SW Pump U-109
230.Y68	02JAN03*	03SEP04	Saltwell Sys Maint. & Operability , U-109 Pmpg
230.Y72	18OCT02*	07SEP04	Stabilize U-109 by Pmpg to 244-U
230.Y78	08SEP04*	18APR05	Perform Post Stabil. Activities on U-109
230.Y80	27JUL04*	14JUN05	Perform Interim Isolation on U-109
230.Z05	01MAR02*	07MAR02	Walkdown SST Farm and U-111 System
230.Z10	01OCT01*	18APR02	Design U-111 Saltwell Sys Components
230.Z15	08MAR02*	07JUN02	Procure/Fab /Upgrd Req. Stabil. Equip. U-111
230.Z20	03MAY02*	23MAY02	Run-In the Saltwell Pump for U-111
230.Z25	18OCT01*	26JUL02	Grab Sample & Analyze U-111
230.Z30	12APR02*	09MAY02	Install/Test the U-111 FGM
230.Z45	19APR02*	31MAY02	Install PIC Skid , Upgrd WFIE Cabinet U-111
230.Z50	05NOV01*	26NOV01	Wtrlance/Install the Saltwell Screen for U-111
230.Z54	29JUL02*	04OCT02	End State Analysis/Compat. Studies for U-111
230.Z56	08MAR02*	02JUL02	Test (OTP) the Saltwell Control Sys for U-111



Activity ID	Early Start	Early Finish	
230.Z60	08MAR02*	02JUL02	Hydro Test Saltwell Lines from U-111 to 244-U
230.Z64	19APR02*	12JUL02	Wtrlance SW Screen / Install SW Pump U-111
230.Z68	01NOV02*	02JAN04	Saltwell Sys Maint. & Operability , U-111 Pmpg
230.Z72	03SEP02*	02JAN04	Stabilize U-111 by Pmpg to 244-U
230.Z78	05JAN04*	12APR04	Perform Post Stabil. Activities on U-111
230.Z80	17NOV03*	08JUN04	Perform Interim Isolation on U-111
230._47	01OCT98*	07SEP04	DCRT for Remaining SST's
230._69	01OCT98*	30SEP04	Shift Pumping Operations Crews
1.01.03.01.01.10			Project W-314
250.100	03OCT96A	01NOV02	Project Management
250.100165		20AUG98A	MS: M-43-11Provide W-314 Const Sch to Ecology M-43-11
250.100170	02MAR98A		**MS: M-43-12 Start Construction In 1st Tank Farm** T03-99-055
250.100175	30JUN00*		MS: M-43-13 Start Construction in 2nd Farm T03-00-056
250.100180	30MAR01*		MS: M-43-14 Start Construction in 3rd Farm T03-01-057
250.100185	29MAR02*		MS: M-43-15 Start Construction in 4th Farm T03-02-058
250.100190	30JUN03*		MS: M-43-16 Start Construction in 5th Farm T03-03-059

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Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
250.100195		30JUN05*	MS: M-43-00 Complete TF Upgrades T03-05-051
250.130	01OCT96A	29JUN07	OPC Activities (Expense)
250.130204		15JAN99*	Milestone: P.A. 2.1.3 Complete Rebaseline (Ph 1) T03-99-213
250.130541		30SEP99*	Milestone: P.A. TWR-2.1.2 AN Const/Startup T03-99-212
250.200	13JAN97A	18SEP02	Master Pump Shut Down Upgrades
250.300	01OCT96A	15JUL98A	
250.400	01OCT99*	29MAY07	Phase 2 Design, Procure & Construct
250.E00	01JUL98A	02AUG01	200E Waste Trans System Upgrades
250.E00124		30SEP99*	MS: P.A. TWR 2.1.1 WTS Partial Design & Proc. T03-99-211
250.N00	20JAN97A	03AUG00	AN Valve Pit Upgrades
250.W00	02OCT00*	30OCT02	AW Valve Pit Upgrades
250.Y00	01OCT97A	02MAY02	AY Valve Pit Upgrades
250.Z00	02JAN98A	31OCT01	AZ Valve Pit Upgrades
1.01.03.01.03			Transition Tank Farm Facilities
1.01.03.01.03.01			Deactivate Facilities
190.A91	02OCT00*	21OCT04	Deactivate Systems in A/AX Farms

Activity ID	Early Start	Early Finish	FY00 FY02 FY04 FY06 FY08 FY10 FY12 FY14 FY16 FY18 FY20 FY22 FY24 FY26 FY28 FY30
190.B91	02OCT00*	21OCT04	Deactivate Systems in B/BX/BY Farms
190.C91	02OCT00*	21OCT04	Deactivate Systems in C Farms
190.E91	02OCT00*	21OCT04	Deactivate Systems in 244-S
190.F91	02OCT00*	21OCT04	Deactivate Systems in 200E Anc Fcls
190.G91	02OCT00*	21OCT04	Deactivate Systems in 200W Anc Fcls
190.N91	01OCT04*	21OCT09	Deactivate Systems in AN Farms
190.P91	01OCT04*	21OCT09	Deactivate Systems in AP Farms
190.R91	02OCT00*	21OCT04	Deactivate Systems in 204-AR
190.S91	02OCT00*	21OCT04	Deactivate Systems in S/SX Farms
190.T91	02OCT00*	21OCT04	Deactivate Systems in T/TX/TY Farms
190.U91	02OCT00*	21OCT04	Deactivate Systems in U Farms
190.W91	01OCT04*	21OCT09	Deactivate Systems in AW Farms
190.Y91	01OCT04*	21OCT09	Deactivate Systems in SY Farms
190.Z91	01OCT04*	21OCT09	Deactivate Systems in AY/AZ Farms

B.3.3.2 Execution Year Project Master Baseline Schedule

Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP FY00 OCT
1			Hanford Environmental Management
1.01			Tank Waste Remediation System
1.01.03			Tank Farm Operations
1.01.03.01			Tank Farm System
1.01.03.01.01			Waste Feed Delivery
1.01.03.01.01.01			Project Management
190.205	01OCT98*	30SEP24	RadCon Prog Mgmt/General Admin
190.305	01OCT98*	30SEP24	Engineering Program Mgmt and Gen Admin
190.310	01OCT98*	04MAY00	Provide Y2K Project Support
190.315	01OCT98*	30SEP03	Impl/Maint HNF-SD-WM-CM-014, Conf Mgmt
190.505	01OCT98*	30SEP25	Maintenance Program Mgmt/General Admin
190.602	01OCT98*	30SEP24	QA Program Management/General Admin
190.604	01OCT98*	30SEP24	Safety and Health Prog Mgmt/Gen Admin
190.606	01OCT98*	30SEP24	Provide Environmental Program Mgmt/Gen Admin
190.902	01OCT98*	30SEP24	Ops Program Management/General Admin
190.911	01OCT98*	30SEP24	Patrol Rover
190.918	01OCT98*	30SEP24	Attend Personnel Training

Start 01OCT97
Finish 29SEP27
Data Date 01OCT98
Run Date 18NOV98

Early Bar
Progress Bar
Critical Activity

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Sheet 1 of 26

Tank Waste Remediation System
PMBS - FY 1999
TW03 - Tank Farm Operations

Activity ID	Early Start	Early Finish	FY99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY00 OCT
190.924	01OCT98*	30SEP24	Perf Indicator Rptg/Communication Admin												
190.930	01OCT98*	30SEP24	Prov BIO/Emergency Response Staffing												
190.999	01OCT98*	30SEP24	Perform TFO Project Fin Plan Assessments												
190.A51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for A/AX Farms												
190.B51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for B/BX/BY Farms												
190.C51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for C Farms												
190.D51	01OCT98*	30SEP03	Perf Surv/Eqmt Monit for Deactivation												
190.E51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for 244-S												
190.F51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for 200E Anc Fcls												
190.G51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for 200W Anc Fcls												
190.N51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for AN Farms												
190.P51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for AP Farms												
190.R51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for 204-AR												
190.S51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for S/SX Farms												
190.T51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for T/TX/TY Farms												

Activity ID	Early Start	Early Finish	FY98 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP	FY00 OCT
190.U51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for U Farms	
190.W51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for AW Farms	
190.Y51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for SY Farms	
190.Z51	01OCT98*	30SEP24	Perf Surv/Eqmt Monit for AY/AZ Farms	
680.210	01OCT98*	30SEP24	Implement the RadCon Improvement Plan	
680.625	01OCT98*	29SEP00	Implement PHMC Chemical Management System	
1.01.03.01.01.02			Ancillary Facilities	
190.F60	01OCT98*	30SEP24	Perform Preventive Maint 200E Anc Fcls	
190.F61	01OCT98*	30SEP24	Perform Corrective Maint 200E Anc Fcls	
190.G60	01OCT98*	30SEP24	Perform Preventive Maint 200W Anc Fcls	
190.G61	01OCT98*	30SEP24	Perform Corrective Maint 200W Anc Fcls	
240.F67	01OCT98*	11NOV98	Perf Cont. Air Monitor (CAM) Upgrs 2E Anc Facil	
1.01.03.01.01.03			Deactivating Facilities	
190.D60	01OCT98*	30SEP24	Perform Preventive Maint Deactivation Facils	
190.D61	01OCT98*	30SEP24	Perform Corrective Maint Deactivation Facils	
1.01.03.01.01.04			Waste Processing Facilities	
190.E60	01OCT98*	30SEP24	Perform Preventive Maint S-244	

Activity ID	Early Start	Early Finish	FY98 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP	FY00 OCT
190.E61	01OCT98*	30SEP24	Perform Corrective Maint S-244	
190.R60	01OCT98*	30SEP24	Perform Preventive Maint 204-AR	
190.R61	01OCT98*	30SEP24	Perform Corrective Maint 204-AR	
240.E67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs 242-S	
240.R67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs 204-AR	
1.01.03.01.01.05			Tank Farm Complexes	
190.A52	01OCT98*	30SEP24	Operate A/AX Farms	
190.A60	01OCT98*	30SEP24	Perform Preventive Maint A/AX Farms	
190.A61	01OCT98*	30SEP24	Perform Corrective Maint A/AX Farms	
190.A85	01OCT98*	30SEP25	Impl A/AX Farms Tech Bsln Upgrs/Mods	
190.B52	01OCT98*	30SEP24	Operate B/BX/BY Farms	
190.B60	01OCT98*	30SEP24	Perform Preventive Maint B/BX/BY Farms	
190.B61	01OCT98*	30SEP24	Perform Corrective Maint B/BX/BY Farms	
190.B85	01OCT98*	30SEP25	Impl B/BX/BY Farms Tech Bsln Upgrs/Mods	
190.C52	01OCT98*	30SEP24	Operate C Farms	
190.C60	01OCT98*	30SEP24	Perform Preventive Maint C Farms	

Activity ID	Early Start	Early Finish	FY99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY00 OCT
190.C61	01OCT98*	30SEP24	Perform Corrective Maint C Farms												
190.C85	01OCT98*	30SEP25	Impl C Farms Tech Bsln Upgrs/Mods												
190.D52	01OCT98*	30SEP03	Operate Deactivation Facilities												
190.E52	01OCT98*	30SEP24	Operate 242-S												
190.E85	01OCT98*	30SEP25	Impl 244-S Tech Bsln Upgrs/Mods												
190.F52	01OCT98*	30SEP24	Operate 200E Ancillary Facilities												
190.F85	01OCT98*	30SEP25	Impl 200E Anc Fcls Tech Bsln Upgrs/Mods												
190.G52	01OCT98*	30SEP24	Operate 200W Ancillary Facilities												
190.G85	01OCT98*	30SEP25	Impl 200W Anc Fcls Tech Bsln Upgrs/Mods												
190.N52	01OCT98*	30SEP24	Operate AN Farms												
190.N60	01OCT98*	30SEP24	Perform Preventive Maint AN Farms												
190.N61	01OCT98*	30SEP24	Perform Corrective Maint AN Farms												
190.N85	01OCT98*	30SEP25	Impl AN Farms Tech Bsln Upgrs/Mods												
190.P52	01OCT98*	30SEP24	Xfr Tnk Waste into AP Farm for Tnk Spc Consolid.												
190.P60	01OCT98*	30SEP24	Perform Preventive Maint AP Farms												

Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP	FY00 OCT
190.P61	01OCT98*	30SEP24	Perform Corrective Maint AP Farms	
190.P85	01OCT98*	29SEP27	Impl AP Farms Tech Bsln Upgrs/Mods	
190.R52	01OCT98*	30SEP24	Operate 204-AR	
190.S52	01OCT98*	30SEP24	Operate S/SX Farms	
190.S60	01OCT98*	30SEP24	Perform Preventive Maint S/SX Farms	
190.S61	01OCT98*	30SEP24	Perform Corrective Maint S/SX Farms	
190.S85	01OCT98*	30SEP25	Impl S/SX Farms Tech Bsln Upgrs/Mods	
190.T52	01OCT98*	30SEP24	Operate T/TX/TY Farms	
190.T60	01OCT98*	30SEP24	Perform Preventive Maint T/TX/TY Farms	
190.T61	01OCT98*	30SEP24	Perform Corrective Maint T/TX/TY Farms	
190.T85	01OCT98*	30SEP25	Impl T/TX/TY Farms Tech Bsln Upgrs/Mods	
190.U52	01OCT98*	30SEP24	Operate U Farms	
190.U60	01OCT98*	30SEP24	Perform Preventive Maint U Farms	
190.U61	01OCT98*	30SEP24	Perform Corrective Maint U Farms	
190.U85	01OCT98*	30SEP25	Impl U Farms Tech Bsln Upgrs/Mods	

Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP FY00 OCT
190.W52	01OCT98*	30SEP24	Operate AW Farms
190.W60	01OCT98*	30SEP24	Perform Preventive Maint AW Farms
190.W61	01OCT98*	30SEP24	Perform Corrective Maint AW Farms
190.W85	01OCT98*	30SEP25	Impl AW Farms Tech Bsln Upgrs/Mods
190.Y52	01OCT98*	30SEP24	Operate SY Farms
190.Y60	01OCT98*	30SEP24	Perform Preventive Maint SY Farms
190.Y61	01OCT98*	30SEP24	Perform Corrective Maint SY Farms
190.Y85	01OCT98*	30SEP25	Impl SY Farms Tech Bsln Upgrs/Mods
190.Y99	01OCT98*	30SEP99	Leak Detectors Annulus SY Farm
190.Z52	01OCT98*	30SEP24	Operate AY/AZ Farms
190.Z60	01OCT98*	30SEP24	Perform Preventive Maint AY/AZ Farms
190.Z61	01OCT98*	30SEP24	Perform Corrective Maint AY/AZ Farms
190.Z85	01OCT98*	30SEP25	Impl AY/AZ Farms Tech Bsln Upgrs/Mods
210.Y50	01OCT98*	29NOV05	Compl Cross-Site Slurry Xfr Line SY to 244-A
240.A67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs A/AX

Activity ID	Early Start	Early Finish	FY98 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP FY00 OCT
240.B67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs B/BX/BY
240.C67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs C Farms
240.N67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs AN Farms
240.P60	01OCT98*	18JUN99	Install ENRAF Level Instrument AP Farms
240.P60A8M		30SEP99*	PA 6.3.7 Install 8 ENRAFs in S/SX, AP Tank Farms T03-99-637
240.P65	01OCT98*	19MAR99	Compl INstall/Connect TMACS AP Farms
240.P67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs AP Farms
240.S60	01OCT98*	13AUG99	Install ENRAF Level Instrument S/SX Farms
240.S65	01OCT98*	30SEP99	Compl Install/Connect TMACS S/SX Farms
240.S67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs S/SX
240.T67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs T/TX/TY
240.Y67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs SY Farms
240.Z67	01OCT98*	11NOV98	Perf Continuous Air Monitor (CAM) Upgrs AY/AZ
1.01.03.01.01.06			Waste Transfers
190.E53	01OCT98*	04DEC98	Perf 242-S Evap C-100/Pump Rm Smp Xfrs
190.P56	01OCT98*	07DEC01	Waste Consolidation Xfrs into AP Farm

Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP FY00 OCT
190.R53	01OCT98*	30SEP24	Rcv Extrnl Xfrs T-plant/WESF/300A/400A/PUREX
190.S54	01OCT98*	06FEB24	Receive External Waste Xfr into 244-S
190.T54	01OCT98*	15OCT99	Receive External Waste Xfr into T/TX/TY Farms
190.W53	01OCT98*	30SEP24	Perf A-350 Catch Tank Xfrs to AW-102
190.Z53	01OCT98*	30SEP24	Perf 151-AZ Catch Tank to 102-AZ
320.P64	01OCT98*	31MAR10	Transfer Evap Slurries From 106AW into AP Farms
320.W60	01OCT98*	30SEP10	Stage Wst AW-102 for 242-A Evap Campaigns
320.W62	01OCT98*	30JUN10	242-A Evap Recycle Xfrs AW-106 AW-102
1.01.03.01.01.07			Essential Services
190.320	01OCT98*	30SEP24	Update and Maintain the OWVP
190.320A1M		30SEP99*	M-46-00F Double-Shell Tank Space Evaluation T03-99-103
190.320B1M		30NOV98*	M-46-01E Concurence of Add'l Tank Acquisition T03-99-102
190.330	01OCT98*	30SEP24	Provide Waste Tank Summary Reports
190.335	01OCT98*	30SEP24	Integrity Assessment
190.335C1M		30JUL99*	PA 6.3.1 Perf Ultrasonic Examination of Four DST T03-99-631
190.335C2M		30SEP99*	PA 6.3.4 Perf Integrity Assessments of 28 DSTs T03-99-632

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Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP	FY00 OCT
190.510	01OCT98*	30SEP24	Control Inventory of Spare Parts/Eqmt	
190.608	01OCT98*	30SEP24	Maintain Emergency Preparedness Prog	
190.610	01OCT98*	30SEP24	Prov Safety Sub-Contractor Oversight	
190.612	01OCT98*	30SEP24	Perform Environmental Records Mgmt	
190.614	01OCT98*	30SEP24	Impl/Maint. TWRS Air Permitting	
190.616	01OCT98*	30SEP24	Prov Environmental Regulatory Reports	
190.618	01OCT98*	30SEP24	Perf RCRA Map Undrgrnd Danger Wst Lns	
190.620	01OCT98*	30SEP24	Prov Environ Sub-Contractor Oversight	
190.622	01OCT98*	30SEP24	Eval/Monitor TWRS Facility Hazards	
190.624	01OCT98*	30SEP05	Perf Hazardous Material Coordination	
190.626	01OCT98*	30SEP24	Conduct TWRS Emerg Preparedness Drills	
190.904	01OCT98*	30SEP24	Perf Corrective Action Mgmt for TWRS	
190.908	01OCT98*	30SEP24	Support External Assessments of TWRS	
190.910	01OCT98*	30SEP24	Prov Infrastructure Services to TWRS	
190.912	01OCT98*	30SEP24	Manage/Maint TWRS Training Program	

Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP	FY00 OCT
190.914	01OCT98*	30SEP24	Prov Continuous/Init Facil Spec Trng	
190.916	01OCT98*	30SEP24	Develop and Maintain Training Material	
190.920	01OCT98*	30SEP24	Provide CASS/TMACS/SACS Support	
190.926	01OCT98*	30SEP24	Prov Safe Tank Ops Baseline Controls	
190.928	01OCT98*	30SEP24	Manage and Maintain TWRS Procedures	
190.932	01OCT98*	30SEP24	Provide LMSI Document Control	
190.936	01OCT98*	30SEP24	Prov Waste Generator Srvs Prog Mgmt	
190.938	01OCT98*	30SEP24	Prepare and Manage Waste Containers	
190.N45	01OCT98*	29SEP06	Resolve AN Farm Tanks Corrosion Issues	
190.P45	01OCT98*	29SEP06	Resolve 2E Anc Fcl Tks Corrosion Issues	
190.R85	01OCT98*	30SEP25	Impl 204-AR Tech Bsln Upgrs/Mods	
190.W45	01OCT98*	29SEP06	Resolve 2E Anc Fcl Tks Corrosion Issues	
190.Y45	01OCT98*	29SEP06	Resolve SY Tank Farms Corrosion Issues	
190.Z45	01OCT98*	29SEP06	Resolve 2E Anc Fcl Tks pH Out-of-Spec Issue	
680.325	01OCT98*	30SEP24	Provide Waste Acceptance Program	

Activity ID	Early Start	Early Finish	FY99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY00 OCT
680.612	01OCT98*	30SEP99	Implement S/RID Recovery Plan												
680.612A1M		30SEP99*											PA 5.1.1 Compl HLW Storage S/RIDs Phase II T03-99-511		
680.615	01OCT98*	30SEP24	Impl PHMC Price Anderson Act Admin Program												
680.620	01OCT98*	29SEP00	Submit RCRA DST Part B Permit Approval												
680.635	01OCT98*	30SEP24	Maintain/Update S/RID Program												
680.638	01OCT98*	30SEP24	Conduct ESH&Q/Radcon Compliance Assessments												
680.640	01OCT98*	30SEP99	Resolve Emerging Regulatory Compliance Issues												
680.905	01OCT98*	09FEB24	Implement Integr Safety Management System (ISMS)												
680.905A1M		14JUL99*										PA 5.1.2 Cmpl TWRS Impl DNFSB 95-2 (ISMS) PH II T03-99-512			
680.A40	01OCT98*	30SEP24	Estab/Maint Reg Compliance A/AX Farms												
680.A77	01OCT98*	03APR18	Perform Integrity Assessment 244-A/A-350												
680.B40	01OCT98*	30SEP24	Estab/Maint Reg Compliance B Farms												
680.B77	04JAN99*	30APR18				Perform Integrity Assessment B/BY/BX Farms									
680.C40	01OCT98*	30SEP24	Estab/Maint Reg Compliance C Farms												
680.D40	01OCT98*	30SEP24	Estab/Maint Reg Compliance Deactivating Facils												

Activity ID	Early Start	Early Finish	Activity
680.E40	01OCT98*	30SEP24	Estab/Maint Reg Compliance 242-S
680.F40	01OCT98*	30SEP24	Estab/Maint Reg Compliance 200E Ancillary Facil
680.F77	01OCT98*	27JUN18	Perform Integrity Assessment AZ-151/ER311
680.G40	01OCT98*	30SEP24	Estab/Maint Reg Compliance 200W Ancillary Facil
680.G77	01DEC98*	02MAR18	Perf Integ Assmt EW151/TX302C/U310B/UX302A/S304
680.N40	01OCT98*	30SEP24	Estab/Maint Reg Compliance AN Farms
680.N77	01OCT98*	31DEC21	Perform Integrity Assessment AN-101/2/3/4/5/6/7
680.P40	01OCT98*	30SEP24	Estab/Maint Reg Compliance AP Farms
680.R40	01OCT98*	30SEP24	Estab/Maint Reg Compliance 204-AR
680.R77	01JUN99*	28SEP18	Perform Integrity Assessment 244-AR
680.R77A1N		29SEP99*	M-32-06-T01 Comp/Submit Integrity Assmt Report T03-99-320
680.S40	01OCT98*	30SEP24	Estab/Maint Reg Compliance S/SX Farms
680.S77	02NOV98*	06MAR18	Perform Integrity Assessment 244-S
680.T40	01OCT98*	30SEP24	Estab/Maint Reg Compliance T/TX/TY Farms
680.T77	03MAY99*	28AUG18	Perform Integrity Assessment 244-TX

FY99: OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP; FY00: OCT

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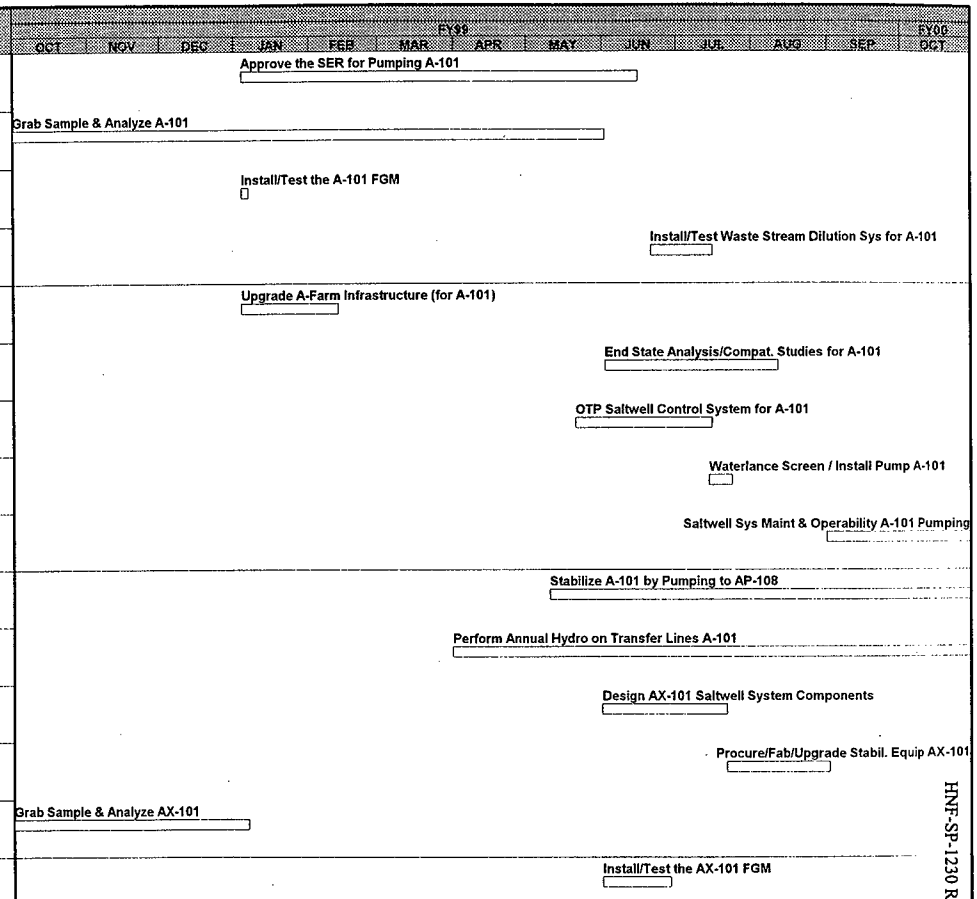
Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP FY00 OCT
680.U40	01OCT98*	30SEP24	Estab/Maint Reg Compliance U Farms
680.W40	01OCT98*	30SEP24	Estab/Maint Reg Compliance AW Farms
680.W77	01JUN99*	31DEC21	Perform Integrity Assessment AW-101/2/3/4/5/6
680.Y40	01OCT98*	30SEP24	Estab/Maint Reg Compliance SY Farms
680.Z40	01OCT98*	30SEP24	Estab/Maint Reg Compliance AY/AZ Farms
680.Z77	01OCT98*	31DEC21	Perform Integrity Assessment AY/AZ Farms
1.01.03.01.01.08			Drawing and Labeling
190.325	01OCT98*	30SEP24	As-Building Project Management/Admin
190.A43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog A/AX Farms
190.B43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog B/BX/BY Farms
190.C43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog C Farms
190.E43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog 244-S
190.F43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog 200E Anc Fcls
190.G43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog 200W Anc Fcls
190.N43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog AN Farms
190.P43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog AP Farms

Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP FY00 OCT
190.R43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog 204-AR
190.S43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog S/SX Farms
190.S43A1M		30SEP99*	PA 6.3.5 Perf Drawing & Labeling Upgrades T03-99-635
190.S43A1N		30SEP99*	SI 4c Complete Accelerated Walk-Downs and Field T03-99-400
190.T43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog T/TX/TY Farms
190.U43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog U Farms
190.W43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog AW Farms
190.Y43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog SY Farms
190.Z43	01OCT98*	30SEP05	Incorp ECN/Drwg Revs Backlog AY/AZ Farms
1.01.03.01.01.09			SST Interim Stablization
230.010	01OCT98*	30SEP99	Approval to Combine Complex Wastes
230.055	01OCT98*	30SEP99	DOE-RL ORR for Pumping A-101
230.057	01OCT98*	30SEP99	Provide Controls/TSRs to Pump A-101 per SAD-036
230.060	01OCT98*	30SEP02	Provide Emerg. Pump Plan for New Assumed Leakers
230.066	01MAR99*	06MAY99	Install Overgrnd Xfr Line if Route Fails Hydro
230.070	01OCT98*	30JUN05	Provide I.S. Program Mgt & Tech Functions

Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP FY00 OCT
230.070N2A	01OCT98*		Start Interim Stabilization of 6 SSTs (M-41-22) T03-97-150
230.070N2B	01OCT98*		Start Interim Stabilization of 8 SSTs (M-41-23) T03-98-151
230.070N2C	01OCT98*		Start Interim Stabilization of 9 SSTs (M-41-24) T03-98-152
230.070N2D	01APR99*		Start Interim Stabilization of 3 SSTs M-41-25 T03-99-191
230.070N2F		30SEP98*	Complete Salt Well Pumping of 5 Single Shell T03-98-154
230.070N2G		30SEP99*	Complete Salt Well Pumping of 8 Single Shell T03-99-194
230.070N2H		30SEP99*	TWR6.4.1 Initiate Interim Stab of SSTs # TBD RL T03-99-706
230.071	01OCT98*	28SEP01	Engineering Studies
230.078	01OCT98*	14JUN05	Risk Mitigation
230.080	01OCT98*	25JAN99	RL Review/Approve NOCs for I.S. Exhausters
230.090	01OCT98*	18MAR99	Design the Interim Stabilization Exhausters
230.095	01OCT98*	25MAR99	Procure the Interim Stabilization Exhausters
230.110	19MAR99*	06MAY99	Design A-101 Saltwell System Components
230.115	07MAY99*	18JUN99	Procure/Fab/Upgrade Stabil. Equip. A-101
230.120	01APR99*	21APR99	Run-In Saltwell Pump for A-101

Activity ID	Early Start	Early Finish
230.123	04JAN99*	15JUN99
230.125	01OCT98*	01JUN99
230.130	04JAN99*	06JAN99
230.142	21JUN99*	15JUL99
230.152	04JAN99*	12FEB99
230.154	02JUN99*	11AUG99
230.156	21MAY99*	15JUL99
230.164	15JUL99*	23JUL99
230.168	01SEP99*	24MAY02
230.172	11MAY99*	24MAY02
230.174	01APR99*	17JUL01
230.210	01JUN99*	21JUL99
230.215	22JUL99*	01SEP99
230.225	01OCT98*	06JAN99
230.230	01JUN99*	28JUN99



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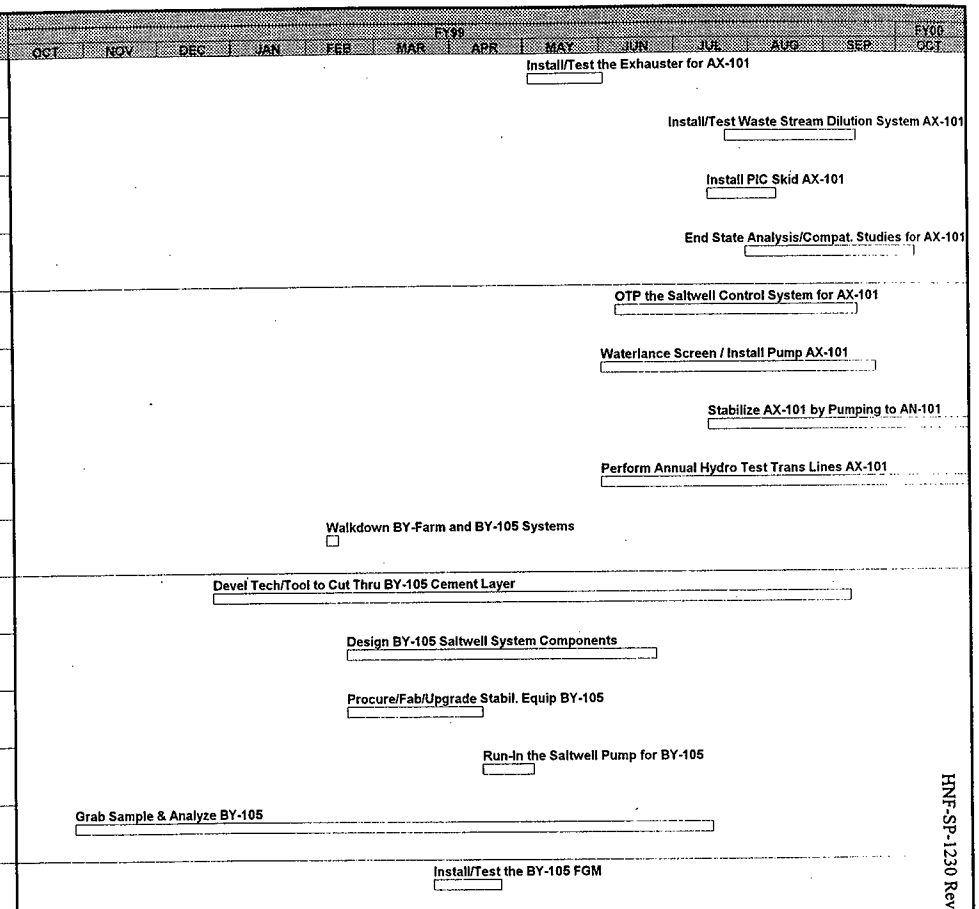
TW03-91

Activity ID	Early Start	Early Finish	Activity
230.240	03MAY99*	02JUN99	Install/Test the Exhauster for AX-101
230.242	22JUL99*	13SEP99	Install/Test Waste Stream Dilution System AX-101
230.245	15JUL99*	11AUG99	Install PIC Skid AX-101
230.254	30JUL99*	07OCT99	End State Analysis/Compat. Studies for AX-101
230.256	07JUN99*	13SEP99	OTP the Saltwell Control System for AX-101
230.264	01JUN99*	21SEP99	Waterlance Screen / Install Pump AX-101
230.272	15JUL99*	07JAN02	Stabilize AX-101 by Pumping to AN-101
230.274	01JUN99*	13JUL00	Perform Annual Hydro Test Trans Lines AX-101
230.305	08FEB99*	12FEB99	Walkdown BY-Farm and BY-105 Systems
230.307	23DEC98*	10SEP99	Devel Tech/Tool to Cut Thru BY-105 Cement Layer
230.310	16FEB99*	22JUN99	Design BY-105 Saltwell System Components
230.315	16FEB99*	12APR99	Procure/Fab/Upgrade Stabil. Equip BY-105
230.320	13APR99*	03MAY99	Run-In the Saltwell Pump for BY-105
230.325	26OCT98*	15JUL99	Grab Sample & Analyze BY-105
230.330	23MAR99*	19APR99	Install/Test the BY-105 FGM



TW03-92

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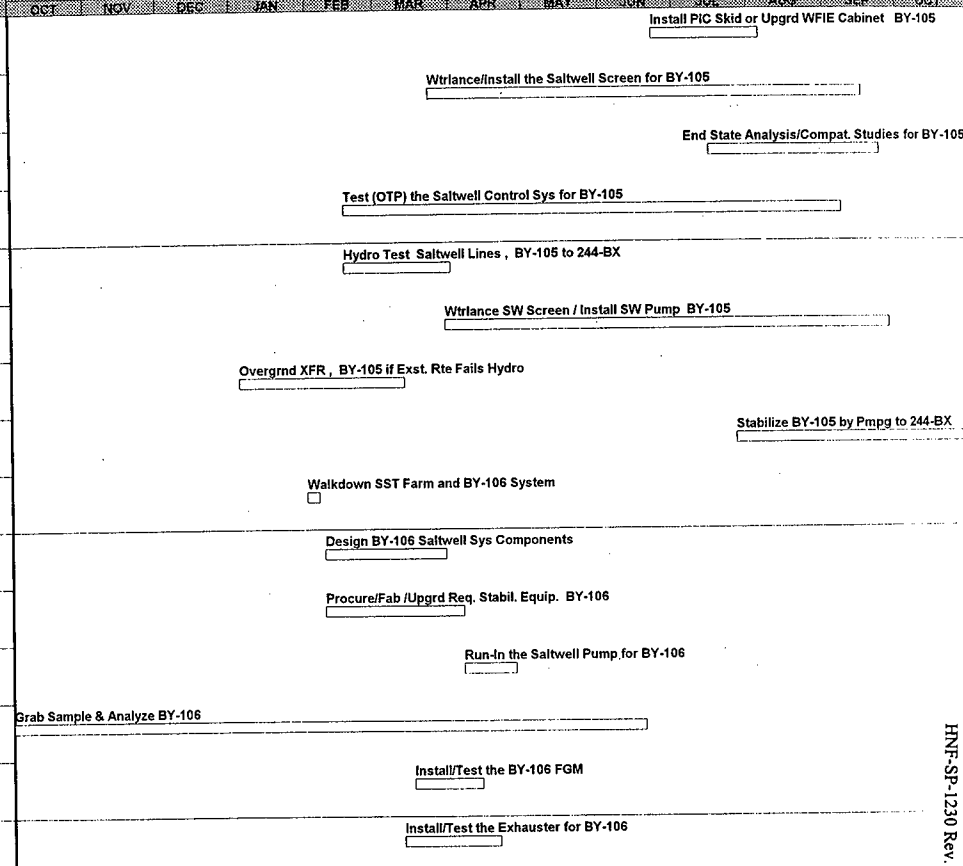
Activity ID	Early Start	Early Finish	Activity
230.345	23JUN99*	05AUG99	Install PIC Skid or Upgrd WFIE Cabinet BY-105
230.350	23MAR99*	16SEP99	Wtrlance/Install the Saltwell Screen for BY-105
230.354	16JUL99*	23SEP99	End State Analysis/Compat. Studies for BY-105
230.356	16FEB99*	07SEP99	Test (OTP) the Saltwell Control Sys for BY-105
230.360	16FEB99*	31MAR99	Hydro Test Saltwell Lines , BY-105 to 244-BX
230.364	30MAR99*	27SEP99	Wtrlance SW Screen / Install SW Pump BY-105
230.366	04JAN99*	12MAR99	Overgrnd XFR , BY-105 if Exst. Rte Fails Hydro
230.372	27JUL99*	06MAR01	Stabilize BY-105 by Pmpg to 244-BX
230.405	01FEB99*	05FEB99	Walkdown SST Farm and BY-106 System
230.410	08FEB99*	29MAR99	Design BY-106 Saltwell Sys Components
230.415	08FEB99*	05APR99	Procure/Fab /Upgrd Req. Stabil. Equip. BY-106
230.420	06APR99*	26APR99	Run-In the Saltwell Pump for BY-106
230.425	01OCT98*	18JUN99	Grab Sample & Analyze BY-106
230.430	16MAR99*	12APR99	Install/Test the BY-106 FGM
230.440	12MAR99*	19APR99	Install/Test the Exhauster for BY-106



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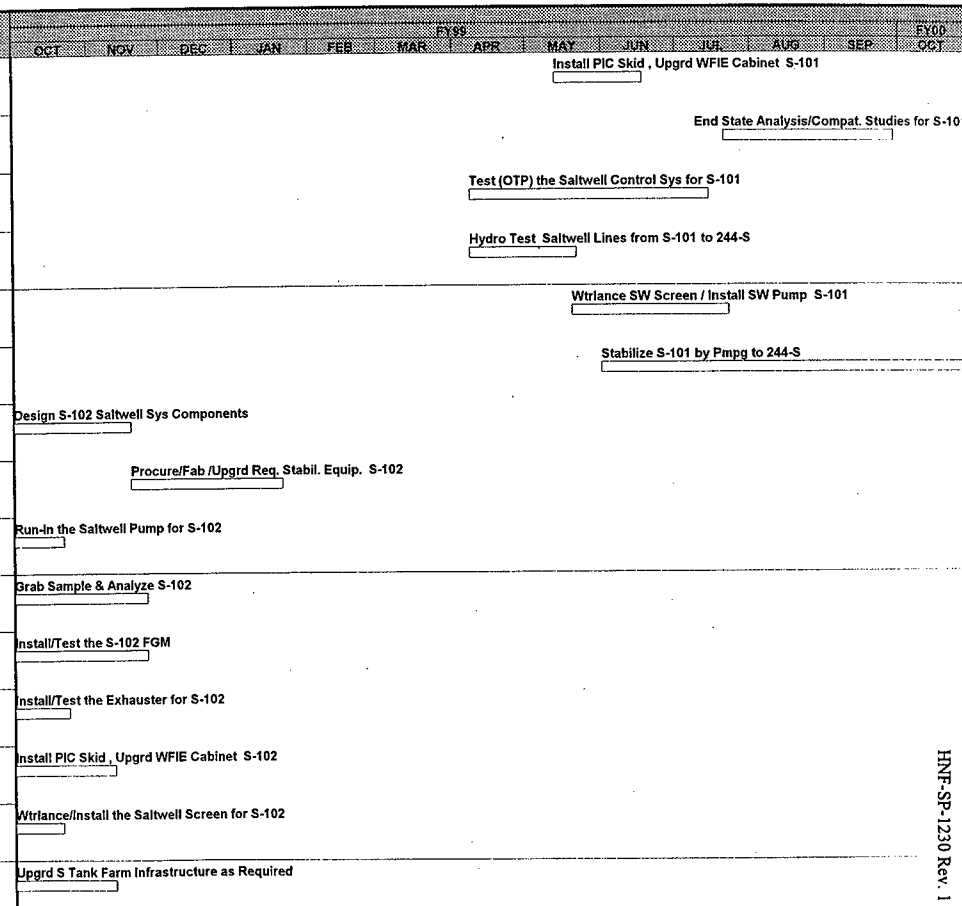
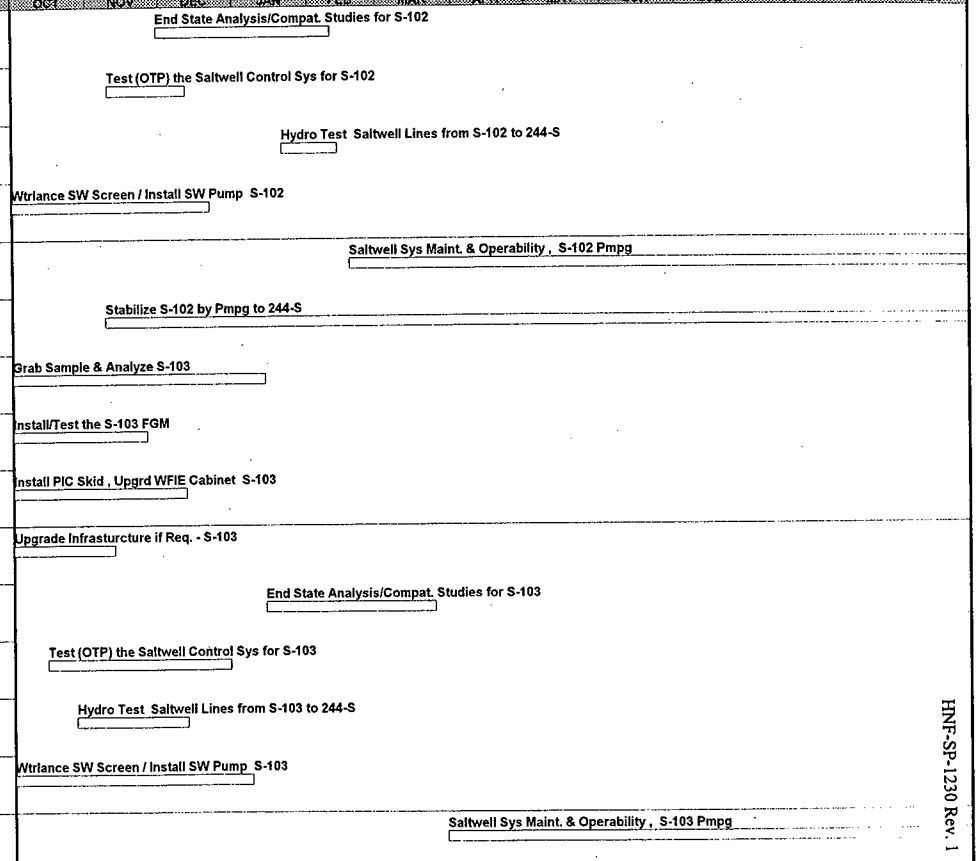
TW03-93

Activity ID	Early Start	Early Finish	FY99 OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	FY00 OCT
230.445	23MAR99*	03MAY99	Install PIC Skid or Upgrd WFIE Cabinet BY-106												
230.452	30MAR99*	10MAY99	Upgrd BY Tank Farm Infrastructure as Required												
230.454	01JUL99*	10SEP99	End State Analysis/Compat. Studies for BY-106												
230.456	21JUN99*	05AUG99	Test (OTP) the Saltwell Control Sys for BY-106												
230.460	08FEB99*	24MAR99	Hydro Test Saltwell Lines , BY-106 to 244-BX												
230.464	23MAR99*	12AUG99	Wtrlance SW Screen / Install SW Pump BY-106												
230.472	23JUN99*	06AUG01	Stabilize BY-106 by Pmpg to 244-BX												
230.655	01OCT98*	25AUG04	Cross Site Transfers												
230.A05	01APR99*	07APR99	Walkdown SST Farm and S-101 System												
230.A10	08APR99*	19MAY99	Design S-101 Saltwell Sys Components												
230.A15	08APR99*	19MAY99	Procure/Fab /Upgrd Req. Stabil. Equip. S-101												
230.A20	20MAY99*	10JUN99	Run-In the Saltwell Pump for S-101												
230.A25	16NOV98*	20JUL99	Grab Sample & Analyze S-101												
230.A30	13MAY99*	10JUN99	Install/Test the S-101 FGM												
230.A40	08APR99*	14MAY99	Install/Test the Exhauster for S-101												

Activity ID	Early Start	Early Finish
230.A45	13MAY99*	17JUN99
230.A54	21JUL99*	28SEP99
230.A56	08APR99*	14JUL99
230.A60	08APR99*	21MAY99
230.A64	20MAY99*	22JUL99
230.A72	01JUN99*	08DEC00
230.B10	01OCT98*	18NOV98
230.B15	19NOV98*	20JAN99
230.B20	01OCT98*	21OCT98
230.B25	01OCT98*	25NOV98
230.B30	01OCT98*	25NOV98
230.B40	01OCT98*	23OCT98
230.B45	01OCT98*	11NOV98
230.B50	01OCT98*	20OCT98
230.B52	01OCT98*	11NOV98

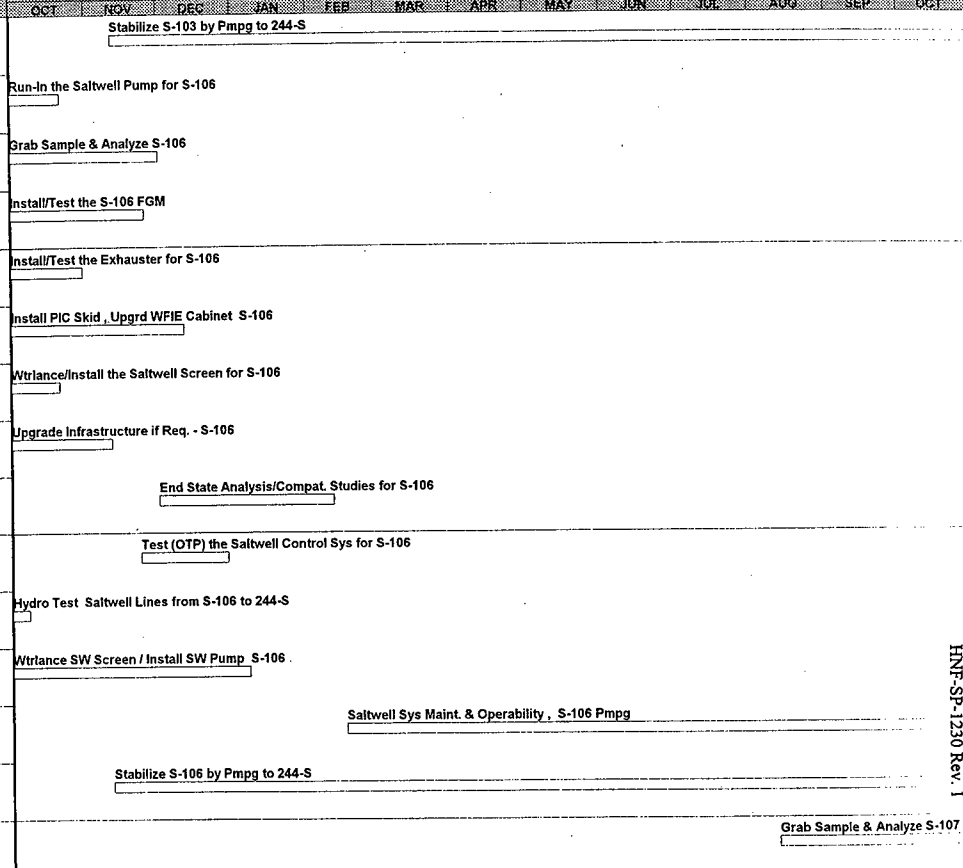


Activity ID	Early Start	Early Finish
230.B54	30NOV98*	09FEB99
230.B56	10NOV98*	11DEC98
230.B60	21JAN99*	12FEB99
230.B64	01OCT98*	21DEC98
230.B68	18FEB99*	03JAN01
230.B72	09NOV98*	03JAN01
230.C25	01OCT98*	13JAN99
230.C30	01OCT98*	25NOV98
230.C45	01OCT98*	11DEC98
230.C52	01OCT98*	11NOV98
230.C54	14JAN99*	24MAR99
230.C56	15OCT98*	29DEC98
230.C60	27OCT98*	11DEC98
230.C64	01OCT98*	07JAN99
230.C68	29MAR99*	21JAN00



TW03-96

Activity ID	Early Start	Early Finish	Activity
230.C72	12NOV98*	21JAN00	Stabilize S-103 by Pmpg to 244-S
230.D20	01OCT98*	21OCT98	Run-In the Saltwell Pump for S-106
230.D25	01OCT98*	01DEC98	Grab Sample & Analyze S-106
230.D30	01OCT98*	25NOV98	Install/Test the S-106 FGM
230.D40	01OCT98*	30OCT98	Install/Test the Exhauster for S-106
230.D45	01OCT98*	11DEC98	Install PIC Skid , Upgrd WFIE Cabinet S-106
230.D50	01OCT98*	20OCT98	Wtrlance/Install the Saltwell Screen for S-106
230.D52	01OCT98*	11NOV98	Upgrade Infrastructure if Req. - S-106
230.D54	02DEC98*	11FEB99	End State Analysis/Compat. Studies for S-106
230.D56	24NOV98*	29DEC98	Test (OTP) the Saltwell Control Sys for S-106
230.D60	01OCT98*	07OCT98	Hydro Test Saltwell Lines from S-106 to 244-S
230.D64	01OCT98*	07JAN99	Wtrlance SW Screen / Install SW Pump S-106
230.D68	17FEB99*	17NOV00	Saltwell Sys Maint. & Operability , S-106 Pmpg
230.D72	12NOV98*	20NOV00	Stabilize S-106 by Pmpg to 244-S
230.E25	13AUG99*	01MAY00	Grab Sample & Analyze S-107



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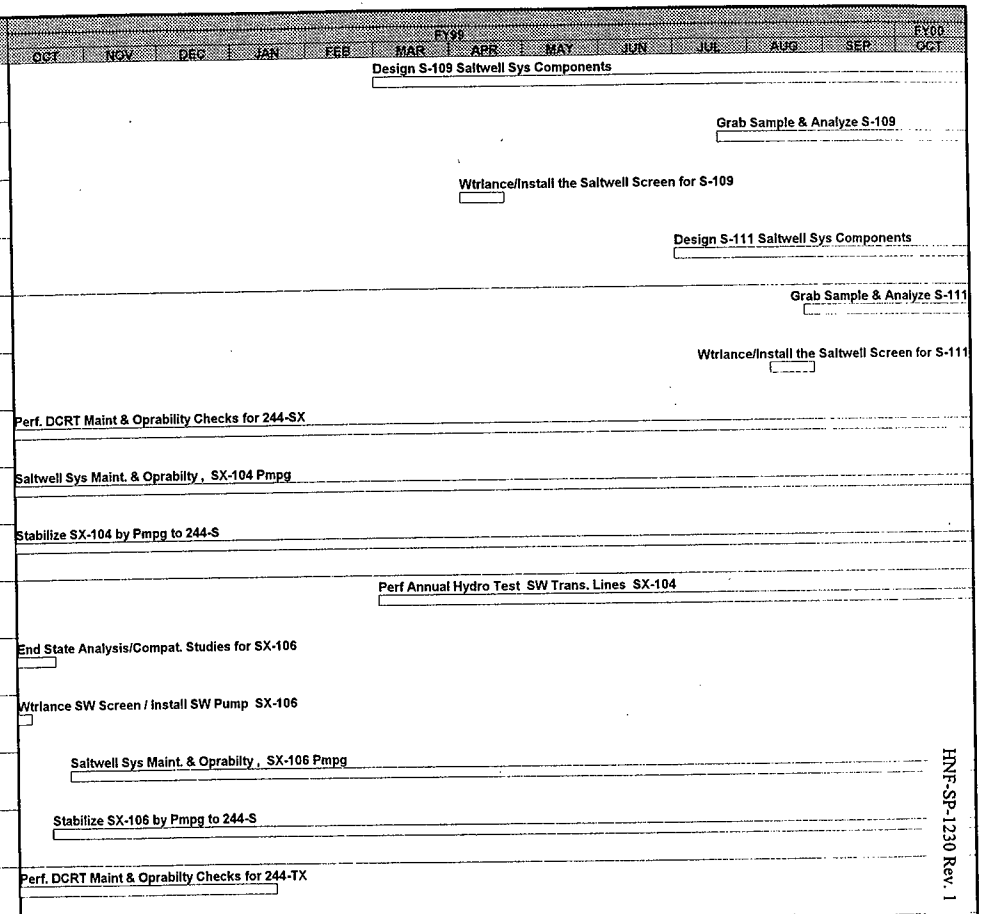
Activity ID	Early Start	Early Finish	Activity
230.F10	01MAR99*	21MAR00	Design S-109 Saltwell Sys Components
230.F25	19JUL99*	04APR00	Grab Sample & Analyze S-109
230.F50	05APR99*	22APR99	Wtrlance/Install the Saltwell Screen for S-109
230.G10	01JUL99*	18APR00	Design S-111 Saltwell Sys Components
230.G25	23AUG99*	07JUN00	Grab Sample & Analyze S-111
230.G50	09AUG99*	26AUG99	Wtrlance/Install the Saltwell Screen for S-111
230.M32	01OCT98*	29SEP00	Perf. DCRT Maint & Oprability Checks for 244-SX
230.M68	01OCT98*	15MAY00	Saltwell Sys Maint. & Oprabilty , SX-104 Pmpg
230.M72	01OCT98*	15MAY00	Stabilize SX-104 by Pmpg to 244-S
230.M74	01MAR99*	19AUG02	Perf Annual Hydro Test SW Trans. Lines SX-104
230.P54	01OCT98*	16OCT98	End State Analysis/Compat. Studies for SX-106
230.P64	01OCT98*	06OCT98	Wtrlance SW Screen / install SW Pump SX-106
230.P68	23OCT98*	31JUL00	Saltwell Sys Maint. & Oprabilty , SX-106 Pmpg
230.P72	15OCT98*	31JUL00	Stabilize SX-106 by Pmpg to 244-S
230.Q32	01OCT98*	15JAN99	Perf. DCRT Maint & Oprabilty Checks for 244-TX



Activity ID	Early Start	Early Finish	FY99 OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP FY00 OCT
230.Q68	01OCT98*	23DEC98	Saltwell Sys Maint. & Operability , T-104 Pmpg
230.Q72	01OCT98*	23DEC98	Stabilize T-104 by Pmpg to 244-TX
230.Q78	28DEC98*	06APR99	Perform Post Stabil. Activities on T-104
230.R68	01OCT98*	15JAN99	Saltwell Sys Maint. & Operability , T-110 Pmpg
230.R72	01OCT98*	15JAN99	Stabilize T-110 by Pmpg to 244-TX
230.R78	18JAN99*	26APR99	Perform Post Stabil. Activities on T-110
230._47	01OCT98*	07SEP04	DCRT for Remaining SST's
230._69	01OCT98*	30SEP04	Shift Pumping Operations Crews
1.01.03.01.01.10			Project W-314
250.100	03OCT96A	01NOV02	Project Management
250.100165		20AUG98A	
250.100170	02MAR98A		MS: M-43-12 Start Construction In 1st Tank Farm T03-99-055
250.130	01OCT96A	29JUN07	OPC Activities (Expense)
250.130204		15JAN99*	Milestone: P.A. 2.1.3 Complete Rebaseline (Ph 1) T03-99-213
250.130541		30SEP99*	Milestone: P.A. TWR-2.1.2 AN Const/Startup T03-99-212
250.200	13JAN97A	18SEP02	Master Pump Shut Down Upgrades

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Activity ID	Early Start	Early Finish
250.300	01OCT96A	15JUL98A
250.E00	01JUL98A	02AUG01
250.E00124		30SEP99*
250.N00	20JAN97A	03AUG00
250.Y00	01OCT97A	02MAY02
250.Z00	02JAN98A	31OCT01

FY99: OCT NOV DEC JAN FEB MAR APR MAY JUN JUL AUG SEP; FY00: OCT

200E Waste Trans System Upgrades

MS: P.A. TWR 2.1.1 WTS Partial Design & Proc.

T03-99-211

AN Valve Pit Upgrades

AY Valve Pit Upgrades

AZ Valve Pit Upgrades

B.3.3.3 Milestone List

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/TPA Date
T03-99-055	Start Construction for Upgrades in the 1st Tank Farm	HQ-I	M-43-12	2-Mar-98A	30-Jun-99
T03-99-102	Concurrence of Additional Tank Acquisition	HQ-I	M-46-01E	30-Nov-98	30-Nov-98
T03-99-213	TWR 2.1.3 Complete Rebaselining of all Phase 1 Activities	RL	-	15-Jan-99	-
T03-99-512	TWR 5.1.2 Complete TWRS Implementation of DNFSB 95-2 (ISMS Phase II)	RL	-	14-Jul-99	-
T03-99-631	TWR 6.3.1 Perform Ultrasonic Examination of 4 DSTs	RL	-	30-Jul-99	-
T03-99-320	Complete and Submit Integrity Assessment Report and Identified Upgrades for 244-AR Vault Interim Status Tank System	RL (Target)	M-32-06-T01	29-Sep-99	TBD
T03-99-706	TWR 6.4.1, Initiate Interim Stabilization of SSTs, Number TBD by RL	RL	-	30-Sep-99	-
T03-99-212	TWR 2.1.2, W-314 Complete Construction and Startup for AN Valve Pit Upgrades	RL	-	30-Sep-99	-
T03-99-511	TWR 5.1.1 Complete HLW Storage S/RIDs Phase II Assessment	RL	-	30-Sep-99	-
T03-99-103	Double-Shell Tank Space Evaluation	HQ-I	M-46-00F	30-Sep-99	30-Sep-99
T03-99-400	Complete Accelerated Walk-Downs and Field Verify Essential Drawings (SI 4C)	HQ	-	30-Sep-99	
T03-99-211	TWR 2.1.1 Complete Definitive Design on Project W-314 (Revised) 200 East Construction Package	RL	-	30-Sep-99	-
T03-99-632	TWR 6.3.4 Complete Integrity Assessments of 28 DSTs	RL	-	30-Sep-99	-
T03-99-635	TWR 6.3.5 Perform Drawing and Labeling Upgrades	RL	-	30-Sep-99	-
T03-99-637	TWR 6.3.7 Install 8 ENRAFs in S/SX Farms and 8 ENRAFs in AP Farm	RL	-	30-Sep-99	-
T03-00-104	Concurrence of Additional Tank Acquisition	HQ-I	M-46-01F	30-Nov-99	30-Nov-99
T03-00-056	Start Construction for Upgrades in the 2nd Tank Farm	HQ-I	M-43-13	30-Jun-00	30-Jun-00
T03-00-105	Double-Shell Tank Space Evaluation	HQ-I	M-46-00G	29-Sep-00	30-Sep-00

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/TPA Date
T03-01-057	Start Construction for Upgrades in the 3rd Tank Farm	HQ-I	M-43-14	30-Mar-01	31-Mar-01
T03-01-104	Concurrence of Additional Tank Acquisition	HQ-I	M-46-01G	30-Nov-00	30-Nov-00
T03-01-100	Double-Shell Tank Space Evaluation	HQ-I	M-46-00H	28-Sep-01	30-Sep-01
T03-02-104	Concurrence of Additional Tank Acquisition	HQ-I	M-46-01H	30-Nov-01	30-Nov-01
T03-02-058	Start Construction for Upgrades in the 4th Tank Farm	HQ-I	M-43-15	29-Mar-02	31-Mar-02
T03-02-100	Double-Shell Tank Space Evaluation	HQ-I	M-46-00I	30-Sep-02	30-Sep-02
T03-03-104	Concurrence of Additional Tank Acquisition	HQ-I	M-46-01I	27-Nov-02	30-Nov-02
T03-03-059	Start Construction for Upgrades in the 5th Tank Farm	HQ-I	M-43-16	30-Jun-03	30-Jun-03
T03-03-100	Double-Shell Tank Space Evaluation	HQ-I	M-46-00J	30-Sep-03	30-Sep-03
T03-04-104	Concurrence of Additional Tank Acquisition	HQ-I	M-46-01J	01-Dec-03	30-Nov-03
T03-05-051	Complete Tank Farm Upgrades	HQ-I	M-43-00	30-Jun-05	30-Jun-05
T03-08-206	Complete 244-AR Vault Interim Status Tank Actions.	HQ-I	M-32-06	30-Sep-08	TBD
T03-08-208	Complete Grout Interim Status Tank Actions.	HQ-I	M-32-08	30-Sep-08	TBD
T03-08-209	Complete and Submit Integrity Assessment Report for Grout Interim Status Tank System.	RL (Target)	M-32-08-T01	30-Sep-08	TBD

MS #	Title	Level	DNFSB/ TPA #	99 MYWP Date	DNFSB/TPA Date
	M-41 Milestones				
T03-97-150	Start Interim Stabilization of 6 SSTs	HQ-I	M-41-22	TBD [1]	30-Sep-97
T03-98-151	Start Interim Stabilization OF 8 SSTs	HQ-I	M-41-23	TBD [1]	31-Mar-98
T03-98-152	Start Interim Stabilization of 9 SSTs	HQ-I	M-41-24	TBD [1]	30-Sep-98
T03-99-191	Start Interim Stabilization of 3 SSTs	HQ-I	M-41-25	TBD [1]	31-Mar-99
T03-99-192	Start Interim Stabilization of 2 SSTs	HQ-I	M-41-26	TBD [1]	30-Sep-99
T03-00-196	Complete Salt Well Pumping of SSTs	HQ-I	M-41-27	TBD [1]	30-Sep-00
T03-98-154	Complete Salt Well Pumping of 5 SSTs	RL (Target)	M-41-27-T03	TBD [1]	30-Sep-98
T03-99-194	Complete Salt Well Pumping of 8 SSTs	RL (Target)	M-41-27-T04	TBD [1]	30-Sep-99
T03-00-195	Complete Salt Well Pumping of 16 SSTs	RL (Target)	M-41-27-T05	TBD [1]	30-Sep-00
T03-00-193	Complete SST Interim Stabilization	HQ-I	M-41-00	TBD [1]	30-Sep-00

[1] The M-41 milestones are being renegotiated and the current enforceable dates are not supported in the FY99 MYWP schedule

B.3.3.4 Milestone Description Sheets

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Start Construction for Upgrades in the 1st Tank Farm

Schedule Date: Completed 3/2/98 (A)
TPA Date: 6/30/1999

Assigned to: Tank Farm Operations

TPA No.: M-43-12

WBS Number: 1.01.03

Milestone Control Number: T03-99-055

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[X] Other (Specify)
		WDOE/WDOH

Description of this Commitment:

Initiate construction-related activity in the first tank farm to be upgraded by Project W-314, Tank Restoration and Safe Operations.

Description of what constitutes completion of the commitment:

RL issue letter to Washington State Department of Ecology/Department of Health indicating the commencement of construction of work in the first tank farm to be upgraded by Project W-314.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Concurrence of Additional Tank Acquisition (M-46-01E) Schedule / TPA Date: 11/30/98

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-99-102 TPA No.: M-46-01E

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Issue a letter that includes plans of additional tank acquisition to support TPA milestone M-46-01. The content of the letter will be based on the waste tank volume projections.

Note: This is an annual TPA milestone, which is due November 30 of each fiscal year.

Description of what constitutes completion of the commitment:

Issue an approved letter to DOE-RL, including a basis for the conclusion of tank acquisition., with subsequent transmittal to the Washington State Department of Ecology.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: W-314 Complete Rebaselining of all Phase 1 Activities Due Date: 1/15/99
TWR 2.1.3)

Assigned to: W-314 / J. L. Homan

WBS Number: 1.01.03.01.01.10

Milestone Control Number: T03-99-213

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment: Complete rebaselining of all Project W-314 Phase 1 activities.

Description of what constitutes completion of the commitment: This milestone is considered complete when FDH transmits the contractor (FDH) approved Rebaseline Report for Phase 1 activities to DOE-RL. The Rebaseline Report will include, at a minimum, revisions of the technical scope, work breakdown structure, BA/BO profile, cost estimate summary, and project summary schedule by January 15, 1999.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete TWRS implementation of DNFSB 95-2 and submit a letter report on declaration of implementation readiness for RL Phase II Verification of TWRS Integrated Safety Management System by July 14, 1999. (TWR 5.1.2)

Schedule Date: 7/14/99

Assigned to: Tank Farm Operations (RL-TW03)

WBS Number: 1.01.03

Milestone Control Number: T03-99-512

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete TWRS implementation of DNFSB 95-2 and submit a letter report on declaration of implementation readiness for RL Phase II Verification of the TWRS Integrated Safety Management System by July 14, 1999.

Description of what constitutes completion of the commitment:

1) The Contractor shall complete the following requirements as demonstration of TWRS Integrated Safety Management System implementation:

- Incorporate lessons learned resulting from the TWRS ISMS Phase I Verification, and PHMC ISMS Phase I and Phase II verification reviews.
- Submit the Phase I corrective action plan within 45 days of the RL Phase I Verification Report approval.

Actions resulting from the Phase I Verification Report and the Contractor Phase I gap analysis and corrective action plan will form the basis for the Phase II implementation.

2) The Contractor shall submit a letter report on declaration of implementation readiness for RL Phase II Verification by July 14, 1999. The letter report must meet RL preliminary acceptance review criteria (to be provided by RL by February 1, 1999).

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Perform ultrasonic examination on four double-shell tanks and submit report of observations by July 31, 1999. (TWR 6.3.1)

Schedule Date: 7/30/99

Assigned to: Tank Farm Operations (RL-TW03)

WBS Number: 1.01.03

Milestone Control Number: T03-99-631

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Perform ultrasonic examination on four double-shell tanks and submit report of observations by July 31, 1999.

Description of what constitutes completion of the commitment:

The Contractor shall perform ultrasonic examination of four double-shell tanks (primary walls straight portion) to the extent described in HNF-2820, "Engineering Task Plan for the Ultrasonic Inspection of Hanford Double-Shell Tanks". Completion is met when ultrasonic examination on four double-shell tanks is performed, a report of examination observations is reviewed and approved by FDH, and the report is submitted to RL by July 31, 1999. The report shall include the extent of the examination, discussion of observations, findings, and conclusions.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete and Submit Integrity Assessment Report & Identified Upgrades for 244-AR Vault Interim Status Tank System. Provide Schedule to Address Deficiencies Described In the Report Related to Tank System Compliance (M-32-06-T01)

Schedule Date: 9/29/99
TPA Date: TBD

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-99-320

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete interim status actions prior to restart date for 244-AR Vault.

Description of what constitutes completion of the commitment:

Complete and submit Integrity Assessment report and identified upgrades for 244-AR Vault interim status tank system (except that DST transfer lines that penetrate the 244-AR Vault will continue to be used). Provide a schedule to address any deficiencies described in the report related to tank system compliance.

LMHC will submit a TPA change request to eliminate this milestone and transfer 244-AR from DST Interim Status to SST Interim Status and Closure.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Initiate Interim Stabilization of SSTs, the number of tanks TBD by RL (TWR 6.4.1)

Schedule Date: 9/30/99

Assigned to: Tank Farm Operations (RL-TW03)

WBS Number: 1.01.03

Milestone Control Number: T03-99-706

TPA No.:

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Initiate Interim Stabilization of SSTs, the number of tanks TBD by RL by September 30, 1999.

Description of what constitutes completion of the commitment:

The Contractor shall initiate interim stabilization pumping of TBD single-shell tanks. Initiation of interim stabilization for each tank will be accomplished when actual pump operation has commenced and the pump operates at least 60% of the time over a 72 hour consecutive period, transferring a total of not less than 500 gallons of pumpable liquid tank waste.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: W-314 Complete Construction & Start-up for AN Valve Pit Upgrades (TWR 2.1.2)

Due Date: 9/30/99

Assigned to: W-314 / J. L. Homan

WBS Number: 1.01.03.01.01.10

Milestone Control Number: T03-99-212

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)
	FDH Approved ABU	

Description of this Commitment:

Complete construction and start-up activities of Project W-314 AN Valve Pit Upgrades Construction Package.

Description of what constitutes completion of the commitment:

This milestone is considered complete when FDH approves the Acceptance for Beneficial Use (ABU) for the Project W-314 AN Valve Pit Upgrades Construction package and transmits a copy by letter to RL. The Project W-314 AN Valve Pit Upgrades Construction Package is defined in the AN portion of the *Upgrades Scope Summary Report* HNF-SD-W314-RPT-003, Rev. 2, July 21, 1998. Note - The date for completion of this milestone is subject to change based upon on-going project rebaselining efforts and finalization of the privatization schedule.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete FY 1999 High-Level Waste (HLW) storage Tank Farms Standards/Requirements Identification Document (S/RID) Program Implementation Plan Phase II Assessment deliverables by September 30, 1999. (TWR 5.1.1)

Schedule Date: 9/30/99

Assigned to: Tank Farm Operations (RL-TW03)

WBS Number: 1.01.03

Milestone Control Number: T03-99-511

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete FY 1999 High-Level Waste (HLW) storage Tank Farms Standards/Requirements Identification Document (S/RID) Program Implementation Plan Phase II Assessment deliverables by September 30, 1999.

- 25 percent of the incentive fee for this Performance Agreement may be earned by the Contractor for submitting a PHMC-approved TWRS S/RID Program Implementation Plan, including a plan and schedule for the performance of Phase I and II assessments, by December 15, 1998.

- 75 percent of the incentive fee for this Performance Agreement may be earned by the Contractor for completing the *High-Level Waste (HLW) Storage Tank Farms Standards/Requirements Identification Document (S/RID)* Program Implementation Plan Phase II Assessment FY 1999 deliverables and submitting a letter report documenting completion by September 30, 1999.

Description of what constitutes completion of the commitment:

The Contractor shall complete the following requirements:

1) Develop and submit to RL for approval, a multi-year TWRS S/RIDS Program Implementation Plan by December 15, 1998, that includes the following elements:

- Description of "as-is" and "should be" condition of the TWRS S/RID Program

Milestone Control Number: T03-99-511 (continued)

Title: Complete FY 1999 High-Level Waste (HLW) storage Tank Farms Standards/Requirements Identification Document (S/RID) Program Implementation Plan Phase II Assessment deliverables by September 30, 1999. (TWR 5.1.1)

- Definition of program infrastructure needs (e.g., required procedures, computer-based hardware and software system requirements, training, etc.)
- Definition of criteria for selection of facilities and requirements to be subjected to Phase II verification assessment
- Identification of facilities and requirement to be subjected to Phase II assessment in FY 1999 and FY 2000
- A resource-loaded schedule for the completion of a Phase I re-validation effort in FY 1999
- A resource-loaded schedule for the performance of Phase II assessments to be performed in FY 1999 and FY 2000
- A resource-loaded schedule for the implementation of infrastructure improvements for FY 1999 and FY 2000
- A comparison of the cost of the Program Implementation Plan to the existing approved FY 1999 budget plan

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Double-Shell Tank Space Evaluation

Schedule / TPA Date: 9/30/99

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-99-103

TPA No.: M-46-00F

(9) Milestone Type	(10) Deliverables	(11) Addressed to
[X] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Prepare annual Operational Waste Volume Projection (OWVP), as required TPA milestone M-46-00.

Note: This is an annual milestone, due September 30 of each fiscal year.

Description of what constitutes completion of the commitment:

The project identifies future tank volume additions and reductions and evaluates the impact relative to tank capacity. Release of the annual OWVP Supporting Document meeting DST Operations approval.

The report must be formally submitted by the performing contractor and received by the appropriate RL TWRS project manager by August 31 of each fiscal year. Prior to formal submittal of the report, all appropriate contractor reviews shall have occurred and comments incorporated. Format and scope of the report shall be similar to past OWVP reports and shall include a summary recommendations regarding the construction of any new double-shell storage tanks and any appropriate measures to take in the efficient management of DST waste volumes.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Accelerated Walk-Downs and Field Verify Essential Drawings (SI 4c)

Schedule Date: 9/30/99
SI Date: 9/30/97

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-99-400

SI #: 4c

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[X] DOE-HQ
[X] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Field verify essential/support drawings as identified in Tank Farm Essential Drawing Plan WHC-SD-WM-PC-002, produce single system Operations and Maintenance drawings, assign unique Equipment Identification Numbers, develop and implement a Master Equipment List, and label equipment/components, completing these activities by TBD.

Description of what constitutes completion of the commitment:

A letter will be issued to DOE-HQ identifying the Computer-Aided Design and Drafting Drawings that were issued, and detailing the corresponding work including labels specified and Master Equipment List entries made. This letter will describe how the completion of the program was verified. All active Tank Farm equipment is labeled in the Master Equipment List and found on system-based process instrumentation drawings (H-14s),

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Definitive Design on the Project W-314 (Revised) 200 East Construction Package. (PA TWR 2.1.1)

Schedule Due Date: 09/30/99

Assigned to: W-314 / J. L. Homan

WBS Number: 1.01.03.01.01.10

Milestone Control Number: T03-99-211

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

By September 30, 1999 the following actions will be performed:

1) Issue the definitive design for the new AN portion of the (revised) 200 East Waste Transfer System pipelines (i.e., WT-SLL-3160 and WT-SNL-3150, 3 inches SN-636, and 3 inches SN-630 from the AN tanks to the interface point with the fixed-price Contractor at the AN farm fence line as defined in HNF-SD-W314-RPT-003, Rev. 3, *Upgrades Scope Summary Report*). This shall include jumper manifolds in AN-101-01A and termination of WT-SLL-3160 at AN-104.

2) Issue the procurement specifications for the design and procurement of the pipe for the (revised) 200 East Waste Transfer System (i.e., WT-SLL-3160, WT-SNL-3150, SN-634, SN-636, SN-637, SN-633, SN-632, and SN-630 as defined in HNF-SD-W314-RPT-003, Rev. 3, *Upgrade Scope Summary Report*).

Description of what constitutes completion of the commitment:

Completion will be met when the contractor (FDH) submits a letter to DOE-RL with the approved deliverables, described above, by September 30, 1999. Note – The date for completion of the Performance Expectation is subject to change based upon on-going project rebaselining efforts.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete integrity assessments of 28 double-shell tanks (TWR 6.3.4)

Schedule Date: 9/30/99

Assigned to: Tank Farm Operations (RL-TW03)

WBS Number: 1.01.03

Milestone Control Number: T03-99-632

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete integrity assessments of 28 double-shell tanks by September 30, 1999.

Description of what constitutes completion of the commitment:

The Contractor shall complete integrity assessments of 28 double-shell tanks and submit a report to RL, in accordance with WAC 173-303-640(2) by September 30, 1999. The report shall be certified by an independent, qualified, registered, professional engineer.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Perform drawing and labeling upgrades (TWR 6.3.5) Schedule Date: 9/30/99

Assigned to: Tank Farm Operations (RL-TW03)

WBS Number: 1.01.03

Milestone Control Number: T03-99-635

Performance Agreement TWR6.3.5

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[] Letter	[] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[X] Other (Specify)

Description of this Commitment:

Perform drawing and labeling upgrades as specified below by September 30, 1999.

Description of what constitutes completion of the commitment:

- Perform electrical circuit verifications and release associated current configuration electrical distribution system (EDS) drawings (estimated at 29 sheets) for AY and AZ tank farms.
- Reduce essential drawing Engineering Change Notices backlog to within 30 calendar days for tank farm systems by September 30, 1999.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Install 8 ENRAFs in S/SX Tank Farms and 8 ENRAFs in AP Tank Farms and complete associated connections to Tank Monitoring and Control System (TMACS) (TWR 6.3.7)

Schedule Date: 9/30/99

Assigned to: Tank Farm Operations (RL-TW03)

WBS Number: 1.01.03

Milestone Control Number: T03-99-637

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Install 8 ENRAFs in S/SX Tank Farms and 8 ENRAFs in AP Tank Farms and complete connections to Tank Monitoring and Control System (TMACS) by September 30, 1999.

Description of what constitutes completion of the commitment:

Complete associated TMACS work scope activities, and submit a letter to RL documenting that ENRAFs are connected to TMACS and are operational.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Concurrence of Additional Tank Acquisition (M-46-01F) Schedule / TPA Date: 11/30/99

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-00-104 TPA No.: M-46-01F

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Issue a letter that includes plans of additional tank acquisition to support TPA milestone M-46-01. The content of the letter will be based on the waste tank volume projections.

Note: This is an annual TPA milestone, which is due November 30 of each fiscal year.

Description of what constitutes completion of the commitment:

Issue an approved letter to DOE-RL, including a basis for the conclusion of tank acquisition., with subsequent transmittal to the Washington State Department of Ecology.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Start Construction for Upgrades in the 2nd Tank Farm

Schedule / TPA Date: 6/30/00

Assigned to: Tank Farm Operations

TPA No.: M-43-13

WBS Number: 1.01.03

Milestone Control Number: T03-00-056

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[X] Other (Specify)
		WDOE/WDOH

Description of this Commitment:

Initiate construction-related activity in the second tank farm to be upgraded by Project W-314, Tank Restoration and Safe Operations.

Description of what constitutes completion of the commitment:

RL issue letter to Washington State Department of Ecology/Department of Health indicating the commencement of construction of work in the second tank farm to be upgraded by Project W-314.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Double-Shell Tank Space Evaluation

Schedule Date: 9/29/00
TPA Date: 9/30/00

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-00-105

TPA No.: M-46-00G

Milestone Type	Deliverables	Addressed to
[X] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Prepare annual Operational Waste Volume Projection (OWVP), as required TPA milestone M-46-00.

Note: This is an annual milestone, due September 30 of each fiscal year.

Description of what constitutes completion of the commitment:

The project identifies future tank volume additions and reductions and evaluates the impact relative to tank capacity. Release of the annual OWVP Supporting Document meeting DST Operations approval.

The report must be formally submitted by the performing contractor and received by the appropriate RL TWRS project manager by August 31 of each fiscal year. Prior to formal submittal of the report, all appropriate contractor reviews shall have occurred and comments incorporated. Format and scope of the report shall be similar to past OWVP reports and shall include a summary recommendations regarding the construction of any new double-shell storage tanks and any appropriate measures to take in the efficient management of DST waste volumes.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Start Construction for Upgrades in the 3rd Tank Farm

Schedule Date: 3/30/01
TPA Date: 3/31/01

Assigned to: Tank Farm Operations

TPA No.: M-43-14

WBS Number: 1.01.03

Milestone Control Number: T03-01-057

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[X] Other (Specify)
		WDOE/WDOH

Description of this Commitment:

Initiate construction-related activity in the third tank farm to be upgraded by Project W-314, Tank Restoration and Safe Operations.

Description of what constitutes completion of the commitment:

RL issue letter to Washington State Department of Ecology/Department of Health indicating the commencement of construction of work in the third tank farm to be upgraded by Project W-314.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Concurrence of Additional Tank Acquisition

Schedule / TPA Date: 11/30/00

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-01-104

TPA No.: M-46-01G

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Issue a letter that includes plans of additional tank acquisition to support TPA milestone M-46-01. The content of the letter will be based on the waste tank volume projections.

Note: This is an annual TPA milestone, which is due November 30 of each fiscal year.

Description of what constitutes completion of the commitment:

Issue an approved letter to DOE-RL, including a basis for the conclusion of tank acquisition., with subsequent transmittal to the Washington State Department of Ecology.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Double-Shell Space Tank Evaluation

Schedule Date: 9/28/01
TPA Date: 9/30/01

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-01-100

TPA No.: M-46-00H

Milestone Type	Deliverables	Addressed to
[X] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Prepare annual Operational Waste Volume Projection (OWVP), as required TPA milestone M-46-00.

Note: This is an annual milestone, due September 30 of each fiscal year.

Description of what constitutes completion of the commitment:

The project identifies future tank volume additions and reductions and evaluates the impact relative to tank capacity. Release of the annual OWVP Supporting Document meeting DST Operations approval.

The report must be formally submitted by the performing contractor and received by the appropriate RL TWRS project manager by August 31 of each fiscal year. Prior to formal submittal of the report, all appropriate contractor reviews shall have occurred and comments incorporated. Format and scope of the report shall be similar to past OWVP reports and shall include a summary recommendations regarding the construction of any new double-shell storage tanks and any appropriate measures to take in the efficient management of DST waste volumes.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Concurrence of Additional Tank Acquisition

Schedule / TPA Date: 11/30/01

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-02-104

TPA No.: M-46-01H

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Issue a letter that includes plans of additional tank acquisition to support TPA milestone M-46-01. The content of the letter will be based on the waste tank volume projections.

Note: This is an annual TPA milestone, which is due November 30 of each fiscal year.

Description of what constitutes completion of the commitment:

Issue an approved letter to DOE-RL, including a basis for the conclusion of tank acquisition., with subsequent transmittal to the Washington State Department of Ecology.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Schedule Date: 3/29/02
TPA Date: 3/31/02

Title: Start Construction for Upgrades in the 4th Tank Farms

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-02-058

TPA No.: M-43-15

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[X] Other (Specify)
		WDOE/WDOH

Description of this Commitment:

Initiate construction-related activity in the fourth tank farm to be upgraded by Project W-314, ATank Restoration and Safe Operations.

Description of what constitutes completion of the commitment:

RL issue letter to Washington State Department of Ecology/Department of Health indicating the commencement of construction of work in the fourth tank farm to be upgraded by Project W-314.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Double-Shell Tank Space Evaluation

Schedule / TPA Date: 9/30/02

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-02-100

TPA No.: M-46-00I

Milestone Type	Deliverables	Addressed to
[X] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Prepare annual Operational Waste Volume Projection (OWVP), as required TPA milestone M-46-00.

Note: This is an annual milestone, due September 30 of each fiscal year.

Description of what constitutes completion of the commitment:

The project identifies future tank volume additions and reductions and evaluates the impact relative to tank capacity. Release of the annual OWVP Supporting Document meeting DST Operations approval.

The report must be formally submitted by the performing contractor and received by the appropriate RL TWRS project manager by August 31 of each fiscal year. Prior to formal submittal of the report, all appropriate contractor reviews shall have occurred and comments incorporated. Format and scope of the report shall be similar to past OWVP reports and shall include a summary recommendations regarding the construction of any new double-shell storage tanks and any appropriate measures to take in the efficient management of DST waste volumes.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Concurrence of Additional Tank Acquisition (M-46-01I)

Schedule Date: 11/27/02
TPA Date: 11/30/02

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-03-104

TPA No.: M-46-01I

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Issue a letter that includes plans of additional tank acquisition to support TPA milestone M-46-01. The content of the letter will be based on the waste tank volume projections.

Note: This is an annual TPA milestone, which is due November 30 of each fiscal year.

Description of what constitutes completion of the commitment:

Issue an approved letter to DOE-RL, including a basis for the conclusion of tank acquisition., with subsequent transmittal to the Washington State Department of Ecology.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Start Construction for Upgrades in the 5th Tank Farm

Schedule / TPA Date: 6/30/2003

Assigned to: Tank Farm Operations

TPA No.: M-43-16

WBS Number: 1.01.03

Milestone Control Number: T03-03-059

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[ ] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[X] Other (Specify)
		WDOE/WDOH

Description of this Commitment:

Initiate construction-related activity in the fifth tank farm to be upgraded by Project W-314, ATank Restoration and Safe Operations.

Description of what constitutes completion of the commitment:

RL issue letter to Washington State Department of Ecology/Department of Health indicating the commencement of construction of work in the fifth tank farm to be upgraded by Project W-314.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Double-Shell Tank Space Evaluation

Schedule / TPA Date: 9/30/03

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-03-100

TPA No.: M-46-00J

Milestone Type	Deliverables	Addressed to
[X] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Prepare annual Operational Waste Volume Projection (OWVP), as required TPA milestone M-46-00.

Note: This is an annual milestone, due September 30 of each fiscal year.

Description of what constitutes completion of the commitment:

The project identifies future tank volume additions and reductions and evaluates the impact relative to tank capacity. Release of the annual OWVP Supporting Document meeting DST Operations approval.

The report must be formally submitted by the performing contractor and received by the appropriate RL TWRS project manager by August 31 of each fiscal year. Prior to formal submittal of the report, all appropriate contractor reviews shall have occurred and comments incorporated. Format and scope of the report shall be similar to past OWVP reports and shall include a summary recommendations regarding the construction of any new double-shell storage tanks and any appropriate measures to take in the efficient management of DST waste volumes.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Concurrence of Additional Tank Acquisition (M-46-01J)

Schedule Date: 12/1/03
TPA Date: 11/30/03

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-04-104

TPA No.: M-46-01J

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Issue a letter that includes plans of additional tank acquisition to support TPA milestone M-46-01. The content of the letter will be based on the waste tank volume projections.

Note: This is an annual TPA milestone, which is due November 30 of each fiscal year.

Description of what constitutes completion of the commitment:

Issue an approved letter to DOE-RL, including a basis for the conclusion of tank acquisition., with subsequent transmittal to the Washington State Department of Ecology.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Tank Farm Upgrades

Schedule / TPA Date: 6/30/05

Assigned to: Tank Farm Operations

TPA No.: M-43-00

WBS Number: 1.01.03

Milestone Control Number: T03-05-051

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

All W-314 tank farm systems upgrades complete and operational.

Description of what constitutes completion of the commitment:

Administrative turnover of all completed Project W-314 upgrades to TWRS Operations. Final closure of Project W-314 indicated by approval of the Construction Completion and Cost Closeout Statement (4Cs).

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete 244-AR Vault Interim Status Tank Actions

Schedule Date: 9/30/08
TPA Date: TBD

Assigned to: Tank Farm Operations

TPA No.: M-32-06

WBS Number: 1.01.03

Milestone Control Number: T03-08-206

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete interim status actions prior to restart date for 244-AR Vault.

Description of what constitutes completion of the commitment:

Resolve issues with the 244-AR Vault interim status tank actions.

LMHC will submit a TPA change request to eliminate this milestone and transfer 244-AR from DST Interim Status to SST Interim Status and Closure.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Grout Interim Status Tank Actions

Schedule Date: 9/30/2008
TPA Date: TBD

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-08-208

TPA No.: M-32-08

Milestone Type	Deliverables	Addressed to
[X] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete program planning prior to processing DST waste.

Description of what constitutes completion of the commitment:

Completion of all agreed upon interim status tank actions per agreement with DOE-RL and LMHC.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete and submit integrity assessment report for Grout Interim Status tank system. Complete activities required to correct any deficiencies described in the report related to tank system compliance.

Schedule Date: 9/30/08
TPA Date: TBD

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-08-209

TPA No.: M-32-08-T01

Milestone Type	Deliverables	Addressed to
[ ] TPA	[X] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete program planning prior to processing DST waste.

Description of what constitutes completion of the commitment:

Completion of integrity assessment report for Grout interim status tank system. Complete all activities required to correct any deficiencies described in the report related to tank system compliance.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Interim Stabilization of 6 Single-Shell Tank

TPA Date: 9/30/97 *
* Being renegotiated

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-97-150

TPA No.: M-41-22

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Response to TPA milestone

Description of this Commitment:

Start stabilization pumping of six single-shell tanks by TBD.

Description of what constitutes completion of the commitment:

When saltwell pump and flammable gas monitors are operational, notify RL that the milestone has been met.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Start Interim Stabilization of 8 Single-Shell Tanks

TPA Date: 3/31/98 *
* Being renegotiated

Assigned to: Tank Farm Operations

WBS Number: 1.01.03

Milestone Control Number: T03-98-151

TPA No.: M-41-23

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Response to TPA Milestone

Description of this Commitment:

Start stabilization pumping of eight single-shell tanks by 3/31/98.

Description of what constitutes completion of the commitment:

When saltwell pump and flammable gas monitors are operational, notify RL that the milestone has been met.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Start Interim Stabilization of 9 Single-Shell Tanks

TPA Date: 9/30/98 *
* Being renegotiated

Assigned to: Tank Farm Operations

TPA No.: M-41-24

WBS Number: 1.01.03

Milestone Control Number: T03-98-152

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Response to TPA Milestone

Description of this Commitment:

Start stabilization pumping of nine single-shell tanks by 9/30/98.

Description of what constitutes completion of the commitment:

When saltwell pump and flammable gas monitors are operational, notify RL that the milestone has been met.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Start Interim Stabilization of 3 Single-Shell Tanks

TPA Date: 3/31/99 *
* Being renegotiated

Assigned to: Tank Farm Operations

TPA No.: M-41-25

WBS Number: 1.01.03

Milestone Control Number: T03-99-191

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Response to TPA Milestone

Description of this Commitment:

Start stabilization pumping of three single-shell tanks by TBD.

Description of what constitutes completion of the commitment:

When saltwell pump and flammable gas monitors are operational, notify RL that the milestone has been met.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Start Interim Stabilization of 2 Single-Shell Tanks

TPA Date: 9/30/99 *
* Being renegotiated

Assigned to: Tank Farm Operations

TPA No.: M-41-26

WBS Number: 1.01.03

Milestone Control Number: T03-99-192

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Response to TPA milestone

Description of this Commitment:

Start stabilization pumping of two single-shell tanks by TBD.

Description of what constitutes completion of the commitment:

When saltwell pump and flammable gas monitors are operational, notify RL that the milestone has been met.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Saltwell Pumping of Single-Shell Tanks

TPA Date: 9/30/00 *
* Being renegotiated

Assigned to: Tank Farm Operations

TPA No.: M-41-27

WBS Number: 1.01.03

Milestone Control Number: T03-00-196

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[ ] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[X] Other (Specify)	[ ] Other (Specify)

Response to TPA Milestone

Description of this Commitment:

All single-shell tanks saltwell pumping is complete.

Description of what constitutes completion of the commitment:

When all single-shell tanks meet stable endpoint criteria, notification to RL that the TPA milestone has been met.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Saltwell Pumping of 5 Single-Shell Tanks

TPA Date: 9/30/98 *
* Being renegotiated

Assigned to: Tank Farm Operations

TPA No.: M-41-27-T03

WBS Number: 1.01.03

Milestone Control Number: T03-98-154

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Conduct Saltwell pumping activities on a schedule to complete pumping of five single-shell tanks.

Description of what constitutes completion of the commitment:

Reduction by pumping of remaining liquid in each tank to or below the specified stabilization criteria. Interim Stabilization occurs when the pumping rate drops to 0.05 gallons per minute and the remaining liquid does not contain greater than 50,000 gallons of interstitial liquid or 5,000 gallons of supernate. Definition is provided in the Tri-Party Agreement. Commitment is to complete this pumping in five single-shell tanks by TBD.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Saltwell Pumping of 8 Single-Shell Tanks

TPA Date: 9/30/99 *
* Being renegotiated

Assigned to: Tank Farm Operations

TPA No.: M-41-27-T04

WBS Number: 1.01.03

Milestone Control Number: T03-99-194

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Conduct Saltwell pumping activities on a schedule to complete pumping of eight single-shell tanks.

Description of what constitutes completion of the commitment:

Reduction by pumping of remaining liquid in each tank to or below the specified stabilization criteria. Interim Stabilization occurs when the pumping rate drops to 0.05 gallons per minute and the remaining liquid does not contain greater than 50,000 gallons of interstitial liquid or 5,000 gallons of supernate. Definition is provided in the Tri-Party Agreement. Commitment is to complete this pumping in eight single-shell tanks by TBD.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Saltwell Pumping of 16 Single-Shell Tanks

TPA Date: 9/30/2000 *
* Being Renegotiated

Assigned to: Tank Farm Operations

TPA No.: M-41-27-T05

WBS Number: 1.01.03

Milestone Control Number: T03-00-195

Milestone Type	Deliverables	Addressed to
[ ] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[X] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete Saltwell Pumping of 16 Single-Shell Tanks by TBD.

Description of what constitutes completion of the commitment:

Interim Stabilization occurs when the pumping rate drops to 0.05 gallons per minute and the remaining liquid does not contain greater than 50,000 gallons of interstitial liquid or 5,000 gallons of supernate. Definition is provided in the Tri-Party Agreement. Commitment is to complete this pumping in 16 single-shell tanks by TBD.

TANK WASTE REMEDIATION SYSTEM
MILESTONE DESCRIPTION SHEET

Title: Complete Single-Shell Tank Interim Stabilization

TPA Date: 9/30/00*
* Being renegotiated

Assigned to: Tank Farm Operations

TPA No.: M-41-00

WBS Number: 1.01.01

Milestone Control Number: T03-00-193

Milestone Type	Deliverables	Addressed to
[X] TPA	[ ] Report	[ ] DOE-HQ
[ ] DOE-HQ	[X] Letter	[X] DOE-RL
[ ] DOE-FO	[ ] Drawings	
[ ] DOE-RL		
[ ] Contractor	[ ] Other (Specify)	[ ] Other (Specify)

Description of this Commitment:

Complete Interim Stabilization activities for all single-shell tanks (SSTs) except 241-C-106 (to be retrieved in accordance with milestone M-45-03). Complete intrusion prevention for all SSTs except 241-C-106.

Description of what constitutes completion of the commitment:

Interim Stabilization occurs when the pumping rate drops to 0.05 gallons per minute and the remaining liquid does not contain greater than 50,000 gallons of interstitial liquid or 5,000 gallons of supernate. Definition is provided in the Tri-Party Agreement. Commitment is to complete this pumping in all single-shell tanks except 241-C-106 by TBD.

B.3.4.1 Project Priority List

TANK WASTE REMEDIATION SYSTEM
FY 1999 - 2007 MYWP PRIORITY LIST BY PBS

11/23/98 'FY 99 MYWP

EXCEL: 10YRPR49.XLS

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UAS	PBS #	ADS	"UNIT OF ANALYSIS"	FY 99 TOTAL ESCAL'D	FY 00 TOTAL ESCAL'D	FY 01 TOTAL ESCAL'D	FY 02 TOTAL ESCAL'D	FY 03 TOTAL ESCAL'D	FY 04 TOTAL ESCAL'D	FY 05 TOTAL ESCAL'D	FY 06 TOTAL ESCAL'D	FY 07 TOTAL ESCAL'D
TW03												
130	TW03	1100 - 0	TWRS DST MINIMUM SAFE OPERATIONS	61,761	62,495	67,246	79,653	75,470	69,452	71,711	67,917	73,926
134	TW03	1100 - 0	TWRS SST MINIMUM SAFE OPERATIONS	11,728	12,364	26,036	16,065	18,544	9,376	8,944	8,990	9,224
538	TW03	1100 - 0	TWRS TRANSFERS & WASTE STAGING	1,290	1,407	1,447	1,588	2,990	1,064	2,108	1,120	1,315
138	TW03	1100 - 0	TWRS SST LIQUID EMERGENCY PUMPING	4,000	2,000	2,087	2,133	2,180	2,229	1,599	-	-
149	TW03	1100 - 0	TWRS OPERATIONS RL SUPPORT	2,764	2,856	2,980	3,046	3,113	3,181	3,253	3,311	3,398
540	TW03	1100 - 0	TWRS ECN INCORPORATION	364	522	269	275	281	287	148	-	-
543	TW03	1100 - 0	TWRS EMERG. PREPAREDNESS DRILL REQTS	390	387	404	414	422	432	442	449	461
546	TW03	1100 - 0	TWRS CONFIGURATION / ALARM MGMT.	1,732	1,623	1,388	1,118	-	-	-	-	-
547	TW03	1100 - 0	TWRS WDOH ROUTINE ACTIVIT NOC's	49	-	-	-	-	-	-	-	-
549	TW03	1100 - 0	TWRS WDOE ENVIRONMENTAL RECORDS	186	113	105	110	110	111	115	116	120
551	TW03	1100 - 0	TWRS AIR OPERATING PERMIT IMPLEMENTATION	423	400	494	427	478	483	491	500	512
			SUBTOTAL - MIN SAFE	**84,687**	**84,167**	**102,456**	**104,827**	**103,588**	**86,617**	**88,812**	**82,404**	**88,957**
333	TW03	1100 - 0	TWRS ROVER PATROL	1,135	1,197	1,249	1,277	1,305	1,333	1,364	1,388	1,424
544	TW03	1100 - 0	TWRS PAAA COMPLIANCE (HNF-PRO-2243)	789	686	716	739	750	780	799	813	835
			SUBTOTAL - ESSENTIAL SERVICES	**86,611**	**86,050**	**104,421**	**106,842**	**105,642**	**88,730**	**90,974**	**84,605**	**91,217**
539	TW03	1100 - 0	TWRS PROCESS SYSTEMS UPGRADE	1,952	279	269	275	281	287	294	300	307
545	TW03	1100 - 0	TWRS CAM REPLACEMENT	1,797	324	-	-	-	-	-	-	-
137	TW03	1100 - 0	TWRS TMACS AND ENRAF	4,671	-	-	-	-	-	-	-	-
NEW	TW03	1100 - 0	TANK PH ISSUE RESOLUTION	52	3,543	768	781	401	410	585	342	-
NEW	TW03	1100 - 0	TWRS SY101 MIXER PUMP REPLACEMENT	-	-	10,152	-	-	-	-	-	-
			SUBTOTAL -URGENT RISK- SAFETY	**95,083**	**90,196**	**115,610**	**107,898**	**106,324**	**89,427**	**91,853**	**85,247**	**91,523**
224	TW03	1100 - 0	TWRS SST LIQUID PUMPING - INCREMENT	22,000	26,800	25,051	21,502	20,322	18,875	-	-	-
			SUBTOTAL -URGENT RISK- TANK PUMPING	**117,083**	**116,996**	**140,662**	**129,400**	**126,646**	**108,303**	**91,853**	**85,247**	**91,523**
164	TW03	1100 - 1	TWRS TF RES & SAFE OPS (W-314)	10,500	26,216	40,438	50,220	37,919	35,362	30,426	20,491	4,721
			S/T -URGENT RISK- PRIVAT'ZN/ FY 2000 TARGET	**127,583**	**143,212**	**181,100**	**179,621**	**164,565**	**143,665**	**122,279**	**105,738**	**96,244**
352	TW03	1100 - 0	TWRS INTEGRITY INSPECTION M-32	3,696	-	47	476	-	283	398	447	416
541	TW03	1100 - 0	TWRS S/RID RECOVERY & MAINT'CE (PHASE I)	1,292	306	319	330	337	344	352	358	367
542	TW03	1100 - 0	TWRS INTEGRATED SAFETY MGMT SYS (PHASE I)	1,636	98	65	67	69	70	74	76	77
657	TW03	1100 - 0	TWRS I.S.M.S. IMPLEMENTATION	-	-	-	-	-	-	-	-	-
548	TW03	1100 - 0	TWRS DST RCRA PART B APPLICATION	310	106	-	-	-	-	-	-	-
654	TW03	1100 - 0	TWRS LEAK DETECTORS FOR ANNULUS IN SY FARM	500	-	-	-	-	-	-	-	-
184	TW03	1100 - 0	TWRS MARKING/MAPPING UNGD LINES	47	83	86	89	90	92	93	95	99
550	TW03	1100 - 0	TWRS WASTE ACCEPTANCE PROGRAM	548	23	24	25	25	26	9	9	10
NEW	TW03	1100 - 0	TWRS AS-BUILT DRAWINGS AND COMPONENT LABELING	1,012	4,571	2,792	1,393	1,423	796	329	273	281
			SUBTOTAL -CRITICAL NEEDS	**136,624**	**148,399**	**184,433**	**181,999**	**166,509**	**145,276**	**123,535**	**106,997**	**97,494**
NEW	TW03	1100 - 0	TWRS TANK ISOLATION & ABANDONED EQUIP	-	3,778	-	-	-	-	-	-	-
NEW	TW03	1100 - 0	SRIDS ASSESSMENT PHASE 2 ASSMT	-	577	302	311	318	325	331	339	347
NEW	TW03	1100 - 0	NATURAL PHENOMENON HAZARD MITIG'N	-	148	-	-	-	-	-	-	-
NEW	TW03	1100 - 0	FIRE HAZARD ANALYSIS	-	386	98	101	104	106	110	113	115
NEW	TW03	1100 - 0	METRIFICATION PROGRAM	-	49	-	-	-	-	-	-	-
NEW	TW03	1100 - 0	SUSPECT PARTS	-	199	40	41	41	42	43	44	45
NEW	TW03	1100 - 0	LOW INSTALLATIONS	-	792	244	-	-	-	-	-	-

TANK WASTE REMEDIATION SYSTEM
FY 1999 - 2007 MYWP PRIORITY LIST BY PBS

11/23/98 'FY 99 MYWP

EXCEL: 10YRPR49.XLS

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UAS	PBS #	ADS			"UNIT OF ANALYSIS"	FY 99 TOTAL ESCAL'D	FY 00 TOTAL ESCAL'D	FY 01 TOTAL ESCAL'D	FY 02 TOTAL ESCAL'D	FY 03 TOTAL ESCAL'D	FY 04 TOTAL ESCAL'D	FY 05 TOTAL ESCAL'D	FY 06 TOTAL ESCAL'D	FY 07 TOTAL ESCAL'D
NEW	TW03	1100	-	0	702 AZ UPGRADES	-	891	8,406	1,077	1,339	4,020	779	38	39
					S/T - FY 1999 TARGET	**136,624**								
585	TW03	1100	-	0	RAW WATER FLOW TOTALIZERS INSTALL'N	-	-	116	-	-	-	-	-	-
586	TW03	1100	-	0	TRANSFER PUMP REPLACEMENT 104-AW	-	-	544	-	-	-	-	-	-
	TW03	1100	-	0	TWRS SALTWELL PUMPING	-	-	-	-	-	-	-	-	-
308	TW03	1100	-	0	TWRS AS-BUILT DRAWINGS /LABELING / CONFIG	2,500	4,600	-	-	-	-	-	-	-
214	TW03	1100	-	0	TWRS TANK ISOLATION & ABANDONED EQUIP	3,800	-	-	-	-	-	-	-	-
593	TW03	1100	-	0	SRIDS ASSESSMENT PHASE 2 ASSMT	300	300	-	-	-	-	-	-	-
598	TW03	1100	-	0	TANK PH ISSUE RESOLUTION	3,600	800	-	-	-	-	-	-	-
					SUBTOTAL - EM30 COMPLIANCE	**146,824**	**160,919**							
587	TW03	1100	-	0	TWRS DST MINIMUM SAFE OPERATIONS	-	3,522	-	-	-	-	-	-	-
619	TW03	1100	-	0	SY101 MIXER PUMP MOCK UP QUAL'NS	800	-	-	-	-	-	-	-	-
588	TW03	1100	-	0	TWRS ESH & Q ASSESSMENTS	300	300	-	-	-	-	-	-	-
589	TW03	1100	-	0	SPARE PARTS/ INVENTORY RECOVERY	2,300	-	-	-	-	-	-	-	-
590	TW03	1100	-	0	NATURAL PHENOMENON HAZARD MITIG'N	200	-	-	-	-	-	-	-	-
592	TW03	1100	-	0	FIRE HAZARD ANALYSIS	300	100	-	-	-	-	-	-	-
595	TW03	1100	-	0	METRIFICATION PROGRAM	50	-	-	-	-	-	-	-	-
596	TW03	1100	-	0	SUSPECT PARTS	200	30	-	-	-	-	-	-	-
597	TW03	1100	-	0	LOW INSTALLATIONS	800	300	-	-	-	-	-	-	-
615	TW03	1100	-	0	TWRS PONDS CRIBS & DITCHES DEACT'N	400	-	-	-	-	-	-	-	-
616	TW03	1100	-	0	702 AZ UPGRADES	5,600	600	-	-	-	-	-	-	-
617	TW03	1100	-	0	FACILITY DEACTIVATION	1,900	5,000	650	31	43	55	44	29	-
618	TW03	1100	-	0	DRAWINGS/ DOC'N FOR INACTIVE SYSTEMS	300	30	285	245	251	256	257	234	237
199	TW03	1100	-	0	TWRS 242 T STABILIZATION / HAZARD RED'N	-	3,359	-	-	-	-	-	-	-
621	TW03	1100	-	0	TREND & PREDICTED MAINT.	500	200	187	78	80	81	83	85	87
622	TW03	1100	-	0	TWRS TMACS / ENRAF	1,800	-	2,025	100	-	-	-	-	-
623	TW03	1100	-	0	OE TRAINING (25)	2,500	3,110	-	-	-	-	-	-	-
625	TW03	1100	-	0	DST SSC ANALYSIS & DESIGN RECONSTITUTION	2,700	100	2,670	151	156	158	163	209	214
626	TW03	1100	-	0	SST SSC ANALYSIS & DESIGN RECONSTITUTION	1,300	100	1,393	64	65	67	69	70	71
627	TW03	1100	-	0	TANK STRUCTURAL ISSUE RESOL'N	900	200	-	-	1,164	882	60	-	-
628	TW03	1100	-	0	CONTAMINATION ZONE REDUCTION	1,000	1,200	-	1,779	670	-	-	-	-
629	TW03	1100	-	0	UPGRADE DST HARDWARE & TECH. BASELINE	3,000	2,500	2,515	1,987	2,378	2,327	2,378	2,412	2,474
630	TW03	1100	-	0	UPGRADE SST HARDWARE & TECH. BASELINE	1,300	1,100	1,376	1,120	1,144	1,170	1,195	1,232	1,264
631	TW03	1100	-	0	REMOVE INACTIVE SYSTEMS FROM OPERATIONS	1,200	1,100	2,140	952	973	995	1,017	-	-
632	TW03	1100	-	9	CORRECTIVE MAINT. BACKLOG ELIMINATION	3,200	-	-	-	-	-	-	-	-
179	TW03	1100	-	0	TWRS CASS CLOSURE	-	1,607	-	-	-	-	-	-	-
178	TW03	1100	-	0	TWRS LONG LENGTH CONTAMT'S EQUIP	-	1,348	-	-	-	-	-	-	-
294	TW03	1100	-	0	TWRS 209E STABILIZATION / HAZARD RED'N	-	1,306	-	-	-	-	-	-	-
					TOTAL TWRS REQUIREMENTS (EM-30)	**179,374**	**188,031**	**207,423**	**190,036**	**175,236**	**155,760**	**130,066**	**111,802**	**102,388**

B.3.4.2 Life Cycle Cost Baseline by PBS

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.3										
PBS NO:	RL-TW03										
PBS TITLE:	TANK FARM OPERATIONS										SUBTOT
FUND TYPE	*ACTUAL* FY1997	*ACTUAL* FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997-FY2006
OPERATING EXPENSE	120,742	98,427	131,824	131,932	167,947	138,249	129,764	111,298	90,724	81,667	1,202,574
CENRTC	3,126	298	-	-	-	-	-	-	-	-	3,424
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*											
97-D-402 (W-314)	3,864	9,596	11,508	16,191	24,774	31,971	24,704	22,596	18,523	11,294	175,021
89-D-173 (W-030)	3,327	3,362	-	-	-	-	-	-	-	-	6,689
93-D-182 (W058)	19,566	3,359	-	-	-	-	-	-	-	-	22,925
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	26,757	16,317	11,508	16,191	24,774	31,971	24,704	22,596	18,523	11,294	204,635
Escalation	-	-	-	3,175	8,553	11,674	14,308	15,791	15,700	15,634	84,835
TOTAL BCWS/PMB[1]	150,625	115,042	143,332	151,299	201,274	181,894	168,776	149,685	124,947	106,595	1,495,459
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	-	-	-	3,824	5,852	7,553	5,836	5,338	4,376	2,667	35,446
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-
Subtotal	-	-	-	3,824	5,852	7,553	5,836	5,338	4,376	2,667	35,446
Escalation	-	-	-	96	296	589	625	737	744	541	3,626
TOTAL	150,625	115,042	143,332	155,219	207,423	190,036	175,236	155,760	130,066	111,802	1,534,542

[1]Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2]Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

HNF-SP-1230 Rev. 1

TW03-153

EXHIBIT 1a

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.3
PBS NO:	RL-TW03
PBS TITLE:	TANK FARM OPERATIONS

FUND TYPE	FY2007	FY2008	FY2009	FY2010	FY2011-FY2015	FY2016-FY2020	FY2021-FY2025	FY2026-FY2030	FY2031-FY2035	FY2036 FY2040	FY2041-FY2045	FY2046 FY2050	TOTAL FY1997-FY2050
OPERATING EXPENSE	84,534	80,305	77,950	77,898	384,611	386,447	311,914	453	-	-	-	-	2,606,686
CENRTC	-	-	-	-	-	-	-	-	-	-	-	-	3,424
GENERAL PLANT PROJECT	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM *(List Each One)*													
97-D-402 (W-314)	1,227	-	-	-	-	-	-	-	-	-	-	-	176,248
89-D-173 (W-030)	-	-	-	-	-	-	-	-	-	-	-	-	6,689
93-D-182 (W058)	-	-	-	-	-	-	-	-	-	-	-	-	22,925
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
0	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal Line Items	1,227	-	-	-	-	-	-	-	-	-	-	-	205,862
Escalation	16,267	17,278	18,855	20,971	136,702	197,585	208,311	370	-	-	-	-	701,176
TOTAL BCWS/PMB[1]	102,028	97,583	96,805	98,869	521,313	584,032	520,225	823	-	-	-	-	3,517,149
MGMT RESERVE[2]	-	-	-	-	-	-	-	-	-	-	-	-	-
LINE ITEM CONTINGENCY[2]	291	-	-	-	-	-	-	-	-	-	-	-	35,737
TRANSFERS[3,4]	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal	291	-	-	-	-	-	-	-	-	-	-	-	35,737
Escalation	69	-	-	-	-	-	-	-	-	-	-	-	3,695
TOTAL	102,388	97,583	96,805	98,869	521,313	584,032	520,225	823	-	-	-	-	3,556,581

[1] Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover Is Not Included

[2] Management Reserve and Line Item Contingency Held By RL

[3] Funding And Work Scope Transferred To Other Sites Outside Hanford; and/or Funds And Workscope Transferred To Hanford From Other Sites.

[4] Estimate for FY 1999 National Lab Transfers attached.

HNF-SP-1230 Rev. 1

TW03-154

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.3																	
RL-TW03																	
TANK FARM OPERATIONS																	
1.1.3.1.1.1	Project Management	OE	36,384	38,946	38,918	38,518	38,695	38,503	35,318	35,950	301,232	1,104,661	36,889	37,700	38,530	39,377	152,496
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		GPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		36,384	38,946	38,918	38,518	38,695	38,503	35,318	35,950	301,232	1,104,661	36,889	37,700	38,530	39,377	152,496
1.1.3.1.1.2	Ancilliary Facilities	OE	3,456	3,292	4,078	3,700	9,463	3,821	3,906	3,977	35,693	125,172	4,081	4,170	4,262	4,356	16,869
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		3,456	3,292	4,078	3,700	9,463	3,821	3,906	3,977	35,693	125,172	4,081	4,170	4,262	4,356	16,869
1.1.3.1.1.3	Deactivating Facilities	OE	617	699	15,563	3,763	3,555	693	697	693	26,281	41,127	681	696	712	727	2,816
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		617	699	15,563	3,763	3,555	693	697	693	26,281	41,127	681	696	712	727	2,816
1.1.3.1.1.4	Waste Process Facility	OE	767	696	786	762	821	784	801	831	6,248	25,161	853	871	890	910	3,524
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		767	696	786	762	821	784	801	831	6,248	25,161	853	871	890	910	3,524
1.1.3.1.1.5	Tank Farm Complexes	OE	22,889	21,725	33,798	25,013	29,554	24,843	20,883	20,695	199,400	664,082	25,473	21,211	21,677	22,154	90,515
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		22,889	21,725	33,798	25,013	29,554	24,843	20,883	20,695	199,400	664,082	25,473	21,211	21,677	22,154	90,515
1.1.3.1.1.6	Waste Transfers	OE	917	1,034	11,404	1,393	2,990	855	2,350	689	21,631	31,268	872	892	723	581	3,068
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		917	1,034	11,404	1,393	2,990	855	2,350	689	21,631	31,268	872	892	723	581	3,068
1.1.3.1.1.7	Essential Services	OE	32,030	28,400	29,444	39,785	27,562	27,570	31,882	27,623	244,296	852,469	27,949	31,033	29,225	29,834	118,041
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		32,030	28,400	29,444	39,785	27,562	27,570	31,882	27,623	244,296	852,469	27,949	31,033	29,225	29,834	118,041
1.1.3.1.1.8	Drawing & Labeling	OE	3,064	5,411	3,612	2,188	1,094	1,118	509	277	17,274	22,997	281	287	293	300	1,160
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		3,064	5,411	3,612	2,188	1,094	1,118	509	277	17,274	22,997	281	287	293	300	1,160
1.1.3.1.1.9	Interim SST Stabil'zn	OE	26,000	28,800	27,138	23,635	22,502	21,104	1,599	0	150,779	150,779	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		26,000	28,800	27,138	23,635	22,502	21,104	1,599	0	150,779	150,779	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
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		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.3														
RL-TW03														
TANK FARM OPERATIONS														
1.1.3.1.1.1	Project Management	OE	210,102	234,439	206,392	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		GPP	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		210,102	234,439	206,392	0	0	0	0	0	0	0	0	0
1.1.3.1.1.2	Ancilliary Facilities	OE	23,241	25,929	23,440	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		23,241	25,929	23,440	0	0	0	0	0	0	0	0	0
1.1.3.1.1.3	Deactivating Facilities	OE	3,881	4,333	3,816	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		3,881	4,333	3,816	0	0	0	0	0	0	0	0	0
1.1.3.1.1.4	Waste Process Facility	OE	4,855	5,418	5,116	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		4,855	5,418	5,116	0	0	0	0	0	0	0	0	0
1.1.3.1.1.5	Tank Farm Complexes	OE	118,205	131,896	123,242	823	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		118,205	131,896	123,242	823	0	0	0	0	0	0	0	0
1.1.3.1.1.6	Waste Transfers	OE	2,215	2,471	1,884	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		2,215	2,471	1,884	0	0	0	0	0	0	0	0	0
1.1.3.1.1.7	Essential Services	OE	157,344	177,902	154,887	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		157,344	177,902	154,887	0	0	0	0	0	0	0	0	0
1.1.3.1.1.8	Drawing & Labeling	OE	1,471	1,644	1,448	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		1,471	1,644	1,448	0	0	0	0	0	0	0	0	0
1.1.3.1.1.9	Interim SST Stabil'zn	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
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		F/T	MWYP FY 1999 (B/O)	FY 2000 (B/O)	FY 2001 (B/O)	FY 2002 (B/O)	FY 2003 (B/O)	FY 2004 (B/O)	FY 2005 (B/O)	FY 2006 (B/O)	FY 1999-FY 2006 (B/O)	FY 1999-FY 2066 (B/O)	FY 2007 (B/O)	FY 2008 (B/O)	FY 2009 (B/O)	FY 2010 (B/O)	FY 2007-FY 2010 (B/O)
1.1.3.1.1.10	Project W-314	OE	5,700	5,700	8,263	7,615	4,109	3,572	3,636	3,701	42,296	45,140	2,844	0	0	0	2,844
		LI	11,508	16,596	26,027	34,463	27,349	25,715	21,670	13,583	176,911	178,428	1,517	0	0	0	1,517
		LI C	0	3,920	6,148	8,142	6,461	6,075	5,120	3,207	39,073	39,433	360	0	0	0	360
	S/T		17,208	26,216	40,438	50,220	37,919	35,362	30,426	20,491	258,280	263,001	4,721	0	0	0	4,721
1.1.3.1.1.11	Project W-030	OE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.3.1.3.1	Deactivate Facilities	OE	0	0	2,243	1,058	1,081	1,106	1,695	577	7,761	10,196	590	723	493	630	2,435
		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	2,243	1,058	1,081	1,106	1,695	577	7,761	10,196	590	723	493	630	2,435
1.1.3.1.X	W-058 Historical Data	OE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1.3 TANK FARM OPERN'S		OE	126,124	129,003	166,985	139,816	137,317	120,398	99,640	91,311	1,010,594	3,027,912	97,667	97,583	96,805	98,869	390,925
(W/O W-314/W-030/W058)		C/E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		GPP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		126,124	129,003	166,985	139,816	137,317	120,398	99,640	91,311	1,010,594	3,027,912	97,667	97,583	96,805	98,869	390,925
1.1.3 TANK FARM OPERN'S		**OE**	**131,824**	**134,703**	**175,248**	**147,431**	**141,426**	**123,970**	**103,276**	**95,012**	**1,052,890**	**3,073,053**	**100,511**	**97,583**	**96,805**	**98,869**	**393,769**
		C/E	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
		GPP	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
		LI	**11,508**	**16,596**	**26,027**	**34,463**	**27,349**	**25,715**	**21,670**	**13,583**	**176,911**	**178,428**	**1,517**	**0**	**0**	**0**	**1,517**
		LI C	**0**	**3,920**	**6,148**	**8,142**	**6,461**	**6,075**	**5,120**	**3,207**	**39,073**	**39,433**	**360**	**0**	**0**	**0**	**360**
	TOTAL		**143,332**	**155,219**	**207,423**	**190,036**	**175,236**	**155,760**	**130,066**	**111,802**	**1,268,874**	**3,290,914**	**102,388**	**97,583**	**96,805**	**98,869**	**395,646**

TANK WASTE REMEDIATION SYSTEM
FY1999-2066 COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT LEVEL 6 (PBS)
($000s)

TWRSR&A: 9764BOBA.XLS(LEVEL 6)
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		F/T	FY 2011-FY 2015 (B/O)	FY 2016-FY 2020 (B/O)	FY 2021-FY 2025 (B/O)	FY 2026-FY 2030 (B/O)	FY 2031-FY 2035 (B/O)	FY 2036-FY 2040 (B/O)	FY 2041-FY 2045 (B/O)	FY 2046-FY 2050 (B/O)	FY 2051-FY 2055 (B/O)	FY 2056-FY 2060 (B/O)	FY 2061 - FY 2065 (B/O)	FY 2066 - FY 2066 (B/O)
1.1.3.1.1.10	Project W-314	OE	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.3.1.1.11	Project W-030	OE	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.3.1.3.1	Deactivate Facilities	OE	0	0	0	0	0	0	0	0	0	0	0	0
		C/E	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.3.1.X	W-058 Historical Data	OE	0	0	0	0	0	0	0	0	0	0	0	0
		LI	0	0	0	0	0	0	0	0	0	0	0	0
		LI C	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		0	0	0	0	0	0	0	0	0	0	0	0
1.1.3 TANK FARM OPERN'S		OE	521,313	584,032	520,225	823	0	0	0	0	0	0	0	0
(W/O W-314/W-030/W058)		C/E	0	0	0	0	0	0	0	0	0	0	0	0
		GPP	0	0	0	0	0	0	0	0	0	0	0	0
	S/T		521,313	584,032	520,225	823	0	0	0	0	0	0	0	0
1.1.3 TANK FARM OPERN'S		**OE**	**521,313**	**584,032**	**520,225**	**823**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
		C/E	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
		GPP	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
		LI	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
		LI C	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
	TOTAL		**521,313**	**584,032**	**520,225**	**823**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

B.3.4.3 Life Cycle Budget Authority by PBS

EXHIBIT 4a

TANK WASTE REMEDIATION SYSTEM
BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999
($000s)

PROJECT WBS:	1.1.3	
PBS NO:	RL-TW03	
PBS TITLE:	TANK FARM OPERATIONS	
FUND TYPE	TARGET B/A FY1998	PRESIDENT'S BUDGET PLUS CARRYOVER[1] FY1999
OPERATING EXPENSE	98,427	131,824
CENRTC	298	-
GENERAL PLANT PROJECT	-	-
LINE ITEM *(List Each One)*		
97-D-402 (W-314)	9,596	4,800
89-D-173 (W-030)	3,362	-
93-D-182 (W-058)	3,359	-
0	-	-
0	-	-
0	-	-
Subtotal Line Items	16,317	4,800
TOTAL NEW B/A	115,042	136,624
ESTIMATED FY 1998 CARRYOVER		8,411
TOTAL NEW B/A+CARRYOVER	115,042	145,035

[1]Estimated Carryover Is NOT Included In Cost Baseline; Change Request For Actual Carryover Submitted After September 30, 1998.

HNF-SP-1230 Rev. 1

TW03-160

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)
11/24/98 09/24/98 UPDATE
10:29 AM

PBS - ADS PBS TITLE	F/T	FY 1997 B/A PROFILE (ACWP)	FY 1998 B/A PROFILE (ACWP)	FY 1999 B/A PROFILE (B/A) *	FY 2000 B/A PROFILE (B/A)	FY 2001 B/A PROFILE (B/A)	FY 2002 B/A PROFILE (B/A)	FY 2003 B/A PROFILE (B/A)	FY 2004 B/A PROFILE (B/A)	FY 2005 B/A PROFILE (B/A)	FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2006 B/A PROFILE (B/A)	FY 1997-FY 2066 B/A PROFILE (B/A)	FY 2007 B/A PROFILE (B/A)	FY 2008 B/A PROFILE (B/A)	FY 2009 B/A PROFILE (B/A)	FY 2010 B/A PROFILE (B/A)	FY 2007-FY 2010 B/A PROFILE (B/A)
TW03																		
1.1.3 TANK FARM OPERATIONS	EX	111,463	93,172	126,393	129,003	166,985	139,816	137,317	120,398	99,640	91,311	1,215,498	3,232,816	97,667	97,583	96,805	98,869	390,925
	CE	3,126	298	0	0	0	0	0	0	0	0	3,424	3,424	0	0	0	0	0
	TOTAL	114,589	93,470	126,393	129,003	166,985	139,816	137,317	120,398	99,640	91,311	1,218,922	3,236,240	97,667	97,583	96,805	98,869	390,925
1.1.3.1.1.10 Project W-314	EX	2,377	1,790	5,700	5,700	8,263	7,615	4,109	3,572	3,636	3,701	46,463	49,307	2,844	0	0	0	2,844
	LI	3,864	9,596	12,885	16,596	26,028	34,463	27,349	25,715	21,670	13,583	191,749	193,266	1,518	0	0	0	1,517
	LI CONT	0	0	0	3,920	6,148	8,142	6,461	6,075	5,120	3,207	39,073	39,433	360	0	0	0	360
	TOTAL	6,241	11,386	18,585	26,216	40,439	50,220	37,919	35,362	30,426	20,491	277,285	282,006	4,722	0	0	0	4,721
1.1.3.1.1.11 Project W-030	EX	4,597	1,754	0	0	0	0	0	0	0	0	6,351	6,351	0	0	0	0	0
	LI	3,327	3,362	56	0	0	0	0	0	0	0	6,745	6,745	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	7,924	5,116	56	0	0	0	0	0	0	0	13,096	13,096	0	0	0	0	0
1.1.3.X Project W-058	EX	2,305	1,711	1	0	0	0	0	0	0	0	4,017	4,017	0	0	0	0	0
	LI	19,566	3,359	0	0	0	0	0	0	0	0	22,925	22,925	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	21,871	5,070	1	0	0	0	0	0	0	0	26,942	26,942	0	0	0	0	0
1.1.3 TANK FARM OPS TOTAL	EX	120,742	98,427	132,094	134,703	175,248	147,431	141,426	123,970	103,276	95,012	1,272,329	3,292,492	100,511	97,583	96,805	98,869	393,769
	CE	3,126	298	0	0	0	0	0	0	0	0	3,424	3,424	0	0	0	0	0
	LI	26,757	16,317	12,941	16,596	26,028	34,463	27,349	25,715	21,670	13,583	221,419	222,936	1,518	0	0	0	1,517
	LI CONT	0	0	0	3,920	6,148	8,142	6,461	6,075	5,120	3,207	39,073	39,433	360	0	0	0	360
	TOTAL	150,625	115,042	145,035	155,219	207,424	190,036	175,236	155,760	130,066	111,802	1,536,245	3,558,285	102,389	97,583	96,805	98,869	395,646

* FY 1999 INCLUDES CARRYOVER OF $270 EXP, $8,141 LI

TANK WASTE REMEDIATION SYSTEM
LIFE CYCLE BUDGET AUTHORITY (B/A) BY FUND TYPE
FY 1999
($000's)

TWRSR&A: 9764BOBA.XLS(SUMMARY)

10/24/98	09/24/98 UPDATE

10:29 AM

PBS - ADS PBS TITLE	F/T	FY 2011- FY 2015 B/A PROFILE (B/A)	FY 2016- FY 2020 B/A PROFILE (B/A)	FY 2021- FY 2025 B/A PROFILE (B/A)	FY 2026- FY 2030 B/A PROFILE (B/A)	FY 2031- FY 2035 B/A PROFILE (B/A)	FY 2036- FY 2040 B/A PROFILE (B/A)	FY 2041- FY 2045 B/A PROFILE (B/A)	FY 2046- FY 2050 B/A PROFILE (B/A)	FY 2051- FY 2055 B/A PROFILE (B/A)	FY 2056- FY 2060 B/A PROFIL (B/A)	FY 2061- FY 2065 B/A PROFILE (B/A)	FY 2066- FY 2066 B/A PROFILE (B/A)
TW03													
1.1.3 TANK FARM OPERATIONS	EX	521,313	584,032	520,225	823	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	521,313	584,032	520,225	823	0	0	0	0	0	0	0	0
1.1.3.1.1.10 Project W-314	EX	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.3.1.1.11 Project W-030	EX	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.3.X Project W-058	EX	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	0	0	0	0	0	0	0	0	0	0	0	0
1.1.3 TANK FARM OPS TOTAL	EX	521,313	584,032	520,225	823	0	0	0	0	0	0	0	0
	CE	0	0	0	0	0	0	0	0	0	0	0	0
	LI	0	0	0	0	0	0	0	0	0	0	0	0
	LI CONT	0	0	0	0	0	0	0	0	0	0	0	0
	TOTAL	521,313	584,032	520,225	823	0	0	0	0	0	0	0	0

B.3.4.4 Project (PBS) Contractor Split

TANK WASTE REMEDIATION SYSTEM
FY 1999 CONTRACTOR FUNDING SPLIT (NEW BA ONLY)

PBS	DOE-RL/ RL-PNNL	NATIONAL LABS	TOTAL
TW03	$ 2,764	$ -	$ 2,764

REFLECTS FY 1999 NEW BA ONLY

TANK WASTE REMEDIATION SYSTEMS FY 1999 MULTI-YEAR WORK PLAN

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