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Waste Management Project Fiscal Year 1998 Multi-Year Work Plan WBS 1.2

Waste Management Federal Services of Hanford, Inc.

**Date Published
August 1997**

**Prepared for the U.S. Department of Energy
Assistant Secretary for Environmental Management**

**Project Hanford Management Contractor for the
U.S. Department of Energy under Contract DE-AC06-85RL14200**

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A.1.0 Technical Baseline (WM)

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 Waste Management Project manages and integrates (non-TWRS) waste management activities at the site. Activities include management of Hanford wastes as well as waste transferred to Hanford from other DOE, Department of Defense, or other facilities. This work includes handling, treatment, storage, and disposal of radioactive, nonradioactive, hazardous ("dangerous"), and mixed solid and liquid wastes. Major Waste Management Projects are the Solid Waste Project (SWP), Liquid Effluents Project (LEP), and Analytical Services. Existing facilities (e.g., grout vaults and canyons) shall be evaluated for reuse for these purposes to the maximum extent possible.

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 blank center column represents this Project.

Table A.1-1 Waste Management Project Boundary Diagram

<p>External Interfaces</p> <ul style="list-style-type: none"> Artes Laboratory Argonne National Laboratory - East Baker Bookbinder - Bensenville Battelle Columbus Laboratories Battelle Atomic Power - Laboratory Battelle Atomic Power - Shipyard Battelle-Seven National Laboratory BNWL National Accelerator Laboratory Cardinal Allene Harford Legacy Kelco Atomic Power - Laboratory Kelco Atomic Power - Shipyard Lawrence Berkeley Laboratory Polkovich Energy Systems Paul Hulse Naval Shipyard Polkovich Energy Systems Prescott Plasma Physics Laboratory Regal Steel Head Shaped Rickwood - Canoga Park Roddy Plant Statelink Laser Application Center University of California - Elms University of Utah <p>Harford Site Environmental System Interfaces</p> <ul style="list-style-type: none"> Isomers 4.1.2 Facilities on the North Side Operable Units Isomers 4.2.1 100 K Area Facilities Isomers 2.1.1 Central Plutonium Groundwater Operable Units Isomers 2.2.1 LWH Plant Phase I Isomers 2.2.2 LWH/HLW Plant, Phase I Isomers 2.2.3 LWH Treatment Facility, Phase II Isomers 2.2.4 HLW Treatment Facility, Phase I Isomers 2.2.5 SAG A Evaporator Isomers 2.2.6 Plutonium/Ammonium Extractions Plant Isomers 2.2.7 B Plant Isomers 2.2.8 Waste Encapsulation and Storage Facility Isomers 2.2.9 Plutonium Workshop Plant Isomers 2.2.10 Plutonium/Ammonium Plant Isomers 2.2.11 Uranium Oxide Plant Isomers 2.2.12 T-Plant Facility Isomers 2.2.14 M&B Facility Isomers 2.2.15 WHAP Module 1 Isomers 2.2.17 200 Area Effluent Treatment Facility Isomers 2.2.18 Liquid Effluent Retention Facility Isomers 2.3.1 Single Shell Tank (SST) System Isomers 2.3.2 Double Shell Tank (DST) System Isomers 2.3.3 Central Waste Complex Isomers 2.3.4 Temporary Storage and Assembly Facility Isomers 2.3.10 HLW Storage Module, Phase II Isomers 2.4.2 Mixed Waste Disposal Trenches Isomers 2.4.4 Environmental Protection Disposal Facility Isomers 2.5.1 220-S Laboratory Isomers 2.5.2 Waste Sampling and Characterization Facility Isomers 2.5.3 Central Plutonium System Isomers 2.5.4 Central Plutonium Water System Isomers 2.5.5 Central Plutonium Office Facilities Isomers 2.5.6 Central Plutonium Electrical System Isomers 2.5.8 Central Plutonium Telecommunication System Isomers 2.5.9 Central Plutonium Shop Facilities Isomers 2.5.10 Central Plutonium Storage Support Facilities Isomers 2.5.13 Central Plutonium Food System Isomers 4.3.1 300 Area Treated Effluent Disposal Facility Isomers 4.2.2 30T Plutonium Burns Isomers 4.2.3 SAG Waste Handling Facility Isomers 4.2.5 Thermal Treatment Facility Isomers 4.2.6 Low-Level Mixed Waste Disposal Facility Isomers 4.7.1 Fuel Pin Test Facility Isomers 4.3.2 300 Area Fuel Supply System Isomers 4.2.4 30R Building 	<p>External Interfaces</p> <ul style="list-style-type: none"> 200E Building 200E Building Columbia River Harford Waste Disposal Complex Oshtemo Landfill SW Column Waste Isolation Pilot Project <p>Harford Site Environmental System Interfaces</p> <ul style="list-style-type: none"> Isomers 2.2.12 T-Plant Facility Isomers 2.2.14 M&B Facility Isomers 2.2.15 WHAP Module 1 Isomers 2.2.17 200 Area Effluent Treatment Facility Isomers 2.2.18 Liquid Effluent Retention Facility Isomers 2.3.2 Double Shell Tank (DST) System Isomers 2.3.3 Central Waste Complex Isomers 2.4.1 Low-Level Waste Disposal Trenches Isomers 2.4.2 Mixed Waste Disposal Trenches Isomers 2.4.3 200 Area Treated Effluent Disposal Facility Isomers 2.5.1 220-S Laboratory Isomers 2.5.2 Waste Sampling and Characterization Facility Isomers 2.5.3 Central Plutonium Liquid Secondary Waste System Isomers 4.2.1 300 Area Treated Effluent Disposal Facility Isomers 4.2.3 SAG Waste Handling Facility Isomers 4.2.5 Thermal Treatment Facility Isomers 4.2.6 Low-Level Mixed Waste Disposal Facility Isomers 4.4.4 Bunk 007 Area Liquid Secondary Waste System Isomers 4.7.1 331 Complex Isomers 4.7.1 331 Complex
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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.1-2 Facility Responsibility Assignment Matrix

Facility	Program Manager	Pre Conceptual	Conceptual	Life Cycle Execute			O&M	Close Out	
				Design	Construction	Turnover		Final Close	EMO
240-A Evaporator	RL-WM001						RL-WM001	RL-TP10	RL-EP06 RL-EP02
T-Plant Facility	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02
220E-T	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02
4401 Facility	RL-WM001	RL-WM001	RL-WM001	RL-WM001	RL-WM001	RL-WM001	RL-WM001	RL-WM001	RL-WM001 RL-EP06 RL-EP02
WRUP Module 1	RL-WM001						RL-WM001	RL-WM001	RL-WM001 RL-EP06 RL-EP02
Liquid Effluent Retention Facility	RL-WM001						RL-WM001	RL-TP10	RL-EP06 RL-EP02
240 Area Effluent Treatment Facility	RL-WM001						RL-WM001	RL-TP10	RL-EP06 RL-EP02
Central Waste Complex	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02
Intermittent Dangerous Waste Storage Facility	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02
Transferring Storage and Assay Facility	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02
Low-Level Waste Buryal Grounds	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02
Island Waste Chemical Treatment	RL-WM001						RL-WM001	RL-TP10	RL-EP06 RL-EP02
240 Area Treated Effluent Disposal Facility	RL-WM001						RL-WM001	RL-TP10	RL-EP06 RL-EP02
220-B Laboratory	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02
Waste Sampling and Characterization Facility	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02
240 Area Treated Effluent Disposal Facility	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02
240 Retention Basins	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02
240 Waste Handling Facility	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02
Microbiological Studies System	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02
Thermal Treatment Facility	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02
Low-Level Mixed Waste Stabilization Facility	RL-WM001						RL-WM001	RL-WM001	RL-EP06 RL-EP02

RL-EP02 - 200 Area Source Removal Action Project

RL-EP06 - Surveillance and Maintenance

RL-EP08 - Decontamination & Decommissioning

RL-TP10 - Accelerated Decommissioning Project

RL-TP10 - Landfill

RL-WM001 - Solid Waste Storage & Disposal

RL-WM001 - Solid Waste Treatment

RL-WM001 - Liquid Effluents Project

RL-WM001 - Analytical Services

A.1.4 Project Planning Assumptions

This section contains the issues that affect the project. These include project specific issues, as well as the 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.1-3 Project Issues And Assumptions

ISSUE	PLANNING ASSUMPTION	CHAMPION
1 Lead Use Plan 100 The plans and state for the 100 Acre has not been defined	Soil sites identified consistent with CERCLA ROD cleanup mandate. DOE will retain control of this land throughout the cleanup mission and will protect archaeological, cultural and environmental resources.	Bauer
2 Lead Use Plan 200 The plans and state for the 200 Acre has not been defined	The 200 Acre and capital plans will be used by the management of nuclear materials and the collection and disposal of waste materials that remain on site and are often mixed and complex waste. Cleanup levels and disposal standards will be established in the CERCLA and RCRA permit modifications. Soil sites will be identified consistent with CERCLA ROD cleanup standards. DOE will retain control of this land.	Bauer
3 Lead Use Plan 300 The plans and state for the 300 Acre has not been defined	The 300 Acre waste sites, materials and facilities will be remediated to allow industrial and economic tourism opportunities. The Federal government will retain ownership of land in and adjacent to the 300 and 400 Acre, but will develop land for private and public use to support regional industrial and economic development. Excess land within the 1100 and 3000 acres will be targeted for transfer to non-Federal ownership.	Bauer
4 End State for Geyser Facilities The end state for the geyser facilities has not been clearly defined	Geyser facilities will be returned to place with a barrier cap.	Bauer Udell
5 Resource Disposal Potential use as a neutralization agent for tank waste is expected to be beyond 2010.	Plans exist in the 200 Acre and Central Waste Complex (CWC) and THERS building to Tank Waste Treatment and Encapsulation in the near future.	Krellinger Reynolds
6 Environmental Remediation Issues A has not been decided where, when and how surplus weapons materials (W) will be disposed of from storage in geyser.	The ROD on WTS recommended continued release storage for Hanford material at PFF pending a final policy on geyser, and that the Hanford Site will be evaluated for PFF disposition activities in the next round of NEPA studies.	Harris Reynolds
7 Future Disposal of Waste Group A Final disposition of Waste Group A has not been determined	Final disposition will occur by 2020.	Harris Reynolds
8 SRF Disposal Facilities Disposal location and acceptance criteria for Hanford SRF material have not been clearly defined	Final disposition of Hanford Reservoir. No further processing of SRF necessary after release storage and prior to disposal.	Harris Wilkens
9 HSTB / SRF Interface Definition The interface information is needed to support the Hanford Site Integral Schedule preparation. The current HSTB interface can not be easily linked to the SRF interface.	See Interface as currently defined in the HSTB.	Wilkens Brown
10 WTS End State All the WTS End State Targets do not get assigned to the Project.	WTS belongs to the Advanced Reactors Transition End State (WTS) belongs to SRF. Other requirements need to be assigned.	Wilkens Brown
11 Low Level Tank Waste Disposal Criteria The disposal criteria for LLW from tanks is not consistent with that of LLW from other sources (i.e. SRF and EPO).	LLW from tanks will be per product specifications in the product form RFP. Waste will be disposed in the LLW disposal cells.	Kaiser Utah

Waste Management Project

WQF-SP-0329

Rev. 0

Waste Management Project Fiscal Year 1995/96 Annual Work Plan

WBS 4.2

27 August 1997

Table A-3 Project Issues And Assumptions (Continued)

ID	ISSUE	PLANNED ASSUMPTION	COMMENT
22	TRU Waste Long-Term Storage Criteria for long-term storage of TRU waste have not been defined.	Continue to store TRU waste onsite in interim storage pending development with ECHW and shipment to an offsite facility.	Risks: None

FY1998

August 29, 1997

A.2.0 Project Hanford Breakdown (PHBS) Structure

A.2.1 PHBS Hierarchy

FY1998

August 29, 1997

A.2.2 Tracking Work Scope Changes from FY 1997 to FY 1998

HNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.2

FY1998

August 29, 1997

A.3.0 Schedule Baseline

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains Project Baseline Summary (PBS) guidance.

Activity ID	Activity Description	Early Start	Early Finish	Activity Description
RL WY03 Solid Waste Storage and Disposal				
HSEMS 2.3.5.5 Central Waste Complex Ops & Maint				
RMW/CWC STORAGE				
SW301	Operate RMW/CWC Storage	01OCT97*	30SEP98	Operate RMW/CWC Storage
SW302	From LW - 200 Area RTF		30SEP98	From LW - 200 Area RTF
SW304	To AS - Provide WSCF Support to RMW Trashes		30SEP98	To AS - Provide WSCF Support to RMW Trashes
SW305	To AS - Provide Commercial Supply to RMW Trashes		30SEP98	To AS - Provide Commercial Supply to RMW Trashes
SW306	To AS - WSCF Ship Mixed Waste to CWC		30SEP98	To AS - WSCF Ship Mixed Waste to CWC
SW307	Receive S-Cell Wastes		30SEP98*	Receive S-Cell Wastes
SW308	From FG - S-Cell Wastes to SW		30SEP98	From FG - S-Cell Wastes to SW SSS - FB
HSEMS 2.3.5.6 RCRA Landfill Waste Storage & Closure				
W12 RCRA LANDFILL				
SW301	W12 Bldg Standby	01OCT97*	30SEP98	W12 Bldg Standby
SW302	To FB - W12 Bldg		30SEP98	To FB - W12 Bldg SSS - W12
HSEMS 2.3.10.6 TRUBAF Closure				
TRUBAF FACILITY				
SW301	Trubaf Shutdown	01OCT97*	31MAR98	Trubaf Shutdown
SW302	To TW - TRUBAF to Facility Transition		31MAR98	To TW - TRUBAF to Facility Transition
HSEMS 2.4.1.5 (Low Level Waste) Gravelade Ops & Maint				
LLW/LI - LLW/LLW/GRU/LLW				
SW301	Operate LLW Bural Grounds	01OCT97*	30SEP98	Operate LLW Bural Grounds
SW302	To AS - Provide WSCF Support to Bural Grounds		30SEP98	To AS - Provide WSCF Support to Bural Grounds
SW303	To AS - Provide Comm Support to Bural Grounds		30SEP98	To AS - Provide Comm Support to Bural Grounds
Prepared: _____ Reviewed: _____ Date: _____ By: _____				WASTE MANAGEMENT HARTFORD PBB WMD3, 04, 05 & 06 SITE MASTER BASELINE SCHEDULE

[illegible]

Activity ID	Activity Description	Early Start	Early Finish	From AS - Ship WSCF LLR Waste to Basal Ground	From AS - Ship WSCF LLR Waste to CWC	From AS - Ship 222-S LLR Waste to CWC	From AS - Ship 222-S Mixed Waste to CWC	Receives Waste from all Off-Site Generators	Receives Waste from Off-Site Generators
WASTE RECEIPTS									
SWA5A7	From AS - Ship WSCF LLR Waste to Basal Ground		30SEP40						
SWA5A8	From AS - Ship 222-S LLR Waste to CWC		30SEP40						
SWA5A9	From AS - Ship 222-S Mixed Waste to CWC		30SEP40						
SWA5AC	Receives Waste from all Off-Site Generators	01OCT87	30SEP40						
SWA5AD	Last Shipment from Other DOE Sites		28SEP30						
SWA5AE	Last Shipment from Off-Site Labs		28SEP30						
SWA5AF	Last Shipment from Off-Site Universities		28SEP30						
SWA5AG	Last Shipment from Other Off-Site Generators		28SEP30						
SWA5AH	Receives Waste from Off-Site Generators	01OCT87	30SEP40						

WASTE MANAGEMENT HANFORD , PB6 WM03, 04, 05 & 06 SITE MASTER BASELINE SCHEDULE		
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Activity ID	Activity Description	Early Start	Early Finish
WASTE DECONTAMINATION SERVICES			
BW403	To AS - Provide WSCF Support to T Plant		30SEP04
BW404	To FS - T Plant to Transition		30SEP04
BW405	Low Dose Equipment Decommissioning (2706-T)	01OCT97*	28SEP05
BW406	To AS - Provide 220-B Support to T Plant		28SEP05
BW407	To AS - Provide WSCF Support to T Plant		28SEP05
BW408	To LW - Effluent from 2706-T		28SEP05
BW409	To FS - Transfer 2706-T		28SEP05
TRU WASTE RETRIEVAL			
BW410	W-153 Phase I Retrieval	01OCT96*	30SEP04
BW412	W-221 - Phase II Retrieval	01OCT96*	26SEP12
BW413	W-198 - Alpha Calsonic Retrieval	02OCT96*	30SEP16
BW414	M-81-04 Comp./Covered Cell CH TRUITRUM Retriever Facility ♦ A21-66-001		28SEP03*
BW415	M-81-07 Comp./W-115 for Post-1970 CH TRUITRUM Rat ♦ A21-64-002		30SEP04
BW416	Transfer Retrieved Fuel to Canister Storage Bldg.	01OCT12*	30SEP15
BW417	To PS - Retrieval Facilities		28SEP12
BW418	To SN - CSB Pool		30SEP15
MILITARY WASTE TREATMENT			
BW419	Thermal Treatment Contract - Process & Admin.	01OCT97*	28SEP28
BW420	M-81 Thermal Treatment of CH MLW	01JAN98*	

Activity ID: BW403

Activity Description: To AS - Provide WSCF Support to T Plant

Early Start:

Early Finish: 30SEP04

Activity ID: BW404

Activity Description: To FS - T Plant to Transition

Early Start:

Early Finish: 30SEP04

Activity ID: BW405

Activity Description: Low Dose Equipment Decommissioning (2706-T)

Early Start: 01OCT97*

Early Finish: 28SEP05

Activity ID: BW406

Activity Description: To AS - Provide 220-B Support to T Plant

Early Start:

Early Finish: 28SEP05

Activity ID: BW407

Activity Description: To AS - Provide WSCF Support to T Plant

Early Start:

Early Finish: 28SEP05

Activity ID: BW408

Activity Description: To LW - Effluent from 2706-T

Early Start:

Early Finish: 28SEP05

Activity ID: BW409

Activity Description: To FS - Transfer 2706-T

Early Start:

Early Finish: 28SEP05

Activity ID: BW410

Activity Description: W-153 Phase I Retrieval

Early Start: 01OCT96*

Early Finish: 30SEP04

Activity ID: BW412

Activity Description: W-221 - Phase II Retrieval

Early Start: 01OCT96*

Early Finish: 26SEP12

Activity ID: BW413

Activity Description: W-198 - Alpha Calsonic Retrieval

Early Start: 02OCT96*

Early Finish: 30SEP16

Activity ID: BW414

Activity Description: M-81-04 Comp./Covered Cell CH TRUITRUM Retriever Facility
♦ A21-66-001

Early Start:

Early Finish: 28SEP03*

Activity ID: BW415

Activity Description: M-81-07 Comp./W-115 for Post-1970 CH TRUITRUM Rat
♦ A21-64-002

Early Start:

Early Finish: 30SEP04

Activity ID: BW416

Activity Description: Transfer Retrieved Fuel to Canister Storage Bldg.

Early Start: 01OCT12*

Early Finish: 30SEP15

Activity ID: BW417

Activity Description: To PS - Retrieval Facilities

Early Start:

Early Finish: 28SEP12

Activity ID: BW418

Activity Description: To SN - CSB Pool

Early Start:

Early Finish: 30SEP15

Activity ID: BW419

Activity Description: Thermal Treatment Contract - Process & Admin.

Early Start: 01OCT97*

Early Finish: 28SEP28

Activity ID: BW420

Activity Description: M-81 Thermal Treatment of CH MLW

Early Start: 01JAN98*

Early Finish:

Activity ID: BW403

Activity Description: To AS - Provide WSCF Support to T Plant

Early Start:

Early Finish: 30SEP04

Activity ID: BW404

Activity Description: To FS - T Plant to Transition

Early Start:

Early Finish: 30SEP04

Activity ID: BW405

Activity Description: Low Dose Equipment Decommissioning (2706-T)

Early Start: 01OCT97*

Early Finish: 28SEP05

Activity ID: BW406

Activity Description: To AS - Provide 220-B Support to T Plant

Early Start:

Early Finish: 28SEP05

Activity ID: BW407

Activity Description: To AS - Provide WSCF Support to T Plant

Early Start:

Early Finish: 28SEP05

Activity ID: BW408

Activity Description: To LW - Effluent from 2706-T

Early Start:

Early Finish: 28SEP05

Activity ID: BW409

Activity Description: To FS - Transfer 2706-T

Early Start:

Early Finish: 28SEP05

Activity ID: BW410

Activity Description: W-153 Phase I Retrieval

Early Start: 01OCT96*

Early Finish: 30SEP04

Activity ID: BW412

Activity Description: W-221 - Phase II Retrieval

Early Start: 01OCT96*

Early Finish: 26SEP12

Activity ID: BW413

Activity Description: W-198 - Alpha Calsonic Retrieval

Early Start: 02OCT96*

Early Finish: 30SEP16

Activity ID: BW414

Activity Description: M-81-04 Comp./Covered Cell CH TRUITRUM Retriever Facility
♦ A21-66-001

Early Start:

Early Finish: 28SEP03*

Activity ID: BW415

Activity Description: M-81-07 Comp./W-115 for Post-1970 CH TRUITRUM Rat
♦ A21-64-002

Early Start:

Early Finish: 30SEP04

Activity ID: BW416

Activity Description: Transfer Retrieved Fuel to Canister Storage Bldg.

Early Start: 01OCT12*

Early Finish: 30SEP15

Activity ID: BW417

Activity Description: To PS - Retrieval Facilities

Early Start:

Early Finish: 28SEP12

Activity ID: BW418

Activity Description: To SN - CSB Pool

Early Start:

Early Finish: 30SEP15

Activity ID: BW419

Activity Description: Thermal Treatment Contract - Process & Admin.

Early Start: 01OCT97*

Early Finish: 28SEP28

Activity ID: BW420

Activity Description: M-81 Thermal Treatment of CH MLW

Early Start: 01JAN98*

Early Finish:

Activity ID: BW403

Activity Description: To AS - Provide WSCF Support to T Plant

Early Start:

Early Finish: 30SEP04

Activity ID: BW404

Activity Description: To FS - T Plant to Transition

Early Start:

Early Finish

Activity ID	Activity Description	Early Start	Early Finish	Activity Description
MLLW NON-THERMAL TREATMENT				
SW4G1	MLLW Stabilization Contract Procurement/Implement	01OCT97*	28SEP28	MLLW Stabilization Contract - Procurement/Implement
SW4G2	M-18-01-TD Comp NEPA Req'ts for Sub of CHLLMW		30SEP28*	M-18-01-TD Comp NEPA Req'ts for Sub of CHLLMW ◆ AGC-02-001
SW4G3	M-18-01 Intake Treatment of CHLLMW	30SEP97*		M-18-01 Intake Treatment of CHLLMW ◆ AGC-02-002
SW4G4	M-18-00 Comp Treat/Disp. of LHM CH of CHLLMW		30SEP28*	M-18-00 Comp Treat/Disp. of LHM CH of CHLLMW ◆ AGC-02-003
RM TRU TREATMENT				
SW4H1	RM TRU Treatment Contract/Procurement/Implement	01OCT97*	28SEP28	RM TRU Treatment Contract/Facility Procurement/Implement
SW4H2	M-01-03 Submitt TRUTRUM PMP to Ecology		06JUN98*	M-01-03 Submitt TRUTRUM PMP to Ecology ◆ AGC-05-102
SW4H3	M-01-01 Comp Facility Prior Disp of P-1970 TRUTRUM		28DEC00*	M-01-01 Comp Facility Prior Disp of P-1970 TRUTRUM ◆ AGM-06-001
SW4H4	M-01-05T Submitt TRUTRUM Facility ES/FDC to Ecol		31DEC02*	M-01-05T Submitt TRUTRUM Facility ES/FDC to Ecol ◆ AGC-03-105
SW4H5	M-01-05T Award Contract for RM TRUTRUM		30SEP03*	M-01-05T Award Contract for RM TRUTRUM ◆ AGC-03-106
SW4H6	M-01-08T Comp Construction Ops of RM TRUTRUM Fac		30JUN05*	M-01-08T Comp Construction Ops of RM TRUTRUM Fac ◆ AGC-05-108
SW4H7	To FS - RM TRU		28SEP28	
SW4H8	Send RM TRU to ER		30SEP19*	
SW4H9	To ER - RM TRU		30SEP13	
LARGE RM TRU TREATMENT				
SW4J1	Large RM TRU TCS Contract/Facility Procurement/Implement	01OCT97*	28SEP28	Large RM TRU TCS Contract/Facility Procurement/Implement
SW4J2	M-01-10 Submitt MLLW & GTCS PMP to Ecology		06JUN98*	M-01-10 Submitt MLLW & GTCS PMP to Ecology ◆ AGC-06-101
SW4J3	M-01-11T Submitt MLLW Facility ES/FDC to Ecology		28DEC00*	M-01-11T Submitt MLLW Facility ES/FDC to Ecology ◆ AGC-01-102
SW4J4	M-01-14T Award Contract for RM & Large MLLW		30OCT03*	M-01-14T Award Contract for RM & Large MLLW ◆ AGC-04-101

Activity ID	Activity Description	Early Start	Early Finish	Activity Details
WSEMS 2.2.21.5 200 Area ETP Ops & Maint				
LWA12	200 A Effluent Treatment Facilities (ETP)	01OCT07*	30SEP02	200 A Effluent Treatment Facilities (ETP)
LWA12B	From TW - PH1 HOT STARTUP		30SEP02	From TW - PH1 HOT STARTUP
LWA12E	To AS - Provide 222-S Supply to 200 Area ETP		30SEP02	To AS - Provide 222-S Supply to 200 Area ETP
LWA12F	To AS - Provide WSCF Supply to 200 Area ETP		30SEP02	To AS - Provide WSCF Supply to 200 Area ETP
LWA12G	To FS - 200 Area ETP		30SEP02	To FS - 200 Area ETP
LWA12H	To SW - Operate RMW/CWC Storage		30SEP02	To SW - Operate RMW/CWC Storage
LWA24	200 A ETP PROCESSING	01OCT07*	30SEP02	200 A ETP PROCESSING
LWA25	200 A ETP PROCESSING OUT YEARS	01OCT02	30SEP02	200 A ETP PROCESSING OUT YEARS
LWA25A	From TW - HLY VITRIFICATION		30SEP02	From TW - HLY VITRIFICATION
LWA25B	From ER - ERDF LEACHATE		30SEP02	From ER - ERDF LEACHATE
LWA25C	From ER - H Basin Water		30SEP02	From ER - H Basin Water
LWA25T	From SW - Operate RMW Tranche - Disposal		30SEP02	From SW - Operate RMW Tranche - Disposal
LWA25E	From TW - C&D LLY FACILITY		30SEP02	From TW - C&D LLY FACILITY
WSEMS 2.2.21.5 200 Area LERF Ops & Maint				
LWA21	200 A LERF S&MCO	01OCT07*	30SEP02	200 A LERF S&MCO
LWA23	200 A LERF S&MCO Outyear activities	01OCT02	30SEP02	200 A LERF S&MCO Outyear activities
LWA25A	To FS - 200 Area LERF S&MCO		30SEP02	To FS - 200 Area LERF S&MCO

Activity ID	Description	Early Start	Early Finish	Activity ID	Description	Early Start	Early Finish
HSEMS 2.4.3 200 Area TEDF Ops & Maint							
UNW404	200 A Treated Effluent Disposal Facility (TEDF)	01OCT97	30SEP92	200 A Treated Effluent Disposal Facility (TEDF)			
UNW404B	From F3 - B PLANT EFFLUENT		00SEP92	From F3 - B PLANT EFFLUENT			
UNW404C	From F5 - PPP EFFLUENT		30SEP92	From F5 - PPP EFFLUENT			
UNW404D	From AB - Send 2233 LAB LIQUID Gase to 200A TEDF		30SEP92	From AB - Send 2233 LAB LIQUID Gase to 200A TEDF			
UNW404E	From F5 - WSEF MISSION COMPLETE		30SEP92	From F5 - WSEF MISSION COMPLETE			
UNW404F	From SW - LOWDOSE EQUIP DECOMBAMP		30SEP92	From SW - LOWDOSE EQUIP DECOMBAMP			
UNW404H	To AB - Provide WSCF Supply to 200 Area TEDF		30SEP92	To AB - Provide WSCF Supply to 200 Area TEDF			
UNW404J	From TW - 241 Tank Farm Cooling Effluent		30SEP92	From TW - 241 Tank Farm Cooling Effluent			
UNW404K	From F5 - 2B1-Z		30SEP92	From F5 - 2B1-Z			
UNW404L	To F5 - 200 Area TEDF		30SEP92	To F5 - 200 Area TEDF			
SSS - W74							
HSEMS 3.1.3 340 Facility Shutdown & Ops & Maint							
UNW430	340 Operations / Ongoing waste receipts	01OCT97	30SEP96	340 Operations / Ongoing waste receipts			
UNW432	340 Facility Surveillance & Maintenance	01OCT97	30SEP96	340 Facility Surveillance & Maintenance			
UNW432A	To F5 - 340 Facility		30SEP96	To F5 - 340 Facility			
SSS - W70							
HSEMS 4.1.3 340 Facility Shutdown & Ops & Maint							
UNW436	340 Facility Shutdown	01OCT98	20SEP01	340 Facility Shutdown			
UNW436A	From TW - 204 AR Mode	01OCT98		From TW - 204 AR Mode			
UNW436B	From PN - 325 Upgrade	01OCT98		From PN - 325 Upgrade			
SSS - P1							

Activity ID	Activity Description	Early Start	Early Finish	
HSEMS 4.3.2.6 307 Lgd Wst X-ber Fac Basin O & M				
LWA40	307 Basin Operations	01OCT97	30SEP98	307 Basin Operations
LWA41	307 Basin Modified Operations	01OCT98	30SEP99	307 Basin Modified Operations
HSEMS 4.4.1.5 300 Area TEOF Ops & Maint				
LWA30	310 Facility Operations (TEOF)	01OCT97	30SEP98	310 Facility Operations (TEOF)
LWA37	310 Facility Operations (TEOF)	01OCT98	30SEP99	310 Facility Operations (TEOF)
LWA37C	To AS - Provide Green Supply to 300 Area TEOF		30SEP99	To AS - Provide Green Supply to 300 Area TEOF
LWA37D	To BR - 300 Area TEOF		30SEP99	To BR - 300 Area TEOF

1. 100% 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100			
Approved: Prepared: Checked: Date:	1. 100% 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	1. 100% 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100	1. 100% 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100
WASTE MANAGEMENT HANFORD PBS WMM03, 04, 05 & 06 SITE MASTER BASELINE SCHEDULE

Activity ID	Activity Description	Early Start	Early Finish	Activity Description	Early Start	Early Finish
222-5 Laboratory						
AS604A	From ER - 200 Area D&D		30SEP92			From ER - 200 Area D&D
AS607	PROVIDE 222-S SUPPORT TO WRAP I OPERATIONS	01OCT92*	30SEP93	PROVIDE 222-S SUPPORT TO WRAP I OPERATIONS		
AS610A	From SW - WRAP I Operation		30SEP93			From SW - WRAP I Operation
AS611	PROVIDE 222-S SUPPORT TO T PLANT	01OCT92*	28SEP95	PROVIDE 222-S SUPPORT TO T PLANT		
AS611A	From SW - High Dose Equip / Waste Decom		28SEP95			From SW - High Dose Equip / Waste Decom
AS611B	From SW - Low Dose Equip Decom / Sampling		28SEP95			From SW - Low Dose Equip Decom / Sampling
AS615	PROVIDE 222-S SUPPORT TO B PLANT SUBPROJECT	01OCT92*	30SEP95	PROVIDE 222-S SUPPORT TO B PLANT SUBPROJECT		
AS615A	From FS - Completion of Required AS Support		30SEP95			From FS - Completion of Required AS Support
AS618	PROVIDE 222-S SUPPORT TO WESP	01OCT92*	30SEP95	PROVIDE 222-S SUPPORT TO WESP		
AS618A	From FS - Completion of Required AS Support		30SEP95			From FS - Completion of Required AS Support
AS617	PROVIDE 222-S SUPPORT TO 300 AREA BHM	01OCT92*	28SEP90	PROVIDE 222-S SUPPORT TO 300 AREA BHM		
AS617A	From FS - Completion of Required AS Support		28SEP90			From FS - Completion of Required AS Support
AS619	PROVIDE 222-S SUPPORT TO PFF DEACTIVATION	01OCT92*	18NOV95	PROVIDE 222-S SUPPORT TO PFF DEACTIVATION		
AS619A	From FS - Completion of Required AS Support		18NOV95			From FS - Completion of Required AS Support
AS619B	PROVIDE 222-S SUPPORT TO PFF STABILIZATION	01OCT92*	31MAY92	PROVIDE 222-S SUPPORT TO PFF STABILIZATION		
AS619B	From FS - Completion of Required AS Support		31MAY92			From FS - Completion of Required AS Support
AS620	PROVIDE 222-S SUPPORT TO PFF VAULT MANAGEMENT	01OCT92*	01OCT93	PROVIDE 222-S SUPPORT TO PFF VAULT MANAGEMENT		
AS620A	From FS - Completion of Required AS Support		01OCT93			From FS - Completion of Required AS Support
AS621	PROVIDE 222-S SUPPORT TO K BASIN PROJECT	01OCT92*	30DEC95	PROVIDE 222-S SUPPORT TO K BASIN PROJECT		

Project ID: AS604A

Project Name: 222-S Laboratory

Project Location: 222-S Laboratory

WASTE MANAGEMENT HANFORD

PBS WMM03, 04, 05 & 06

SITE MASTER BASELINE SCHEDULE

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Agency ID	Activity Description	Early Start	Early Finish	Activity Description
AS691A	From FS - Completion of Required AS Support		30DEC05	From FS - Completion of Required AS Support
AS692	PROVIDE 222-6 SUPP TO 200 AREA RENTALIZATION	01OCT97*	28SEP07	PROVIDE 222-6 SUPP TO 200 AREA RENTALIZATION
AS692A	From FS - Completion of Required AS Support		28SEP07	From FS - Completion of Required AS Support
AS698	PROVIDE 222-6 SUPPORT TO 242-A EVAPORATOR	01OCT97*	30SEP13	PROVIDE 222-6 SUPPORT TO 242-A EVAPORATOR
AS698A	From LW - 242-A Evaporator Campaigns - Oct Yr		30SEP13	From LW - 242-A Evaporator Campaigns - Oct Yr
AS699	ENP 222-6 AQUEOUS LIQ. WASTE TO TANK FARM	01OCT97*	30SEP98	ENP 222-6 AQUEOUS LIQ. WASTE TO TANK FARM
AS692	ENP 222-6 LLR WASTE TO CWC	01OCT97*	28SEP96	ENP 222-6 LLR WASTE TO CWC
AS692A	To SW - Receive Waste from all On-Site Generators		28SEP96	To SW - Receive Waste from all On-Site Generators
AS693	ENP 222-6 MIXED WASTE TO CWC	01OCT97*	28SEP96	ENP 222-6 MIXED WASTE TO CWC
AS693A	To SW - Receive Waste from all On-Site Generators		28SEP96	To SW - Receive Waste from all On-Site Generators
AS694	222-6 LIQUID CONDENSATE TO 200 AREA TEF	01OCT97*	28SEP95	222-6 LIQUID CONDENSATE TO 200 AREA TEF
AS694A	To LW - 200 Area TROP		28SEP95	To LW - 200 Area TROP
AS695	222-6 LABORATORY MODERNIZATION	01OCT97*	30SEP95	222-6 LABORATORY MODERNIZATION
AS696	SEND 222-6 LIQUID WASTE TO 200 AREA ETF	01OCT97*	30SEP92	SEND 222-6 LIQUID WASTE TO 200 AREA ETF
AS696A	To LW - 200 Area ETF		30SEP92	To LW - 200 Area ETF
AS700	222-6 Lab to Transition		28SEP94*	222-6 Lab to Transition
AS700A	To FS - 222-6 Lab		28SEP94	To FS - 222-6 Lab
AS704	AS-32-02 COMP 215-6 TANK INTERIM STATUS ACTIONS		30SEP99*	AS-32-02 COMP 215-6 TANK INTERIM STATUS ACTIONS AS-32-02
AS706	To SW - AS-32-02 TPA 180 INTERFAGE TO T PLANT		30SEP99*	To SW - AS-32-02 TPA 180 INTERFAGE TO T PLANT AS-32-02

WASTE MANAGEMENT HANFORD
PES WM03, 04, 05 & 06
SITE MASTER BASELINE SCHEDULE

Activity ID	Activity Description	Early Start	Early Finish
HGENS 2 & 3 WSCF Labe Opt & Maint			
WSPC Labeling			
A5501	PROVIDE WSCF SUPP FOR SPENT NUCLEAR FUELS	01OCT87	28SEP91
A5501	PROVIDE WSCF SUPP FOR SITE GW REMED ACTIONS	01OCT87	30SEP90
A5501A	From ER - Site GW Remed Actions		30SEP90
A5502	PROVIDE WSCF SUPP TO 200 AREA ETP	01OCT87	28SEP94
A5502A	From LW - 200 Area ETP		28SEP94
A5503	PROVIDE WSCF SUPP TO 200 AREA TEDF	01OCT87	28SEP93
A5503A	From LW - 200 Area TEDF Operations		28SEP93
A5510	REMO WSCF LL LIQUID WASTE TO 200 AREA TEDF	01OCT87	28SEP93
A5510A	To LW - 200 Area TEDF		28SEP93
A5515	PROVIDE WSCF SUPP TO WRAP / OPERATIONS	01OCT87	30SEP91
A5515A	From SW - WRAP / Operations		30SEP91
A5516	PROVIDE WSCF ANALYTICAL SUPPORT TO T PLANT	01OCT87	28SEP90
A5516A	From SW - High Dose Equip / Waste Decn		28SEP90
A5516B	From SW - Low Dose Equip Decom / Sampling		28SEP90
A5520	PROVIDE WSCF SUPPORT TO LL BURIAL GROUNDS	01OCT87	30SEP90
A5520A	From SW - Operate LLW Burial Grounds		30SEP90
A5521	PROVIDE WSCF SUPPORT TO RAD MIXED WASTE TRENCHES	01OCT87	30SEP94
A5521A	From SW - Operate RABWHNC Storage		30SEP94

WASTE MANAGEMENT HANFORD
PBS WMOS, 04, 05 & 06
SITE MASTER BASELINE SCHEDULE

Activity ID	Activity Description	Early Start	Early Finish	
WASTE MANAGEMENT				FROM SW - Operate RSW Trenches - Disposal
A8521B	From SW - Operate RSW Trenches - Disposal		30SEP48	
A8525	PROVIDE WSCF SUPP TO 300 AREA REVITALIZATION	01OCT87	28SEP97	PROVIDE WSCF SUPP TO 300 AREA REVITALIZATION
A8525A	From FB - Completion of Required AS Support		28SEP97	From FB - Completion of Required AS Support
A8530	SHIP WSCF MIXED WASTE TO CMC	01OCT98	30SEP+0	SHIP WSCF MIXED WASTE TO CMC
A8530A	To SW - Receive Waste from all On-Site Generators		30SEP+0	To SW - Receive Waste from all On-Site Generators
A8530B	From SW - Operate RSW/CMC Storage		30SEP+0	From SW - Operate RSW/CMC Storage
A8535	SHIP WSCF LLW WASTE TO BURIAL GROUND	01OCT98	30SEP+0	SHIP WSCF LLW WASTE TO BURIAL GROUND
A8535A	To SW - Receive Waste from all On-Site Generators		30SEP+0	To SW - Receive Waste from all On-Site Generators
A8570	WSCF MAJOR UPGRADE	01OCT94	30SEP95	WSCF MAJOR UPGRADE
A8600	WSCF Decommission	01OCT97	30SEP+0	WSCF Decommission
A8600A	To ER - WSCF		30SEP+0	To ER - WSCF
Commercial Lab Operations				
Commercial Lab Activity				
ASA11	PROVIDE COMMERCIAL LAB SUPP TO 300 AREA TDF	01OCT87	23MAR92	PROVIDE COMMERCIAL LAB SUPP TO 300 AREA TDF
ASA11A	From LUN - 310 Facility Operations (TDF)		23MAR92	From LUN - 310 Facility Operations (TDF)
ASA17	PROVIDE COMMERCIAL LAB SUPP SPENT NUCLEAR FUELS	01OCT87	28SEP91	PROVIDE COMMERCIAL LAB SUPP SPENT NUCLEAR FUELS
ASA17	PROVIDE COMMERCIAL LAB SUPP LL BURIAL GROUND	01OCT87	30SEP+0	PROVIDE COMMERCIAL LAB SUPP LL BURIAL GROUND
ASA17A	From SW - Operate LLW Burial Grounds		30SEP+0	From SW - Operate LLW Burial Grounds
ASA18	PROVIDE COMM LAB SUPP RAD MIXED WASTE TRENCHES	01OCT87	30SEP+0	PROVIDE COMM LAB SUPP RAD MIXED WASTE TRENCHES
WASTE MANAGEMENT HANFORD				
PSS WM03, 04, 05 & 06				
SITE MASTER BASELINE SCHEDULE				

Activity ID	Activity Description	Early Start	Early Finish
ASAI4A	From SW - Operate PBMWONG Storage		30SEP98
ASAI4B	From SW - Operate PBMW Trenches - Disposal		30SEP98
ASAI3D	PROVIDE COMM SUPP HQ AREA REMEDIAL ACTIONS	01OCT97*	30SEP98
ASAI3G	From ER - 100 Area Remedial Actions		30SEP98
ASAI3H	PROVIDE COMM SUPP 200 AREA REMEDIAL ACTIONS	01OCT97*	30SEP98
ASAI3I	From ER - 200 Area Remedial Actions		30SEP98
ASAI3J	PROVIDE COMM SUPP 300 AREA REMEDIAL ACTIONS	01OCT97*	30SEP98
ASAI3K	From ER - 300 Area Remedial Actions		30SEP98
ASAI3L	PROVIDE COMM LAB SUPP - 300 AREA REVITALIZATION	01OCT97*	28SEP97
ASAI3M	From FS - Complete of Required FS Support		28SEP97
ASAI3N	PROVIDE COMM LAB SUPP TO K BASIN PROJECT	01OCT97*	30DEC98
ASAI3O	From FS - Complete of Required FS Support		30DEC98

WASTE MANAGEMENT HANFORD
PBS WM03, 04, D5 & D6
SITE MASTER BASELINE SCHEDULE

HNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.2

FY1998

August 29, 1997

A.4.0 Cost Baseline

HNF-SP-1229
Rev. 0
Waste Management Project
WBS L2

FY1998

August 29, 1997

A.4.1 Estimate Basis

The Waste Management project cost estimates were prepared and documented in accordance with HNF-PR-000585, Cost Estimating. The activity-based cost (ABC) estimating method was used for 100 percent of the project dollars. ABC techniques used include analogy, definitive, parametric, and trend analysis. Planning rates and escalation used are consistent with those developed by the FDH Chief Financial Officer and approved by the DOE-RL. Resource loaded schedules are traceable to the cost estimate packages.

Cost estimates for FY 1998 and FY 1999 were prepared at the task level or lower. At a minimum, cost estimates for years FY 2000 through FY 2006 were prepared at the financial data system (FDS) activity level. After FY 2006, the cost estimates were prepared at the FDS end function level.

Final cost estimate packages contain the following: (Note: All are required per HNF-PR-000585, Cost Estimating.)

- Technical scope
- Purpose of the project
- Assumptions and exclusions
- Estimate work breakdown structure
- Technique and historical basis
- Cost estimating relationship (CER) development
- Labor rates, unit rates, and unit cost sources
- Escalation amounts and sources
- Contingency calculation development (if applicable)
- Legal drivers
- Labor costs
- Technical logic diagram
- Integrated, logic driven, resource loaded schedules
- Responsibility assignment matrix
- Other costs that will be reflected in the budget for the particular project or program

Final cost estimate packages are located in MQ278, Room A133, 200 West Area.

WASTE MANAGEMENT PROJECT
SUMMARY OF LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS : 1.2												SUBTOT
PBS TITLE	PBS NO	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997- FY2006
SOLID WASTE STORAGE/DISPOSAL	RL-WM03	30,870	31,873	31,545	22,344	27,340	27,331	28,087	28,823	34,823	48,848	312,664
SOLID WASTE TREATMENT	RL-WM04	42,888	29,442	25,471	78,102	87,728	106,805	81,205	80,828	81,820	93,582	726,661
LIQUID EFFLUENT	RL-WM06	37,358	31,870	31,889	38,287	35,453	38,594	38,830	36,833	39,158	42,443	371,607
ANALYTICAL SERVICES	RL-WM05	31,227	28,413	27,109	35,031	28,873	38,874	38,692	39,013	39,034	39,053	359,519
												-
												-
												-
												-
												-
												-
												-
												-
												-
TOTAL BCWS/PBS		142,442	121,598	115,814	174,744	189,194	211,505	197,215	185,297	204,736	224,918	1,767,581

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

*Budgeted Cost of Work Scheduled (BCWS)
 Equals Performance Measurement Baseline
 (PMB), Expense Carryover is NOT included

LIFE CYCLE COST BASELINE (BCHB) BY YEAR BY FUND TYPE

FY 1996

FY 1990

[5000s]

[illegible]

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Exposure Categories NOT Included
Management, Finance and Labor Staff; Emergency Plans by Risk; Public Personnel at Sites; Other Than Personnel

**WASTE MANAGEMENT PROJECT
FY 1998 COST BASELINE (BCWS) BY MONTH
BY PROJECT BASELINE SUMMARY (PBS)
BY ACTIVITY DATA SHEET (ADS)
EXECUTION YEAR**

(\$000s)

PROJECT WBS: 1.2															
PBS NO: WM															
PBS TITLE: Waste Management															
ADS TITLE	ADS NO	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Solid Waste	2000-0	OP EXP	3,702	2,819	3,399	3,422	3,000	3,542	3,503	3,151	3,489	3,346	3,283	7,991	44,217
		CBMRPO													-
		CBMR													-
		LI													-
		SUBTOT	3,702	2,819	3,399	3,422	3,000	3,542	3,503	3,151	3,489	3,346	3,283	7,991	44,217
Waste and Debris Services	2000-0	OP EXP	1,068	828	973	973	863	1,028	1,051	961	1,051	971	871	971	11,898
		CBMRPO													-
		CBMR													-
		LI													-
		SUBTOT	1,068	828	973	973	863	1,028	1,051	961	1,051	971	871	971	11,898
Y Plant Secondary Comminution	2000-0	OP EXP	110	75	90	58	52	83	65	66	86	89	89	82	900
		CBMRPO	-	-	-	-	-	-	-	-	-	-	-	-	-
		CBMR	-	-	-	-	-	-	-	-	-	-	-	-	-
		LI	423	330	365	385	348	403	403	367	401	365	365	365	4,800
		SUBTOT	533	405	455	444	400	486	468	425	487	474	474	457	5,700
Liquid Effluent Project	2000-0	OP EXP	2,295	2,894	2,299	2,418	2,391	3,136	2,509	3,013	2,634	2,280	3,143	2,610	31,799
		CBMRPO	-	-	-	-	-	-	-	-	-	-	-	-	-
		CBMR	-	-	-	-	-	-	-	-	-	-	-	-	-
		LI	-	-	-	-	-	-	-	-	-	-	-	-	-
		SUBTOT	2,295	2,894	2,299	2,418	2,391	3,136	2,509	3,013	2,634	2,280	3,143	2,610	31,799

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

*Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover is NOT included.

**WASTE MANAGEMENT PROJECT
FY 1998 COST BASELINE (BCWS) BY MONTH
BY PROJECT BASELINE SUMMARY (PBS)
BY ACTIVITY DATA SHEET (ADS)
EXECUTION YEAR**

(\$000s)

PROJECT PBS: 1.2															
PBS NO: WMA															
PBS TITLE: Waste Management															
ADS TITLE	ADS NO	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
LABORATORY OPERATIONS & UPGRADES	7160-0	OP EXP	1,728	2,191	1,789	1,842	1,833	2,457	1,040	2,474	2,107	1,727	2,383	2,180	24,652
		CEMTC	72	92	72	78	78	100	80	96	80	72	100	88	1,000
		SWP	-	-	-	-	-	-	-	-	-	-	-	-	-
		LI	-	-	-	-	-	-	-	-	-	-	-	-	-
		SUBTOT	1,801	2,283	1,861	1,918	1,909	2,557	2,020	2,570	2,187	1,799	2,483	2,268	25,652
RADIOACTIVE WASTE TRANSFER	7160-0	OP EXP	12	15	9	7	-	-	-	-	-	-	-	-	43
		CEMTC	-	-	-	-	-	-	-	-	-	-	-	-	-
		SWP	-	-	-	-	-	-	-	-	-	-	-	-	-
		LI	-	-	-	-	-	-	-	-	-	-	-	-	-
		SUBTOT	12	15	9	7	-	-	-	-	-	-	-	-	43
219-B SECONDARY CONTAINMENT UPGRADES	7160-0	OP EXP	44	56	48	54	61	80	64	77	64	58	80	70	732
		CEMTC	-	-	-	-	-	-	-	-	-	-	-	-	-
		SWP	-	-	-	-	-	-	-	-	-	-	-	-	-
		LI	-	-	-	47	179	267	200	311	150	200	225	417	1,886
		SUBTOT	44	56	48	61	240	337	264	388	214	258	305	487	2,718
		OP EXP	-	-	-	-	-	-	-	-	-	-	-	-	-
		CEMTC	-	-	-	-	-	-	-	-	-	-	-	-	-
		SWP	-	-	-	-	-	-	-	-	-	-	-	-	-
		LI	-	-	-	-	-	-	-	-	-	-	-	-	-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL BCWS/PBS ¹			9,424	9,298	9,032	9,281	8,803	11,067	9,616	10,497	9,942	9,127	10,659	14,774	121,886

Note: The information for FY1999 and FY1998 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover is NOT included.

WASTE MANAGEMENT PROJECT
FY 1988 COST BASELINE (BCWS) BY MONTH BY FUND TYPE BY PROJECT
EXECUTION YEAR
(\$000s)

PROJECT WBS	PROJECT TITLE	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	
1.2	Waste Management	Operating Expense	8,920	8,877	8,578	8,754	8,211	10,298	9,139	9,725	9,312	8,471	9,390	13,805	114,032	
		GENRTC	717	92	72	78	70	100	80	96	90	72	100	168	1,000	
		GPP	0	0	0	0	0	0	0	0	0	0	0	0	0	
		Line Item	423	390	385	432	327	860	803	678	551	585	810	802	6,680	
		Total BCWS/PMB ¹	9,415	9,259	9,033	9,262	8,814	11,058	9,816	10,400	9,843	9,128	10,690	14,775	121,598	
		Management Reserve ²														0
		Line Item Contingency ³														0
		Offsite Transfers ⁴														0
Total			9,415	9,259	9,033	9,262	8,814	11,058	9,816	10,400	9,843	9,128	10,690	14,775	121,598	

Note: The tabulation for FY1988 and FY1989 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹ Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB) Expense Category is Not Included

² Management Reserve and Line Item Contingency Held By PM

WASTE MANAGEMENT PROJECT
FY 1998 COST BASELINE (BCWS) BY MONTH BY COST ELEMENT BY PROJECT
EXECUTION YEAR
(\$000s)

PROJECT WBS	PROJECT TITLE	COST ELEMENT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
1.2	Waste Management	0 Salaries	4,139	4,139	3,400	4,064	3,058	4,779	4,268	4,850	4,351	5,860	4,452	4,803	\$1,928
		1 Material	335	278	304	372	247	438	370	483	390	353	434	481	4,874
		2 Purchased Serv	886	492	486	482	488	889	830	310	814	468	810	865	8,359
		3 Other Contr Chgs	89	34	84	87	33	102	84	84	94	38	88	93	1,084
		4 Internal Serv	888	843	881	804	878	728	830	838	832	881	757	885	7,862
		5 Internal Chgs	888	843	878	888	886	748	841	787	842	888	738	848	7,822
		6 LMS	18	14	15	14	13	15	16	16	14	13	16	14	172
		7 Overheads	2,084	2,074	1,078	2,838	1,852	2,432	2,188	2,300	2,192	2,814	2,874	3,328	31,538
		8 Revenue	0	0	0	0	0	0	0	0	0	0	0	0	0
		9 Enterprise Cos	888	732	778	784	830	1,048	818	888	885	870	847	841	10,478
Total BCWS/PMB ²			8,145	7,984	8,024	8,800	8,283	10,029	9,828	10,373	9,727	13,590	16,105	18,796	121,896

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

²Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover is Not Included.

WASTE MANAGEMENT PROJECT
SUMMARY OF LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS : 1.2												SUBTOT
PBS TITLE		FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997- FY2006
SOLID WASTE STORAGE/ DISPOSAL	RL-WM03	26,831	31,973	31,545	22,344	27,340	27,331	28,067	28,823	34,823	49,848	309,545
SOLID WASTE TREATMENT	RL-WM04	34,962	29,442	25,471	78,102	87,728	105,806	91,206	80,628	91,920	83,562	719,527
LIQUID EFFLUENT PROJECT	RL-WM06	35,289	31,870	31,689	36,287	36,453	38,594	38,930	36,833	39,159	42,453	389,537
ANALYTICAL SERVICES	RL-WM09	29,739	28,927	28,090	38,031	38,673	38,674	38,982	39,013	39,054	39,053	385,031
TOTAL NEW B/A		126,621	122,212	115,300	174,744	189,194	211,605	197,215	185,287	204,736	224,819	1,751,940

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

WASTE MANAGEMENT PROJECT
SUMMARY OF LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1988

(\$000s)

PROJECT WEB : 1.2											TOTAL
PBS TITLE		FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	FY1997- FY2050
SOLID WASTE STORAGE/DISPOSAL	RL-WMD3	151,211	293,158	174,805	174,805	174,805	174,805	15,790	15,790	18,790	1,468,504
SOLID WASTE TREATMENT	RL-WMD4	198,344	218,900	213,570	208,990	207,210	137,232	-	-	-	1,699,823
LIQUID EFFLUENT PROJECT	RL-WMD5	175,876	215,849	210,507	238,095	230,129	265,898	140,273	-	-	1,840,182
ANALYTICAL SERVICES	RL-WMD6	138,484	175,105	223,906	231,884	144,000	146,500	145,000	133,000	130,000	1,827,409
											-
											-
											-
											-
											-
											-
											-
											-
											-
											-
											-
TOTAL NEW B/A		683,015	871,009	822,487	854,504	760,144	724,486	301,063	148,790	145,790	7,042,928

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary estimate.

WASTE MANAGEMENT PROJECT
LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS: T.1												SUBTOT
PBS NO: WM												FY1997- FY2008
PBS TITLE: Waste Management												
FUND TYPE	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006		
OPERATING EXPENSE	110,656	114,032	114,268	146,664	160,263	189,204	166,049	176,732	188,349	187,053		1,580,494
CENRTC	1,380	1,080	1,100	5,101	3,043	4,062	4,222	4,383	4,332	4,241		34,764
GENERAL PLANT PROJECT	2,473	-	-	2,444	1,966	2,735	3,236	2,182	2,200	1,980		19,215
LINE ITEM (Line Item only)												
WM-325 BG Closure	-	-	-	-	-	-	-	-	4,269	17,167		21,436
Project WM-259 Secondary Containment	4,000	4,800	-	-	-	-	-	-	-	-		8,800
WM-91 RES Waste	-	-	-	7,900	10,924	-	-	-	-	-		18,824
WM-221 Phase II Retrieval	-	-	-	4,638	8,095	13,600	3,700	-	-	-		30,045
WM-113 TRU Retrieval	-	-	-	4,099	-	-	-	-	6,380	14,475		24,800
WM-106 Carbon Retrieval	-	-	-	-	-	-	-	-	-	-		-
WM-178, 219-S Secondary Containment	-	2,800	-	-	-	-	-	-	-	-		2,800
WM-367, 222-S Auxiliary Equipment	-	-	-	1,900	3,000	1,600	-	-	-	-		5,600
WM-404, 222-S Major Upgrades	-	-	-	-	-	-	-	-	-	-		-
WM-404, WSCF Major Upgrades	-	-	-	-	-	-	-	-	-	-		-
Subtotal Line Items	4,000	7,100	-	16,533	23,019	14,905	3,700	-	8,656	31,642		132,185
TOTAL NEW B/A	126,921	132,212	115,368	174,744	188,184	211,508	187,215	185,267	204,736	224,915		1,751,840

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

WASTE MANAGEMENT PROJECT
LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS: 1.2										
PBS NO: WM										
PBS TITLE: Waste Mgmt										
FUND TYPE	FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	TOTAL
OPERATING EXPENSE	566,668	734,663	718,612	737,219	798,179	672,060	287,663	143,290	142,290	6,322,124
CENRYC	22,675	27,810	22,875	14,785	22,485	21,397	12,000	4,000	2,000	164,771
GENERAL PLANT PROJECT	25,400	32,500	31,000	32,900	32,900	31,000	1,800	1,800	1,500	205,816
LINE ITEM (Full Stock Item)										
W-329 BG Closure	4,345	75,808	-	-	-	-	-	-	-	191,667
Project W-250 Secondary Containment										8,800
M-91 RH Waste										19,864
W-221 Phase II Retrieval										30,948
W-113 TRU Retrieval										
W-106 Cesium Retrieval	18,000	-	-	-	-	-	-	-	-	
W-178, 218-S Secondary Containment										
W-367, 222-S Auxiliary Equipment										
W-400, 222-S Major Upgrades	-	-	50,000	50,000	-	-	-	-	-	
W-400, WSCF Major Upgrades	-	-	-	20,000	-	-	-	-	-	
Baseline Line Items	18,348	75,808	50,000	70,000	-	-	-	-	-	327,417
TOTAL NEW B/A	665,015	871,068	822,487	854,654	790,144	728,058	301,063	148,790	145,790	7,042,923

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

**Waste Management Project
3 DIGIT CONTRACTOR IDENTIFIER-PR-WM12**

Revision 0

AVERAGE ANNUAL FULL TIME EQUIVALENTS

(Includes Major Subcontractors but not Enterprise Companies)

PHBS 1.2

Submittal Date: 8/29/97

PBS Number	PBS Title	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
RL-WM03	Solid Waste Storage and Disposal	159	159	156	166	166	156	156	156	156	156
RL-WM04	Solid Waste Treatment	179	182	182	182	182	182	182	182	182	182
RL-WM05	Liquid Effluents Analytical Services	198	199	198	199	199	199	198	199	199	199
RL-WM06		165	161	192	192	193	186	187	185	199	185
Total PBS FTEs		700	698	728	729	730	726	724	722	722	722

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

A.4.2 Unfunded Workscope

FY 1999 Priorities
(Priority as of 8/1/97)

<u>Unit of Analysis/Description</u>	<u>FY 1996 \$ Request</u>	<u>FY 1998 \$ Com.</u>	<u>Comments</u>
Unfunded Essential Services (in Priority Order)			
2706-T Oversight	212.0	212.0	1 year funding was provided from FY95 and FY96. Funding from FY97 provided that the State allocated funds to fund essential services would be needed by 1997 calendar or with FY94 FY95 funding transfer
Laboratory Sample Management Fee	554.0	176.0	
	776.0	1891.0	
Other Unfunded Activities (in Priority Order)*			
Miscellaneous Services	300.0	1051.0	Minimum required to meet constant order
WRAP Operations - Tel. Increment	2,200.0	4051.0	Minimum required to meet 12000 TPA
TRU Refill Redesign Study	100.0	4151.0	Minimum required to meet intent of TPA
Bioassay Sample Waste Returns (1st Inc)	600.0	4591.0	Demonstrate good faith, avoid lawsuit
222-S Safety Maintenance	580.0	5141.0	222-S root repairs, other safety enhancements
Integrated Safety Management Plan Impl	350.0	5491.0	Initial implementation of ISMP
WVSC Privatization	100.0	5591.0	Minimum required to pursue privatization
Chemical Safety Analysis		5691.0	Scope not undefined, PFF outfall
QAPP Implementation		5391.0	Scope not undefined, awaiting DOE guidance
416 Transition	48.0	5840.0	Significantly reduces future 616 costs
Communication Upgrade	262.0	5902.0	Resolves real time safety issues
SWT8 Upgrade	280.0	6162.0	
RATE Replacement		6162.0	Scope not undefined, awaiting DOE guidance
WRAP Operations - Second Increment	1082.0	7244.0	Enables lab operations in FY 1997
Lab Consolidation (1st Increment)	1191.0	8426.0	Implements lab integration plan
Backing Sample Waste Returns (2nd Inc)	487.0	8922.0	Avoids lawsuit with sample
Computer Replacements	600.0	9522.0	Systematic replacement of obsolete PCs
HQST Update for Field Training	170.0	9692.0	Efficiency improvement
URMA for LLBG	82.0	9774.0	Improved radiological control
QAPP for LLBG	70.0	9844.0	
Lab Consolidation (2nd Increment)	1000.0	10844.0	Implements lab integration plan
NUMATEC pig support	300.0	11144.0	
LLBG/QVOC Records Management	150.0	11294.0	Document archiving support
TBCA Disposal in LLBG	31.0	11325.0	Efficiency improvement
NUMATEC technology development (integrating Safety Mgmt Plan (2nd Inc))	800.0	11422.0	Improved sample analysis technology
Leachate Tunnels for RWH Trench	200.0	12134.0	
340 Shutdown Support	218.0	12354.0	Enables RWH Trench operation
1p-Site TRU Treatment	300.0	12654.0	
1p-Site TRUM Treatment	900.0	13554.0	Supports TPA 14-01
BULKMIC Enhancements	565.0	13909.0	Chemical management system
Numerics Management Support	238.0	13937.0	
Remediation Technology Development	458.0	14405.0	
LABCORE Software Enhancements	101.0	14506.0	
222-S Life Extension	1677.0	16183.0	P
222-S General Upgrades	2428.0	18611.0	-
Lab Consolidation (3rd Increment)	1000.0	19611.0	-
WVSC General Upgrade	650.0	20171.0	-
SWP Upgrade (Physical) Module	200	20371.0	WVH Support Costs
TRU/AAE Transition	1195.0	21566.0	

* NOTE: The "Other Unfunded Activities" may be authorized for execution as cost undertakings are achieved.

HNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.2

FY1998

August 29, 1997

5.0 Performance Measures/Matrix

This section will be provided at a later date.

HNF-SP-1229

Rev. 0

Waste Management Project

WBS 1.2

FY1998

August 29, 1997

B.1 Technical Baseline (RL-WM03)

B.1 Solid Waste Storage & Disposal (RL-WM02)

B.1.1 Solid Waste Storage & Disposal Technical Baseline (RL-WM03)

B.1.1.1 Solid Waste Storage & Disposal Organization Mission (RL-WM03)

Solid Waste Storage and Disposal provides centralized facilities for the storage of solid radioactive low-level mixed waste (LLMW) and transuranic (TRU) wastes and the disposal of solid radioactive low-level waste (LLW) (excluding high-level and sanitary wastes) for onsite and offsite generators. This includes the management, operations, surveillance, monitoring, and maintenance of facility buildings, burial grounds, and current waste inventories. Additionally, Solid Waste Storage and Disposal manages the receipt and storage or disposal of newly generated wastes from onsite and offsite generators. The Solid Waste Storage and Disposal goal is to achieve the mission in a compliant and safe manner. The primary near term goals of this project are: (a.) Provide safe, compliant facility conditions in preparation of receipt of LLW, LLMW, and TRU wastes from onsite and offsite generators. (b.) Provide receipt, waste verification, and Toxic Substances Control Act (TSCA) and Resource Conservation and Recovery Act (RCRA) compliant storage of solid radioactive LLMW and TRU waste until treatment and disposal occurs. (c.) Provide receipt, waste verification, and disposal of solid radioactive LLW in the RCRA compliant burial grounds. (d.) Provide direct offsite shipment services for treatment and disposal of non-radioactive dangerous wastes. (e.) Provide storage, receipt, and disposal of treated solid radioactive LLMW in the Mixed Waste Disposal Trenches. (f.) Interface with project RL-WM04 (Solid Waste Treatment) for the treatment of solid radioactive LLMW and the treatment, repackaging, and certification of TRU wastes for shipment to the Waste Isolation Pilot Plant (WIPP).

B.1.1.2 Solid Waste Storage & Disposal End Point Targets from Hanford Strategic Plan

B.1.1.2.1 Solid Waste Storage & Disposal Principal End Point Targets:

- Spent fuels (TRIGA and light water reactor) and applicable FFTF fuels removed from 400 Area interim storage area to 200 Area.
- Contaminated media from soil piles in the south 600 area will be consolidated and moved to the 200 Area for disposal.
- Transition high cost surplus facilities in the central plateau and south 600 areas to a low cost, stable, deactivated condition.
- Complete final disposition of remaining unregulated uranium inventories in the south 600 area facilities by disposition offsite or disposal as LLW in 200 Area.
- Retrievably stored TRU waste retrieved, processed, shipped offsite to WIPP.
- Low level and low level mixed waste from onsite and offsite sources (including PNNL special case wastes) will continue to be disposed of in the 200 Area.

B.1.1.2.2 Solid Waste Storage & Disposal Supported End Point Targets

- Spent fuel removed and K-Basins cleaned sufficient to transition to D&D.

WBA 1.8

- Spent fuels consolidated in the 200 Area in safe, stable, cost-effective interim storage pending national decisions on their ultimate disposition
- Spent fuels (light water reactor) removed to interim storage in 400 Area pending availability of 200 Area interim storage
- Shut, decontaminate, and stabilize K-Basins Facility
- Provide safe, stable, interim storage for nuclear materials in the 200 Area pending decisions on their ultimate disposition
- Continue to provide safe storage for Cs/Sr capsules in the WRESF indefinitely
 - (1) WRESF decommissioned and a standalone facility
- Transition the PUREX facility and B Plant to low cost, stable, deactivated condition
- Transition B-Plant to a low cost, stable, deactivated condition
- Transition the 324/327 Buildings to a low cost, stable, deactivated condition and disposition their nuclear materials (including 324 Building radioactive tank wastes)
- Remove non-essential, surplus buildings and facilities that don't have identified post-cleanup uses
- Demolish or close through entombment, D&D facilities in the central plateau areas currently assigned to the ISR program
- Reuse facilities in the south 600 area for economic diversification where feasible
- Retrieve tank wastes to the extent needed for tank closure: divide into high level and low activity fractions and immobilize
- The high level immobilized fractions will be interim stored until it can be shipped offsite for disposal (planned for the Yucca Mountain geologic repository)
- For Cs/Sr capsules declared waste, send to Yucca Mountain for HLW repository disposal

B.1.1.3 Solid Waste Storage & Disposal Major Facilities

B.1.1.3.1 Central Waste Complex Facility

B.1.1.3.1.1 Central Waste Complex Facility Description

The Central Waste Complex includes the Radioactive Mixed Waste Storage Facility and the Waste Receiving and Processing Facility

The Radioactive Mixed Waste Storage Facility currently consists of the following

- Plutonium/Polychlorinated Biphenyl Mixed Waste Storage Building
- Low-Flash Point Mixed Waste Storage Modules
- Radioactive and/or Mixed Waste Storage Buildings

WBS 1.2

- Large Mixed-Waste Storage Facility, Phases I-IV
- Waste Receiving and Staging Area
- Mixed-Waste Storage Pad
- 2727-W Product Sodium Storage Building
- Isotopic Heat Storage

B.1.1.3.1.2 Central Waste Complex Facility Technical Logic:

The technical logic for the Central Waste Complex (CWC) is captured in the functional flow block diagram which shows the functions performed for each applicable life cycle phase of the CWC and the sequence in which the functions are executed.

Waste Management Project
 WAFB 2010
 Run 6

Waste Management Project Fiscal Year 1999 Multi Year Work Plan

WB 12

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Figure B-1 CENTRAL WASTE COMPLEX

B.1.1.3.1.3 Central Waste Complex Requirements and Life Cycle Function Descriptions

Requirements:

- Comply with requirements identified in WHC-WP-1120, Standards/Requirements Identification Document (SRID).
- Container contents of newly generated waste shall be inspected to verify waste contents.
- Contents of "unknown" or "backlog" wastes shall be inspected to provide segregation and ensure compliant packaging of waste.
- Solid waste shall be stored in a safe and compliant manner prior to shipment to an approved treatment and/or disposal site.
- (b)(3) Mixed transuranic waste shall be treated, where feasible and practical, to destroy the hazardous waste component.
- Central Plateau high cost surplus facilities shall be transitioned to a low cost, stable, deactivated condition.
- Central Plateau inactive facilities shall be maintained within the approved safety envelope.
- Low level mixed waste from offsite sources shall be received in the 200 area.
- Low level waste from offsite sources shall be received in the 200 area.
- Immobilized low activity waste interim storage facility shall be provided.
- TRIGA reactor materials shall be moved to the Central Plateau interim storage.
- TRU waste packaged for final disposition shall be interim stored in the Central Plateau.
- TRU shipments from offsite for onsite interim storage shall be consolidated.
- Offsite TRU wastes shall be interim stored in the Central Plateau.
- Complete acquisition of new facilities, modification of existing facilities, and/or modification of planned facilities necessary for storage, treatment/processing prior to disposal of all Hanford Site Post 1970 TRU/TRUM.

Due Date: TBD But No Later Than 12/31/2000

Life Cycle Function Descriptions:

B.1.1.3.1.3.1 CENTRAL WASTE COMPLEX PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program; establishing broad priorities; providing program technical direction; preparing and defending the program budget; controlling milestones; integrating all components of the program; providing public and private sector policy liaison; expediting interface activities and follow-up actions; and retaining overall accountability for program success.

B.1.1.3.1.3.2 CENTRAL WASTE COMPLEX OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

CENTRAL WASTE COMPLEX OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B 1 1 3 1 3 3 Receive and Dispose Low Level Waste

Receive and verify low level waste package. Transfer accepted low level waste package to disposal.

B 1 1 3 1 3 4 Receive and Store Low Level Mixed Waste

Receive and store low level mixed solid waste. Stored waste will be staged to mixed waste treatment facilities on site and off site.

B 1 1 3 1 3 5 Receive and Store TRU/THU Waste

Provide consolidated storage for existing TRU/THU waste on Site. Receive new TRU/THU waste and place in storage to stage for treatment.

B 1 1 3 1 3 6 Store Greater than Category 3 Low Level Solid Waste

Upon receipt of Greater than Category 3 Low Level Solid (GTC3 LLS) waste, provide safe and compliant storage for this waste. The transfer of the stored GTC3 LLS waste to the Disposition Function will be invoked by formal agreement of the Receiving Entity.

B 1 1 3 1 3 7 Store Low Level Mixed Waste

Upon receipt of Low Level Mixed Waste (LLMW), provide safe and compliant storage for this waste. The transfer of the stored LLMW to the Disposition Function will be invoked by formal agreement of the Receiving Entity.

B 1 1 3 1 3 8 Store TRIGA Fuel

Store the TRIGA fuel pending DOE ROD on ultimate disposition.

B 1 1 3 1 3 9 CENTRAL WASTE COMPLEX POST OPERATIONS WORK SCOPE SUMMARY

Day-to-day work, including pre stabilization surveillance and maintenance, stabilization, post-stabilization surveillance and maintenance, deactivation, and post deactivation surveillance and maintenance, that is required to allow safe decontamination and decommissioning.

CENTRAL WASTE COMPLEX POST OPERATIONS SPECIFIC FUNCTIONS

B 1 1 3 1 3 10 Maintain Safe & Compliant Central Waste Complex Facility at CP Areas

Maintain the CWC facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facilities are made available for clean-up.

B 1 1 3 1 3 11 Transition Central Waste Complex Facility

Instate the transition phase of decontamination and decommissioning for the Central Waste Complex Facility.

8.1-1.3.1.4 Central Waste Complex Boundary Diagram

Table E.1-1 Central Waste Complex Boundary Diagram

[illegible]

B.1.1.3.1.5 Central Waste Complex Interface Description and Forecast

EXTERNAL INPUTS

Table B.1-2 External Inputs for Central Waste Complex

Stream	Category	Period	Quantity	Units
A. Ames Laboratory AMES, CH-LW-4 CH-LW-1 Transferred by Ames Laboratory AMES, CH-TM-1 CH-TM-1 Transferred by Ames Laboratory AMES, CH-TRM-1 CH-TRM-1 Transferred by Ames Laboratory	CH-LW-1	1987 - 2070	129.9	cubic meters
	CH-TM-1	2004 - 2064	0.254	cubic meters
	CH-TRM-1	2004 - 2064	0.254	cubic meters
B. Argonne National Laboratory - East ANL B, RH-LW-10 RH-LW-10 Transferred by Argonne National Laboratory - East ANL E, CH-LW-1 CH-LW-1 Transferred by Argonne National Laboratory - East ANL E, CH-LW-2 CH-LW-2 Transferred by Argonne National Laboratory - East	RH-LW-10	1987 - 2070	19.0	cubic meters
	CH-LW-1	1987 - 2070	10000	cubic meters
	CH-LW-2	1987 - 2070	1070	cubic meters
C. Batte Accelerator - Massachusetts MIT BATTEL, CH-LW-1 CH-LW-1 Transferred by Batte Accelerator - Massachusetts	CH-LW-1	1980 - 2000	34.1	cubic meters
D. Battelle Columbus Laboratories BAT CLS LAB, CH-LW-1 CH-LW-1 Transferred by Battelle Columbus Laboratories BAT CLS LAB, CH-LW-1 CH-LW-1 Transferred by Battelle Columbus Laboratories BAT CLS LAB, CH-LW-1 CH-LW-1 Transferred by Battelle Columbus Laboratories	CH-LW-1	1967 - 2000	442.0	cubic meters
	CH-LW-1	1967 - 2000	5.0	cubic meters
	CH-LW-1	1967 - 2000	539.0	cubic meters
E. BNL Atomic Power - Laboratory BNL, CH-LW-10 CH-LW-10 Transferred by BNL Atomic Power - Laboratory BNL, CH-LW-1 CH-LW-1 Transferred by BNL Atomic Power - Laboratory	CH-LW-10	1957 - 1968	131.0	cubic meters
	CH-LW-1	1957 - 1968	78.3	cubic meters
F. BNL Atomic Power - Shippards BNL, SHIP-10, CH-LW-1 CH-LW-1 Transferred by BNL Atomic Power - Shippards	CH-LW-1	1912 - 1912	1.2	cubic meters
G. Brookhaven National Laboratory BROOKV, CH-LW-1 CH-LW-1 Transferred by Brookhaven National Laboratory BROOKV, CH-LW-1 CH-LW-1 Transferred by Brookhaven National Laboratory BROOKV, CH-LW-1 CH-LW-1 Transferred by Brookhaven National Laboratory	CH-LW-1	1957 - 1918	2040	cubic meters
	RH-LW-1	1958 - 1918	110.0	cubic meters
H. FERM National Accelerator Laboratory FERM, CH-LW-1 CH-LW-1 Transferred by FERM National Accelerator Laboratory	CH-LW-1	0 - 2027	1510	cubic meters
I. General Atomics GEN ATOM, CH-LW-10 CH-LW-10 Transferred by General Atomics GEN ATOM, CH-LW-4 CH-LW-1 Transferred by General Atomics GEN ATOM, RH-LW-10 RH-LW-10 Transferred by General Atomics GEN ATOM, CH-LW-1 CH-LW-1 Transferred by General Atomics	CH-LW-10	1957 - 1960	48.9	cubic meters
	CH-LW-1	1967 - 1969	877.0	cubic meters
	RH-LW-10	1967 - 1967	9.75	cubic meters
	CH-LW-1	1967 - 1968	7.89	cubic meters
J. Knolls Atomic Power - Laboratory KAPL, CH-LW-10 CH-LW-10 Transferred by Knolls Atomic Power - Laboratory KAPL, CH-LW-1 CH-LW-1 Transferred by Knolls Atomic Power - Laboratory KAPL, RH-LW-1 RH-LW-1 Transferred by Knolls Atomic Power - Laboratory	CH-LW-10	1981 - 1991	0.728	cubic meters
	CH-LW-1	1996 - 2001	12.1	cubic meters
	RH-LW-1	1967 - 1967	4.5	cubic meters
K. Knolls Atomic Power - Shippards KAPL, SHIP-10, CH-LW-1 CH-LW-1 Transferred by Knolls Atomic Power - Shippards KAPL, SHIP-10, CH-LW-1 CH-LW-1 Transferred by Knolls Atomic Power - Shippards	CH-LW-1	1981 - 2004	237.0	cubic meters
	CH-LW-1	1968 - 2000	51.9	cubic meters

Table B.1-2 External Inputs for Central Waste Complex (Continued)

Stream ID	Category	Period	Baseline	Units
A Lawrence Berkeley Laboratory LBL, CH-LUM-I CH-LUM-I Transferred by Lawrence Berkeley Laboratory. LBL, CH-TNU CH-TNU Transferred by Lawrence Berkeley Laboratory.	CH-LUM-I	1987 - 2030	11500	cubic meters
	CH-TNU	1980 - 2030	1.0	cubic meters
B Pacific Energy Systems PACOWASH, CH-LUM-I CH-LUM-I Transferred by Pacific Energy Systems. PACOWASH, CH-LUM-W CH-LUM-W Transferred by Pacific Energy Systems PACOWASH, CH-LUM-W CH-LUM-W Transferred by Pacific Energy Systems.	CH-LUM-I	1987 - 1997	69.0	cubic meters
	CH-LUM-W	1998 - 2030	23.0	cubic meters
	CH-LUM-W	1987 - 1997	69.0	cubic meters
C Ford Motor Metal Shipyard FORD, MAMBO, CH-LUM-W CH-LUM-W Transferred by Ford Motor.	CH-LUM-W	2000 - 2001	4.01	cubic meters
D Portsmouth Energy Systems PORTSMOUTH NS, CH-LUM-I CH-LUM-I Transferred by PORTSMOUTH NS PORTSMOUTH NS, CH-LUM-W CH-LUM-W Transferred by Portsmouth Energy Systems. PORTSMOUTH NS, CH-LUM-W CH-LUM-W Transferred by Portsmouth Energy Systems.	CH-LUM-I	2004 - 2001	4.21	cubic meters
	CH-LUM-W	1997 - 1997	303.0	cubic meters
	CH-LUM-W	1997 - 2000	574.0	cubic meters
E Princeton Plasma Physics Laboratory PPPL, CH-LUM-I CH-LUM-I Transferred by Princeton Plasma Physics Laboratory. PPPL, CH-LUM-W CH-LUM-W Transferred by Princeton Plasma Physics Laboratory.	CH-LUM-I	1997 - 2025	40.0	cubic meters
	CH-LUM-W	1997 - 2025	95.0	cubic meters
F Fugit Solid Rocket Shipyard FUGIT SOUND, CH-LUM-W CH-LUM-W Transferred by Fugit Sound	CH-LUM-W	2000 - 2001	87.5	cubic meters
G Rockwell - Cosco Park RCKW, CH-LUM-I CH-LUM-I Transferred by Rockwell - Cosco Park. RCKW, CH-LUM-W CH-LUM-W Transferred by Rockwell - Cosco Park.	CH-LUM-I	1997 - 1997	49.7	cubic meters
	CH-LUM-W	0 - 2000	1430	cubic meters
H Rocky Flats ROCKY FLATS, CH-LUM-I CH-LUM-I Transferred by Rocky Flats.	CH-LUM-I	1987 - 2030	175.5	cubic meters
I Stanford Linear Accelerator Center STANFORD, CH-LUM-W CH-LUM-W Transferred by Stanford Linear Accelerator Center.	CH-LUM-W	1987 - 2070	1900	cubic meters
J University of California - Davis B LEBN DAV, CH-LUM-I CH-LUM-I Transferred by University of California - Davis. B LEBN DAV, CH-LUM-W CH-LUM-W Transferred by University of California - Davis.	CH-LUM-I	1987 - 2030	979.0	cubic meters
	CH-LUM-W	1987 - 1997	481.0	cubic meters
K University of Utah U U, CH-LUM-I CH-LUM-I Transferred by University of Utah U U, CH-LUM-W CH-LUM-W Transferred by University of Utah.	CH-LUM-I	1997 - 1997	7.30	cubic meters
	CH-LUM-W	1997 - 1997	7.30	cubic meters
L0 Stanford Legacy L0, CH-LUM-W (Inventory at OMC) CH-LUM-W Transferred by Stanford Legacy	CH-LUM-W	1997 - 1997	82.00	cubic meters

INTERNAL INPUTS

Table B.1-3 Internal Inputs for Central Waste Complex

Stream	Category	Period	Baseline	Units
Feeds B.1-2 Reactors on the Utah Site Operable Units				
Reactor CH-TNU	(from feedwater)			
CH-TNU Disposed by SR 2.0 DISPOSED				
Feeds B.1-3 100 K Area Facilities				
K PRODUCE, CH-LUM-I	CH-LUM-I	1997 - 2000	913.0	cubic meters
CH-LUM-I Transferred by 100 K Area Facilities.				
K QUEN, CH-LUM-W	CH-LUM-W	1997 - 2000	225.0	cubic meters

Table 2. 1-3 Internal Inputs for Central Waste Complex (Continued)

[illegible]

Table B.1-9 Internal Inputs for Central Waste Complex (Continued)

Process	Category	Period	Expenditure	Units
B PLANT, CH-LLW-4 CH-LLW-4 Transferred by B Plant	CH-LLW-1	1960 - 1968	2.0	cubic meters
Section 3.3.4 Waste Encapsulation and Storage Facility				
WESF, CH-LLW-4 CH-LLW-4 Transferred by Waste Encapsulation and Storage Facility.	CH-LLW-1	1967 - 2025	404.0	cubic meters
WESF, CH-LLW-10 CH-LLW-10 Transferred by Waste Encapsulation and Storage Facility.	CH-LLW-10	1997 - 2025	58.0	cubic meters
WESF, CH-LLW-1 CH-LLW-1 Transferred by Waste Encapsulation and Storage Facility.	CH-LLW-7	1977 - 2025	29.0	cubic meters
Section 3.3.5 Plutonium Finishing Plant				
PFP, CH-TRU-1 CH-TRU-1 Transferred by Plutonium Finishing Plant.	CH-TRU-1	1967 - 2025	305.0	cubic meters
MP-PFP TR, CH-LLW-10 CH-LLW-10 Transferred by Plutonium Finishing Plant	CH-LLW-10	2007 - 2027	16.0	cubic meters
MP-PFP TR, CH-LLW-10 CH-LLW-10 Transferred by Plutonium Finishing Plant	CH-LLW-10	2003 - 2037	3.0	cubic meters
MP-PFP TR, CH-LLW-1 CH-LLW-1 Transferred by Plutonium Finishing Plant.	CH-LLW-1	2008 - 2037	55.0	cubic meters
PFP, CH-LLW-10 CH-LLW-10 Transferred by Plutonium Finishing Plant.	CH-LLW-10	1997 - 2025	679.0	cubic meters
MP-PFP TR, CH-TRU-1 CH-TRU-1 Transferred by Plutonium Finishing Plant	CH-TRU-1	2003 - 2037	40.0	cubic meters
PFP, CH-TRU-1 CH-TRU-1 Transferred by Plutonium Finishing Plant.	CH-TRU-1	1967 - 2034	6740	cubic meters
PFP, CH-LLW-1 CH-LLW-1 Transferred by Plutonium Finishing Plant.	CH-LLW-1	1967 - 2034	809.0	cubic meters
PFP, CH-LLW-10 CH-LLW-10 Transferred by Plutonium Finishing Plant.	CH-LLW-10	1997 - 2034	342	cubic meters
PFP, CH-LLW-4 CH-LLW-4 Transferred by Plutonium Finishing Plant	CH-LLW-1	1967 - 2036	3260	cubic meters
SP-PFP TR, CH-LLW-4 CH-LLW-4 Transferred by Plutonium Finishing Plant.	CH-LLW-4	2003 - 2037	75.5	cubic meters
MP-PFP TR, CH-TRU-1 CH-TRU-1 Transferred by Plutonium Finishing Plant.	CH-TRU-1	2003 - 2037	7.0	cubic meters
Section 3.3.10 Radiochemical Separation Plant				
RP-REDUX TR, CH-TRU-1 CH-TRU-1 Transferred by Radiochemical Separation Plant.	CH-TRU-1	2025 - 2029	175.0	cubic meters
RP-REDUX TR, CH-LLW-10 CH-LLW-10 Transferred by Radiochemical Separation Plant.	CH-LLW-10	2025 - 2029	1.8	cubic meters
RP-REDUX TR, CH-LLW-1 CH-LLW-1 Transferred by Radiochemical Separation Plant.	CH-LLW-1	2025 - 2029	500.0	cubic meters
RP-REDUX TR, CH-TRU-1 CH-TRU-1 Transferred by Radiochemical Separation Plant.	CH-TRU-1	2025 - 2029	35.0	cubic meters
RP-REDUX TR, CH-LLW-4 CH-LLW-4 Transferred by Radiochemical Separation Plant	CH-LLW-1	2025 - 2029	2.6	cubic meters
Section 3.3.12 Uranium Oxide Plant				
MP-U PLANT TR, CH-LLW-10 CH-LLW-10 Transferred.	CH-LLW-10	2001 - 2025	5.5	cubic meters
MP-U PLANT TR, CH-LLW-4 CH-LLW-4 Transferred.	CH-LLW-1	2001 - 2025	27.5	cubic meters
MP-U PLANT TR, CH-LLW-1 CH-LLW-1 Transferred.	CH-LLW-1	2001 - 2025	0.6	cubic meters
MP-U PLANT TR, CH-TRU-1 CH-TRU-1 Transferred.	CH-TRU-1	2001 - 2025	0.5	cubic meters
MP-U PLANT TR, CH-LLW-10 CH-LLW-10 Transferred.	CH-LLW-10	2001 - 2025	0.5	cubic meters
MP-U PLANT TR, CH-TRU-1 CH-TRU-1 Transferred.	CH-TRU-1	2001 - 2025	1.5	cubic meters
Section 3.3.12 Y-Plant Facility				
Y PLANT, CH-LLW-4 CH-LLW-4 Transferred by 221-F.	CH-LLW-1	1997 - 2007	817.0	cubic meters
Y PLANT TR, CH-TRU-1 CH-TRU-1 Transferred by 221-F.	CH-TRU-1	2029 - 2039	33.5	cubic meters
Y PLANT TR, CH-TRU-1 CH-TRU-1 Transferred by 221-F.	CH-TRU-1	2029 - 2039	7.5	cubic meters
Section 3.3.14 Mail Facility				
MAIL AS STORAGE, CH-LLW-1 CH-LLW-1 Transferred by MAIL AS STORAGE	CH-LLW-1	1967 - 2070	3630	cubic meters

Table B.1-9 Internal Invertebrates for Central Waste Complex (Continued)

System	Category	Period	Baseline	Units
Section 2.2.1: Single Shaft Tank (SST) System				
CH LUMW I (Transferred by Single Shaft Tank (SST) System)	CH LUMW I	1997 - 2025	26.0	cubic meters
CH LUMW I (Transferred by Single Shaft Tank (SST) System)	CH LUMW I	1997 - 2024	259.0	cubic meters
CH LUMW I (Transferred by Single Shaft Tank (SST) System)	CH LUMW I	1997 - 2024	92.4	cubic meters
Section 2.2.2: Double Shaft Tank (DST) System				
RET LUE, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	PH TRUM	2001 - 2000	491.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1994 - 2017	383.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1994 - 2017	507.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH TRUM	1991 - 2000	494.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1994 - 1997	503.0	cubic meters
RET LUE, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	PH LUMW I	1991 - 2017	3290.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	PH LUMW I	1994 - 2017	168.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	PH LUMW I	1994 - 2017	233.0	cubic meters
Section 2.2.3: Double Shaft Tank (DST) System				
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1997 - 2000	672.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	PH LUMW I	1997 - 2000	881.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1997 - 2000	719.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	PH TRUM	1991 - 2000	15.1	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1997 - 1997	41.9	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	PH LUMW I	1991 - 2000	322.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1991 - 2000	750.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	PH LUMW I	1997 - 2000	395.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	PH LUMW I	1991 - 2000	179.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1997 - 2000	306.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1997 - 2000	112.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1991 - 2000	129.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	PH LUMW I	1997 - 2000	278.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	PH LUMW I	1991 - 2000	58.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1997 - 2000	397.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	2000 - 2000	114.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1997 - 1997	5.14	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1997 - 2000	90.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1997 - 2000	263.0	cubic meters
RET RET, CH LUMW I (Transferred by Double Shaft Tank (DST) System)	CH LUMW I	1991 - 2000	82.0	cubic meters
Section 2.2.4: Transferable Storage and Assay Facility				
RET RET, CH LUMW I (Transferred by Transferable Storage and Assay Facility)	CH LUMW I	1997 - 1999	1.54	cubic meters

Table B.1-3 Internal inputs for Central Waste Complex (Continued)

Item	Category	Period	Quantity	Units
Item B.1.1: RWL Storage Modules, Phase II				
RWL Storage, CHLLW-4	CHLLW-1	2041 - 2044	3200	cubic meters
CHLLW-7 Transferred by RWL Storage Module, Phase II				
Item B.1.2: 222-R Laboratory				
ANALYT LAB, CHLTRM	CHLTRM	1997 - 2070	18.0	cubic meters
CHLTRM Transferred by 222-R Laboratory				
ANALYT LAB, CHLLW-10	CHLLW-11	1997 - 2070	1250	cubic meters
CHLLW-10 cold waste generated during day to day operations necessary for analyzing high level radioactive samples				
ANALYT LAB, CHLLW-7	CHLLW-7	1997 - 2070	14800	cubic meters
CHLLW-7 Transferred by 222-R Laboratory				
ANALYT LAB, CHLLW-11	CHLLW-11	1997 - 2070	2810	cubic meters
CHLLW-11 Transferred by 222-R Laboratory				
ANALYT LAB, CHLLW-4	CHLLW-11	1997 - 2070	565.0	cubic meters
CHLLW-11 Transferred by 222-R Laboratory				
Item B.1.3: Waste Sampling and Characterization Facility				
WSPF, CHLLW-4	CHLLW-1	1997 - 2025	59.0	cubic meters
CHLLW-1 Transferred by Waste Sampling and Characterization Facility				
WSPF, CHLLW-11	CHLLW-11	1997 - 2025	29.0	cubic meters
CHLLW-11 Transferred by Waste Sampling and Characterization Facility				
Item B.1.4: Central Plutonium Water System				
Potable Water for 200-SWIM	Potable Water	1998 - 2094	652.0	kgal
Potable Water for 200-SWIM				
Item B.1.5: Central Plutonium Office Facilities				
Office Space (Program Owned) for 200-SWIM	Office Space (Program Owned)	1998 - 2094	1800000	sq. ft.
Office Space (Program Owned) for 200-SWIM				
Paper Service for 200-SWIM	Paper Service	1998 - 2094	2870	ml. of paper
Paper Service for 200-SWIM				
Item B.1.6: Central Plutonium Electrical Systems				
Electricity for 200-SWIM	Electricity	1998 - 2094	18500	MWH-yr
Electricity for 200-SWIM				
Item B.1.7: Central Plutonium Telecommunication Systems				
Pagers, National/Regional for 200-SWIM	Pagers, National/Regional	1998 - 2094	74.0	no. of pager
Pagers, National/Regional for 200-SWIM				
Video Communication for 200-SWIM	Video Communication	1998 - 2094	4000	hours
Video Communication for 200-SWIM				
Voice (Telephone) Communication for 200-SWIM	Voice (Telephone) Communication	1998 - 2094	8000	no. of phone
Voice (Telephone) Communication for 200-SWIM				
Data (BLAU) Transmission for 200-SWIM	Data (BLAU) Transmission	1998 - 2094	8000	ml. of PCs
Data (BLAU) Transmission for 200-SWIM				
Item B.1.8: Central Plutonium Shop Facilities				
Maintenance Services Electrical for 200-SWIM	Maintenance Services (Electrical)	1998 - 2094	1.9	FTE
Maintenance Services Electrical for 200-SWIM				
Maintenance Services Structural for 200-SWIM	Structural Services	1998 - 2094	1000000	sq. ft.
Structural Services for 200-SWIM				
Paint Shop Services for 200-SWIM	(none forecasted)			
Paint Shop Services for 200-SWIM				
Maintenance Services Carpenter for 200-SWIM	Maintenance Services Carpenter	1998 - 2094	14.7	FTE
Maintenance Services Carpenter for 200-SWIM				
Maintenance Services Carpenter for 200-SWIM	Libby (Carpenter)	1998 - 2094	10000	cubic yards
Libby (Carpenter) for 200-SWIM				
Item B.1.9: Central Plutonium Storage Support Facilities				
Allocated Storage for CWC	Allocated Storage	1998 - 2094	7400	sq. ft.
Item B.1.10: Central Plutonium Road System				
Heavy Equipment for 200-SWIM	(none forecasted)			
Heavy Equipment for 200-SWIM				
Bedford/Light Trucks for 200-SWIM	Bedford/Light Trucks	1998 - 2094	256.8	no. of vehicles
Bedford/Light Trucks for 200-SWIM				
Heavy Trucks for 200-SWIM	Heavy Trucks	1998 - 2094	14000	vehicle days
Heavy Trucks for 200-SWIM				
Hanford Road Sys. Heavy Traffic for 200-SWIM	Hanford Road Sys. Heavy Traffic	1998 - 2094	15704	truck loads
Hanford Road Sys. Heavy Traffic for 200-SWIM				

Table B.1-3 Internal Inputs for Central Waste Complex (Continued)

Station	Category	Period	Resource	Units
Process 4.1.1 300 Area Thermal Effluent Disposal Facility				
300 TEFDF CH LLW-I Secondary waste from inventory returned to waste stream at the 300 Area TEFDF	CH LLW-I	1987 - 2025	5499	— cubic meters
Process 4.1.2 Thermal Treatment Facility				
OTF to Storage, CH LLW-I CH LLW-I Transferred by OTF to Storage	CH LLW-I	1987 - 2070	3289	cubic meters
Process 4.2.6 Low-Level Mixed Waste Solidification Facility				
STP to Storage, CH LLW-I CH LLW-I Transferred by STP to Storage	CH LLW-I	1987 - 2070	67700	— cubic meters
Process 4.3.1 Fast Flux Test Facility				
SODIUM TEST, CH-LLW-M CH-LLW-M Generated by S2F Sodium Fast Facility	CH-LLW-M	1989 - 1999	8 145	cubic meters
FFTR, CH-LLW-I CH-LLW-I Transferred by Fast Flux Test Facility	CH-LLW-I	1987 - 2001	50.5	cubic meters
FFTR, CH-LLW-M CH-LLW-M Transferred by Fast Flux Test Facility	CH-LLW-M	2001 - 2001	0.267	cubic meters
SODIUM TEST, CH-LLW-M CH-LLW-M Transferred by Fast Flux Test Facility	CH-LLW-M	1987 - 1997	9 8051	cubic meters
FFTR, CH-LLW-M CH-LLW-M Transferred by Fast Flux Test Facility	CH-LLW-M	1987 - 1999	2.81	cubic meters
FFTR, CH-LLW-M CH-LLW-M Transferred by Fast Flux Test Facility	CH-LLW-M	1987 - 1999	31.6	— cubic meters
Process 4.3.2 300 Area Fuel Supply System				
FUEL TRAYS, CH-LLW-M CH-LLW-M Transferred by 300 Area Fuel Supply System	CH-LLW-M	1987 - 1997	3 12	cubic meters
Process 4.3.4 300 Buildings				
PHTR, CH-TRU CH-TRU Transferred by 300 Building	CH-TRU	1987 - 1988	0.544	cubic meters
PHTR, CH-LLW-M CH-LLW-M Transferred by 300 Building	CH-LLW-M	1987 - 1987	0.257	cubic meters
PHTR, CH-LLW-M CH-LLW-M Transferred by 300 Building	CH-LLW-M	1987 - 1988	0.6	cubic meters
PHTR, CH-LLW-M CH-LLW-M Transferred by 300 Building	CH-LLW-M	1987 - 1988	9.544	cubic meters
Process 4.4 300 Area Radiological Site				
Radiological Standards (Californians) for 300-BWM	Radiological Standards (Californians)	1988 - 2004	4260	californians
Radiological Standards (Californians) for 300-CPWM	Radiological Standards (Californians)	1988 - 2004	370.8	californians
Barometry and Cosmology Services for 300-BWM	Barometry and Cosmology Services	1988 - 2004	370.8	californians
Process 4.4.1 304 Building				
PHWL 304, CH-LLW-I CH-LLW-I Transferred by 304 Building	CH-LLW-I	1987 - 2001	127.9	cubic meters
PHWL 304, PH-LLW-M PH-LLW-M Transferred by 304 Building	PH-LLW-M	1987 - 2001	160.0	cubic meters
PHWL 304, PH-TRU PH-TRU Transferred by 304 Building	PH-TRU	1987 - 2001	5.0	cubic meters
PHWL 304, CH-LLW-M CH-LLW-M Transferred by 304 Building	CH-LLW-M	1987 - 2001	480.0	cubic meters
PHWL 304, PH-TRU PH-TRU Transferred by 304 Building	PH-TRU	1987 - 2001	7.0	cubic meters
PHWL 304, CH-TRU CH-TRU Transferred by 304 Building	CH-TRU	1987 - 1987	4.0	cubic meters
PHWL 304, CH-LLW-M CH-LLW-M Transferred by 304 Building	CH-LLW-M	1987 - 2001	20.0	— cubic meters
Process 4.4.2 327 Building				
PHWL 327, CH-LLW-I CH-LLW-I Transferred by 327 Building	CH-LLW-I	1987 - 2005	2.31	cubic meters
PHWL 327, CH-TRU CH-TRU Transferred by 327 Building	CH-TRU	1996 - 2006	0.771	— cubic meters
PHWL 327, PH-LLW-M PH-LLW-M Transferred by 327 Building	PH-LLW-M	1987 - 2005	2.57	— cubic meters
PHWL 327, CH-LLW-M CH-LLW-M Transferred by 327 Building	CH-LLW-M	1987 - 2005	21.8	cubic meters
PHWL 327, CH-TRU CH-TRU Transferred by 327 Building	CH-TRU	1987 - 2005	56.5	cubic meters
PHWL 327, CH-LLW-I CH-LLW-I Transferred by 327 Building	CH-LLW-I	1987 - 2005	129.0	cubic meters

Table E.1-3 Internal Inputs for Central Waste Complex (Continued)

<u>Strain</u>	<u>Category</u>	<u>Period</u>	<u>Residue</u>	<u>Critica</u>
CHILLWV Transferred by SEY Building.				
ISOPRS-ALB-206 / CH-TRU				
GREN, CH-TRUM	CH TRUM	1997 - 2010	76.0	cubic meters
CH TRUM Transferred by Pacific Northwest National Laboratory.				
KP SITE SUP TR, CH-TRU	CH TRU	2027 - 2031	30.0	cubic meters
CH TRU Forwarded.				
PRESL, CH-LINW	CH LIN W	1997 - 2010	6700	cubic meters
CH LIN W Transferred by Pacific Northwest National Laboratory.				
BEN BRUNN FAC, CH-TRU	CH TRU	1997 - 2008	1500	cubic meters
CH TRU Forwarded.				
PRESL, CH-LINW-H	RH LINW H	1997 - 2006	17.9	cubic meters
CH LNW-H Transferred by Pacific Northwest National Laboratory.				
PRESL, CH-LINW	RH LINW I	1997 - 2006	219.0	cubic meters
CH LNW-I Transferred by Pacific Northwest National Laboratory.				
RP-400 TR, CH-TRU	CH TRU	2010 - 2022	73.9	cubic meters
CH TRU Transferred.				
PHON, CH-LINW-M	(none collected)			
CH LINW-I Transferred by Pacific Northwest National Laboratory.				
RP-306 TR, CH-TRU	CH TRU	2011 - 2016	634.0	cubic meters
CH TRU Transferred.				
PHON, RH-LINW-M	RH LINW M	1997 - 2010	35.0	cubic meters
RH LINW-M Transferred by Pacific Northwest National Laboratory.				
PHON, CH-LINW-H	CH LINW H	1997 - 2010	295.0	cubic meters
CH LINW-H Transferred by Pacific Northwest National Laboratory.				
PHIL, CH-TRU	CH TRU	1997 - 2010	185.0	cubic meters
CH TRU Transferred by Pacific Northwest National Laboratory.				
PHON, RH-LINW-M	RH LINW M	1997 - 2010	179.0	cubic meters
PHILLY-I Transferred by Pacific Northwest National Laboratory.				
PHIL, CH-LINW-H	CH LINW H	1997 - 2010	207.0	cubic meters
CH LINW-H Transferred by Pacific Northwest National Laboratory.				
PHON, RH-TRU	RH TRU	1997 - 2010	47.2	cubic meters
RH TRU Transferred by Pacific Northwest National Laboratory.				
PHON, RH-TRU	RH TRUM	1997 - 2010	66.2	cubic meters
RH TRU-I Transferred by Pacific Northwest National Laboratory.				
RESEARCHS-331 Complete.				
Non-reg Bioactive (Cultures) for ZED-SMMS	Non-reg Bioactive (Cultures)	1999 - 2004	740.4	cylinders
Non-reg Sterile (Cultures) for ZED-SMMS	Non-reg Sterile (Cultures)	1999 - 2004	20.0	samples
Industrial Hygiene Services for ZED-SMMS	Industrial Hygiene Services	1999 - 2004		
Industrial Hygiene Services for ZED-SMMS	Industrial Hygiene Services	1999 - 2004	20.0	samples

EXTERNAL OUTPUTS

Table E.1-4 External Outputs for Central Waste Cluster

Stream	Category	Period	Baseline	Units
Household Waste Disposal Contracts CWC Hot Waste Stream Household waste accepted for incineration	WTE	2007-2014	37%	solid waste

INTERNAL OUTPUTS

Table B.1-5 Internal Outlets for Central Waste Complex

Stream	Category	Period	Baseline	Media
Version 2.2.3.14 - M-01 Facility				
Storage to M-01, CH LLMW1	CH LLMW1	1937 - 1970	3450	public stream
CH LLMW1 Transferred by Storage to M-01				
Storage to M-01, RH LLMW1	RH LLMW1	1937 - 1970	3450	public stream
RH LLMW1 Transferred by Storage to M-01				
Storage to M-01, RH TRLM1	RH TRLM1	1937 - 1970	1850	public stream
RH TRLM1 Transferred by Storage to M-01				
Storage to M-01, CH TRLM1	CH TRLM1	1937 - 1970	1850	public stream
CH TRLM1 Transferred by Storage to M-01				
Version 2.2.3.15 - WRAP Module 1				
Storage to WRAP1, CH TRLM1	CH TRLM1	1937 - 1970	1840	public stream
CH TRLM1 Transferred by Storage to WRAP1				

Table B.1-5 Internal Outputs for Central Waste Complex (Continued)

Strata	Category	Period	Baseline	Units
Item 1.2.4.1 Low-Level Waste Isolation Grounds CMC CHLLW / Disposal CHLLW / packaged and verified for disposal at the low level waste grounds.	CHLLW /	1997 - 2070	17000	cubic meters
Item 1.2.4.2 Mixed Waste Disposal Periods STP Treated to Disposal, CHLLMW / CHLLMW / Disposed by STP Treated to Disposal STOM2GUP, CHLLMW-4 CHLLMW / Transferred Direct Disposal, RH LLMW / RH LLMW / Disposed by Direct Disposal CTT Treated to Disposal, CHLLMW / CHLLMW / Disposed by CTT Treated to Disposal CMC, CH LLMW / CHLLMW / Transferred by WMC CMC	CH LLMW / (none for CMC) RH LLMW / CH LLMW / CH LLMW /	1997 - 2070 1997 - 2070 1997 - 2070 1997 - 2070	57760 25494 3320 29.0	cubic meters cubic meters cubic meters cubic meters
Item 1.2.5.1 22548 Laboratory Analytical Laboratory Services for 200-SWM Analytical Laboratory Services for 200-SWM	Analytical Laboratory Services	1998 - 2024	200.0	samples
Item 1.2.5.2 Waste Sampling and Characterization Facility In-Field Laboratory Services for 200-SWM In-Field Laboratory Services for 200-SWM	In-Field Laboratory Services	1998 - 2024	259.0	samples
Item 1.2.5.3 Thermal Treatment Facility Storage to CTT, CHLLMW / CHLLMW / Transferred by Storage to CTT	CHLLMW /	1997 - 2070	3320	cubic meters
Item 1.2.5.4 Low-Level Waste Waste Solidification Facility Storage to STP, CHLLMW / CHLLMW / Transferred by Storage to STP	CHLLMW /	1997 - 2070	33900	cubic meters

B.1.1.3.2 Nonradioactive Dangerous Waste Storage Facility

B.1.1.3.2.1 Nonradioactive Dangerous Waste Storage Facility Description

Nonradioactive Dangerous Waste Storage Facility (B1B Building) was used for storing hazardous waste/materials pending disposition. This facility is currently in standby mode. No operations of this facility are planned.

B.1.1.3.2.2 Nonradioactive Dangerous Waste Storage Facility Facility Technical Logic

The technical logic for the Nonradioactive Dangerous Waste Storage Facility is captured in the facility's functional flow block diagram which shows the functions performed for each applicable life cycle phase of the facility and the sequence in which the functions are executed.

Figure B-2 NONHAZARDOUS WASTE STORAGE FACILITY

B.1.1.3.2.3 Nonradioactive Dangerous Waste Storage Facility Requirements and Life Cycle Function Descriptions

Requirements:

- Central Plateau high cost surplus facilities shall be transitioned to a low cost, stable, deactivated condition
- S16 building shall be operated in the cold standby mode within the approved safety envelope
- S16 building shall be maintained in the cold standby mode within the approved safety envelope
- Central Plateau inactive facilities shall be maintained within the approved safety envelope

Life Cycle Function Descriptions:

B.1.1.3.2.3.1 NONRADIOACTIVE DANGEROUS WASTE STORAGE FACILITY PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program; establishing broad priorities; providing program technical direction; preparing and defending the program budget; controlling milestones; integrating all components of the program; providing public and private sector policy liaison; expediting interface activities and follow-up actions; and retaining overall accountability for program success.

B.1.1.3.2.3.2 NONRADIOACTIVE DANGEROUS WASTE STORAGE FACILITY POST OPERATIONS WORK SCOPE SUMMARY

Day-to-day work, including pre-stabilization surveillance and maintenance, stabilization, post-stabilization surveillance and maintenance, deactivation, and post-deactivation surveillance and maintenance, that is required to allow safe decontamination and decommissioning.

NONRADIOACTIVE DANGEROUS WASTE STORAGE FACILITY POST OPERATIONS SPECIFIC FUNCTIONS

B.1.1.3.2.3.3 Maintain Safe & Compliant Non-radioactive Dangerous Waste Storage Facility in CP Area

Maintain the Non-Radioactive Dangerous Waste Storage facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facilities are made available for clean-up.

B.1.1.3.2.3.4 Transition Non-Radioactive Dangerous Waste Storage Facility

Initiate the transition phase of decontamination and decommissioning for the Non-Radioactive Dangerous Waste Storage Facility

B.1.1.3.2.4 Nonradioactive Dangerous Waste Storage Facility Boundary Diagram

Table B.1-6 Nonradioactive Dangerous Waste Storage Facility Boundary Diagram

Actual Interface None	Actual Interface None
Planned Site Environmental System Interface None	Planned Site Environmental System Interface None

B.1.1.3.2.5 Nonradioactive Dangerous Waste Storage Facility Interlock Description and Forecast

EXTERNAL INPUTS

-None-

INTERNAL INPUTS

-None-

EXTERNAL OUTPUTS

-None-

INTERNAL OUTPUTS

-None-

8.1.1.3.3 Transuranic Storage and Assay Facility

8.1.1.3.3.1 Transuranic Storage and Assay Facility Description

The Transuranic Storage and Assay Facility (TRUSAF) provides storage for TRU and TRUM waste in drums. Limited assay capability is provided. TRUSAF is assumed to have a capacity of 2000 55-gal drums, or 520 cubic meters.

8.1.1.3.3.2 Transuranic Storage and Assay Facility Facility Technical Logic:

The technical logic for the Transuranic Storage and Assay Facility is captured in the facility's functional flow block diagram which shows the functions performed for each applicable life cycle phase of the facility and the sequence in which the functions are executed.

Figure B-8 TRANSURANIC STORAGE AND ASSAY FACILITY

B.1.1.2.3.3 Transuranic Storage and Assay Facility Requirements and Life Cycle Function Descriptions

Requirements:

- Central Plateau high cost surplus facilities shall be transitioned to a low cost, stable, deactivated conditioned
- Central Plateau inactive facilities shall be maintained within the approved safety envelope
- 224-T TRUSAF shall be operated within the approved safety envelope
- 224-T TRUSAF shall be maintained within the approved safety envelope
- TRU/TRUM waste shall be prepared for shipment to the Waste Isolation Pilot Plant

Life Cycle Function Descriptions:

B.1.1.3.3.1 TRANSURANIC STORAGE AND ASSAY FACILITY PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program; establishing broad priorities; providing program technical direction; preparing and defending the program budget; controlling milestones; integrating all components of the program; providing public and private sector policy liaison; expediting interface activities and follow-up actions; and retaining overall accountability for program success.

B.1.1.3.3.2 TRANSURANIC STORAGE AND ASSAY FACILITY POST OPERATIONS WORK SCOPE SUMMARY

Day-to-day work, including pre-stabilization surveillance and maintenance, stabilization, post-stabilization surveillance and maintenance, deactivation, and post-deactivation surveillance and maintenance, that is required to allow safe decontamination and decommissioning.

TRANSURANIC STORAGE AND ASSAY FACILITY POST OPERATIONS SPECIFIC FUNCTIONS

B.1.1.3.3.3 Maintain Safe & Compliant Transuranic Storage and Assay Facility in CP Areas

Maintain the TRU Storage facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facilities are made available for clean-up.

B.1.1.3.3.4 Transition Transuranic Storage and Assay Facility

Initiate the transition phase of decontamination and decommissioning for the Transuranic Storage and Assay Facility

B.1.1.3.3.5 TRANSURANIC STORAGE AND ASSAY FACILITY OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

TRANSURANIC STORAGE AND ASSAY FACILITY OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B.1.1.3.3.2.6 Remove CH TRU/TRUM Waste in TRUSAF

Prepare TRUSAF for transition to shutdown.

B.1.1.3.3.4 Transuranic Storage and Assay Facility Boundary Diagram

Table B.1-7 Transuranic Storage and Assay Facility Boundary Diagram

External Interface -None- Hazardous Site Environmental System Interface -None-		External Interface -None- Hazardous Site Environmental System Interface -None- HSP-GP-9226, 2.1.1 Low-Level Waste Final Schedule
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B.1.1.3.3.5 Transuranic Storage and Assay Facility Interface Description and Forecast

EXTERNAL INPUTS

-None-

INTERNAL INPUTS

-None-

EXTERNAL OUTPUTS

-None-

INTERNAL OUTPUTS

Table B.1-6 Internal Outputs for Transuranic Storage and Assay Facility

ITEM	Category	Period	Quantity	Units
TABLE B.1-6 Low-Level Waste Surfer Breasts TRUSAF CHILLW1 CHILLW1 Transferred by TRUSAF	CHILLW1	1997 - 1999	1.04	- cubic meters

B.1.1.3.4 Low-Level Waste Burial Grounds Facility

B.1.1.3.4.1 Low-Level Waste Burial Grounds Facility Description

The Low Level Waste (LLW) burial grounds provide disposal capability for Category I and Category III LLW. The capacity of the LLW burial grounds is designed to accommodate burial of all forecasted Category I and Category III LLW in the 200 Areas.

B.1.1.3.4.2 Low-Level Waste Burial Grounds Facility Technical Logic:

The technical logic for the Low Level Burial Grounds (LLBG) is captured in the functional flow block diagram which shows the functions performed for each applicable life cycle phase of the LLBG and the sequence in which the functions are executed.

Figure B-4 LOW-LEVEL WASTE BURIAL GROUNDS

B.1.1.3.4.3 Low-Level Waste Burial Grounds Requirements and Life Cycle Function Descriptions

Requirements:

- Disposal standards in the central plateau area will be established that are consistent with the long term goal to use the central plateau area to manage nuclear materials and collect and dispose of waste materials that remain onsite.
- Central Plateau high cost surplus facilities shall be transitioned to a low cost, stable, decontaminated condition
- Low Level Waste Burial Grounds shall be operated within the approved safety envelope
- Low Level Waste Burial Ground shall be surveilled and maintained within the approved safety envelope
- Unirradiated uranium shall be dispositioned offsite or disposed onsite as low level waste
- Onsite low level waste shall be dispositioned in the Central Plateau
- Offsite low level waste shall be dispositioned in the Central Plateau
- U.S. Navy low level waste shall be dispositioned in the Central Plateau
- Solid wastes shall be dispositioned consistent with national policies for management of transuranic, low level, low level mixed and hazardous wastes
- Contaminated media from soil sites in the South 600 area shall be disposed in the Central Plateau
- Onsite wastes shall be disposed in the Central Plateau.
- Offsite wastes shall be disposed in the Central Plateau.
- Central Plateau inactive facilities shall be maintained within the approved safety envelope
- Central Plateau unsegregated wastes (including pre 1970 TRLU) shall not be retrieved
- Low level waste from onsite sources shall be received in the 200 area
- Low level waste from offsite sources shall be received in the 200 area
- Remediation levels and disposal standards that are consistent with long term uses for the central plateau will be established.

Life Cycle Function Descriptions:

B.1.1.3.4.3.1 LOW-LEVEL WASTE BURIAL GROUNDS PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program; establishing broad policies; providing program technical direction; preparing and defending the program budget; controlling milestones; integrating all components of the program; providing public and private sector policy liaison; expediting interface activities and follow-up actions; and retaining overall accountability for program success.

B.1.1.3.4.3.2 LOW-LEVEL WASTE BURIAL GROUNDS OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

LOW-LEVEL WASTE BURIAL GROUNDS OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B.1.1.3.4.3.3 Disposition Cat I and III LLW

Disposition category I and III low level waste to support the ongoing environmental management mission.

B.1.1.3.4.3.4 Disposition Greater than Category 3 Low Level Solid Waste

Disposition of GTWC3 waste is defined as receiving packaged GTWC3 waste from treatment/storage facilities, assuring that a permitted (performance assessment and NEPA process) waste disposal facility is available onsite, transporting the waste to the disposal facility and placing it in disposal there.

B.1.1.3.4.3.5 Operate LLW Burial Ground

Operate and maintain the LLW Burial Grounds within the approved safety envelope to support the ongoing Site Environmental Management mission.

B.1.1.3.4.3.6 LOW-LEVEL WASTE BURIAL GROUNDS POST OPERATIONS WORK SCOPE SUMMARY

Day-to-day work, including pre-stabilization surveillance and maintenance, stabilization, post-stabilization surveillance and maintenance, deactivation, and post-deactivation surveillance and maintenance, that is required to allow safe decontamination and decommissioning.

LOW-LEVEL WASTE BURIAL GROUNDS POST OPERATIONS SPECIFIC FUNCTIONS

B.1.1.3.4.3.7 Maintain Safe & Compliant Low Level Burial Grounds Facility in CP Areas

Maintain the LLW Burial Grounds facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facilities are made available for clean-up.

B.1.1.3.4.3.8 Transition Low Level Burial Grounds Facility

Initiate the transition phase of decontamination and decommissioning for the Low Level Burial Grounds Facility

B.1.1.3.4.4 Low-Level Waste Burial Grounds Boundary Diagram

Table B.1-0 Low-Level Waste Burial Grounds Boundary Diagram

External Interfaces	External Interfaces
Waste/LLW Facility	None
Waste/LLW Environmental System Interface	None
Waste/LLW E. R. T. Plant Facility	None
Waste/LLW E. R. T. Plant Facility	None
Waste/LLW E. R. T. Plant Facility	None
Waste/LLW E. R. T. Plant Facility	None
Waste/LLW E. R. T. Plant Facility	None
Waste/LLW E. R. T. Plant Facility	None

B.1.1.3.4.5 Low-Level Waste Burial Grounds Interface Description and Forecast

EXTERNAL INPUTS

Table B.1-10 External Inputs for Low-Level Waste Burial Grounds

Stream	Category	Period	Baseline	Units
CG Heelord Legacy Legacy CHLLW1 Inventory in LLBG	CH LLW1	1997 - 1997	4000	cubic meters
Low level solid waste currently in low level burial grounds from previous years	CH LLW1	1997 - 1997	179.0	cubic meters

INTERNAL INPUTS

Table B.1-11 Internal Inputs for Low-Level Waste Burial Grounds

Stream	Category	Period	Baseline	Units
Process 2.2.12 T-Plant Facility T PLANT, CH-LLW1 CH LLW1 Transferred by 221-T.	CH LLW1	1997 - 2007	2630	cubic meters
HP T PLANT TR, CH-LLW1 CH LLW1 Transferred by 221-T.	CH LLW1	2008 - 2008	81.5	cubic meters
HP T PLANT TR, CH-LLW1 CH LLW1 Transferred by 221-T.	CH LLW1	2009 - 2009	0.5	cubic meters
T PLANT, NH-LLW1 NH LLW1 Transferred by 221-T.	NH LLW1	1997 - 2007	434.0	cubic meters
Process 2.2.16 WISUP Module 1 WISUP1, CH-LLW1 CH LLW1 Transferred by WISUP Module 1.	CH LLW1	1997 - 2070	385.0	cubic meters
Process 2.2.5 Central Waste Complex CWC CH LLW1 Disposed CH LLW1 packaged and verified for disposal at the low level burial grounds.	CH LLW1	1997 - 2070	170060	cubic meters
Process 2.2.9 Transuranic Storage and Assay Facility TRUSAF, CH LLW1 CH LLW1 Transferred by TRUSAF	CH LLW1	1997 - 1998	1.54	cubic meters

EXTERNAL OUTPUTS

-None-

INTERNAL OUTPUTS

-None-

B.1.1.3.5 Mixed Waste Disposal Trenches Facility

B.1.1.3.5.1 Mixed Waste Disposal Trenches Facility Description

Two mixed waste disposal trenches will provide RCRA-compliant, permanent on-site disposal for existing and newly generated radioactive mixed waste. CH-LLMW treated in the Stabilization Treatment Program (STP), the M-91 facility, or the Thermal Treatment Facility and RH-LLMW treated in the M-91 facility will be shipped to the mixed waste disposal trenches. The current capacity of each of the mixed waste disposal trenches is 7,600 cubic meters. Storage in-trench is included prior to authorizing disposal in the RMW trenches.

B.1.1.3.5.2 Mixed Waste Disposal Trenches Facility Technical Logic

The technical logic for the Mixed Waste Disposal Trench (MWDT) is captured in the functional flow block diagram which shows the functions performed for each applicable life cycle phase of the MWDT and the sequence in which the functions are executed.

Figure B 5 MIXED WASTE DISPOSAL TRENCHES

B.1.1.3.5.3 Mixed Waste Disposal Trenches Requirements and Life Cycle Function Descriptions

Requirements:

- Disposal standards in the central plateau area will be established that are consistent with the long term goal to use the central plateau area to manage nuclear materials and collect and dispose of waste materials that remain onsite.
- Central Plateau high cost surplus facilities shall be transitioned to a low cost, stable, deactivated condition.
- Onsite low level mixed waste shall be dispositioned in the Central Plateau.
- Offsite low level mixed waste shall be dispositioned in the Central Plateau.
- Onsite wastes shall be disposed in the Central Plateau.
- Offsite wastes shall be disposed in the Central Plateau.
- Central Plateau inactive facilities shall be maintained within the approved safety envelope.
- Low level mixed waste from offsite sources shall be received in the 200 area.
- Complete acquisition of new facilities, modification of existing facilities, and/or modification of planned facilities necessary for storage, treatment/processing, and disposal of all Hanford Site TRU/ITRUM, LLW, and GTC3.

Due Date: TBD

- Initiate Disposal of CH-LLW

Due Date: 6/30/2001

- Remediation levels and disposal standards that are consistent with long term uses for the central plateau will be established.

Life Cycle Function Descriptions:

B.1.1.3.5.3.1 MIXED WASTE DISPOSAL TRENCHES PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program; establishing broad priorities; providing program technical direction; preparing and defending the program budget; controlling milestones; integrating all components of the program; providing public and private sector policy liaison; expediting interface activities and follow-up actions; and retaining overall accountability for program success.

B.1.1.3.5.3.2 MIXED WASTE DISPOSAL TRENCHES OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

MIXED WASTE DISPOSAL TRENCHES OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B.1.1.3.5.3.3 Disposition Low Level Mixed Waste

Disposition of LLMW is defined as picking up packaged LLMW from the treatment/storage facility, certifying it meets waste disposal criteria for on-site disposal, transporting it to an on-site disposal facility, and placing it in the on-site disposal facility (Mixed Waste Disposal Trench).

B.1.1.3.5.3.4 MIXED WASTE DISPOSAL TRENCHES POST OPERATIONS WORK SCOPE SUMMARY

Day-to-day work, including pre-stabilization surveillance and maintenance, stabilization, post-stabilization surveillance and maintenance, deactivation, and post-deactivation surveillance and maintenance, that is required to allow safe decontamination and decommissioning.

MIXED WASTE DISPOSAL TRENCHES POST OPERATIONS SPECIFIC FUNCTIONS

B.1.1.3.5.3.5 Maintain Safe & Compliant Mixed Waste Disposal Trenches in CP Areas

Maintain the Mixed Waste Disposal Trenches structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facilities are ready available for clean-up.

B.1.1.3.5.3.6 Transition Mixed Waste Disposal Trenches

Initiate the transition phase of decontamination and decommissioning for the Mixed Waste Disposal Trenches

B.1.1.3.5.4 Mixed Waste Disposal Trenches Boundary Diagram

Table B.1-12 Mixed Waste Disposal Trenches Boundary Diagram

External Interface	Internal Interface
None	None
Harford Site Environmental System Interface	Harford Site Environmental System Interface
Room 2.2.14 M&H Facility	Room 2.2.16 Liquid Effluent Retention Facility
Room 2.2.18 WRAP Module 1	
Room 2.2.5 Control Waste Corridor	

B.1.1.3.3.5 Mixed Waste Disposal Trenches Interface Description and Forecast

EXTERNAL INPUTS

-None-

INTERNAL INPUTS

Table B.1-13 Internal Inputs for Mixed Waste Disposal Trenches

Stream	Category	Period	Baseline	Units
Process 2-2-14 MRF Facility MFI to Disposal, RH LLANN I RH LLANN I Disposed by MFI to Disposal	RH LLANN I	1987-2070	4750	cubic meters
Process 2-2-15 WULP Module 1 WULP1, CH LLANN I CH LLANN I Transferred by WULP Module 1	CH LLANN I	1987-2070	75.5	cubic meters
Process 2-2-5 Central Waste Complex STP Treated to Disposal, CH LLANN I CH LLANN I Disposed by STP Treated to Disposal STP Disposal, CH LLANN I CH LLANN I Transferred	CH LLANN I Disposal Incineration	1987-2070	57700	cubic meters
Direct Disposal, RH LLANN I RH LLANN I Disposed by Direct Disposal	RH LLANN I	1987-2070	25200	cubic meters
CTT Treated to Disposal, CH LLANN I CH LLANN I Disposed by CTT Treated to Disposal	CH LLANN I	1987-2070	3380	cubic meters
CWC, CH LLANN I CH LLANN I Transferred by WMC CWC	CH LLANN I	1987-2070	10.0	cubic meters

EXTERNAL OUTPUTS

-None-

INTERNAL OUTPUTS

Table B.1-14 Internal Outputs for Mixed Waste Disposal Trenches

Stream	Category	Period	Baseline	Units
Process 2-2-16 Liquid Effluent Treatment Facility Mixed Waste Disposal Trench Leachate Waste water from Mixed Waste Disposal Trench Leachate	Waste Water	1980-2030	48000	cubic meters

6.1.1.4 Drivers for Solid Waste Storage & Disposal

Table 6.1-15 Source Documents for Solid Waste Storage & Disposal

Name	Title
DOE Order 820.2A	Radioactive Waste Management
DOE/IS-0222D	Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan
DOE/RL-88-10	Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement), Rev. 4
DOE/RL-88-14	Updated Draft Mission Direction Document, June 1986
DOE/RL-88-82	Hanford Strategic Plan
WNC-IP-112D, Rev. 1	Standards/Requirements Identification Document (S/RID)
WNC-SD-WM-MAR-008, TWRS	
Mission Analysis Report	
WNC-SP-1114 Rev 2	Solid Waste Program Fiscal Year 1987 Multi-Year Work Plan

6.1.1.5 Solid Waste Storage & Disposal Risk Management

Units of Analysis (and any RDS #):

CWCLL BG MINIMUM SAFE (R96N0004, R96N0005, R96N0018, R96N0209, R96N0217, R96N0218, R96N0221)

CWCLL BG OPERATIONS (R96N0005, R96N0018)

LLBG CLOSURE PROJECT (W-329) (R96N0031)

SOLID WASTE PROGRAM MANAGEMENT (R96N0004)

Risk roll-up by year:

	1997	1998	1999	2000	2001	2002	2003	2004	2005
Public	3B-L	3B-L	3B-L	3B-L	3B-L	3B-L	3B-L	3B-L	3B-L
Worker	3B-M	3B-M	3B-M	3B-M	3B-M	3B-M	3B-M	3B-M	3B-M
Envr	3B-M	3B-M	3B-M	3B-M	3B-M	3B-M	3B-M	3B-M	3B-M

	2006	2007-10	2011-15	2016-20	2021-25
Public	3B-L	3B-L	3B-L	3B-L	3B-L
Worker	3B-M	3B-M	3B-M	3B-M	3B-M
Envr	3B-M	3B-M	3B-M	3B-M	3B-M

	2026-30	2031-35	2036-40	2041-45	2046-50
Public	3B-L	3B-L	3B-L	3B-L	3B-L
Worker	3B-M	3B-M	3B-M	3B-M	3B-M
Envr	3B-M	3B-M	3B-M	3B-M	3B-M

	2051-55	2058-60	2061-65	2066-70
Public	3B-L	3B-L	3B-L	L-3D
Worker	3B-M	3B-M	3B-M	L-3D
Envr	3B-M	3B-M	3B-M	L-3D

Has the risk evaluation been externally peer reviewed? (N)

Have regulators and stakeholders been involved in validating the project risk evaluations? (N)

G.1. Narrative

Identification of relevant PBS interfaces -- e.g., if the project ends and is transferred to another PBS.

This activity supports surveillance and maintenance of current waste inventories within TSCA and RCRA permitted storage and disposal facilities and maintaining safe, compliant facility conditions in preparation to receive solid low level, mixed, and transuranic waste for storage and disposal from all onsite generators and from offsite generators. The actual waste receipt activities are supported with Solid Waste resources while the funding is supported within the generator profiles. The Solid Waste Program additionally supports all onsite generators for direct offsite shipment of dangerous nonradioactive wastes for treatment and disposal. This activity also supports storage and disposal of solid waste resulting from onsite cleanup activities and disposal of the Reactor Compartments (RCs) from the U.S. Navy, as well as, obsolete DOE wastes. This project also interfaces with RL-WM04 for the disposal of treated mixed wastes and the retrieval operations of retrievable stored TRU waste.

Brief description of Project, hazards and activities

Solid Waste storage and disposal is a long-term mission to support the storage and disposal of solid wastes. Assuming that storage and disposal at Solid Waste facilities is not supported, the primary risks are found at the generator facilities as generated waste inventories stockpile. It is assumed that increasing inventories at the generator facilities over time result in increased worker exposures, increased potential for inadvertent releases to the environment. Failure to continue surveillance and monitoring of current waste inventories at Solid Waste facilities are assumed over time to result in containment breaches and subsequent release to the environment. The operations, surveillance, and maintenance of the Solid Waste facilities have inherent industrial risks, with the highest risks occurring during generator funded waste receipt activities.

Risk reduction metric(s) and demarcation of risk levels

How will this project reduce Hanford risks? What key project events are planned that will change risk?

The Solid Waste long-term mission of storage and disposal of solid wastes reaches its end state when all generator facilities have ceased operations, all cleanup activities are complete, Solid Waste facilities are deactivated, and closure of all burial grounds is achieved. At that time, all onsite and offsite generated low level are disposed in the LLBG and onsite and offsite treated mixed wastes are disposed in RCRA compliant landfill in the LLBG resulting in low long term risks to the public, site workers, and the environment.

What risk performance measures have been selected to track changes in risk? Are these direct metrics such as dose or indirect metrics such as volume of stabilized material?

Only indirect metrics are possible which relate to limits of operation as determined by analyzing the hazards with each facility including the waste inventories.

Public Health metric(s):

The basic public health measure is radiological dose, with an offsite location for 300 years, and then onsite locations thereafter.

Worker Health & Safety metric(s):

Worker doses as well as industrial accidents are both considered, with a range of potential frequency-severity combinations. The number of workers physically working in Solid Waste facilities during a given year, the volume of waste in storage, and the number of active burial grounds could be risk surrogates.

Environmental Health metric(s):

Potential spread of environmental contamination in the 200 areas is a relevant measure. Again, once the mixed solid wastes have been disposed in RCRA compliant landfills and low level waste has been disposed in the LLBG, there is a low probability for release of contamination, unless the facilities are abandoned and allowed to deteriorate extensively.

Risk Drivers:

Risk sources include existing inventories of stored and buried contact handled and remote handled low level, mixed, mixed TRU, TRU, mixed PCBs, radioactively contaminated PCBs, and reactor irradiated nuclear material. Additional

Industrial hazards are similar to other large facilities (electrical and facility infrastructure). Industrial accidents and the varying severity is proportional to the level of worker activity during a given year. Site experience, the scale of the operations, and the effectiveness of existing controls indicate the frequency of injury is expected to be once in 10 years.

Where are we now? BASELINE risks existing at the beginning of 1997 - "stopped project" risks against which progress will be measured.

Existing conditions, inventories: Millions of cubic feet of low level, mixed, TRU, mixed TRU, mixed waste, PCBs, and radioactively contaminated PCBs are stored, disposed, or removable buried within Solid Waste facilities. All stored wastes are within RCRA compliant facilities with ongoing surveillance and monitoring. Disposed and buried wastes within the burial grounds include legacy wastes, low level, mixed, TRU, and mixed TRU.

Baseline public health risks: Without compliant storage and disposal facilities and the resulting lack of proper storage and management of generator facilities, it is assumed the presently employed radioactive mixed and transuranic wastes have a high probability of inadvertent release to uncontrolled areas and subsequently travel offsite within 1 - 10 years. Future generated radioactive mixed and transuranic wastes would accumulate at the site of generation resulting in the potential for multiple sites of release to uncontrolled areas. Unacceptable safety risks to the public result. Quantities of undeposited radioactive wastes will increase during routine operations because of the lack of a compliant disposal facility, unacceptable safety risks to the public result. Cleanup activities will be congested and as a result contaminated and/or hazardous materials may be inadvertently released to uncontrolled areas and subsequently travel offsite and exceed established limits. This is assumed to occur within 1-10 years.

Baseline worker health & safety risks: Unmanaged or uncontained contamination poses a major threat to site staff safety and health. Virtually all Hanford Programs and many offsite generators will have significant impacts to mission, or create a large inventory, or unmanaged radioactive waste will lead to unacceptable exposures to site workers. There are increased risks of deterioration of facilities containing legacy wastes that could expose staff to high levels of contamination. As the current containers deteriorate, the condition would escalate leading to increasing and expanding exposures. Both short and long term ESSH risks of staff to contaminated and/or hazardous materials would result.

Baseline environmental health risks: There would be a greatly increased potential for contamination spread to the environment. Virtually all programs generating waste and be in RCRA non-compliance, therefore all cleanup progress will be impacted. High level contamination spread of low level, transuranic, and hazardous wastes would cause severe environmental damage over time that would not be easily containable.

Where are we going? Conditions at project completion or transfer and risk-related conditions in the outyears that relate to long-term ENDSTATE commitments.

Endstate conditions, inventories: All onsite and offsite mixed wastes (treated) would be disposed in RCRA compliant disposal facilities. Onsite and offsite low level waste would be disposed in the LLBG. All post 1970 TRU would be retrieved and shipped offsite for disposal by RL-WM04. All generator facilities have ceased operations, all cleanup activities are complete, Solid Waste facilities are deactivated, and closure of all burial grounds is achieved.

Endstate public health risks: As Solid Waste operations occur, public exposures exceeding limits are prevented. Radioactive wastes are permanently disposed in safe manner and produce essentially no threat to the public.

Endstate worker health & safety risks: Radiological exposures to workers for surveillance and monitoring activities after endstate are within acceptable limits. Minimal industrial hazards are present.

Endstate environmental health risks: RCRA compliant disposal of radioactive wastes and 5820 2A compliant disposal of low level wastes produce a low risk to the environment.

How are we getting there? Risks that REMAIN at the end of each budget year as currently planned.

General rationale: Since this project has a long term mission, if the project is stopped in any year, the risks are

essentially the same as 1997, although as generators cease operations and the number of cleanup projects is reduced, some reduction in the magnitude of risks is assumed. Beginning in FY 2001, if the project is stopped after disposal operations have been performed in the mixed waste disposal trenches, there is an increased environmental risk associated with leachate accumulation and subsequent liner failure or trench overflow causing significant increase of environmental damage.

Public health and critical project events & years: Since this project has a long term mission, if the project is stopped in any year, the risks are essentially the same as 1997 with increased risks due to the stockpiling of waste by the generators, although as generators cease operations and the number of cleanup projects is reduced, some reduction in the magnitude of risks is assumed.

Worker health & safety and critical project events & years (e.g., risks to other Hanford workers if this project were stopped): Since this project has a long term mission, if the project is stopped in any year, the risks are essentially the same as 1997, although as generators cease operations and the number of cleanup projects is reduced, some reduction in the magnitude of risks is assumed.

Environmental health and critical project events & years: Since this project has a long term mission, if the project is stopped in any year, the risks are essentially the same as 1997, although as generators cease operations and the number of cleanup projects is reduced, some reduction in the magnitude of risks is assumed.

ANNUAL risks for key project years

Annual risks remain constant throughout the long-term mission of this project. Key activity years are dependent on the onsite cleanup activities and the operations of onsite and offsite generators.

Risk Interfaces, Related Projects, Issues

Interfaces and transitions: Interfaces will exist between Solid Waste and all onsite cleanup operations, all onsite waste generators, and offsite waste generators. Interface with RL-WM04 during life cycle of that project for waste verification and TRU retrieval activities.

Related & interdependent projects: Interfaces will exist between Solid Waste and all onsite cleanup operations, all onsite waste generators, and offsite waste generators. Interface with RL-WM04 during life cycle of that project for waste verification and TRU retrieval activities.

Waste streams, disposal plans, long-term risks: Radioactive and dangerous wastes from cleanup activities and generator operations must be disposed.

Major risk issues and risk assumptions related to project implementation and interim and final endstates. It is assumed that waste generators will continue to support actual waste receipt activities.

References:

Central Waste Complex Safety Analysis Report (SAR) approved 1992, document WMC-SD-WM-SAR-049

Central Waste Complex Interim Safety Basis (ISB) submitted to DOE-RL for approval, document WMC-SD-WM-ISB-007, Rev. 0-A

Central Waste Complex Interim Operational Safety Requirements (ISOR) submitted to DOE-RL for approval, document TSR-005

Solid Waste Burial Grounds Interim Safety Basis approved August 1995, document WMC-SD-WM-ISB-002

Solid Waste Burial Grounds Interim Safety Analysis approved August 1995, document WMC-SD-WM-SARA-028

Solid Waste Burial Grounds Interim Operational Safety Requirements (ISOR) approved August 1995, document TSR-001

Transuranic Waste Storage and Assay Facility Interim Safety Basis approved January 1997, document WMC-SD-WM-ISB-004, Rev. 0-A

Transuranic Waste Storage and Assay Facility Interim Safety Operational Safety Requirements (ISOR) approved January 1997, document TSR-002

Nonradioactive Dangerous Waste Storage Facility approved December, 1990, document WM-SAR-019, Rev. 0.

Risk Data Sheets: R66N0004, R66N0005, R66N0018, R66N0209, R66N0217, R66N0218, R66N0221, R66N0005, R66N0018, R66N0031

HNF-SP-1329
Rev. 0
Waste Management Project
WBS 1.2

FY1998

August 29, 1997

B.1.2.0 Work Breakdown Structure

B.1.2.2 WBS Dictionary

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: LOW LEVEL BURIAL GROUNDS MINIMUM SAFE		2. Date 8/23/1997	3. PBS Number RL-NM03	4. Dict Rev
5. Contract WBS No. 1.2.1.1.01	6. Corresponding FDS No. 1A1A	7. Baseline CR No.		
8. Organization Name 32A00 - SOLID WASTE PROJECT MANAGEMENT			9. B & R No.	
<p>10. Scope of Work</p> <p>Provides for minimum safe operations and maintenance of Solid Waste burial grounds to maintain compliant conditions for monitoring and surveillance of existing waste inventories; and for preparation to receive low level wastes from onsite and offsite generators for disposal.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: MIXED WASTE TRENCH MINIMUM SAFE	2. Date 8/23/1997	3. PBS Number RL-WM03	4. Dict Rev
5. Contract WBS No. 1.2.1.1.02	6. Corresponding FDS No. IAIC	7. BaseLine CR No.	
8. Organization Name 32A00 - SOLID WASTE PROJECT MANAGEMENT			9. B & R No.
10. Scope of Work Provides for minimum safe operations and maintenance of Solid Waste mixed waste trenches to maintain compliant conditions for monitoring and surveillance of existing waste inventories; and for preparation to receive mixed wastes from onsite generators for safe interim storage/disposal.			

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY

WASTE MANAGEMENT

WBS: 1.2

8/26/1997

1. Activity Title: CENTRAL WASTE COMPLEX MINIMUM SAFE		2. Date 8/23/1997	3. PBS Number RL-WM03	4. Dict Rev
5. Contract WBS No. 1.2.1.1.03	6. Corresponding FDS No. IAIE	7. Baseline CR No.		
8. Organization Name 32AG0 - SOLID WASTE PROJECT MANAGEMENT				9. B & R No.
10. Scope of Work Provides for minimum safe operations and maintenance of Solid Waste Central Waste Complex (CWC) facilities to maintain compliant facility conditions for monitoring and surveillance of existing waste inventories; and for preparation to receive low level, mixed and/or transuranic (TRU) wastes for safe interim storage or disposal.				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: 616 FACILITY MINIMUM SAFE	2. Date 8/23/1997	3. PBS Number RL-MMO3	4. Dict Rev
5. Contract WBS No. 1.2.1.1.04	6. Corresponding FDS No. 1A1G	7. Baseline CR No.	
8. Organization Name 32A00 - SOLID WASTE PROJECT MANAGEMENT			9. B & R No.
10. Scope of Work Provides for the minimum surveillance and maintenance activities for the 616 facility.			

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: TRUSAF FACILITY MINIMUM SAFE	2. Date 8/23/1997	3. PBS Number RL-WM03	4. Dict Rev
5. Contract WBS No. 1.2.1.1.05	6. Corresponding FDS No. 1A1J	7. Baseline CR No.	
8. Organization Name 32A00 - SOLID WASTE PROJECT MANAGEMENT			9. B & R No.
10. Scope of Work Provides for the minimum surveillance and maintenance activities for the TRUSAF facility.			

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: WASTE MANAGEMENT HANFORD PROGRAM MANAGEM		2. Date 8/23/1997	3. PBS Number RL-WM03	4. Dict Rev
5. Contract WBS No. 1.2.1.1.06	6. Corresponding FDS No. IA6M	7. Baseline CR No.		
8. Organization Name 33400 - STRATEGIC PLANNING				9. B & R No.
<p>10. Scope of Work</p> <p>Provides for the overall program coordination, direction and customer interface to insure the proper conduct of operations in the Waste Management Project. This consists of baseline management activities, strategic planning, procurement services, construction project administration, EM integration activities, and safeguards and security. Also includes maintenance activities supporting solid waste facility trailers.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: LOW LEVEL BURIAL GROUNDS CLOSURE (W-329)		2. Date 8/23/1997	3. PBS Number RL-WM03	4. Dict Rev
5. Contract WBS No. 1.2.1.1.07	6. Corresponding FDS No. IAIN	7. Baseline CR No.		
8. Organization Name 32A00 - SOLID WASTE PROJECT MANAGEMENT			9. B & R No.	
<p>10. Scope of Work</p> <p>This project represents the overall program for final closure of all solid waste burial grounds in the 200 East and 200 West areas of the Hanford site. The solid waste burial grounds are subject to permitting agreements entered into between the Washington State Department of Ecology and the Department of Energy/Richland Operations Office. As such, the burial grounds are subject to the closure requirements given in the Washington Administrative Code (WAC)-173-303. This project provides for the development of strategies, finalization of design, and the ultimate installation of closure covers for the burial grounds. TRU retrieval activities must be completed prior to the closure of the burial grounds.</p>				

HNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.2

FY1998

August 29, 1997

B.1.2.2 Responsibility Assignment Matrix

8/25/1997

Mission Area Responsibility Assignment Matrix

Proj Lvl (PBS #)	FIS Act Number	Activity Title	Activity Manager	Responsible Organization	Cost Account
RL 1403		SOLID WASTE STORAGE & DISPOSAL			
	1A1A	LOW LEVEL BURIAL GROUNDS MINIMUM SAFE	R J GYROIR	32400 SOLID WASTE PROJECT MANAGEMENT	
	1A1C	MIXED WASTE TRENCH MINIMUM SAFE	R J GYROIR	32400 SOLID WASTE PROJECT MANAGEMENT	
	1A1E	CENTRAL WASTE COMPLEX MINIMUM SAFE	R J GYROIR	32400 SOLID WASTE PROJECT MANAGEMENT	
	1A1G	GLS FACILITY MINIMUM SAFE	R J GYROIR	32400 SOLID WASTE PROJECT MANAGEMENT	
	1A1J	TRUSAF FACILITY MINIMUM SAFE	R J GYROIR	32400 SOLID WASTE PROJECT MANAGEMENT	
	1A1N	LOW LEVEL BURIAL GROUNDS CLOSURE (W 329)	R J GYROIR	32400 SOLID WASTE PROJECT MANAGEMENT	
	1A2H	WASTE MANAGEMENT HANFORD PROGRAM MANAGEMENT	D E MCENNETT	30400 STRATEGIC PLANNING	

FY1998

August 29, 1997

B.1.3.0 Schedule Baseline

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains Project Baseline Summary (PBS) guidance.

Activity ID	Activity Description	Early Start	Early Finish	
RL-WY03 Solid Waste Storage and Disposal				
HSEMS 2.2.5.5 Central Waste Complex Ops & Maint.				
RAW/LOWC STORAGE				
SW301	Operate RAW/LOWC Storage	01OCT97	30SEP98	Operate RAW/LOWC Storage
SW302	From LW - 200 Area ETF		30SEP98	From LW - 200 Area ETF
SW304	To AS - Provide WSCF Support to RAW Trenching		30SEP98	To AS - Provide WSCF Support to RAW Trenching
SW306	To AS - Provide Commercial Support to RAW Trenching		30SEP98	To AS - Provide Commercial Support to RAW Trenching
SW308	To AS - WSCF Ship Mixed Waste to CWC		30SEP98	To AS - WSCF Ship Mixed Waste to CWC
SW307	Receive B-Cell Wastes		18SEP98	Receive B-Cell Wastes
SW309	From FS - B-Cell Wastes to SW		18SEP98	From FS - B-Cell Wastes to SW PSS - FS
HSEMS 2.2.5.6 Raw/Cell Wastes to CWC Ops & Maint.				
RAW/CELLS				
SW301	618 Bldg Standby	01OCT97	30SEP98	618 Bldg Standby
SW302	To FS - 618 Bldg		30SEP98	To FS - 618 Bldg PSS - W72
HSEMS 2.3.10.5 TRUAP Cleanout				
TRUAP CLEANOUT				
SW301	Truap Shutdown	01OCT97	31MAR98	Truap Shutdown
SW302	To TW - TRUAP to Facility Transition		31MAR98	To TW - TRUAP to Facility Transition
HSEMS 2.4.1.6 Low Level Burial Grounds Ops & Maint.				
LOW LEVEL BURIAL GROUNDS				
SW301	Operate LLW Burial Grounds	01OCT97	30SEP98	Operate LLW Burial Grounds
SW302	To AS - Provide WSCF Support to Burial Grounds		30SEP98	To AS - Provide WSCF Support to Burial Grounds
SW303	To AS - Provide Commercial Support to Burial Grounds		30SEP98	To AS - Provide Commercial Support to Burial Grounds
Approved For Release	NOFORN	NOFORN	NOFORN	NOFORN
Approved For Release	NOFORN	NOFORN	NOFORN	NOFORN
Approved For Release	NOFORN	NOFORN	NOFORN	NOFORN
WASTE MANAGEMENT UNIT (WU) P6S VM03 & 04 - SOLID WASTE PROJECT MASTER BASELINE SCHEDULE

Activity ID	Activity Description	Early Start	Early Finish	
WASTE RECEIPTS				<div> <div>From AS - Ship WSCF LLR Waste to Burned Ground</div> <div>From AS - Ship 222-S LLR Waste to CWC</div> <div>From AS - Ship 222-S Mixed Waste to CWC</div> <div>Receive Waste from all Co-Site Generators</div> <div>Last Shipment from Debar DOE Sites</div> <div>Last Shipment from Off-Site Labs</div> <div>Last Shipment from Off-Site Universities</div> <div>Last Shipment from Debar Off-Site Generators</div> <div>Receive Waste from Off-Site Generators</div> </div>
SW3A7	From AS - Ship WSCF LLR Waste to Burned Ground		30SEP46	
SW3A8	From AS - Ship 222-S LLR Waste to CWC		30SEP46	
SW3A9	From AS - Ship 222-S Mixed Waste to CWC		30SEP46	
SW3AC	Receive Waste from all Co-Site Generators	01OCT47	30SEP46	
SW3AD	Last Shipment from Debar DOE Sites		28SEP35*	
SW3AE	Last Shipment from Off-Site Labs		28SEP35*	
SW3AF	Last Shipment from Off-Site Universities		28SEP35*	
SW3AG	Last Shipment from Debar Off-Site Generators		28SEP35*	
SW3AH	Receive Waste from Off-Site Generators	01OCT47	30SEP46	
MANAGEMENT FOR LIMS				
SW3G1	Complete Phase I Sample Projections (Labs)		28NOV37*	Complete Phase I Sample Projections (Labs) A664-80-005
SW3G2	Submit Monitoring Evaluation Report to DOE-RL		28NOV37*	Submit Monitoring Evaluation Report to DOE-RL A664-80-004
SW3G3	Complete Phase II Sample Projections (Labs)		28NOV37*	Complete Phase II Sample Projections (Labs) A664-80-004
SW3G4	Complete Revision of WHG-EP-0043-4		30SEP46*	Complete Revision of WHG-EP-0043-4 A664-80-002

Project Manager
Project Number
Activity Number

SW3G1
SW3G2
SW3G3
SW3G4

Activity Name
Activity Number
Activity Description

SW3G1
SW3G2
SW3G3
SW3G4

Activity Name
Activity Number
Activity Description

SW3G1
SW3G2
SW3G3
SW3G4

Activity Name
Activity Number
Activity Description

SW3G1
SW3G2
SW3G3
SW3G4

Activity Name
Activity Number
Activity Description

SW3G1
SW3G2
SW3G3
SW3G4

Activity Name
Activity Number
Activity Description

SW3G1
SW3G2
SW3G3
SW3G4

Activity Name
Activity Number
Activity Description

SW3G1
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Activity Name
Activity Number
Activity Description

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Activity Name
Activity Number
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Activity Name
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Activity Name
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Activity Name
Activity Number
Activity Description

SW3G1
SW3G2
SW3G3
SW3G4

Activity Name
Activity Number
Activity Description

SW3G1
SW3G2
SW3G3
SW3G4

WASTE MANAGEMENT HANFORD
PSS WMO3 & 04 - SOLID WASTE
PROJECT MASTER BASELINE SCHEDULE

Activity ID	Activity Description	Early Start	Early Finish	
WASTE MANAGEMENT REMEDIATION				
WM403	To AS - Provide WSCF Support to T Plant		30SEP04	To AS - Provide WSCF Support to T Plant
WM404	To PS - T Plant to Transition		30SEP04	To PS - T Plant to Transition
WM405	Low Dose Equipment Decom/Banging (3706-T)	01OCT97	28SEP98	Low Dose Equipment Decom/Banging (3706-T)
WM406	To AS - Provide 222-R Support to T Plant		28SEP98	To AS - Provide 222-R Support to T Plant
WM407	To AS - Provide WSCF Support to T Plant		28SEP98	To AS - Provide WSCF Support to T Plant
WM408	To LW - Effluent from 2706-T		28SEP98	To LW - Effluent from 2706-T
WM409	To PS - Transfer 2706-T		28SEP98	To PS - Transfer 2706-T
WASTE RETRIEVAL				
WM401	W-113 - Phase I Retrieval	01OCT98	30SEP04	W-113 - Phase I Retrieval
WM402	W-221 - Phase II Retrieval	01OCT98	28SEP02	W-221 - Phase II Retrieval
WM403	W-104 - Alpha Calcrete Retrieval	03OCT99	30SEP04	W-104 - Alpha Calcrete Retrieval
WM404	M-01-04 Comp/Consol of CH TRINITRUM Retriever Facility		28SEP00	M-01-04 Comp/Consol of CH TRINITRUM Retriever Facility ♦ A27-00-001
WM405	M-01-07 Comp W-413 for Post-1870 CH TRINITRUM Ret.		30SEP04	M-01-07 Comp W-413 for Post-1870 CH TRINITRUM Ret. ♦ A24-04-002
WM406	Transfer Retrieved Fuel to Canister Storage Bldg	01OCT02	30SEP03	Transfer Retrieved Fuel to Canister Storage Bldg
WM407	To PS - Retrieval Facilities		28SEP02	To PS - Retrieval Facilities
WM408	To CN - CSS Fuel		30SEP03	To CN - CSS Fuel
WASTE MANAGEMENT CONTRACTS				
WM401	Thermal Treatment Contract - Process & Admin.	01OCT97	28SEP98	Thermal Treatment Contract - Process & Admin.
WM402	M-01-12/14/16 Thermal Treatment of CH MLW	01JAN98		M-01-12/14/16 Thermal Treatment of CH MLW ♦ A28-01-004

Activity ID	Activity Description	Early Start	Early Finish	Activity ID	Activity Description	Early Start	Early Finish
TELLWASH TREATMENT				TELLWASH TREATMENT			
SWW01	MLW Stabilization Contract - Procurement/Install	01OCT97	20SEP98	SWW01	MLW Stabilization Contract - Procurement/Install	01OCT97	20SEP98
SWW02	M-18-01-703 Comp NEPA Regs for Sub of CHALLW		30SEP97	SWW02	M-18-01-703 Comp NEPA Regs for Sub of CHALLW		30SEP97
SWW03	M-18-01 Initial Treatment of CHALLW	30SEP97		SWW03	M-18-01 Initial Treatment of CHALLW	30SEP97	
SWW04	M-18-00 Comp Treat/Disp. of 1,644 Cbl of CHALLW	30SEP97		SWW04	M-18-00 Comp Treat/Disp. of 1,644 Cbl of CHALLW	30SEP97	
RY TRU TREATMENT				RY TRU TREATMENT			
SWW05	RY TRU Treatm Contract/Fac Procurement/Install	01OCT97	20SEP98	SWW05	RY TRU Treatm Contract/Fac Procurement/Install	01OCT97	20SEP98
SWW06	M-91-03 Submt TRUTRUM PMP to Ecology		30JUN00	SWW06	M-91-03 Submt TRUTRUM PMP to Ecology		30JUN00
SWW07	M-91-01 Comp Fac/Prior Disp of P-1870 TRUTRUM		30DEC00	SWW07	M-91-01 Comp Fac/Prior Disp of P-1870 TRUTRUM		30DEC00
SWW08	M-91-06T Submt TRUTRUM Facility EIS/DC to Ecol		30DEC00	SWW08	M-91-06T Submt TRUTRUM Facility EIS/DC to Ecol		30DEC00
SWW09	M-91-06T Award Contracts for RY TRUTRUM		30SEP03	SWW09	M-91-06T Award Contracts for RY TRUTRUM		30SEP03
SWW10	M-91-06T Comp Const/Start Ops of RY TRUTRUM Fac		30JUN03	SWW10	M-91-06T Comp Const/Start Ops of RY TRUTRUM Fac		30JUN03
SWW11	To ER - RY TRU		30SEP03	SWW11	To ER - RY TRU		30SEP03
SWW12	Send RY-TRU to ER		30SEP03	SWW12	Send RY-TRU to ER		30SEP03
SWW13	To EIA - RY-TRU		30SEP03	SWW13	To EIA - RY-TRU		30SEP03
Large WASTE TREATMENT				Large WASTE TREATMENT			
SWW14	Large WASTE TREATMENT Contract/Fac Procurement/Install	01OCT97	20SEP98	SWW14	Large WASTE TREATMENT Contract/Fac Procurement/Install	01OCT97	20SEP98
SWW15	M-91-03 Submt MLW & CYCS PMP to Ecology		30JUN00	SWW15	M-91-03 Submt MLW & CYCS PMP to Ecology		30JUN00
SWW16	M-91-17T Submt MLW Facility EIS/DC to Ecology		30DEC00	SWW16	M-91-17T Submt MLW Facility EIS/DC to Ecology		30DEC00
SWW17	M-91-14T Award Contract for RY & Large MLW		30OCT03	SWW17	M-91-14T Award Contract for RY & Large MLW		30OCT03

Activity ID	Activity Description	Early Start	Early Finish	
AWF	WASTE TREATMENT			
AWF1	M-01-05 Comp. App. of Fac. Mat. Trans. (M-01-05)		30 JUN 08	
AWF2	M-01-06 Comp. Fac. Handling TRU/TRU/MILLW & QTC3		30 JUN 08	
AWF3	Transfer to Facility Transition		28 SEP 28	

M-01-05 Comp. App. of Fac. Mat. Trans. (M-01-05)
 A20-08-108
 M-01-06 Comp. Fac. Handling TRU/TRU/MILLW & QTC3
 A20-08-109

Transfer to Facility Transition

Project/Task
 Date Code
 Rev Code

Project/Task
 Date Code
 Rev Code

Project/Task
 Date Code
 Rev Code

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WASTE MANAGEMENT MANFORD
 PBS WM03 & 04 - SOLID WASTE
 PROJECT MASTER BASELINE SCHEDULE

Sheet 1 of 1

Activity ID	Activity Description	Early Start	Early Finish	Activity Name	Activity Description	Early Start	Early Finish
RL-WY04 Solid Waste Treatment							
HSEMS 2.2.15 SWRAP Module I Ops & Maint							
WRAP OPERATIONS							
SW4E1	Wrap 1 Operation	01OCT97*	30SEP98	Wrap 1 Operator			
OTHER							
SW401	W-250 Leak Detection Upgrade Construction	01OCT97*	30SEP98	W-250 Leak Detection Upgrade - Construction			
SW402	High Dose Equipment Waste Dose (Remote Handling)	01OCT97*	30SEP98	High Dose Equipment/Waste Dose (Remote Handling)			
SW403	Low Dose Equipment Decontamination (Z206-T)	01OCT97*	30SEP98	Low Dose Equipment Decontamination (Z206-T)			
FLUVENT-GRUVAL TREATMENT							
SW404	Thermal Treatment Contract - Process & Admin	01OCT97*	30SEP98	Thermal Treatment Contract - Process & Admin			
FLUVENT-GRUVAL TREATMENT							
SW405	MLW Stabilization Contract - Process/Implement	01OCT97*	30SEP98	MLW Stabilization Contract - Process/Implement			
SW406	M-19-01-TDS Comp NEPA Review for State of OHLLMW		30SEP98*	M-19-01-TDS Comp NEPA Review for State of OHLLMW			
FLUVENT-GRUVAL TREATMENT							
SW407	FLUVENT Treated Contract/Facility Process/Implement	01OCT97*	30SEP98	FLUVENT Treated Contract/Facility Process/Implement			
FLUVENT-GRUVAL TREATMENT							
SW408	Large RS-4000 Contract/Facility Process/Implement	01OCT97*	30SEP98	Large RS-4000 Contract/Facility Process/Implement			
PHASE 1 PROJECT PROJECTIONS							
SW409	Complete Phase 1 Sample Projections (Late)		29NOV97*	Complete Phase 1 Sample Projections (Late)			
SW410	Submit Monitoring Evaluation Report to DOE-RL		31MAR98*	Submit Monitoring Evaluation Report to DOE-RL			
SW411	Complete Phase 2 Sample Projections (Late)		28MAY98*	Complete Phase 2 Sample Projections (Late)			
SW412	Complete Revision of WHC-EP-008.4		30SEP98*	Complete Revision of WHC-EP-008.4			

Approved: *[Signature]*

Prepared: *[Signature]*

Checked: *[Signature]*

Date: *[Date]*

WASTE MANAGEMENT HANFORD

PBS WY03 & 04 - SOLID WASTE

FY98 - EXECUTION YEAR PMBS

WMP/SPP PLANNING MILESTONE LIST
REPORTING PERIOD 10/01/97 TO 12/31/20

MILESTONE CONTROL #	TRA-MS NUMBER	TRA TYPE	MS LEVEL	MS TITLE	TYPE	DATES			PROJ CEN	PBS #
						PLANNED BASELINE	APPROVED BASELINE	REVISED BASELINE		
AIC-03-001	M-91-13	I	HD	INITIATE DISPOSAL OF CM-LLUM	EA	6/30/01	6/30/01			RL-1990
AGM-49-001	M-91-01	I	HQ	COMPLETE FACILITIES PRIOR TO DISPOSAL OF POST-1970 TRITIUM	EA	12/31/00	12/31/49			RL-1990
AGM-49-002	M-91-00	M	HQ	COMPLETE ALL FACILITIES FOR HANDLING TRIUTRIUM, LLUM & STCS	EA	6/30/08	12/31/49			SL-1990
AGM-98-001			RL	SUBMIT MONITORING EVALUATION REPORT TO DOE-RL	OTH	3/31/98				SL-1990
AGM-98-002			RL	COMPLETE REVISION OF HEC-EP-0063-4	OTH	9/30/98				RL-1990
AGM-98-003			RL	COMPLETE PHASE I SAMPLE PROJECTIONS (LIMS)	OTH	11/25/97				RL-1990
AGM-98-004			RL	COMPLETE PHASE II SAMPLE PROJECTIONS (LABS)	OTH	5/29/98				RL-1990

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMPLETE PHASE II SAMPLE PROJECTIONS (LABS)			Date: 8/26/97	
Assigned To: D.E. McKENNEY			CIN:	
Program WBS Designator: 1.2.1.1			Due Date: 5/29/98	
PBS No: RL-NR03				
MC #: ASM-98-004		TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: X Report Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
<p>Milestone Description: Update the site sample projections every six months. This is accomplished by collecting input from the major programs (TWRS, Solid Waste, Liquid Effluents, Environmental Restoration, Spent Nuclear Fuels) and compiling the needs into a supporting document.</p>				
<p>Description of what constitutes completion of this milestone: A letter report summarizing the results of the projections will be transmitted to DOE-RL by May 29, 1998.</p>				

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMPLETE PHASE I SAMPLE PROJECTIONS (LABS)			Date: 8/26/97	
Assigned To: D.E. MCKENNEY			CIN:	
Program WBS Designator: 1.2.1.1			Due Date: 11/26/97	
PBS No: RL-WN03				
MC #: ASM-98-003		TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: X Report Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Update the site sample projections every six months. This is accomplished by collecting input from the major programs (WMRS, Solid Waste, Liquid Effluents, Environmental Restoration, Spent Nuclear Fuels) and compiling the needs into a supporting document.				
Description of what constitutes completion of this milestone: A letter report summarizing the results of the projections will be transmitted to DOE-RL by November 26, 1997.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: INITIATE DISPOSAL OF CH-LLMW				Date: 12/31/96	
Assigned To: D.E. MCKENNEY				CIN:	
Program WBS Designator: 1.2.1.1				Due Date: 6/30/01	
PBS No: RL-WN03					
MC #: ALC-01-001			TPA No: M-91-13		Rev:
MILESTONE LEVEL:	MILESTONE TYPE:	DNFSB STATUS:	DELIVERABLE:	ADDRESS TO:	
X DOE-HQ DOE-RL DOE-FO CONTRACTOR	X EA PEG OTHER	DNFSB (Y/N): N COMMIT #: RECOMM #:	Report Letter Drawing(s) Other (Specify)	DOE-HQ DOE-RL Other (Specify)	
Milestone Description: Initiate disposal of CH LLMW.					
Description of what constitutes completion of this milestone: Letter to DOE-RL.					

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMPLETE FACILITIES PRIOR TO DISPOSAL OF POST-1970 TRU/TRUM			Date: 12/31/96	
Assigned To: D.E. MCKENNEY			CIN:	
Program WBS Designator: 1.2.1.1			Due Date: 12/31/00	
PBS No: RL-WN03				
MC #: ASM-49-001		TPA No: M-91-01		Rev:
MILESTONE LEVEL:	MILESTONE TYPE:	DMFSB STATUS:	DELIVERABLE:	ADDRESS TO:
☒ DOE-HQ ☐ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	☒ EA ☐ PEG ☐ OTHER	DMFSB (Y/N): N COMMIT #: RECOMM #:	☐ Report ☒ Letter ☐ Drawing(s) ☐ Other (Specify)	☐ DOE-HQ ☒ DOE-RL ☐ Other (Specify)
Milestone Description: Complete the acquisition of new facilities, modification of existing facilities, and/or modification of planned facilities necessary for storage, and treatment/processing prior to disposal of all Hanford Site post-1970 TRU/TRUM. Note: The date for completion of M-91-01 will be determined after required technology has been determined through the TRU/TRUM PMP, but will be no later than December 2000.				
Description of what constitutes completion of this milestone: Letter to DOE-RL.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMPLETE ALL FACILITIES FOR HANDLING TRU/TRUM, LLMW & GTC3				Date: 12/31/96	
Assigned To: D.E. MCKENNEY				CIN:	
Program MBS Designator: 1.2.1.1				Due Date: 6/30/08	
PBS No: RL-WM03					
MC #: A6M-49-002			TPA No: M-91-00		Rev:
MILESTONE LEVEL:	MILESTONE TYPE:	DNFSB STATUS:	DELIVERABLE:	ADDRESS TO:	
X DOE-HQ DOE-RL DOE-FO CONTRACTOR	X EA PEG OTHER	DNFSB (Y/N): N COMMIT #: RECOMM #:	Report X Letter Drawing(s) Other (Specify)	DOE-HQ X DOE-RL Other (Specify)	
Milestone Description: Complete the acquisition of new facilities, modification of existing facilities, and/or modification of planned facilities necessary for storage, treatment/processing, and disposal of all Hanford Site TRU/TRUM, LLMW, and GTC3.					
Description of what constitutes completion of this milestone: Letter to DOE-RL.					

PHMC
MILESTONE DESCRIPTION SHEET

Title: SUBMIT MONITORING EVALUATION REPORT TO DOE-RL			Date: 8/25/97	
Assigned To: D.E. MCKENNEY			CIN:	
Program WBS Designator: 1.2.1.1			Due Date: 3/31/98	
PBS No: RL-WMD3				
MC #: AGM-98-001		TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DMFSB STATUS: DMFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: X Report Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Evaluate methods and costs for monitoring disposal facility performance, particularly release of contaminants into the vadose zone and tracking of infiltration and moisture movement in the vadose zone. Recommend monitoring approach.				
Description of what constitutes completion of this milestone: Submittal of letter report to DOE-RL.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMPLETE REVISION OF WHC-EP-0063-4			Date: 8/25/97	
Assigned To: J.B. BUCKLEY			CIN:	
Program WBS Designator: 1.2.1.1			Due Date: 9/30/98	
PBS No: RL-WM03				
NC #: ABM-98-002		TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ ☒ DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG ☒ OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report Letter Drawing(s) ☒ Other (Specify) DOCUMENT REVISION	ADDRESS TO: DOE-HQ ☒ DOE-RL Other (Specify)
Milestone Description: Revise WHC-EP-0063-4 (or subsequent title/rev.) to incorporate WM Liquids facilities acceptance criteria.				
Description of what constitutes completion of this milestone: Submittal of revision to WHC-EP-0063-4 (or subsequent title/rev.) to DOE-RL for approval by 9/30/98.				

HNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.1

FY1998

August 29, 1997

B.1.4.0 Cost Baseline

WASTE MANAGEMENT PROJECT
SUMMARY OF LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS: 1.2.1.1												SUBTOT
PBS TITLE	PBS NO	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997- FY2006
SOLID WASTE STORAGE/DISPOSAL	RL-WM03	30,970	31,973	31,545	22,344	27,340	27,331	26,067	26,623	34,623	49,548	312,864
												-
												-
												-
												-
												-
												-
												-
												-
												-
												-
												-
												-
TOTAL BCWS/PBS¹		30,970	31,973	31,545	22,344	27,340	27,331	26,067	26,623	34,623	49,548	312,864

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the

Project Baseline Summary guidance

¹Budgeted Cost of Work Scheduled (BCWS)

Equals Performance Measurement Baseline

(PMB), Expense Carryover Is NOT Included

WASTE MANAGEMENT PROJECT
SUMMARY OF LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS: 1.2.1.1											TOTAL
PBS TITLE	PBS NO	FY2007- FY2010	FY2011- FY2016	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	FY1997- FY2050
SOLID WASTE STORAGE/DISPOSAL	RL-WM03	151,211	263,156	174,805	174,805	174,805	174,805	15,790	15,790	15,790	1,473,843
											-
											-
											-
											-
											-
											-
											-
											-
											-
											-
											-
											-
TOTAL BCWS/PMB¹		151,211	263,156	174,805	174,805	174,805	174,805	15,790	15,790	15,790	1,473,843

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the

Project Baseline Summary guidance

¹Budgeted Cost of Work Scheduled (BCWS)

Equals Performance Measurement Baseline

(PMB); Expense Carryover is NOT included

WASTE MANAGEMENT PROJECT
LIFE CYCLE COST BASELINE (SCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT PBS 1111												BUSY01
PBS NO. RL10000												FY1997 -
PBS TITLE: Solid Waste Storage and Disposal												FY2005
FUND TYPE		FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	
OPERATING EXPENSE		28,483	31,873	31,545	21,674	24,925	24,534	26,245	25,960	27,595	30,259	272,110
GENETIC		860			202	604	664	707	761	829	445	4,492
GENERAL PLANT PROJECT		224			479	1,811	2,053	2,135	2,182	2,220	1,969	13,008
LINE ITEM (Last Week Only)												
WASTE		1,795										1,795
WASTE GOVERN										4,260	17,187	21,446
Subtotal Line Items		1,795	-	-	-	-	-	-	-	4,260	17,187	23,228
TOTAL SCWS PBS ¹		30,970	31,873	31,545	22,346	27,340	27,331	28,087	28,623	34,823	48,548	312,854
MANAGEMENT RESERVE ²												
LINE ITEM CONTINGENCY ³												
CHRYSTIE TRANSFERS ⁴												
Subtotal ⁵												
TOTAL		30,970	31,873	31,545	22,346	27,340	27,331	28,087	28,623	34,823	48,548	312,854

note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹ Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB).

Expense Carryover NOT Included

² Management Reserve and Line Item Contingency Held by RL

³ Work Performed at Sites Other Than Hartford

WASTE MANAGEMENT PROJECT
LIFE CYCLE COST BASELINE (BOWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999

(\$000s)

PROJECT WBS	1211											
PBS NO	RLW000											
PBS TITLE	Solid Waste Storage and Deposit											TOTAL
FUND TYPE	FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	FY1997- FY2030		
OPERATING EXPENSE	134,311	228,250	137,905	137,905	137,905	137,905	13,290	13,290	13,290	1,210,398		
CENRTE	4,900	8,900	4,900	4,900	4,900	8,900	800	800	800	89,880		
GENERAL PLANT PROJECT	25,000	25,000	25,000	25,000	25,000	25,000						161,855
LINE ITEM (List Each One)												
W-112												1,780
W-328 RG Closures												24,435
												-
												-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-	26,215
TOTAL BOWSPAS ¹	161,211	263,150	174,905	174,905	174,905	174,905	16,790	16,790	16,790	1,473,543		
MANAG RESERVE ²												-
LINE ITEM CONTINGENCY ³												-
OFFSITE TRANSPORT ⁴												-
Subtotal ⁵												-
TOTAL	161,211	263,150	174,905	174,905	174,905	174,905	16,790	16,790	16,790	1,473,543		

Note: The information for FY1999 and FY1998 is not

shown in this planning guidance with FY2000 and beyond contains the Project Expense Summary guidance

¹Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMBS)²Expense Carryover NOT Included³Management Reserve and Line Item Contingency Fund by RL⁴Not Performed at Site Other Than Hartford

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WASTE MANAGEMENT PROJECT
FY 1998 COST BASELINE (BCWS) BY MONTH
BY PROJECT BASELINE SUMMARY (PBS)
BY ACTIVITY DATA SHEET (ADS)
EXECUTION YEAR

(\$000s)

PROJECT WBS:		1.2.1.1														
PBS NO:		RL-WMD3														
PBS TITLE: Solid Waste Storage and Disposal																
ADS TITLE	ADS NO	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	
Solid Waste	2000-0	CP EXP	2,664	1,668	2,351	2,368	2,111	2,460	2,468	2,243	2,454	2,368	2,305	6,262	31,973	
		CONTRC														-
		GRP														-
		LI														-
		SUBTOT	2,554	1,668	2,351	2,368	2,111	2,460	2,468	2,243	2,454	2,368	2,305	6,262	31,973	
		CP EXP														-
		CONTRC														-
		GRP														-
		LI														-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		CP EXP														-
		CONTRC														-
		GRP														-
		LI														-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		CP EXP														-
		CONTRC														-
		GRP														-
		LI														-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-	-
		CP EXP														-
		CONTRC														-
		GRP														-
		LI														-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover is NOT included.

WASTE MANAGEMENT PROJECT
FY 1998 COST BASELINE (BCWS) BY MONTH
BY PROJECT BASELINE SUMMARY (PBS)
BY ACTIVITY DATA SHEET (ADS)
EXECUTION YEAR

(\$000s)

PROJECT WBS:		1.2.1.1													
PBS NO:		RL-00003													
PBS TITLE:		Solid Waste Storage and Disposal													
ADS TITLE	ADS NO	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
		OP EXP													-
		CONTRC													-
		GRF													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
		OP EXP													-
		CONTRC													-
		GRF													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
		OP EXP													-
		CONTRC													-
		GRF													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
		OP EXP													-
		CONTRC													-
		GRF													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
		OP EXP													-
		CONTRC													-
		GRF													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL BCWS/PBS ¹			2,554	1,998	2,361	2,399	2,111	2,460	2,468	2,243	2,454	2,368	2,305	6,262	31,673

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover is NOT included.

WASTE MANAGEMENT PROJECT
FY 1988 COST BASELINE (BCWS) BY MONTH BY FUND TYPE BY PROJECT
EXECUTION YEAR
(\$000s)

PROJECT WBS	PROJECT TITLE	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
1.2.1.1	Solid Waste Storage and Disposal (PL-470003)	Operating Expenses	2,554	1,898	2,351	2,399	2,111	2,460	2,488	2,243	2,454	2,388	2,305	6,282	31,873
		GENRTC													0
		GPP													0
		Line Item													0
		Total BCWS/PMG ¹	2,554	1,898	2,351	2,398	2,111	2,460	2,488	2,243	2,454	2,388	2,305	6,282	31,873
		Mgmt Reserve ²													0
		Line Item Contingency ³													0
Office Transfers ⁴														0	
Total			2,554	1,898	2,351	2,398	2,111	2,460	2,488	2,243	2,454	2,388	2,305	6,282	31,873

Note: The information for FY1988 and FY1989 complies with planning guidance while FY2000 and beyond complies with Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB) Expenses Category by Not Included

²Management Reserve and Line Item Contingency held by AIC

WASTE MANAGEMENT PROJECT
FY 1998 COST BASELINE (BCWS) BY MONTH BY COST ELEMENT BY PROJECT
EXECUTION YEAR
(\$000s)

PROJECT WBS	PROJECT TITLE	COST ELEMENT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	
1211	Solid Waste Storage and Disposal (RL-WM03)	0 Balance	1 983	549	990	1 412	893	1 043	1 047	993	1 017	1 000	986	987	11 989	
		1 Material	84	45	54	54	49	55	55	51	50	54	54	54	643	
		2 Purchased Serv	217	957	194	216	182	215	217	183	212	204	196	200	2,329	
		3 Other Contr Chgs	34	27	31	31	30	34	34	31	34	39	31	31	379	
		4 Internal Serv	84	77	85	85	81	84	84	85	84	80	80	80	1 078	
		6 Internal Chgs	177	139	182	182	149	188	189	154	186	182	182	182	1 893	
		6 Labor	5	4	4	4	3	4	4	4	4	4	4	4	48	
		7 Overheads	623	499	499	499	431	509	501	496	493	484	473	478	6,176	
		8 Revenue														0
		9 Enterprise Cost	174	339	184	181	143	170	164	143	151	150	149	151	1 890	
Total BCWS/FMS ¹			2 971	1 653	2 180	2 218	1 894	2 284	2 289	2 062	2 229	2 193	2 149	2 140	31 176	

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (FMS). Expenses Carryover Is Not Included.

WASTE MANAGEMENT PROJECT
SUMMARY OF LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000a)

PROJECT WBS: 1.2.1.1												SUBTOT
PBS TITLE	PBS NO	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997- FY2006
SOLID WASTE STORAGE/DISPOSAL	RL-WRM03	28,631	31,973	31,545	22,344	27,340	27,331	28,087	28,823	34,823	49,848	308,545
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												-
TOTAL NEW B/A		28,631	31,973	31,545	22,344	27,340	27,331	28,087	28,823	34,823	49,848	308,545

Note: The information for FY1998 and FY1999 covers the planning guidance while FY2000 and beyond covers the Project Baseline Summary guidance.

WASTE MANAGEMENT PROJECT
SUMMARY OF LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS : 1.2.1.1											TOTAL
PBS TITLE	PBS NO	FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	FY1997- FY2000
SOLID WASTE STORAGE/DISPOSAL	RL-WM03	151,211	263,158	174,805	174,805	174,805	174,805	15,790	15,790	15,790	-
											-
											-
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											-
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											-
											-
											-
TOTAL NEW B/A		151,211	263,158	174,805	174,805	174,805	174,805	15,790	15,790	15,790	1,489,504

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

WASTE MANAGEMENT PROJECT
LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS: 1.2.1.1											
PBS NO: RL-WM03											
PBS TITLE: Solid Waste Storage and Disposal											
FUND TYPE	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	SUBTOT FY1997- FY2006
OPERATING EXPENSE	26,333	31,973	31,545	21,874	24,926	24,834	25,248	26,980	27,325	30,258	269,970
CEMRTC	157			200	604	664	707	761	620	445	4,167
GENERAL PLANT PROJECT	141			470	1,811	2,033	2,136	2,162	2,200	1,980	12,862
LINE ITEM (Last Year Only)											
W-329 BG Closure									4,269	17,167	21,436
											-
											-
											-
Subtotal Line Items	-	-	-	-	-	-	-	-	4,269	17,167	21,436
TOTAL NEW B/A	26,631	31,973	31,545	22,344	27,340	27,331	28,087	28,823	34,623	49,843	306,545

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

**WASTE MANAGEMENT PROJECT
LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998**

(\$000s)

PROJECT WBS: 1.2.1.1										
PBS NO: RL-WM03										
PBS TITLE: Solid Waste Storage and Disposal										
FUND TYPE	FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	TOTAL FY1997- FY2050
OPERATING EXPENSE	116,375	145,247	137,905	137,905	137,905	137,905	15,290	15,290	15,290	1,129,082
GENRTC	8,091	14,005	8,900	8,900	8,900	8,900	500	500	500	63,963
GENERAL PLANT PROJECT	22,400	28,000	28,000	28,000	28,000	28,000				175,352
LINE ITEM (List Each One)										
W-32s BG Closure	4,345	75,906								101,697
										-
										-
										-
Subtotal Line Items	4,345	75,906	-	-	-	-	-	-	-	101,697
TOTAL NEW B/A	151,211	263,156	174,805	174,805	174,805	174,805	15,790	15,790	15,790	1,468,804

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

Waste Management Project
3 DIGIT CONTRACTOR IDENTIFIER-PR-WM12

Revision 0

AVERAGE ANNUAL FULL TIME EQUIVALENTS

(includes Major Subcontractors but not Enterprise Companies)

PHBS 1.2.1.1

Submitted Date: 8/29/97

PBS Number	PBS Title	FY 1996	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
RL-WM03	Solid Waste Storage and Disposal	158	158	158	158	158	158	158	158	158	158

Total PBS FTEs: 158 158 158 158 158 158 158 158 158 158 158

Note: The information for FY1996 and FY1999
contains the planning guidance while FY2000
and beyond contains the Project Baseline
Summary guidance.

HNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.2

FY1996

August 29, 1997

B.2 Technical Baseline (RL-WM04)

B.2 Solid Waste Treatment (RL-WM04)

B.2.1.0 Solid Waste Treatment Technical Baseline (RL-WM04)

B.2.1.1 Solid Waste Treatment Organization Mission (RL-WM04)

The Solid Waste Treatment project provides on-site and commercial mixed waste treatment, waste verification and repackaging, and decontamination services to customers throughout the Hanford Site. This work supports agreements with the Federal Facility Compliance Agreement (Tri-Party Agreement) stakeholders and addresses specific milestones (M-19-00, M-19-01, M-32-03, M-91-00, M-91-01, M-91-02, M-91-13, and M-91-15) for initiating and completing treatment for a variety of low-level waste (LLW), low-level mixed waste (LLMW), transuranic (TRU), and transuranic mixed (TRUM) wastes. Wastes are treated for disposal purposes under varying criteria. This work is accomplished through existing facilities on the Hanford Site such as the T-Plant complex, the Waste Receiving and Processing Facility (WRAP), and through off-site treatment contracts. Capital projects associated with mixed waste treatment activities are also addressed in this project baseline summary.

WASTE AND DECONTAMINATION SERVICES: (T-Plant Complex)

The Waste and Decontamination Services project provides mixed waste treatment, waste verification and repackaging, and decontamination services to customers throughout the Hanford Site. Work is performed at the T-Plant Complex which has been providing decontamination services to the site since 1957. The T-Plant complex is divided into two sub-complexes, the 221-T canyon facility and the 2706-T complex. The entire complex has a Resource Conservation and Recovery Act Treatment, Storage, and Disposal permit and each of the two complexes has its own unique characteristics that allow for a variety of services to be provided to Hanford Site customers.

The 221-T canyon was originally constructed in 1949 to extract plutonium from reactor fuel. It began a mission as a high-dose decontamination facility in 1957. Throughout the years various pieces of large contaminated equipment have been stored in the canyon. Spent nuclear fuel from the decommissioned Shippingport reactor is also stored under water in the canyon. Processing in the canyon also includes items contaminated with alpha-bearing radionuclides. Currently, work in the 221-T canyon includes mixed waste treatment of alpha contaminated mixed waste, decontamination of Tank Waste Remediation sampling equipment, and canyon clean-out activities.

The 2706-T Complex began work in 1959 as a low-dose decontamination facility with specific emphasis on large rolling stock equipment. Since then, it has also assumed the mission of waste verification and mixed waste treatment of non-alpha-bearing wastes. The facility was expanded in 1992 to accommodate the larger demand for its expanded waste treatment services.

Operation of the T-Plant Complex also requires standard operations support activities such as training and certification, maintenance, emergency response, equipment upgrades, environmental, safety and health support, and general administrative and management support.

Operation of the T-Plant Complex maintains the overall objective of providing decontamination services of high-dose rate waste and contaminated equipment to meet applicable standards for disposal, storage, re-use, or free release. Low-dose rate waste and contaminated equipment is also managed for repair and return to service and supporting site goals in pollution prevention, recycling, waste reduction, and mixed waste treatment. Safe storage of high-dose contaminated equipment and spent nuclear fuel are also provided.

WASTE RECEIVING AND PROCESSING FACILITY (WRAP)

This Project Baseline Summary also provides for the startup and operation of the WRAP Module 1. The WRAP

Module 1 facility will provide low-level mixed waste and low-level waste verification sampling capability for waste already in storage as well as newly generated waste. The WRAP Module 1 will provide verification or characterization required by Washington Administrative Code 173-303 and 10 Code of Federal Regulations 264 for the Low Level Burial Grounds and Resource Conservation and Recovery Act compliant storage facilities to be able to accept solid wastes (drums and boxes) for storage or disposal. Without WRAP-1 operations, stockpiling of solid radioactive wastes could occur across the Hanford site.

WRAP Module 1 will also provide certification and treatment for suspect transuranic solid waste in above ground and retrievable underground storage at Hanford. The transuranic fraction will be transported to the Waste Isolation Pilot Project for disposal, while the non-transuranic fraction will be segregated for on-site disposal in the Low Level Burial Grounds or for further processing. Many of the suspect transuranic containers have been underground longer than 20 years, which was the longest period of underground storage initially intended.

MIXED WASTE TREATMENT PROGRAM

The Radioactive Mixed Waste Treatment project provides for the Resource Conservation and Recovery Act and Toxic Substances Control Act required treatment and disposal of several categories of mixed waste and the operation of the Radioactive Mixed Waste trenches. The mixed waste covered under this project includes waste to be generated in the future as well as mixed waste currently stored on the Hanford Site. Tri-Party Agreement Milestones M-19-01, M-19-02, and M-19-03 are satisfied in this work scope for backing soils treatment and stabilization work. The treatment program is governed by Tri-Party Agreement milestones M19 and M91.

CAPITAL PROJECT W-259

Capital project number W-259 is a five-year project that adds a new liquid waste collection system to the T-Plant Complex. This waste collection system upgrade is required by Tri-Party Agreement Milestone M-32-03.

CAPITAL PROJECT W-113

This Project Baseline Summary provides for the activities associated with the design, construction, startup, and operation of a facility that will be used to retrieve contact handled suspect transuranic waste from one underground storage trench at the Hanford site. A phased approach to retrieval has been selected and this project addresses Phase I. The waste has been buried in containers that were not intended to be in the ground for more than twenty years. These containers will begin exceeding this twenty year period in 1996 and will continue to deteriorate the longer they remain underground. The Record of Decision for the Hanford Defense Waste - Environmental Impact Statement states that the post 1970 transuranic waste must be retrieved. Retrieval of waste is governed by the M-91 set of Tri-Party Agreement milestones.

CAPITAL PROJECT W-156

This Project Baseline Summary provides for the activities associated with the design, construction, startup, and operation of a facility that will be used to retrieve remote handled transuranic waste from the 218-W-4B Alpha Calissons. The Record of Decision for the Hanford Defense Waste-Environmental Impact Statement states that the post 1970 transuranic waste must be retrieved. Retrieval of waste is governed by the M-91 set of Tri-Party Agreement milestones.

CAPITAL PROJECT W-221

This Project Baseline Summary provides for the activities associated with the design, construction, startup, and operation of a facility that will be used to retrieve contact handled-transuranic/remote handled-transuranic waste from underground storage trenches at the Hanford site. A phased approach to retrieval has been selected and this project addresses Phase II. The waste has been buried in containers that were not intended to be in the ground for more than twenty years. Many of these containers have begun exceeding this twenty year limit and will continue to deteriorate the longer they remain underground. The Record of Decision for the Hanford Defense Waste-Environmental Impact Statement states that the post 1970 transuranic waste must be retrieved. Retrieval of waste is governed by the M-91 set of Tri-Party Agreement milestones.

FUTURE CAPITAL PROJECT/TREATMENT CONTRACT - M91 FACILITY

Construct facility or provide for a contract to treat remote-handled transuranic mixed waste and low-level mixed waste in support of Tri-Party Agreement Milestone M-91.

B.2.1.2 Solid Waste Treatment End Point Targets from Hanford Strategic Plan

B.2.1.2.1 Solid Waste Treatment Principal End Point Targets

- Spent fuels consolidated in the 200 Area in safe, stable, cost-effective interim storage pending national decisions on their ultimate disposition.
- Transition high cost surplus facilities in the central plateau and south 600 areas to a low cost, stable, deactivated condition.
- Provide safe, stable, interim storage for nuclear materials in the 200 Area pending decisions on their ultimate disposition.
- Retrievably stored TRU waste retrieved, processed, shipped offsite to WIPP.
- Low level and low level mixed waste from onsite and offsite sources (including PNNL special case wastes) will continue to be disposed of in the 200 Area.

B.2.1.2.2 Solid Waste Treatment Supported End Point Targets

None.

B.2.1.3 Solid Waste Treatment Major Facilities

B.2.1.3.1 T-Plant Facility

B.2.1.3.1.1 T-Plant Facility Description

T-Plant was constructed in 1944 in the 200-W Area of Hanford. It originally operated as a separation facility for irradiated production reactor fuel. Later it was used for high-level decontamination and repair of equipment as well as storage of fuel assemblies (PWR Core J).

B.2.1.3.1.2 T-Plant Facility Facility Technical Logic

The technical logic for the T Plant facility is captured in the facility's functional flow block diagram which shows the functions performed for each applicable life cycle phase of the facility and the sequence in which the functions are executed.

B.2.1.3.1.3 T-Plant Facility Requirements and Life Cycle Function Descriptions

Requirements:

- Central Plateau high cost surplus facilities shall be transitioned to a low cost, stable, deactivated condition
- Central Plateau inactive facilities shall be maintained within the approved safety envelope
- T Plant contaminated equipment shall be surveilled and maintained within the approved safety envelope
- T Plant tank actions shall be completed by Sep 30, 1999
- FWR fuel shall be safely stored in T Plant
- Central Plateau asbestos abatement shall be performed as necessary
- Nuclear materials shall be safely stored in the 200 area pending national decisions on their ultimate disposition

Life Cycle Function Descriptions:

B.2.1.3.1.3.1 221-T PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program, establishing broad priorities, providing program technical direction, preparing and defending the program budget, controlling milestones, integrating all components of the program, providing public and private sector policy liaison, expediting interface activities and follow-up actions, and retaining overall accountability for program success

B.2.1.3.1.3.2 221-T OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose

221-T OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B.2.1.3.1.3.3 221-T POST OPERATIONS WORK SCOPE SUMMARY

Day to day work, including pre-stabilization surveillance and maintenance, stabilization, post stabilization surveillance and maintenance, deactivation, and post deactivation surveillance and maintenance, that is required to allow safe decontamination and decommissioning

221-T POST OPERATIONS SPECIFIC FUNCTIONS

B.2.1.3.1.3.4 Maintain Safe & Compliant T-Plant Facility in CP Areas

Maintain the T-Plant facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facilities are made available for clean-up

B.2.1.3.1.3.5 Transition T-Plant Facility

Initiate the transition phase of decontamination and decommissioning for the T-Plant facility

B.2.1.3.1.4 T-Plant Facility Boundary Diagram**Table B.2-1 T-Plant Facility Boundary Diagram**

External Interface None Hazardous Site Environmental System Interface None		External Interface None Hazardous Site Environmental System Interface Process 2-4.3 200 Area Treated EOU and Disposal Facility Process 3-4.4 222-S Laboratory Process 2-3.2 Waste Sampling and Characterization Facility
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B.2.1.3.1.5 T-Plant Facility Interface Description and Forecast

EXTERNAL INPUTS

-None-

INTERNAL INPUTS

-None-

EXTERNAL OUTPUTS

-None-

INTERNAL OUTPUTS

Table B.2-2 Internal Outputs for T-Plant Facility

System	Category	Fiscal	Baseline	Units
System 2.2.3 286 Aqueous Liquid Effluent Disposal Facility T-Plant Wastewater Treated Liquid Effluent Transferred by 287-7.	Treated Liquid Effluent	1995 - 2000	624,000	cubic meters
System 2.2.4 286-6 Laboratory Analytical Laboratory Services for 286-TP Analytical Laboratory Services for 286-TP	Analytical Laboratory Services	1995 - 2000	4140	samples
System 2.2.5 Waste Sampling and Characterization Facility In-Field Laboratory Services for 286-TP In-Field Laboratory Services for 286-TP	In-Field Laboratory Services	1995 - 2000	181.6	samples

B.2.1.3.2 2706-T Facility

B.2.1.3.2.1 2706-T Facility Description

2706-T Facility is located in the 200-W Area of Hanford and is used as an equipment low-level decontamination facility.

B.2.1.3.2.2 2706-T 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.

Figure B-7 2706-T

B.2.1.3.2.3 2706-T Requirements and Life Cycle Function Descriptions

Requirements:

- Facilities discharging to the 200 Area TEDF shall implement Best Available Technology (BAT)/All Known, Available, and Reasonable Treatment (AKART). The generator shall provide the information required by WAC 173-240, Submission of Plans and Reports for Construction of Waste Water Facilities.
- Central Plateau inactive facilities shall be maintained within the approved safety envelope
- Liquid waste car shall be maintained
- Liquid waste car shall be tested
- Liquid waste car shall be certified
- Central Plateau asbestos abatement shall be performed as necessary
- Provide decontamination and maintenance services in support of essential safety operations of the 2706-T Building: equipment decontamination; LLW and HMW packaging.

Life Cycle Function Descriptions:

B.2.1.3.2.3.1 2706-T PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program; establishing broad priorities; providing program technical direction; preparing and defending the program budget; controlling milestones; integrating all components of the program; providing public and private sector policy liaison; expediting interface activities and follow-up actions; and retaining overall accountability for program success.

B.2.1.3.2.3.2 2706-T OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

2706-T OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B.2.1.3.2.3.3 Decontaminated Equipment

Test received contaminated equipment and materials to reduce their level of contamination so they may be returned to the owner for further use in the Hanford Site clean up mission, or recycled for other uses outside the clean up mission.

B.2.1.3.2.3.4 Receive Contaminated Equipment

Receive contaminated equipment and materials from programs involved in the Hanford Site clean up mission.

B.2.1.3.2.3.5 Repair Low-Dose Rate Equipment

Repair low dose rate contaminated equipment so that it may be returned back to service.

B.2.1.3.2.3.6 Transport Disposition Ready Equipment

Certify the radiological condition of the equipment and materials being shipped from the decontamination treatment process. Transport certified decontaminated equipment and materials to the owner for further use in the Hanford Site clean up mission, or for recycle for other uses outside the clean up mission.

B.2.1.3.2.3.7 2706-T POST OPERATIONS WORK SCOPE SUMMARY

Day-to-day work, including pre-stabilization surveillance and maintenance, stabilization, post-stabilization surveillance and maintenance, deactivation, and post-deactivation surveillance and maintenance, that is required to allow safe decontamination and decommissioning.

2706-T POST OPERATIONS SPECIFIC FUNCTIONS

B.2.1.3.2.3.8 Maintain Safe & Compliant 2706-T Decontamination Facility in CP Areas

Maintain the 2706-T 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.

B.2.1.3.2.3.9 Transition 2706-T Decontamination Facility in CP Areas

Initiate the transition phase of decontamination and decommissioning for the 2706-T Decontamination Facility.

B.2.1.3.2.4 2706-T Boundary Diagram

Table B.2-3 2706-T Boundary Diagram

External Interfaces	Internal Interfaces
<ul style="list-style-type: none"> None Hanford Site Environmental System Interface Interim 2706-T Control Building Electrical System 	<ul style="list-style-type: none"> None Hanford Site Environmental System Interface Interim 2706-T Plant Facility

B.2.1.3.2.5 2706-T Interface Description and Forecast

EXTERNAL INPUTS

-None-

INTERNAL INPUTS

Table B.2-4 Internal Inputs for 2706-T

Stream	Category	Period	Baseline	Units
Source B.2.3 Control Platform Electrical System				
Electricity services for 2706-T	Electricity	1997 - 2020	4390	kWh-yr
Electrical power services for 2706-T.				

EXTERNAL OUTPUTS

-None-

INTERNAL OUTPUTS

Table B.2-5 Internal Outputs for 2706-T

Stream	Category	Period	Baseline	Units
Source B.2.1.2 T-Plant Facility				
2706-T LLW Transfer	LLW (Liquid)	1997 - 2020	3836	radioactive
LLW from description of equipment for delivery to consolidated tank storage				

B.2.1.3.3 M-91 Facility

B.2.1.3.3.1 M-91 Facility Description

The primary functions of M-91 include processing, packaging, and certification of retrieved and newly generated RH-TRU wastes, retrieved and newly generated remote handled radioactive mixed waste, and handling, processing, repackaging, and certification for retrieved and newly generated CH-TRU waste that cannot be processed in WRAP 1 or other commercial options.

B.2.1.3.3.2 M-91 Facility Facility Technical Logic

The technical logic for the M-91 facility is captured in the facility's functional flow block diagram which shows the functions performed for each applicable life cycle phase of the facility and the sequence in which the functions are executed.

Figure B-8 Water Facility

B.2.1.3.3.3 M-41 Facility Requirements and Life Cycle Function Descriptions

Requirements:

- Comply with requirements identified in WHC-WP-1120, Standards/Requirements Identification Document (S/RID).
- Solid waste shall be treated to convert the waste to an acceptable form for final disposition.
- Container contents of newly generated waste shall be inspected to verify waste contents.
- Contents of "unknown" or "bedding" wastes shall be inspected to provide segregation and ensure compliant packaging of wastes.
- (b)(3) Mixed transuranic waste shall be treated, where feasible and practical, to destroy the hazardous waste component.
- Cleanup levels in the central plateau area will be established that are consistent with the long term goal to use the central plateau area to manage nuclear materials and collect and dispose of waste materials that remain onsite.
- Central Plateau high cost surplus facilities shall be transitioned to a low cost, stable, deactivated conditioned
- Central Plateau inactive facilities shall be maintained within the approved safety envelope
- Low level waste from offsite sources shall be received in the 200 area
- TRU/TRUM waste shall be prepared for shipment to the Waste Isolation Pilot Plant
- Complete treatment/and or direct disposal of at least 1644 cubic meters of contact handled low level mixed waste (CH-LLHMW) already in storage as of October, 1995, as well as newly generated Hanford Site low level mixed waste.

TPA milestone date is 9/30/2002.

- Initiate Treatment of Contact Handled Low Level Mixed Waste (CH-LLHMW). Due Date: 9/30/1999.
- Complete acquisition of new facilities, modification of existing facilities, and/or modification of planned facilities necessary for storage, treatment/processing prior to disposal of all Hanford Site Post 1970 TRU/TRUM

Due Date: TBD But No Later Than 12/31/2000

- Initiate processing of contact handled TRU/TRUM waste at Waste Receiving and Processing Facility/WRAP1 (contact handled, small container)

Due Date: 12/31/1998

- Complete construction of small container contact handled (CH) TRU/TRUM retrieval facility (s) and initiate (Project W-113) retrieval of small container TRU/TRUM from 200 Area burial grounds.

Due Date: 9/30/2000

- Complete Project W-113 for Post 1970 CH TRU/TRUM Retrieval

Due Date: 9/30/2004

- Complete construction and initiate hot operations of RH and large size TRU/TRU/t processing facility (a final acquisition schedule for this facility will be established as an interim milestone no later than December 2005).

Due Date: 6/30/2005

- Complete acquisition of facilities and initiate treatment of RH and large container (CH) LLNW

Due Date: 6/30/2006

- RH-TRU waste packages (RH casks) shall be no larger than a nominal 26 inches (0.66 m) in diameter with a maximum length of 10 feet, 1 inch (3.1m), including the pinle, per Westinghouse WID Operation Drawing H-2-91273 (Reference 31).

- All waste packages shall be provided with cleats, offsets, chimes, elds or 7-pack handling fixture for handling by means of fork trucks, cranes, or similar handling devices. Lifting rings and other auxiliary lifting devices on the waste packages, if provided, shall be recessed, offset, or hinged in a manner which does not inhibit stacking the waste packages.

Remote-Handled Waste

RH-TRU waste packages shall be equipped with an axial lifting pinle of a design acceptable to the WIPP (Drawing H-2-91273). The waste packages shall have no other lifting devices.

Contact-Handled Waste

In addition to DOT labeling requirements, each waste container shall be uniquely identified by means of a label permanently attached in a conspicuous location. The package identification number shall be in medium to low density Code 39 barcode symbology per MIL-STD-11898 (Reference 40) in characters at least 1 inch high, and alphanumeric characters at least 1/2 inch high.

The identification marking must be reasonably expected to remain legible and affixed to the container for a period of 10 years under anticipated conditions of interim storage before shipment to the WIPP and emplacement underground.

Remote-Handled Waste

Each RH cask shall be uniquely identified by means of an identification number permanently attached to the container in a conspicuous location using characters at least 2 inches high.

The identification marking must be reasonably expected to remain legible and affixed to the cask for a period of 10 years under anticipated conditions of interim storage before shipment to the WIPP and emplacement underground.

- Provide decontamination and maintenance services in support of essential safety operations at the 2706-T Building: equipment decontamination; LLW and RMW packaging.

Life Cycle Function Descriptions:

B.2.1.3.3.3.1 M-91 FACILITY PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program; establishing broad priorities; providing program technical direction; preparing and defending the program budget; controlling milestones; integrating all components of the program; providing public and private sector policy liaison; expediting interface activities and follow-up actions; and retaining overall accountability for program success.

M-91 FACILITY PROGRAM PLANNING SPECIFIC FUNCTIONS

B 2 1 3 3 2 M-91 FACILITY PRE-CONCEPTUAL WORK SCOPE SUMMARY

This phase leads to the formal start of a project through the identification of a need and development of mission need documentation. The program manager will then use this documentation to evaluate the proposal and determine if the need supports the missions, goals, and objectives of the Department and program. Cost accrued for activities in this phase are not part of the total project cost or the life cycle cost for the project.

M-91 FACILITY PRE-CONCEPTUAL SPECIFIC FUNCTIONS

B 2 1 3 3 3 M-91 FACILITY CONCEPTUAL WORK SCOPE SUMMARY

This is the initial formal project phase. Activities in this phase are dedicated to development of a design concept and basis for initiation of effective preliminary physical design, and establishment of a project baseline. The project baseline, including mutually dependent technical, schedule, and cost components should be reviewed and approved at the Approve Baseline Critical Decision prior to initiation of the execution phase.

This phase also marks the initial formation of the project team with the appointment of the project manager. During this phase the project team identifies the specific resources that will be required to accomplish project objectives and establish the scope, schedule, and cost for the project. During this phase the project management team develops the initial project planning documentation for execution of the project. For an environmental restoration project, the assessment phase is usually equivalent to this phase.

M-91 FACILITY CONCEPTUAL SPECIFIC FUNCTIONS

B 2 1 3 3 4 M-91 FACILITY DESIGN WORK SCOPE SUMMARY

The preliminary stage of the project design utilizes the conceptual design and/or design criteria that have been prepared for the project as the design base. Sufficient design should be performed to firmly fix the project scope and further develop schedules and costs. Preliminary design generally includes preliminary trade-off studies, including evaluation of alternative design approaches, definition of the project design criteria and establishment of quality levels for systems and components to be applied in the detailed design stage, and specifications for equipment procurement.

Proper environmental planning is critical to project management. The project manager should carefully integrate the requirements of NEPA with the appropriate stage of the project development. The development of an environmental analysis will depend on the availability of an appropriate level of engineering detail. Compliance with the NEPA process allows public participation and requires consideration of alternatives and mitigating measures. Most importantly in this process, the project manager should complete the required NEPA documentation prior to alternative so subsequent project planning and project decisions will reflect environmental values.

The detailed design effort usually begins after NEPA documentation and preliminary design have been approved and, if appropriate, a preliminary design is selected from multiple alternatives. Details are developed during this stage transforming the preliminary design framework into a complete design for the project. The detailed design usually ends with the detailed design review and Approval to Start Construction/Remedial Action Critical Decision.

M-91 FACILITY DESIGN SPECIFIC FUNCTIONS

B 2 1 3 3 5 M-91 FACILITY CONSTRUCTION WORK SCOPE SUMMARY

Day-to-day work that is required to construct plant and capital equipment in a condition suitable for it to be used for

its designated purpose.

M-91 FACILITY CONSTRUCTION SPECIFIC FUNCTIONS

B.2.1.3.3.3.6 M-91 FACILITY TURNOVER WORK SCOPE SUMMARY

At the end of the construction/remediation stage of a project, the project manager should focus on transition activities, which require strong coordination with the operating organizations. All the roles and responsibilities, acceptance testing, and start-up planning for transition should be addressed in the project planning documentation. Not all projects will undergo transition activities but may proceed directly to close out as prescribed by the project planning documentation.

The project manager should submit acceptance/completion documentation to support the Acceptance/Completion Critical Decision. This decision typically occurs before beginning operations. It indicates that the technical performance has been demonstrated as acceptable and that no further transition activities are necessary. During the transition, the project manager should work closely with operating organizations to complete acceptance testing and start-up in accordance with the project planning documentation. At certain times during the transition, the operations organizations may take beneficial occupancy and take ownership of all documents.

M-91 FACILITY TURNOVER SPECIFIC FUNCTIONS

B.2.1.3.3.3.7 M-91 FACILITY OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

M-91 FACILITY OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B.2.1.3.3.3.8 Manage Cat I MLW

Receive, store, handle, assess, treat, package, transport onsite, and ship offsite or disposition solid waste categorized as Category I Mixed Low Level Waste.

B.2.1.3.3.3.9 Manage Cat III MLW

Receive, store, handle, assess, treat, package, transport onsite, and ship offsite or disposition solid waste categorized as Category III Mixed Low Level Waste.

B.2.1.3.3.3.10 Process CH TRU/TRUM Requiring Special Treatment

Process CH TRU/TRUM waste that requires special treatment to prepare and package waste for disposal at WIPP.

B.2.1.3.3.3.11 Process RH TRU/TRUM Waste

Process RH TRU/TRUM waste to prepare and package waste for disposal at WIPP.

B.2.1.3.3.3.12 Retrieve Retrievably Stored TRU/TRUM

Retrieve Pre-1970 buried TRU/TRUM waste for processing.

B.2.1.3.3.3.13 Treat RH Category I Low Level Solid Waste

Receive, handle, assess, break, and package for transport onsite solid waste categorized as RH Category I LLW.

B.2.1.3.3.3.14 Treat RH Category III Low Level Solid Waste

Receive, handle, assess, treat, and package for transport onsite solid waste categorized as RH Category I LLW.

B.2.1.3.3.3.16 M-91 FACILITY POST OPERATIONS WORK SCOPE SUMMARY

Day-to-day work, including pre-stabilization surveillance and maintenance, stabilization, post-stabilization surveillance and maintenance, deactivation, and post-deactivation surveillance and maintenance, that is required to allow safe decontamination and decommissioning.

M-91 FACILITY POST OPERATIONS SPECIFIC FUNCTIONS

B.2.1.3.3.3.16 Maintain Safe & Compliant M-91 Facility in CP Areas

Maintain the M-91 facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facilities are made available for clean-up.

B.2.1.3.3.3.17 Transition M-91 Facility

Initiate the transition phase of decontamination and decommissioning for the M-91 facility.

B.2.1.3.3.3.18 M-91 FACILITY D&D WORK SCOPE SUMMARY

Day-to-day work, including remedial, stabilizing, controlling, and managing environmental contamination, that is required to allow future land-use objectives.

M-91 FACILITY D&D SPECIFIC FUNCTIONS

B.2.1.3.3.3.18 Decontaminate and Decommission (D&D) M-91 Facility

Initiate the final decontamination and decommissioning of M-91 facility.

B.2.1.3.3.4 M-91 Facility Boundary Diagram

Table B.2-6 M-91 Facility Boundary Diagram

External Interface -None -Shared Site Environmental System Interface Items 2.2.5 Central Waste Complex		External Interface -Waste Isolation Plant Project -Shared Site Environmental System Interface Items 2.2.5 WRAP Module 1 Items 2.2.5 Central Waste Complex Items 2.2.2 Mixed Waste Chemical Treatment
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B.2.1.3.3.5 M-91 Facility Interface Description and Forecast

EXTERNAL INPUTS

-None-

INTERNAL INPUTS

Table B.2-7 Internal Inputs for M-91 Facility

Stream	Category	Period	Baseline	Units
Items 2.2.5: Central Waste Complex Storage to M-91, CH LLAWY1 CH LLAWY1 Transferred by Storage to M-91	CH LLAWY1	1997 - 2070	6400	cubic meters
Storage to M-91, RH LLAWY1 RH LLAWY1 Transferred by Storage to M-91	RH LLAWY1	1997 - 2070	3400	cubic meters
Storage to M-91, RH TRUM RH TRUM Transferred by Storage to M-91	RH TRUM	1997 - 2070	1000	cubic meters
Storage to M-91, CH TRUM CH TRUM Transferred by Storage to M-91	CH TRUM	1997 - 2070	2600	cubic meters

EXTERNAL OUTPUTS

Table B.2-8 External Outputs for M-91 Facility

Stream	Category	Period	Baseline	Units
Waste Isolation Plant Project M-91, RH TRUM RH TRUM Transferred by M-91 to WIPP	RH TRUM	1997 - 2070	2400	cubic meters

INTERNAL OUTPUTS

Table B.2-9 Internal Outputs for M-91 Facility

Stream	Category	Period	Baseline	Units
Items 2.2.5: WIPP Module 1 M-91, CH TRUM Processed CH TRUM from M-91 to WIPP for shipment out to WIPP	CH TRUM	1997 - 2070	4700	cubic meters
Items 2.2.5: Central Waste Complex M-91 to Storage, CH LLAWY1 CH LLAWY1 Transferred by M-91 to Storage	CH LLAWY1	1997 - 2070	3300	cubic meters
Items 2.2.5: Mixed Waste Disposal Facility M-91 to Disposal, RH LLAWY1 RH LLAWY1 Disposed by M-91 to Disposal	RH LLAWY1	1997 - 2070	4700	cubic meters

8.2.1.3.4 WRAP Module 1 Facility

8.2.1.3.4.1 WRAP Module 1 Facility Description

The WRAP 1 facility will accept contact handled low level and mixed low level waste (CH-LLW and CH-MLLW) and transuranic (CH-TRU and CH-TRUM) waste for inspection, certification, and preparation for final disposal. The facility began processing CH-LLW in March of 1997 and will commence processing of CH-TRU, CH-TRUM waste in 1998. WRAP 1 will be operational 175 days per year (70% TOE). WRAP 1 is designed to process annually: 6,825 drums (4,200 drums newly generated waste and 2,625 drums reloaded waste) and 70 standard waste boxes.

8.2.1.3.4.2 WRAP Module 1 Facility Technical Logic

The technical logic for the WRAP facility is captured in the facility's functional flow block diagram which shows the functions performed for each applicable life cycle phase of the facility and the sequence in which the functions are executed.

Figure B-8 WRAP MODULE 1

B.2.1.3.4.3 WRAP Module 1 Requirements and Life Cycle Function Descriptions

Requirements:

- Comply with requirements identified in WMC-IP-1120, Standards/Requirements Identification Document (SRID).
- Solid waste shall be treated to convert the waste to an acceptable form for final disposition.
- Container contents of newly generated waste shall be inspected to verify waste contents.
- Contents of "unknown" or "backlog" wastes shall be inspected to provide segregation and ensure compliant packaging of waste.
- (b)(3) Mixed transuranic waste shall be treated, where feasible and practical, to destroy the hazardous waste component.
- Central Plateau high cost surplus facilities shall be transitioned to a low cost, stable, deactivated condition.
- Packaged Hazard TRU waste shall be shipped to Waste Isolation Pilot Plant.
- Central Plateau inactive facilities shall be maintained within the approved safety envelope.
- Low level waste from offsite sources shall be received in the 200 area.
- WRAP I facility shall be operated within the approved safety envelop.
- WRAP I facility shall be maintained within the approved safety envelop.
- TRU/TRUM waste shall be prepared for shipment to the Waste Isolation Pilot Plant.
- Complete acquisition of new facilities, modification of existing facilities, and/or modification of planned facilities necessary for storage, treatment/processing, and disposal of all Hanford Site TRU/TRUM, LLW, and GTCs.

Due Date: TBD

- Complete acquisition of new facilities, modification of existing facilities, and/or modification of planned facilities necessary for storage, treatment/processing prior to disposal of all Hanford Site Post 1970 TRU/TRUM

Due Date: TBD But No Later Than 12/31/2000

- Initiate processing of contact handled TRU/TRUM waste at Waste Receiving and Processing Facility WRAP1 (contact handled, small container)

Due Date: 12/31/1998

- Contractor waste certification shall be in accordance with DOE/WIPP-088, revision 4, Waste Acceptance Criteria for Waste Isolation Pilot Plant.
- The RCRA regulations, as they apply to the WIPP, include Standards for the Owners/Operators of Treatment, Storage, or Disposal (TSD) facilities that are codified in 40 CFR Parts 264 and 265. These require the

operator to obtain a chemical and physical characterization of the waste, and ensure that the waste shipped to the facility is the waste specified on the shipping manifest. These RCRA requirements for the WIPP facility will be satisfied at the generator sites before transport of waste to the WIPP.

Sites may use process knowledge and/or sampling and analysis to characterize the hazardous component of their wastes. In addition, each site must characterize a statistically representative sample of its waste to demonstrate that it meets the requirements of the NMD. Sampling and analysis activities shall be detailed in the site Quality Assurance Project Plans, (QAPP).

Waste generator and/or storage sites have the responsibility for collecting data that will be used to comply with the NMD. Headspace gas samples shall be collected and analyzed for total volatile organic compounds (VOCs) and toxic metals specified in the WAP contained in the WIPP RCRA Part B Permit Application.

For the waste generated or received from storage during but not part of the test phase, the following criteria must be satisfied for a statistical population of packages:

- Real-time radiography or equivalent examination
- Radionuclide assay for total alpha activity
- Headspace analysis for inorganic and organic gases
- Visual examination of the waste
- Analysis of sludges for pH and major cations and anions

Waste containers for emplacement in the WIPP shall be noncombustible and meet all applicable requirements of 49 CFR 173.412 (Reference 14) for Type A packaging. Waste containers of various sizes, shown to meet Department of Transportation (DOT) Type A requirements by methods detailed in MILM 8245 (Reference 30) are acceptable at the WIPP. In addition, waste containers shall be used, handled and stored in a manner that is expected to maintain their Type A packaging specification from the time of certification to emplacement in the WIPP. Remote-handled TRU waste containers shall be noncombustible and meet, as a minimum, the structural requirements and design conditions for Type A packaging as contained in 49 CFR 173.412. In addition, all RH-TRU waste containers shall be certified to the WIPP-approved specifications and shall be used, handled and stored in a manner that is expected to maintain their Type A packaging specification from the time of certification to emplacement in the WIPP.

RH-TRU waste packages (RH canisters) shall be no larger than a nominal 28 inches (0.68 m) in diameter with a maximum length of 10 feet, 1 inch (3.1 m), including the profile, per Westinghouse WHD Operation Drawing H-2-91273 (Reference 31).

The maximum size of CH-TRU waste packages in the WIPP is limited by access to the waste hoist and the size of the waste hoist cage. Existing packages of CH-TRU waste that meet the criterion in Section 3.2.2.1 are:

- Standard 55-gal (208-L) metal drum (DOT Spec. 17C and 17H)
- Standard 55-gal (208-L) metal drum (DOT Spec. 6M)
- Rectangular metal box (74.4 X 50.6 X 38.6 in. LWH)
- Rectangular metal box (68 X 64 X 38.5 in. LWH)
- Rectangular metal box (68 X 64 X 64 in. LWH)
- Rectangular metal box (71 X 67 X 52.5 in. LWH)
- Rectangular metal box (50.4 X 58.4 X 72.4 in. LWH)
- Rectangular metal box (4 X 4 X 7 ft. LWH)
- Standard waste box (37 in. high X 71 in. long OD/34.25 in. short OD X 43.06 in. wide)

The TRUPACT-II limits the CH-TRU waste containers to 55-gallon drums, or SWBs. Other acceptable waste containers may be added in the future.

The RH-TRU waste package size is based on the handling of an overspecked RH canister in the WIPP transfer cask.

All waste packages shall be provided with cleats, offsets, chimes, skids or 7-point handling fixture for handling by means of fork trucks, cranes, or similar handling devices. Lifting rings and other auxiliary lifting devices on the waste packages, if provided, shall be recessed, offset, or hinged in a manner which does not inhibit stacking the waste packages.

Remote-Handled Waste

RAH-TRU waste packages shall be equipped with an axial lifting points of a design acceptable to the WMP (Drawing H-2-91273). The waste packages shall have no other lifting devices.

- Powders, ashes, and similar particulate waste materials shall be immobilized if more than 1 weight percent of the waste matrix in each package is in the form of particulate below 10 microns in diameter, or if more than 15 weight percent is in the form of particles below 200 microns in diameter.

- Liquid waste will not be placed in the WMP. TRU waste for emplacement in the WMP shall contain as little residual liquid as is reasonably achievable. All internal containers (e.g., bottles, cans, etc.) must be well-drained, but may contain residual liquids. As a guideline, residual liquid in well-drained containers will be restricted to approximately one percent of the volume of the internal container. In no case shall the total liquid equal or exceed one volume percent of the waste container (e.g., drum or SWB).

Remotely-Stored Waste

Real-Time Radiography (RTR) or visual examination shall be used at DOE facilities to determine the presence and quantity of liquids in TRU wastes. Although some differences exist between the RTR equipment sensitivity at DOE sites, all facilities shall be able to certify TRU waste using RTR in accordance with the less than one volume percent liquid criterion for the external waste container. The RTR records shall include a description of the location of any liquid that is detected (e.g., between rigid liner and 55-gallon poly bag liner or within one-gallon poly bottle) and an estimate of its volume.

- Waste for shipment in TRUPACT-II shall contain less than 1 volume percent of the waste container as liquids. Same as TRUPACT-II requirements. (This requirement is anticipated based on initial negotiations with the NRC, but will not be finalized until review is complete and a C of C is issued.)

WMP OPERATIONS AND SAFETY CRITERIA

Contact-Handled and Remote-Handled Wastes

Pyrophoric materials, other than radionuclides, shall be rendered safe by mixing them with chemically stable materials (e.g., concrete, glass) or shall be processed to remove their hazardous properties. Not more than one percent by weight of the waste in each waste container may be pyrophoric forms of radionuclides, and these shall be generally dispersed in the waste.

- Transuranic waste shall contain no explosives or compressed gases. 49 CFR Part 173 Subpart C (Reference 14) defines explosives and 49 CFR Part 173 Subpart G defines compressed gases.

- Documented procedures or RTR verifications are used to ensure that individual waste packages contain no pressurized vessels. Documented procedures are also used to exclude explosive items, compounds, or combination of materials that could form explosive compounds within the waste package. If such materials are present, they must be treated or diluted such that a detonation is not possible.

3.3.5 TRU MIXED WASTES

3.3.5.1 WMP OPERATIONS AND SAFETY CRITERIA

Contact-Handled Waste

Transuranic wastes shall contain no hazardous wastes unless they exist as co-contaminants with transuranics. Waste packages containing hazardous waste shall be identified with the appropriate DOT label. All TRU-contaminated corrosive, reactive, and ignitable materials shall be treated to remove the hazardous characteristic. Hazardous wastes to be reported are listed in 40 CFR 261, Subparts C and D (Reference 18).

Remote-Handled Waste

Transuranic wastes shall contain no hazardous wastes unless they exist as co-contaminants with transuranics. All TRU-contaminated corrosive, reactive, and ignitable materials shall be neutralized and rendered nonhazardous. Hazardous waste to be reported are listed in 40 CFR 261, Subparts C and D (Reference 18).

3.3.5.2 TRANSPORTATION WASTE PACKAGE REQUIREMENTS

TRUPACT-II Requirements

Aqueous materials which have a pH less than 2 or more than 12.5 per 40 CFR 261.22(a)(1) are prohibited from the wastes (Reference 18).

RH Cask Requirements

Aqueous materials which have a pH less than 2 or more than 12.5 per 40 CFR 261.22(a)(1) (Reference 18) are prohibited from the wastes. (These are preliminary requirements based on meetings with the NRC and the SARF to be submitted for approval.)

3.3.5.3 RCRA REQUIREMENTS

RCRA - Waste Determination

Generators of TRU waste must determine whether their waste is regulated by RCRA as a hazardous waste. The determination is based on whether representative samples or process knowledge of the solid waste indicates that it is specifically identified or listed in 40 CFR Part 261 (Reference 18). Each hazardous waste must be assigned one or more of the applicable EPA hazardous waste codes. Only those waste codes included in the WIPP RCRA Part A Permit Application (Reference 19) can be managed at the WIPP. Wastes that exhibit the characteristics of Ignitability (D001), Corrosivity (D002), or Reactivity (D003), as defined in 40 CFR 261 (Reference 18), will not be accepted at the WIPP.

WIPP RCRA Permit Application Requirements and QAPPs

The WAP included in the WIPP RCRA Part B Permit Application (Reference 20) specifies the waste analysis requirements applicable to the TRU mixed wastes to be shipped to WIPP. These include the specific sampling and analysis requirements specified in the NMD issued by the EPA. The QAPP (Reference 8) addresses analysis and sampling requirements to show compliance with the NMD criteria. The QAPP establishes site-specific procedures for sampling and analytical protocols and QA/QC guidance for the WIPP Test Phase. The additional information required by 40 CFR 265.13 and 264.13 (Reference 18), such as test methods, sampling methods, frequency, and accuracy, are required to be addressed in the site-specific QAPPs.

Waste generator and/or storage sites have the responsibility for sampling and analyzing headspace gases to demonstrate compliance with the waste characterization requirements in the NMD. The headspace gas samples shall be collected and analyzed in accordance with procedures specific in each site's QAPP. The QAPP (Reference 8) contains a more detailed explanation of responsibilities for various organizations involved in the waste characterization program. The waste characterization requirements of the NMD (Reference 23) are:

Headspace Gases

Flammability

See Section 3.4.7.3 for requirements.

Nonflammable VOCs (Comparability)

The NMD (Reference 23) mandates that any waste package that is sent to the WMP must meet the requirement that the headspace concentration within a package does not exceed two times (2X) the maximum concentration for five nonflammable VOCs. This requirement is designed to ensure that the wastes to be employed in the WMP are in fact similar to the wastes described in the NM-VP (Reference 22). The five nonflammable VOCs are:

Carbon Tetrachloride
Methylene Chloride
1,1,1-Trichloroethane
Trichloroethylene
1,1,2-Trichloro-1,2,2-tetrafluoroethane.

The five nonflammable compounds and their 2X maximum concentration limits are reported in the NMD (Reference 23) and the WAP to the WMP RCRA Part B Permit Application (Reference 20), and the methodology for demonstrating compliance is presented in the QAPP (Reference 6).

Nonflammable VOCs (No-Migration Demonstration)

The NMD (Reference 23) mandates that any waste package that is sent to the WMP must meet the requirement that the headspace concentration within a package does not exceed ten times (10X) the average concentration of three nonflammable VOCs.

(TWO of the five compounds listed above do not have to meet this requirement) The three nonflammable VOCs that must meet the requirement are:

Carbon Tetrachloride
Methylene Chloride
Trichloroethylene.

The three nonflammable compounds and their 10X average concentration are reported in the NMD (Reference 23) and the WAP to the WMP RCRA Part B Permit Application (Reference 20), and the methodology for demonstrating compliance is presented in the QAPP (Reference 6).

Sludges

In addition to the headspace analyses specified above, sludges shall be analyzed for total VOCs and toxic metals specified in the WAP for the WMP RCRA Part B Permit Application (Reference 20). Sampling and analysis procedures for VOCs and toxic metals in TRU sludges are being developed and, when completed, the requirements will be included in the QAPP (Reference 6).

3.3.8.4 PERFORMANCE ASSESSMENT CRITERIA

No additional requirements.

3.3.5.6 COMPLIANCE

The types and quantities of hazardous wastes must be entered in the data package (Section 3.5.1.1). This

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Information must be consistent with the acceptable EPA hazardous waste codes for WIPP as specified in the RCRA Part A Permit Application (Reference 18).

The basis for the identification of the hazardous wastes will be process knowledge supplemented with sampling.

3.3.5.6 TECHNICAL JUSTIFICATION

Transuranic mixed waste is defined as TRU waste that contains constituents considered hazardous in accordance with 40 CFR Part 261 (Reference 18). Because of the presence of hazardous constituents, the waste is subject to dual regulation under the AEA (Reference 21) and the RCRA (Reference 18). Dual regulation has made it necessary to make a RCRA hazardous waste determination for the purposes of manifesting for transportation, for reporting waste management activities, and for ensuring adequate health and safety programs. The DOE Order 5400.3 (Reference 33) requires the implementation of and compliance with the RCRA regulations.

Waste characterization data or other determinations made about the disposition of the waste shall be maintained for necessary audits.

3.3.6 SPECIFIC ACTIVITY OF WASTE

3.3.6.1 WIPP OPERATIONS AND SAFETY CRITERIA

Contact-Handled Waste

For purposes of TRU waste certification, the lower limit of > 100 nanocuries/gram (nCi/g) of TRU radionuclides in the waste shall be interpreted as > 100 nCi per gram of waste matrix. The weight of added external shielding and the waste containers (including any rigid liners) shall be subtracted prior to performing the nCi/g calculation. This is also applicable to wastes managed as TRU under the provisions of DOE Order 5820.2A (e.g., U-233 and Pu-238) (Reference 18).

Remote-Handled Waste

For purposes of TRU waste certification, the lower limit of > 100 nCi/g of TRU radionuclides in the waste shall be interpreted as > 100 nCi/g of waste matrix. The weight of added external shielding and the waste containers (including any rigid liners) shall be subtracted prior to performing the nCi/g calculation.

The maximum activity concentration for a RH-TRU waste package shall not exceed 23 curies/liter.

The concentration may be averaged over the waste container.

3.3.6.2 TRANSPORTATION: WASTE PACKAGE REQUIREMENTS

TRUPACT-II Requirements

Same as WIPP Operations And Safety Criteria, Section 3.3.8.1.

RM Cask Requirements

Same as WIPP Operations And Safety Criteria, Section 3.3.8.1.

3.3.6.3 RCRA REQUIREMENTS

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None.

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3.3.8.4 PERFORMANCE ASSESSMENT CRITERIA

Same as WIPP Operations And Safety Criteria, Section 3.3.6.1.

3.3.6.5 COMPLIANCE

Documented evidence shall exist to show that the specific activity of any TRU waste package is greater than 100 nCi/g of waste and that the activity of RH-TRU waste does not exceed 20 Ci/liter.

3.3.6.6 TECHNICAL JUSTIFICATION

The DOE Order 5820.2A "Radioactive Waste Management," Chapter 4.3.a.(2), (Reference 13) states:

"The lower concentration limit for transuranic waste (> 100 nCi/g of waste) shall apply to the contents of any single waste package at the time of assay. The mass of the waste container including shielding shall not be used in calculating specific activity of the waste."

The upper limit of RH-TRU waste activity arises from the WIPP Final Environmental Impact Statement (Reference 34).

3.4.1 WASTE PACKAGE WEIGHT

3.4.1.1 WIPP OPERATIONS AND SAFETY CRITERIA

Contact-Handled Waste

All CH-TRU waste packages or package assemblies shall weigh no more than 21,000 pounds.

Remote-Handled Waste

All RH-TRU waste packages shall weigh no more than 8,000 pounds.

3.4.1.2 TRANSPORTATION WASTE PACKAGE REQUIREMENTS

TRUPACT-II Requirements

The following weight limits shall apply for waste package assemblies transported in the TRUPACT-II package:

1,000 lbs per drum

1,450 lbs per drum overpacked in a SWB

4,000 lbs per SWB

7,965 lbs per TRUPACT-II payload

19,250 lbs per TRUPACT-II payload, including the weight of the TRUPACT-II.

Recent enhancements in the TRUPACT-II design have resulted in an average payload weight of approximately 6,200 lbs. The total weight of the top seven-pack of drums or SWB including error shall be less than or equal to the total weight including error of the lower seven-pack of drums or SWB. The DOT limit of 30,000 lbs gross vehicle weight.

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(GVW) must also be met.

RH Cask Requirements

To be determined.

3.4.1.3 RCRA REQUIREMENTS

None.

3.4.1.4 PERFORMANCE ASSESSMENT CRITERIA

None.

3.4.1.5 COMPLIANCE

For CH-TRU waste packages, documented evidence shall exist that the waste package has been weighed and the weight of the waste package or package assembly meets the requirements. The weight of the waste package cannot exceed the weight for which the waste package has been certified in accordance with 49 CFR 173.463 (Reference 14).

For RH-TRU waste, the canister weight may be calculated based on the weight of the empty canister plus the weight of waste that will be placed in the canister. The weight of the canister cannot exceed the weight for which the waste package has been certified in accordance with 49 CFR 173.463 (Reference 14).

3.4.1.6 TECHNICAL JUSTIFICATION

The CH-TRU waste handling system of the WMP is limited by the capacity of the fork trucks that will transfer the CH-TRU waste materials on and off the waste hoist. These fork trucks have a rated lift capacity of 20,000 pounds. As this rated capacity must include an allowance for pellets and overpacks, estimated to be 5,000 pounds, a CH-TRU waste package may weigh a maximum of 21,000 pounds.

The WMP has established a RH-TRU overpack gross weight limit of 10,000 pounds. It is estimated that a RH-TRU overpack may weigh 2,000 pounds, leaving a maximum gross weight of 8,000 pounds for the loaded RH canister.

The TRUPACT-II weight limits are based on the provisions of the TRUPACT-II SARP (Reference 6).

• Contact-Handled Waste

The fissile or fissionable radionuclide content of CH-TRU waste packages shall be no greater than the following values, in Pu-239 fissile gram equivalents:

- 200 g per 55-gallon (0.21 m³) drum
- 600 g per DOT 6M container
- 5 g per 13 (0.028 m³) in boxes, up to 350 g maximum.

The Pu-239 GGE shall be calculated using the methods detailed in Appendix 1.3.7 of the TRUPACT-II SARP (Reference 9).

• Remote-Handled Waste

The fissile or fissionable radionuclide content of RH-TRU waste packages shall not exceed 500 g total (in Pu-239 GGE).

• The fissile or fissionable radionuclide content of CH-TRU waste in the TRUPACT-II, including two times the measurement error, shall be less than 200 grams for a 55-gallon drum or less than 325 grams for a SNB. The sum of the fissile equivalents of all waste packages in the entire paycock quantity including two times the error may not exceed 325 grams. See the calculational methods detailed in Appendix 1.3.7 of the TRUPACT-II SARF for details.

• Waste Packages shall not exceed 1000 Ci of Pu-239 equivalent activity (PE-C).

• All RH-TRU waste packages shall have a surface dose rate at any point no greater than 1000 rem/hr. Neutron contributions are limited to 270 mrem/hr. Neutron contributions of greater than 20 mrem/hr to the total waste package dose rate shall be reported in the data package. At least 85% of the RH containers must have dose rates of ≤ 100 rem/hr, and no more than 5% of the RH containers are allowed to have but ≤ 1000 rem/hr may be shipped in the WIPP.

• Removable surface contamination on waste packages or package assemblies to be emplaced in WIPP shall not be greater than 50 picocuries per 100 sq. cm for alpha-emitting radionuclides and 450 picocuries per 200 sq. cm for beta-gamma-emitting radionuclides. Fixation of surface contamination to meet the above criterion is not permitted.

• The thermal power generated by waste materials in any RH-TRU waste package shall not exceed 300 watts.

• Waste containers with waste that could potentially generate gases shall be vented.

• Contact-Handled Waste

In addition to DOT labeling requirements, each waste container shall be uniquely identified by means of a label permanently attached in a conspicuous location. The package identification number shall be in medium to low density Code 39 barcode symbology per MIL-STD-1189B (Reference 40) in characters at least 1 inch high, and alphanumeric characters at least 1/2 inch high.

The identification marking must be reasonably expected to remain legible and affixed to the container for a period of 10 years under anticipated conditions of interim storage before shipment to the WIPP and emplacement underground.

• Remote-Handled Waste

Each RH container shall be uniquely identified by means of an identification number permanently attached to the container in a conspicuous location using characters at least 2 inches high.

The identification marking must be reasonably expected to remain legible and affixed to the container for a period of 10 years under anticipated conditions of interim storage before shipment to the WIPP and emplacement underground.

• A data package with certification attesting to the fact that the waste package meets the requirements of these orders shall be transmitted to the WIPP operator in advance of shipment. This data package/certification shall be based upon a QA program subject to audit and verification and shall provide information on the items specified below.

Package identification number

Package assembly identification number (if applicable)

Date of waste package certification

WAC exception number (if applicable)

Waste generation site

Date of package closure

Maximum surface dose rate in mrem/hr and specific neutron dose rate if greater than 20 mrem/hr

Weight (in kg)

Container type

Physical description of waste form (content code)

Assay information, including PE-CI, alpha CI, and Pu 239 FGE content

Radionuclide information including radionuclide symbol, quantity, and measure (in grams or Curies)

Radionuclide mixed waste (Identify and quantity of listed wastes and those that exhibit the characteristics of a hazardous waste)

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- Weight and volume percent of organic materials content
- Measured or calculated thermal power (if over 0.1 watt/lb)
- Shipment number
- Date of shipment
- Vehicle type
- TRUPACT-II number(s) (CH-TRU waste), or cask number (RH-TRU waste)
- Other information considered significant by the generator
- Name of certifying official who approved the waste package
- Name of person who certifies that the shipment meets the TRUPACT-II TRAMPAC

A hard copy of the signed and dated Certification Statement, certifying that the waste content and packaging are in accordance with the WIPP WAC and that the waste is unclassified, shall be maintained on file at each site for WAOCC audit.

The specific data format for the transmittal of this information is contained in Appendix B of this document.

3.5.1.2 TRANSPORTATION WASTE PACKAGE REQUIREMENTS

TRUPACT-II Requirements

The documentation required for the certification of an individual waste package or a group of waste packages for an individual TRUPACT-II is given in Section 13.D of Appendix 1.3.7 of the TRUPACT-II SARF. The format of these tables is not mandatory, however, all listed parameters must be included in any site documentation. This documentation may be computer generated based on the site's waste data base.

RH Cask Requirements

To be determined.

3.5.1.3 RCRA REQUIREMENTS

A generator must prepare a specific hazardous waste manifest in accordance with the EPA requirements of 40 CFR 262.20 through 262.23. A generator must also sign the certification on the manifest that indicates that the generator has a program in place to reduce the volume and toxicity of the waste generated. Identification numbers that link each RCRA-regulated waste container and its waste data package must also accompany the manifest. The identification numbers must be attached to the waste profile documentation. The Land Disposal Restriction (LDR) Certification required by the 40 CFR 268 must also accompany the manifest and data package.

- Provide decontamination and maintenance services in support of essential safety operations at the 2708-T Building: equipment decontamination; LLW and RHW packaging.

Life Cycle Function Descriptions:

B.2.1.3.4.3.1 WRAP MODULE 1 PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program; establishing broad priorities; providing program technical direction; preparing and defending the program budget; controlling milestones; integrating all components of the program; providing public and private sector policy liaison; expediting interface activities and follow-up actions; and retaining overall accountability for program success.

B.2.1.3.4.3.2 WRAP MODULE 1 OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

WRAP MODULE 1 OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B.2.1.3.4.3.3 Conduct Specialized Treatments for CH MILLW

Perform specialized treatment for contact handled low level mixed waste. Treatment may consist of compaction, solidification or absorption of liquids, neutralization of corrosives, immobilization of particulate, and reaction of

reactive substances.

B.2.1.3.4.3.4 Disposition Transuranic Mixed Waste

Disposition of Post-1970 TRU/TRUM waste is defined as picking up packaged waste from the treatment/storage facility that has been certified packaged in accordance with offsite disposal facility acceptance criteria, certifying that it meets transportation requirements for offsite transportation, and transporting it to an offsite disposal facility (WIPP).

B.2.1.3.4.3.5 Disposition Transuranic Waste

Disposition of TRU waste is defined in a number of ways dependent upon the type of TRU waste being dispositioned.

B.2.1.3.4.3.6 Process CH TRU/TRUM in Drums and SWB

Process CH TRU/TRUM waste received in drums and standard waste boxes to prepare and package waste for disposal at WIPP.

B.2.1.3.4.3.7 Treat CH Category I Low Level Solid Waste

Receive, handle assess, treat, and package for transport onsite solid waste categorized as CH Category I LLW.

B.2.1.3.4.3.8 Treat CH Category III Low Level Solid Waste

Receive, handle assess, treat, and package for transport onsite solid waste categorized as CH Category III LLW.

B.2.1.3.4.3.9 WRAP MODULE 1 POST OPERATIONS WORK SCOPE SUMMARY

Day-to-day work, including pre-stabilization surveillance and maintenance, stabilization, post-stabilization surveillance and maintenance, deactivation, and post-deactivation surveillance and maintenance, that is required to allow safe decontamination and decommissioning.

WRAP MODULE 1 POST OPERATIONS SPECIFIC FUNCTIONS

B.2.1.3.4.3.10 Maintain Safe & Compliant WRAP Module 1 Facility in CP Areas

Maintain the WRAP Module 1 facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facilities are ready available for clean-up.

B.2.1.3.4.3.11 Transition WRAP Module 1 Facility

Initiate the transition phase of decontamination and decommissioning for the WRAP Module 1 facility.

B.2.1.3.4.3.12 WRAP MODULE 1 D&D WORK SCOPE SUMMARY

Day-to-day work, including remediating, stabilizing, controlling, and managing environmental contamination, that is required to allow future land-use objectives.

WRAP MODULE 1 D&D SPECIFIC FUNCTIONS

B.2.1.3.4.3.13 Decontaminate and Decommission (D&D) WRAP Module 1 Facility

Initiate the final decontamination and decommissioning of the WRAP Module 1 facility.

B.2.1.3.4.4 WRAP Module 1 Boundary Diagram

Table B.3-10 WRAP Module 1 Boundary Diagram

External Interfaces		Internal Interfaces
<p>None</p> <p>Historic Site Environmental System Interfaces</p> <p>Items 2.1.14 44-91 Facility</p> <p>Items 2.2.5 Central Waste Complex</p> <p>Items 2.2.8 Central Plutonium Waste Systems</p> <p>Items 2.5.5 Central Plutonium Waste Facilities</p> <p>Items 2.5.8 Central Plutonium Electrical System</p> <p>Items 2.5.8 Central Plutonium Telecommunication System</p> <p>Items 2.5.10 Central Plutonium Storage Facilities</p> <p>Items 2.5.12 Central Plutonium Storage Support Facilities</p> <p>Items 4.7.1 334 Complex</p> <p>Items 4.7.1 321 Complex</p>		<p>Waste Isolation Pilot Project</p> <p>Historic Site Environmental System Interfaces</p> <p>Items 2.1.1 Low-Level Waste Burial Complex</p> <p>Items 2.4.2 Mixed Waste Disposal Trenches</p> <p>Items 2.5.1 226B Laboratory</p> <p>Items 2.5.2 Waste Sampling and Characterization Facility</p>

B.2.1.3.4.5 WRAP Module 1 Interface Description and Forecast

EXTERNAL INPUTS

None

INTERNAL INPUTS

Table B.2-11 Internal Inputs for WRAP Module 1

Stream	Category	Period	Baseline	Units
Stream 2.2.14 M-01 Facility M-01, CH TRUM Processed CH TRUM from M-01 to WRAP for shipment out to WAPP	CH TRUM	1987 - 2000	4990	cubic meters
Stream 2.2.21 Central Waste Complex Storage to WRAP1, CH TRUM CH TRUM Transferred by Storage to WRAP1	CH TRUM	1987 - 2000	3840	cubic meters
Stream 2.2.22 Central Plateau Water System Possible Water for 200-WRAP Possible Water for 200-WRAP	Possible Water	1990 - 2004	962.0	Mgal
Stream 2.2.23 Central Plateau Office Facilities Office Space (Program Owned) for 200-WRAP Office Space (Program Owned) for 200-WRAP Paper Service for 200-WRAP Paper Service for 200-WRAP	(none forecasted) Paper Service	1990 - 2004	600.0	sq. ft. of space no. of pages
Stream 2.2.24 Central Plateau Electrical System Electricity for 200-WRAP Electricity for 200-WRAP	Electricity	1990 - 2004	15500	MWh/year
Stream 2.2.25 Central Plateau Telecommunications System Video Conferencing for 200-WRAP Video Conferencing for 200-WRAP Voice (Telephone) Conferencing for 200-WRAP Voice (Telephone) Conferencing for 200-WRAP Data (FAX) Transmission for 200-WRAP Data (FAX) Transmission for 200-WRAP Pages, National/Regional for 200-WRAP Pages, National/Regional for 200-WRAP	Video Conferencing Voice (Telephone) Conferencing Data (FAX) Transmission Pages, National/Regional	1990 - 2004 1990 - 2004 1990 - 2004 1990 - 2004	22000 1800 1850 74.0	hours no. of pages no. of PCs no. of pages
Stream 2.2.26 Central Plateau Shop Facilities Lifting (Crane) for 200-WRAP Lifting (Crane) for 200-WRAP Maintenance Services Structural for 200-WRAP Maintenance Services Structural for 200-WRAP Custodial Services for 200-WRAP Custodial Services for 200-WRAP Fab Shop Services for 200-WRAP Fab Shop Services for 200-WRAP Maintenance Services Carpenter for 200-WRAP Maintenance Services Carpenter for 200-WRAP	Lifting (Crane) Maintenance Services Custodial Services Maintenance Services Maintenance Services	1990 - 2004 1990 - 2004 1990 - 2004 1990 - 2004 1990 - 2004	10000 1.1 70000 4.81	crane days FTE sq. ft. FTE
Stream 2.2.27 Central Plateau Storage Support Facilities Allocated Storage for 200-WRAP Allocated Storage for 200-WRAP	Allocated Storage	1990 - 2004	370.0	sq. ft.
Stream 2.2.28 Central Plateau Road System Hazard Road Sys. Heavy Traffic for 200-WRAP Hazard Road Sys. Heavy Traffic for 200-WRAP Sediment/Light Trucks for 200-WRAP Sediment/Light Trucks for 200-WRAP Heavy Trucks for 200-WRAP Heavy Trucks for 200-WRAP	Hazard Road Sys. Heavy Traffic Sediment/Light Trucks Heavy Trucks	1990 - 2004 1990 - 2004 1990 - 2004	3700 74.0 4800	truck loads no. of vehicles vehicle days
Stream 4.0 South 500 Area Facilities/SLTs Biossey and Delivery Services for 200-WRAP Biossey and Delivery Services for 200-WRAP Radioactive Standards (Calibrations) for 200-WRAP Radioactive Standards (Calibrations) for 200-WRAP	Biossey and Delivery Services Radioactive Standards (Calibrations)	1990 - 2004 1990 - 2004	185.0 4400	complex calibrations

Table B.2-11 Internal Inputs for WRIAP Module 1 (Continued)

Stream	Category	Period	Quantity	Units
Items B.2.10.1.1 <i>Industrial Hygiene Services for 200-WRIAP</i>	Industrial Hygiene Services	1998 - 2004	370.0	samples
Items B.2.10.1.2 <i>Non-rel Standards (Calibrations) for 200-WRIAP</i>	Non-rel Standards (Calibrations)	1998 - 2004	740.0	calibrations
Items B.2.10.1.3 <i>Biological Laboratory Services for 200-WRIAP</i>	Biological Laboratory Services	1998 - 2004	370.0	samples

EXTERNAL OUTPUTS

Table B.2-12 External Outputs for WRIAP Module 1

Stream	Category	Period	Quantity	Units
Item B.2.12.1 <i>Waste Isolation Pilot Project</i>				
Item B.2.12.1.1 <i>CH TRUW Transferred by WRIAP to WPP (via WRIAP)</i>	CH TRUW	1997 - 2070	400	cubic meters
Item B.2.12.1.2 <i>CH TRUW Transferred by WRIAP to WPP (via WRIAP)</i>	CH TRUW	1997 - 2070	330000	cubic meters
Item B.2.12.1.3 <i>CH TRUW Transferred by WRIAP to WPP</i>	CH TRUW	1997 - 2070	1400	cubic meters
Item B.2.12.1.4 <i>CH TRUW Transferred by WRIAP to WPP</i>	CH TRUW	1997 - 2070	34000	cubic meters

INTERNAL OUTPUTS

Table B.2-13 Internal Outputs for WRIAP Module 1

Stream	Category	Period	Quantity	Units
Items B.2.1.1 <i>Low-Level Waste Solid Streams</i>				
Item B.2.1.1.1 <i>CH LLWV Transferred by WRIAP Module 1</i>	CH LLWV	1997 - 2070	285.0	cubic meters
Items B.2.1.2 <i>High-Level Waste Solid Streams</i>				
Item B.2.1.2.1 <i>CH LLWV Transferred by WRIAP Module 1</i>	CH LLWV	1997 - 2070	75.5	cubic meters
Items B.2.1.3 <i>200-WRIAP</i>				
Item B.2.1.3.1 <i>Analytical Laboratory Services for 200-WRIAP</i>	Analytical Laboratory Services	1998 - 2004	6726	samples
Items B.2.1.4 <i>Waste Sampling and Characterization Facility</i>				
Item B.2.1.4.1 <i>In-Field Laboratory Services for 200-WRIAP</i>	In-Field Laboratory Services	1998 - 2004	74.0	samples

B 2.1.3.5 Thermal Treatment Facility

B 2.1.3.5.1 Thermal Treatment Facility Description

The Thermal Treatment Facility (TTF) is a commercial facility contracted to perform thermal treatment of CH-LLM/H. The TTF will accept CH-LLM/H requiring thermal treatment. The TTF will provide thermal treatment and residue characterization for the waste volumes that have specific combinations of physical characteristics and hazardous constituents. Presently, the TTF will treat all volumes of waste that contain PCBs, reactive metals, or organic materials. Initially, the facility will be contracted to operate only through 2009. However, the contract is expected to be extended, if necessary, to finish processing all volumes of CH-LLM/H requiring thermal treatment.

B.2.1.3.5.2 Thermal Treatment Facility Facility Technical Logic:

Figure B-10 Thermal Treatment Facility

B.2.1.3.6.3 Thermal Treatment Facility Requirements and Life Cycle Function Descriptions

Requirements:

- Comply with requirements identified in WHC-IP-1120, Standards/Requirements Identification Document (S/RID).
- Solid waste shall be treated to convert the waste to an acceptable form for final disposition.
- Initiate thermal treatment of currently stored and newly generated CH-LLMW. At least 600 cubic meters will be provided for treatment by December 2005.

Due Date: 12/31/2000

- Provide decontamination and maintenance services in support of essential safety operations at the 2706-T Building: equipment decontamination: LLW and RMW packaging.

Life Cycle Function Descriptions:

B.2.1.3.5.3.1 Thermal Treatment Facility Program Planning WORK SCOPE SUMMARY

Functions that include planning and developing the low level mixed waste thermal treatment contract; establishing broad priorities; providing contract technical direction; preparing and defending the contract budget; controlling milestones; integrating all components of the contract; providing public and private sector policy liaison; expediting interface activities and follow-up actions; and retaining overall accountability for contract success.

Thermal Treatment Facility Program Planning SPECIFIC FUNCTIONS

B.2.1.3.5.3.2 Conduct Thermal Treatment

Establish vendor contracts to perform NDE/NDI of contract handled low level mixed waste containers, open-sort contents, thermal treatment process(es), and packaging of disposition ready category I and III low level mixed waste containers for Hanford Site mixed low level waste burial trench.

B.2.1.3.5.4 Thermal Treatment Facility Boundary Diagram

Table B.2-14 Thermal Treatment Facility Boundary Diagram

Internal interfaces	External interfaces
-None-	-None-
-Hanford Site Environmental System Interface	-Hanford Site Environmental System Interface
-Trans. S&M Control Media Controls	-None-

B.2.1.3.5.5 Thermal Treatment Facility Interface Description and Forecast

EXTERNAL INPUTS

-None-

INTERNAL INPUTS

Table B.2-15 Internal Inputs for Thermal Treatment Facility

Stream	Category	Period	Start/End	Units
Process B.2.5.5 Thermal Waste Complex Storage to CTF, CHILLERS I CHILLERS I Transferred by Storage to CTF	CHILLERS I	1997 - 2070	3229	cubic meters

EXTERNAL OUTPUTS

-None-

INTERNAL OUTPUTS

-None-

B.2.1.3.5 Low-Level Mixed Waste Stabilization Facility

B.2.1.3.5.1 Low-Level Mixed Waste Stabilization Facility Description

The LLMW Stabilization Treatment Program (STP) facility is a commercial facility contracted to perform stabilization of CH-LLMW not requiring thermal treatment. The commercial STP facility will provide non-thermal treatment for CH-LLMW (Category I and III only) in preparation for final disposal at the mixed waste disposal trenches. The facility is expected to become operational in September of 1999 (fiscal year 2000). The STP will process annually 2,294 cubic meters of CH-LLMW packaged in drums and 581 cubic meters of CH-LLMW contained in boxes as large as 6'x6'x12'.

B.2.1.3.5.2 Low-Level Mixed Waste Stabilization Facility Facility Technical Logic:

Figure B-11 Low-Level Mixed Waste Stabilization Facility

B.2.1.3.0.3 Low-Level Mixed Waste Stabilization Facility Requirements and Life Cycle Function Descriptions

Requirements:

- Comply with requirements identified in WMO-IP-1120, Standards/Requirements Identification Document (SRID).
- Solid waste shall be treated to convert the waste to an acceptable form for final disposition.

Life Cycle Function Descriptions:

B.2.1.3.0.3.1 Low-Level Mixed Waste Stabilization Facility Program Planning WORK SCOPE SUMMARY

Functions that include planning and developing the low level mixed waste stabilization contract; establishing broad priorities; providing contract technical direction; preparing and defending the contract budget; controlling milestones; integrating all components of the contract; providing public and private sector policy liaison; expediting interface activities and follow-up actions; and retaining overall accountability for contract success.

Low-Level Mixed Waste Stabilization Facility Program Planning SPECIFIC FUNCTIONS

B.2.1.3.0.3.2 Conduct Stabilization Treatment

Establish vendor contracts for performing non-thermal treatment of contract handled low level mixed waste in preparation of final disposal at the mixed waste disposal trenches.

B.2.1.3.0.4 Low-Level Mixed Waste Stabilization Facility Boundary Diagram

Table B.2-10 Low-Level Mixed Waste Stabilization Facility Boundary Diagram

External Interface	Internal Interface
None	None
Harford Site Environmental System Interfaces	Harford Site Environmental System Interfaces
Boards 2.2.0.0 Control Waste Controls	Boards 2.2.0.0 Control Waste Controls

B.2.1.3.6.5 Low-Level Mixed Waste Stabilization Facility Interface Description and Forecast

EXTERNAL INPUTS

-None-

INTERNAL INPUTS

Table B.2-17 Internal Inputs for Low-Level Mixed Waste Stabilization Facility

Stream	Category	Period	Baseline	Units
From: LLL Central Waste Complex Storage to STP, ON LLWMI ON LLWMI Transferred by Storage to STP	ON LLWMI	1997 - 2070	33800	cubic meters

EXTERNAL OUTPUTS

-None-

INTERNAL OUTPUTS

-None-

B.2.1.4 Drivers for Solid Waste Treatment

Table B.2-18 Source Documents for Solid Waste Treatment

Name	Title
DOE Order 5820.2A	Radioactive Waste 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), Rev. 4
DOE/RL-96-14	Updated Draft Mission Direction Document, June 1996
DOE/RL-96-02	Hanford Strategic Plan
DOE/WIPP-068, rev. 4	
ST 4502	State Waste Discharge Permit for the 200 Area TEF
WHC-IP-1120, Rev. 1	Standards/Requirements Identification Document (SRID)
WHC-SD-YM-MAR-008, TWR8	
Mission Analysis Report	
WHC-SP-1114 Rev 2	Solid Waste Program Fiscal Year 1997 Multi-Year Work Plan

B.2.1.6 Solid Waste Treatment Risk Management

Units of Analysis (and any RDS #):

T-Plant Canyon Minimum Safe: R96N0009, R96N0010, R96N0012, R96N0024

Remote Handled Waste Treatment: R96N0008, R96N0010, R96N0012, R96N0023

2706-T Minimum Safe: R96N0009, R96N0010, R96N0012, R96N0024

2706-T Operations: R96N0024

TRUW Treatment/Disposal: R96N0029, R96N0025, R96N0015

WRAP-1 Min Safe: R96N0004, R96N0030

WRAP-1 Operations: R96N0008, R96N0007, R96N0030

Secondary Containment Project W-250: R96N0018

TRU Retrieval Phase I Project W-113: R96N0013

Advanced TRU Retrieval Project W-156 and TRU Retrieval Phase II Project W-221: R96N0016

Risk roll-up by year:

	1997	1998	1999	2000	2001	2002	2003	2004	
Public	NA - 4B	LOW - 4A	LOW - 4A	LOW - 4A	LOW - 4A	LOW - 4A	LOW - 4A	LOW - 4A	LOW - 4A
Worker	MED - 3B	MED - 3B	MED - 3A	MED - 3A	MED - 3A	MED - 3A	MED - 3A	MED - 3A	MED - 3A
Environment	NA - 4B	NA - 4B	LOW - 3C	LOW - 3C	LOW - 3C	LOW - 3C	LOW - 3C	LOW - 3C	LOW - 3C

	2005	2006	2007 - 2010	2011 - 2015	2016 - 2020	2021 - 2025	2026 - 2030	2031 - 2035	
Public	LOW - 4A	LOW - 4A	LOW - 4A	LOW - 4A	LOW - 4A	LOW - 4A	LOW - 4A	LOW - 4A	LOW - 4A
Worker	MED - 3A	MED - 3A	MED - 3A	MED - 3A	MED - 3A	MED - 3A	MED - 3A	MED - 3A	MED - 3A
Environment	LOW - 3C	LOW - 3C	LOW - 3C	LOW - 3C	LOW - 3C	NA - 4B	NA - 4B	NA - 4B	NA - 4B

Has the risk evaluation been externally peer reviewed? N

Have regulators and stakeholders been involved in validating the project risk evaluations? N

C.1. Narrative

Identification of relevant PBS interfaces - e.g., if the project ends and is transferred to another PBS. This project interfaces with all other site programs in providing mixed waste treatment activities and high-dose/low-dose/alpha decontamination services. There is also an interface with the Spent Nuclear Fuels project for the removal of spent nuclear fuel from the T-Plant Canyon. WRAP-1 will receive newly generated waste from Hanford site generators and suspect TRU waste from TRU retrieval projects. LLW will be sent to LDBG for disposal, TRU waste will be sent to the WIPP for disposal, and LLNW/TRUM will be sent to storage or treatment.

WRAP-1 will operate in support of LDBG and WIPP until generator facilities no longer require WRAP-1 services, at which time the facility will be shutdown, decontaminated, and decommissioned.

W-113 will continue until completion in FY 2004 in support of Burial Grounds closure. At project termination appropriate equipment and personnel will transition to TRU Retrieval Phase II Project W-221. Project W-113 will provide WRAP-1 a feed stream of suspect TRU waste containers for continuous processing.

Project W-156 will continue until completion BY FY 2015 in support of Burial Grounds closure.

Project W-221 will continue until completion in FY 2010 in support of Burial Grounds closure. TRU Retrieval Phase II will provide WRAP-1 a feed stream of suspect TRU waste containers for continuous processing.

Any construction of RM-TRU processing facilities requires funding of the TRU retrieval projects as a feed stream.

Brief description of Project, hazards and activities (2-3 sentences, including project phases)

The Waste Treatment project provides mixed waste treatment through on-site activities and off-site vendor contracts. Waste to be treated include waste that is stored and that which is newly generated. Also provided is decontamination support for materials and equipment as requested by Hanford site customers. In addition to the industrial hazards associated with WRAP-1 equipment and operations, there are risks of worker exposure to radioactive and hazardous materials. These risks are mitigated by procedures, training, administrative controls, and maintenance of facility systems and equipment. The project also provides two-year capital upgrades for compliance projects and insurmountable waste retrieval projects. Waste that is not treated must continue to be held in storage posing a greater risk to on-site workers. Waste that is not retrieved will continue to degrade in underground storage and increase risk for environmental contamination.

In addition to the industrial hazards associated with TRU Retrieval Phase 1, Phase 2, and Geison Retrieval equipment and operations, there are risks of worker exposure to radioactive and hazardous materials. These risks are mitigated by procedures, training, administrative controls, and maintenance of facility systems and equipment.

Risk reduction metric(s) and demarcation of risk levels

How will this project reduce Hanford risks? What key project events are planned that will change risk? This overall waste treatment project reduces risk on the Hanford Site by centralizing mixed waste and then reducing the chemical and radiological hazards associated with it through decontamination or treatment. This reduces the both the probability of an event occurring and its potential off-site hazard.

The baseline risks for this project are medium. LLNW treated in this project would otherwise be packaged for compliant storage if they were not treated. Since there is an option of monitored storage, the buildup of backlog wastes to be treated poses no additional risk to the environment, worker, or public. Risks are reduced to near zero at the end of the project. All available wastes will have been treated to regulatory standards and facilities will be decommissioned. WRAP-1 is a service facility and has no specific interim or final endpoint targets in the Hanford Mission Direction Document or Hanford Strategic Plan. However WRAP-1 supports site cleanup activities necessary to ensure public health and safety, and protect the environment. WRAP-1 must be available to support LDBG, WIPP,

and Mixed Waste Treatment activities. Risks during the outyears, 2000 - 2070 are similar to the risks for 1998 as the mission of the treatment facilities and programs is not expected to change in any great degree.

Capital Project W113 This project will remove 10,000 suspect TRU waste drums/boxes from underground storage for disposal, treatment, and/or compliant storage. These waste containers will begin exceeding their design life for underground storage; retrieval reduces the risk of soil and eventual ground water contamination.

Capital Project W156 This project will remove TRU waste from the Alpha Canisters storage for disposal, treatment, and/or compliant storage. Retrieval reduces the risk of soil and eventual ground water contamination.

Capital Project W221 This project will remove 20,000 suspect TRU waste drums/boxes from underground storage for disposal, treatment, and/or compliant storage. These waste containers have begun exceeding their design life for underground storage; retrieval reduces the risk of soil and eventual ground water contamination.

What risk performance measures have been selected to track changes in risk? Are these direct measures such as dose or indirect estimates such as volume of stabilized material?

Public Health metric(s) The metrics chosen to represent certain of these risks include radiological stack emissions from continuing operations and dose from accidental releases, if any should occur.

Worker Health & Safety metric(s) Occurrence reporting incidents, first aid cases, lost work days, and restricted work days, accrued radiological dose.

Environmental Health metric(s) Amount of waste retrieved, treated, stored, and disposed, chemical usage, and spill reporting.

Risk Drivers (primary accident and/or exposure scenarios, with frequency or probability and rough estimate of magnitude)

T-Plant Complex Operation of the T-Plant complex poses only a low risk to the public health and safety as documented in the T-Plant Intern Safety Basis, document number WHC-SD-1WM-15B-006. The evaluation of the bounding scenarios of operation shows that the risk of operation fall within a hazard category 3 classification. Hazard category 3 facilities show the potential for significant consequences only in the local facility area. The bounding accidents include a spray leak from the waste storage tanks for radiological release and the configuration of stored sodium metal. The spray leak scenario results in a release of 8.66 Curies of various radionuclides that result in a potential onsite (plant) worker dose of 2.32 REM and an off-site receptor dose of 0.039 REM. The majority of this dose arises from the release of Sr-90, Y-90, Plutonium isotopes and Am 241. The sodium metal fire scenario results in a 6.88 mg/cubic meter airborne concentration of NaOH for the onsite worker which is 5 times below ERPG-2 to ERPG-3 guidelines. For off-site exposure a value of 0.116 mg/cubic meter is reached which is at least 20 times below the ERPG-1 to ERPG-2 guidelines. This all results in a low risk rating for public safety and health. The primary risk drivers for the on site workers at the complex are industrial in nature. The T-Plant Complex is over 60 years old and was not constructed to the same industrial safety standards as today. Combined with the heavy physical nature of work at the plant, this creates in a higher incidence of lost work days and injuries and results in a medium risk rating.

WRAP Facility Operation of WRAP-1, and its support to the site cleanup, is the primary risk driver. No quantitative estimates have been made of the risk associated with this scenario. Hazards for WRAP-1 have been formally assessed in the WRAP-1 FSAR.

Mixed Waste Treatment Program Most mixed waste treatment will occur at off-site facilities and will not affect the risk profile of Hanford facilities. Any activities that are chosen to be performed on the Hanford site will need to fit within the existing safety structures of the facility where they will be performed and will not increase the risk profile of these facilities. If mixed waste treatment is not accomplished, waste volumes will build up at facilities and at the CWC. These storage facilities are permitted for such storage and an increase in volume stored will not increase the risk profile for their operations. Any risk rating for this work will be low.

Retrieval Projects These projects will remove TRU and suspect TRU waste drums/boxes from underground storage for disposal, treatment, and/or compliant storage. These waste containers have begun exceeding their design life for underground storage; retrieval reduces the risk of soil and eventual ground water contamination.

Where are we now? BASELINE risks existing at the beginning of 1997 - "stopped project" risks against which progress will be measured (occurrences, contaminants/materials, concentrations, risk levels). Refer to Table C 1 A in the Ten Year Plan Guidance.

Formal evaluations of stopped project scenarios have not been undertaken. The following is a qualitative discussion of existing conditions.

Existing conditions, inventories: There is a large quantity of mixed waste and contamination equipment stored on the Hanford Site. If the waste is left untreated it will accumulate on the site in various locations in compliant storage. Contaminated equipment will just stockpile locally at facilities. Replacement materials and equipment will have to be purchased. The Hanford "Legacy" includes radioactive and hazardous acid wastes, spent nuclear fuel, contaminated soil, and facilities with high mortgages for continued surveillance and maintenance. ERAP-1 essential to the cleanup and remediation of the Hanford site. TRU Retrieval Phase I addresses roughly 10,000 of the over 30,000 buried suspect TRU waste containers at Hanford. This represents nearly 250 Kg of plutonium. Cesium Retrieval addresses the roughly 5,500 TRU waste containers in the Alpha Cansons. This represents approximately 279 Kg of uranium and 247 Kg of plutonium. TRU Retrieval Phase II addresses the remaining roughly 20,000 buried suspect TRU waste containers at Hanford. This represents nearly 480 Kg of plutonium.

Baseline public health risks: Without treatment of mixed waste inventories, the volume of the waste will continue to grow. An increased volume in storage increases the risk that some of the material could expose off-site individuals. The additional risk is taken to be very low because waste will continue to be stored in compliance in RCRA requirements. Retrieval Projects. These projects will remove TRU and suspect TRU waste drums/boxes from underground storage for disposal, treatment, and/or compliant storage. These waste containers have begun exceeding their design life for underground storage. Retrieval reduces the risk of potential spread of contamination from degrading containers and reduces risk to the public.

Baseline worker health & safety risks: Without treatment of mixed waste inventories, the volume of the waste will continue to grow. An increased volume in storage increases the risk that some of the material could expose on-site workers. There is a measurable increase in risk to workers as the volume of materials increases. Retrieval Projects. These projects will remove TRU and suspect TRU waste drums/boxes from underground storage for disposal, treatment, and/or compliant storage. These waste containers have begun exceeding their design life for underground storage. Retrieval reduces the risk of potential spread of contamination from degrading containers and reduces risk to the worker.

Baseline environmental health risks: Without treatment of mixed waste inventories, the volume of the waste will continue to grow. An increased volume in storage increases the risk that some of the material could be released to the environment. There is a measurable increase in risk to the environment as the volume of materials increases. Retrieval Projects. These projects will remove TRU and suspect TRU waste drums/boxes from underground storage for disposal, treatment, and/or compliant storage. These waste containers have begun exceeding their design life for underground storage. Retrieval reduces the risk of soil and eventual ground water contamination.

Where are we going? Conditions at project completion or transfer and risk-related conditions in the outdoors that relate to long term END STATE commitments.

END STATE conditions, inventories: All on-site mixed waste will have been disposed or treated/disposed in compliance with RCRA requirements. All post-1970 TRU would be retrieved and shipped off-site for disposal. All generator facilities will have ceased operations, all clean-up activities are complete, and closure of all RCRA facilities is completed.

END STATE public health risks: There is no risk to the public at the end state. All mixed waste materials have

been treated and permanently disposed of in RCRA compliant facilities.

END STATE worker health & safety risks: There is no risk to the worker at the end state. All mixed waste materials have been treated and permanently disposed of in RCRA compliant facilities.

END STATE environmental health risks: There is very low risk to the environment at the end state. All mixed waste materials have been treated and permanently disposed of in RCRA compliant facilities.

How are we getting there? Risks that REMAIN at the end of each budget year as currently planned (Purpose: to show how much progress in risk reduction will have been made, and how much risk would still remain if the project were stopped at the end of that year and never restarted. Refer to Table C.1.A.)

General rationale: This is a long term project. If the project is stopped in any year, mixed waste and contaminated materials will continue to be generated and accumulated. The risks would be approximately the same in the out years as in the current year for a stopped project scenario. There would be some decrease in risk levels as other site projects come to their end states and quit generating mixed waste and contaminated materials.

Public health and critical project events & years: This is a long term project. If the project is stopped in any year, mixed waste and contaminated materials will continue to be generated and accumulated. The risks would be approximately the same in the out years as in the current year for a stopped project scenario. There would be some decrease in risk levels as other site projects come to their end states and quit generating mixed waste and contaminated materials.

Worker health & safety and critical project events & years (e.g., risks to other Hanford workers if this project were stopped): This is a long term project. If the project is stopped in any year, mixed waste and contaminated materials will continue to be generated and accumulated. The risks would be approximately the same in the out years as in the current year for a stopped project scenario. There would be some decrease in risk levels as other site projects come to their end states and quit generating mixed waste and contaminated materials.

Environmental health and critical project events & years: This is a long term project. If the project is stopped in any year, mixed waste and contaminated materials will continue to be generated and accumulated. Waste containers that are not retrieved will continue to degrade and release contaminants into the environment. This would also make future retrieval even more hazardous to the on-site worker and public. There would be some decrease in risk levels as other site projects come to their end states and quit generating mixed waste and contaminated materials. However, there would be a year-by-year increase in risk levels for TRU waste that is not retrieved and treated. The longer the delay in retrieval the more TRU material will be released into the environment.

ANNUAL risks for key project years

Annual risks remain essentially the same throughout each year. However, there would be a year-by-year increase in risk levels to the environment for TRU waste that is not retrieved and treated. The longer the delay in retrieval the more TRU material will be released into the environment.

Risk Interfaces, Related Projects, Issues

Interfaces and transitions: Interfaces exist throughout the life of the project with all on-site generators until they reach their end states. An interface will continue to exist with RL-WHD3 for waste storage and mixed waste treatment feed stream. An interface exists with the Spent Nuclear Fuels project for the removal of Spent Nuclear Fuel from the T-Plant Canyon.

Related & interdependent projects: Waste storage, spent nuclear fuels, and all Hanford Site generators of mixed waste and contaminated equipment.

Waste streams, disposal plans, long-term risks: Wastes generated from this operation will be disposed of in RCRA compliant disposal facilities on the Hanford Site. Generating facilities will require treatment options of their mixed wastes to reach their end states. At the end state there is only minor risk to any receptor.

Major risk issues and risk assumptions related to project implementation and interim and final end states: It is assumed that compliant waste storage at generating facilities and the Central Waste Complex will always be funded. It is assumed that the WIPP site will take TRU waste as currently scheduled. All new mixed waste treatment operations at T-Plant will be screened for and pass Unreviewed Safety Question screening to fall within the existing bounds of authorized operations in the T-Plant Interim Safety Basis. WRAP proceeds to timely operations with an

approved Final Safety Analysis Report. Most new mixed waste treatment operations will occur off-site at contracted vendor facilities. A remaining major risk issue is the continuing degradation of buried TRU containers until their retrieval and treatment.

References:

Interim Safety Basis for Solid Waste Facilities: T-Plant, WMC-SD-WM-15B-006, Rev 0.
Waste Receiving and Processing Facility Final Safety Analysis Report, HNF-SD-W026-SAR-002, Rev 0C
Risk Data Sheets: R96N0004, R96N0006, R96N0007, R96N0008, R96N0010, R96N0012, R96N0013, R96N0015,
R96N0018, R96N0019, R96N0020, R96N0023, R96N0024, R96N0030, R96N0225
Solid Waste Program Multi-Year Program Plan

FY1998

August 29, 1997

B.2.2.0 Work Breakdown Structure (WBS)

B.2.2.1 WBS Dictionary

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: 2706-T FACILITY MINIMUM SAFE		2. Date 8/23/1997	3. PBS Number RL-WMD4	4. Dict Rev
5. Contract WBS No. 1.2.2.1.01	6. Corresponding FDS No. 1A2A	7. Baseline CR No.		
8. Organization Name 32A00 - SOLID WASTE PROJECT MANAGEMENT				9. B & R No.
<p>10. Scope of Work</p> <p>Provides for minimum safe operations at the 2706-T facility. Activities are designed to keep the facility in a safe and compliant status. Maintenance activities will include preventative, corrective, and designated calibration and/or testing services. Training will maintain established qualifications for plant personnel to work in a treatment, storage, and disposal facility.</p>				

MANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
NBS: 1.2

8/26/1997

1. Activity Title: 2706-T FACILITY DECONTAMINATION OPERATION		2. Date 8/23/1997	3. PBS Number RL-WN04	4. Dict Rev
5. Contract WBS No. 1.2.2.1.02	6. Corresponding FDS No. 1A2B	7. Baseline CR No.		
8. Organization Name 32A00 - SOLID WASTE PROJECT MANAGEMENT				9. B & R No.
<p>10. Scope of Work Provides decontamination and waste verification activities, including low-dose beta-gamma decontamination, and waste verification in the 2706-T/TA facility. Training and certification that is directly related to decontamination / verification will be provided.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: T PLANT CANYON MINIMUM SAFE		2. Date 8/23/1997	3. PBS Number RL-WMD4	4. Dict Rev
5. Contract WBS No. 1.2.2.1.03	6. Corresponding FDS No. 1A2C	7. Baseline CR No.		
8. Organization Name 32A00 - SOLID WASTE PROJECT MANAGEMENT				9. B & R No.
10. Scope of Work Provides for minimum safe operations at the T Plant Waste and Decontamination Services Canyon Facility. These activities support compliance and safety requirements.				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: RM-WASTE TREATMENT (T CANYON)	2. Date 8/23/1997	3. PBS Number RL-WMD4	4. Dict Rev
5. Contract WBS No. 1.2.2.1.04	6. Corresponding FDS No. 1A2D	7. Baseline CR No.	
8. Organization Name 32A00 - SOLID WASTE PROJECT MANAGEMENT			9. B & R No.
10. Scope of Work Provides high-dose and dual survey (beta-gamma and alpha) decontamination services, and spent nuclear fuel removal at T Plant. Provides for training and certification of operators.			

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: WRAP FACILITY MINIMUM SAFE	2. Date 8/23/1997	3. PBS Number RL-WMD4	4. Dict Rev
5. Contract WBS No. 1.2.2.1.05	6. Corresponding FDS No. 1A2E	7. Baseline CR No.	
8. Organization Name 32500 - WRAP 1			9. B & R No.
<p>10. Scope of Work Provides for minimum safe operations at the Waste Receiving and Processing (WRAP) Module 1 facility; including surveillance, preventative and corrective maintenance, management/administration, and training activities.</p>			

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: WRAP FACILITY OPERATIONS	2. Date 8/23/1997	3. PBS Number RL-WM04	4. Dict Rev
5. Contract WBS No. 1.2.2.1.06	6. Corresponding FDS No. 1A2F	7. Baseline CR No.	
8. Organization Name 32600 - WRAP 1			9. B & R No.
10. Scope of Work Provides for the operational activities to perform the NDE/NDA, LLW and TRU process line operations. NDE/NDA and visual/repacking will be performed on Low Level Waste (LLW), Transuranic waste (TRU), and LLW/TRU Mixed Waste. LLW will be verified and sent to the burial grounds for disposal. LLW/TRU Mixed Waste will be segregated and sent to storage or treatment. TRU waste will be verified/certified for shipment to the Waste Isolation Pilot Project (WIPP) for disposal.			

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: RADIOACTIVE MIXED WASTE (RMW) TREATMENT		2. Date 8/23/1997	3. PBS Number RL-WM04	4. Dict Rev
5. Contract WBS No. 1.2.2.1.07	6. Corresponding FDS No. 1A2G	7. Baseline CR No.		
8. Organization Name 33400 - STRATEGIC PLANNING				9. B & R No.
<p>10. Scope of Work</p> <p>Provides for RCRA required treatment and disposal of several categories of radioactive mixed waste (RMW) that will be generated in the future, as well as those currently stored on the Hanford site. RMW waste categories include approximately 250 barrels of hydraulic oil containing polychlorinated biphenyls contaminated with plutonium; contact handled (CH) low level mixed waste (LLMW) currently stored in the Central Waste Complex (CWC) awaiting treatment to comply with land disposal restrictions (LDR); MALLAM and SRE sodium presently stored on the Hanford site to be processed for disposal or reuse; and solidified liquids and soils from the 183-N facility ready for disposal. Where possible, direct disposal methods for those wastes currently meeting treatment criteria will be pursued at the Low Level Burial Grounds (LLBG) or in the Environmental Remediation Disposal Facility (ERDF). The common denominator is that they all require treatment, or the approval of a regulatory waiver, before they can be disposed. Until then, they will continue to be stored at the Hanford site. Provides funds for Termination for Convenience, and treatment activities for LLMW Stabilization and Thermal Treatment contracts. Also supports the completion of Tri-Party Agreement Milestone M-19. Large containers of contact handled, and all remote handled, TRU waste will be processed and/or packaged, and stored until it is shipped offsite for final disposition at WIPP and supports Tri-Party Agreement Milestone M-91.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: SECONDARY CONTAINMENT PROJECT (W-259)		2. Date 8/23/1997	3. PBS Number RL-WM04	4. Dict Rev
5. Contract WBS No. 1.2.2.1.08	6. Corresponding FDS No. 1A2H	7. Baseline CR No.		
8. Organization Name 32D00 - CAPITAL/PROJECTS MANAGEMENT				9. B & R No.
10. Scope of Work Provides the expense funding supporting the construction of a double contained waste collection system for the 2706-T Decontamination Facility. These wastes are currently managed in the 221-T canyon piping and tank systems, which are not in compliance with federal and state requirements. This project implements Tri-Party Agreement Milestone N-32-03.				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: TRU RETRIEVAL, PHASE 1 (N-113)		2. Date 8/23/1997	3. PBS Number RL-WM04	4. Dict Rev
5. Contract WBS No. 1.2.2.1.09	6. Corresponding FDS No. 1A2J	7. Baseline CR No.		
8. Organization Name 32D00 - CAPITAL/PROJECTS MANAGEMENT				9. B & R No.
<p>10. Scope of Work</p> <p>Provides the expense funding supporting design, construction and startup of a facility that will be used to retrieve contact handled (CH) suspect Transuranic (TRU) waste from one underground storage trench at the Hanford site. A phased approach to retrieval has been selected, and Project N-113 addresses Phase I. The waste has been buried in containers that were not intended to be in the ground for more than twenty years. Many of these containers have now exceeded this twenty year period. The Record of Decision for the Hanford Defense Waste - Environmental Impact Statement (HDW-EIS) states that the post-1970 TRU waste must be retrieved. Phase I will retrieve roughly one third of the CH TRU waste containers stored since 1970 that are expected to be intact, approximately 10,000 drums/boxes. Equipment will be provided to x-ray and assay the waste containers through non-destructive techniques for proper identification of the content to the extent necessary to meet site requirements at an onsite RCRA permitted facility.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: TRU RETRIEVAL, PHASE II (W-221)		2. Date 8/23/1997	3. PBS Number RL-MM04	4. Dict Rev
5. Contract WBS No. 1.2.2.1.10	6. Corresponding FDS No. 1A2K	7. Baseline CR No.		
8. Organization Name 32D00 - CAPITAL/PROJECTS MANAGEMENT				9. B & R No.
<p>10. Scope of Work</p> <p>Provides the expense funding supporting retrieval of remote handled (RH) suspect Transuranic (TRU) waste from 25 underground storage trenches at the Hanford site. A phased approach has been selected; and Project W-221 addresses Phase II, which is defined as retrieval of all TRU/suspect TRU waste that is not recovered in Phase I TRU Retrieval (W-113) or Caisson Retrieval (W-156). The waste has been buried in containers that were not intended to be in the ground for more than twenty years. Many of these containers have now exceeded this twenty year period. The Record of Decision for the Hanford Defense Waste -Environmental Impact Statement (HDW-EIS) states that the post-1970 TRU waste must be retrieved. This will enable final closure of the respective burial grounds.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: CAISSON RETRIEVAL (W-156)		2. Date 8/23/1997	3. PBS Number RL-WM04	4. Dict Rev
5. Contract WBS No. 1.2.2.1.11	6. Corresponding FDS No. 1A2N	7. BaseLine CR No.		
8. Organization Name 32000 - CAPITAL/PROJECTS MANAGEMENT				9. B & R No.
<p>10. Scope of Work</p> <p>Provides expense funding supporting retrieval of remote handled (RH) Transuranic (TRU) waste from the Alpha Caissons. The Record of Decision for the Hanford Defense Waste - Environmental Impact Statement (HDW-EIS) states that the post-1970 TRU waste must be retrieved. A total of 5,485 one-gallon waste containers are stored in four underground caissons. This will enable the final closure of the respective burial grounds.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT

WBS: 1.2

8/26/1997

1. Activity Title: TRU RETRIEVAL, PHASE II (W-221) - GENRTC		2. Date 8/23/1997	3. PBS Number RL-WM04	4. Dict Rev
5. Contract WBS No. 1.2.2.1.20	6. Corresponding FDS No. 2A2K	7. Baseline CR No.		
8. Organization Name 32D00 - CAPITAL/PROJECTS MANAGEMENT				9. B & R No.
<p>10. Scope of Work</p> <p>Provides capital equipment funding supporting the retrieval of remote handled (RH) suspect Transuranic (TRU) waste from underground storage trenches at the Hanford site. A phased approach has been selected; and project W-221 addresses Phase II, which is defined as retrieval of all TRU/suspect TRU waste that is not recovered in Phase I TRU Retrieval (W-113) or Caisson Retrieval (W-156). The waste has been buried in containers that were not intended to be in the ground for more than twenty years. Many of these containers have now exceeded this twenty year period. The Record of Decision for the Hanford Defense Waste -Environmental Impact Statement (HDW-EIS) states that the post-1970 TRU waste must be retrieved. Provides for retrieval of remote handled (RH) TRU waste from twenty five underground trenches for continuous processing within WRAP 1. This will enable final closure of the respective burial grounds.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: CAISSON RETRIEVAL (W-156) - CENRTC		2. Date 8/23/1997	3. PBS Number RL-WN04	4. Dict Rev
5. Contract WBS No. 1.2.2.1.21	6. Corresponding FDS No. 2A2M	7. Baseline CR No.		
8. Organization Name 32000 - CAPITAL/PROJECTS MANAGEMENT				9. B & R No.
<p>10. Scope of Work</p> <p>Provides capital equipment funding supporting the retrieval of remote handled (RH) Transuranic (TRU) waste from the Alpha Caissons. The Record of Decision for the Hanford Defense Waste -Environmental Impact Statement (HDW-EIS) states that the post-1970 TRU waste must be retrieved. Provides for the retrieval of RH TRU waste from four underground caissons. There are a total of 5,485 one-gallon waste containers stored in these caissons. This will enable the final closure of the respective burial grounds.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: TRU RETRIEVAL, PHASE I (W-113) - CENRTC		2. Date 8/23/1997	3. PBS Number RL-WM04	4. Dict Rev
5. Contract WBS No. 1.2.2.1.29	6. Corresponding FDS No. 2A2J	7. Baseline CR No.		
8. Organization Name 32D00 - CAPITAL/PROJECTS MANAGEMENT				9. B & R No.
<p>10. Scope of Work</p> <p>Provides capital equipment funding supporting the design, construction and startup of a facility that will be used to retrieve contact handled (CH) suspect Transuranic (TRU) waste from one underground storage trench at the Hanford site. A phased approach to retrieval has been selected, and Project W-113 addresses Phase I. The waste has been buried in containers that were not intended to be in the ground for more than twenty years. Many of these containers have now exceeded this twenty year period. The Record of Decision for the Hanford Defense Waste - Environmental Impact Statement (HDW-EIS) states that the post-1970 TRU waste must be retrieved. Phase I will retrieve roughly one third of the CH TRU waste containers - stored since 1970 that are expected to be intact, approximately 10,000 drums/boxes. Equipment will be provided to x-ray and assay the waste containers through non-destructive techniques for proper identification of the content to the extent necessary to meet site requirements at an onsite RCRA permitted facility.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: TRU RETRIEVAL, PHASE II (W-221) - LINE 17		2. Date 8/23/1997	3. PBS Number RL-MM04	4. Dict Rev
5. Contract WBS No. 1.2.2.1.30	6. Corresponding FDS No. 3A2K	7. Baseline CR No.		
8. Organization Name 32000 - CAPITAL/PROJECTS MANAGEMENT			9. B & R No. -	
<p>10. Scope of Work</p> <p>Provides line item funding to support the retrieval of remote handled (RH) suspect Transuranic (TRU) waste from underground storage trenches at the Hanford site. A phased approach has been selected; and Project W-221 addresses Phase II, which is defined as retrieval of all TRU/suspect TRU waste that is not recovered in Phase I TRU Retrieval (W-113) or Caisson Retrieval (W-156). The waste has been buried in containers that were not intended to be in the ground for more than twenty years. Many of these containers have now exceeded this twenty year period. The Record of Decision for the Hanford Defense Waste -Environmental Impact Statement (HDW-EIS) states that the post-1970 TRU waste must be retrieved. Provides for retrieval of remote handled (RH) TRU waste from twenty five underground trenches for continuous processing within WRAP 1. This will enable final closure of the respective burial grounds.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: CAISSON RETRIEVAL (W-156) - LINE ITEM	2. Date 8/23/1997	3. PBS Number RL-WM04	4. Dict Rev
5. Contract WBS No. 1.2.2.1.31	6. Corresponding FDS No. 3A2M	7. Baseline CR No.	
8. Organization Name 32D00 - CAPITAL/PROJECTS MANAGEMENT			9. B & R No.
10. Scope of Work Provides line item funding to support the retrieval of remote handled (RH) Transuranic (TRU) waste from the Alpha Caissons. The Record of Decision for the Hanford Defense Waste -Environmental Impact Statement (HOW-EIS) states that the post-1970 TRU waste must be retrieved. Provides for the retrieval of RH TRU waste from four underground caissons. There are a total of 5,485 one-gallon waste containers stored in these caissons. This will enable the final closure of the respective burial grounds.			

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
NBS: 1.2

8/26/1997

1. Activity Title: SECONDARY CONTAINMENT PROJECT (W-259) - I	2. Date 8/23/1997	3. PBS Number RL-WP04	4. Dict Rev
5. Contract NBS No. 1.2.2.1.38	6. Corresponding FDS No. 3A2H	7. Baseline CR No.	
8. Organization Name 32D00 - CAPITAL/PROJECTS MANAGEMENT			9. B & R No.
<p>10. Scope of Work Provides line item funding to support the construction of a double contained waste collection system for the 2706-T Decontamination Facility. These wastes are currently managed in the 221-T canyon piping and tank systems, which are not in compliance with federal and state requirements. This project implements Tri-Party Agreement Milestone M-32-03.</p>			

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/26/1997

1. Activity Title: TRU RETRIEVAL, PHASE I (W-113) - LINE 17		2. Date 8/23/1997	3. PBS Number RL-WMD4	4. Dict Rev
5. Contract WBS No. 1.2.2.1.39	6. Corresponding FDS No. 3A2J	7. Baseline CR No.		
8. Organization Name 32000 - CAPITAL/PROJECTS MANAGEMENT				9. B & R No.
<p>10. Scope of Work</p> <p>Provides line item funding to support the design, construction and startup of a facility that will be used to retrieve contact handled (CH) suspect Transuranic (TRU) waste from one underground storage trench at the Hanford site. A phased approach to retrieval has been selected, and Project W-113 addresses Phase I. The waste has been buried in containers that were not intended to be in the ground for more than twenty years. Many of these containers have now exceeded this twenty year period. The Record of Decision for the Hanford Defense Waste - Environmental Impact Statement (HDW-EIS) states that the post-1970 TRU waste must be retrieved. Phase I will retrieve roughly one third of the CH TRU waste containers stored since 1970 that are expected to be intact, approximately 10,000 drums/boxes. Equipment will be provided to x-ray and assay the waste containers through non-destructive techniques for proper identification of the content to the extent necessary to meet site requirements at an onsite RCRA permitted facility.</p>				

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B.2.2.2 Responsibility Assignment Matrix

WASTE MANAGEMENT
MS 1.2

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Mission Area Responsibility Assignment Matrix

Proj Lvl (PBS #)	FIS Act Number	Activity Title	Activity Manager	Responsible Organization	Cost Account
RL-WMD4		SOLID WASTE TREATMENT			
	1A2A	2706-T FACILITY MINIMUM SAFE	R.J. GINDR	32400 - SOLID WASTE PROJECT MANAGEMENT	
	1A2B	2706-T FACILITY DECONTAMINATION OPERATIONS	R.J. GINDR	32400 - SOLID WASTE PROJECT MANAGEMENT	
	1A2C	T PLANT CANYON MINIMUM SAFE	R.J. GINDR	32400 - SOLID WASTE PROJECT MANAGEMENT	
	1A2D	PH-WASTE TREATMENT (T CANYON)	R.J. GINDR	32400 - SOLID WASTE PROJECT MANAGEMENT	
	1A2E	WRAP FACILITY MINIMUM SAFE	L.W. ROBERTS	32600 - WRAP 1	
	1A2F	WRAP FACILITY OPERATIONS	L.W. ROBERTS	32600 - WRAP 1	
	1A2G	RADIOACTIVE MIXED WASTE (RWMD) TREATMENT	D.E. HEKENEY	33400 - STRATEGIC PLANNING	
	1A2H	SECONDARY CONTAINMENT PROJECT (M-259)	D.B. POWELL	32000 - CAPITAL/PROJECTS MANAGEMENT	
	1A2J	TRU RETRIEVAL, PHASE I (M-113)	D.B. POWELL	32000 - CAPITAL/PROJECTS MANAGEMENT	
	1A2K	TRU RETRIEVAL, PHASE II (M-221)	D.B. POWELL	32000 - CAPITAL/PROJECTS MANAGEMENT	
	1A2M	CAISSON RETRIEVAL (M-156)	D.B. POWELL	32000 - CAPITAL/PROJECTS MANAGEMENT	
	2A2J	TRU RETRIEVAL, PHASE I (M-113) - CEMTIC	D.B. POWELL	32000 - CAPITAL/PROJECTS MANAGEMENT	
	2A2K	TRU RETRIEVAL, PHASE II (M-221) - CEMTIC	D.B. POWELL	32000 - CAPITAL/PROJECTS MANAGEMENT	
	2A2M	CAISSON RETRIEVAL (M-156) - CEMTIC	D.B. POWELL	32000 - CAPITAL/PROJECTS MANAGEMENT	
	JAZH	SECONDARY CONTAINMENT PROJECT (M-259) - LINE ITEM	D.B. POWELL	32000 - CAPITAL/PROJECTS MANAGEMENT	
	JAZJ	TRU RETRIEVAL, PHASE I (M-113) - LINE ITEM	D.B. POWELL	32000 - CAPITAL/PROJECTS MANAGEMENT	
	JAZK	TRU RETRIEVAL, PHASE II (M-221) - LINE ITEM	D.B. POWELL	32000 - CAPITAL/PROJECTS MANAGEMENT	
	JAZM	CAISSON RETRIEVAL (M-156) - LINE ITEM	D.B. POWELL	32000 - CAPITAL/PROJECTS MANAGEMENT	

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B.2.3.0 Schedule Baseline

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains Project Baseline Summary (PBS) guidance.

WMP/SSPP PLANNING MILESTONE LIST
REPORTING PERIOD 10/01/97 TO 12/31/20

MILESTONE CONTROL #	TPA-MS NUMBER	TPA TYPE	MS LEVEL	MS TITLE	DATES			PROJ CDM	PBS #
					PLANNED TYPE	BASELINE	APPROVED BASELINE	REVISED BASELINE	
A2H-99-001	H-02-03-T06	T	RL	COMPLETE SCHEDULED UPGRADES TO T PLANT TANK SYSTEM (PROJ W-256)	OTH	9/30/99			RL-WH04
A2H-99-002	H-02-03	I	HQ	COMPLETE T PLANT TANK ACTIONS	EA	9/30/99	9/30/99		RL-WH04
A2H-99-003	H-02-00	I	HQ	COMPLETE IDENTIFIED DANGEROUS WASTE TANK CORRECTIVE ACTIONS	EA	9/30/99	9/30/99		RL-WH04
A2S-98-001	H-19-01-T03	T	RL	COMPL NEPA REQ'NTS FOR STABILIZATION OF CH-LUNN	OTH	9/30/98			RL-WH04
A2S-99-002	H-19-01	I	HQ	INITIATE TREATMENT OF CH-LUNN	EA	9/30/98	9/30/98		RL-WH04
A2S-02-003	H-19-00	M	HQ	COMP TREATMENT/DISPOSAL OF 1,644 C.M. OF CH-LUNN	EA	9/30/99	9/30/99		RL-WH04
A2F-99-001	H-01-02	I	HQ	INITIATE PROCESSING OF CH-TRU/TRUM AT WNAFL	EA	12/31/98	12/31/98		RL-WH04
A2S-99-101	H-01-14	I	HQ	SUBMIT LUNN & ETCS PMP TO ECOLOGY (000-C08-2)	EA	6/30/99	6/30/99		RL-WH04
A2J-00-001	H-01-04	I	HQ	COMP CONST OF CH-TRU/TRUM RETRIEVAL FACILITY	EA	9/30/00	9/30/00		RL-WH04
A2H-99-102	H-01-03	I	HQ	SUBMIT TRU/TRUM PMP TO ECOLOGY	EA	6/30/00	6/30/00		RL-WH04
A2S-01-103	H-01-11-T01	T	RL	SUBMIT LUNN FACILITY ES/FDC TO ECOLOGY	OTH	12/31/00			RL-WH04
A2S-01-104	H-01-12	I	HQ	INITIATE THERMAL TREATMENT OF CH-LUNN	EA	12/31/00	12/31/00		RL-WH04
A2S-03-105	H-01-08-T01	T	RL	SUBMIT TRU/TRUM FACILITY ES/FDC TO ECOLOGY	OTH	12/31/02			RL-WH04
A2H-03-106	H-01-06-T01	T	RL	AWARD CONTRACTS FOR RH-TRU/TRUM	OTH	9/30/03			RL-WH04
A2S-04-107	H-01-14-T01	T	RL	AWARD CONTRACTS FOR RH & LARGE LUNN	OTH	10/30/03			RL-WH04
A2J-04-002	H-01-07	I	HQ	COMP X-113 FOR POST-1970 CH-TRU/TRUM RETRIEVAL	EA	9/30/04	9/30/04		RL-WH04
A2H-05-108	H-01-08-T01	T	RL	COMP CONST / START OPS OF RH-TRU/TRUM FACILITY	OTH	6/30/06			RL-WH04
A2S-06-109	H-01-15	I	HQ	COMPLETE FACILITIES/INITIATE TREATMENT OF RH/CH-LUNN	EA	6/30/06	6/30/06		RL-WH04

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMPLETE SCHEDULED UPGRADES TO T PLANT TANK SYSTEM (PROJ W-259)			Date: 7/15/97	
Assigned To: L.T. BLACKFORD			CIN:	
Program WBS Designator: 1.2.2.1			Due Date: 9/30/99	
PBS No: RL-WMD4				
MC #: A2H-99-DB1		TPA No: M-32-03-T06		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Complete scheduled upgrades to T Plant tank system (Project W-259).				
Description of what constitutes completion of this milestone: Letter to DOE-RL.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMPLETE T PLANT TANK ACTIONS			Date: 7/15/97	
Assigned To: L.T. BLACKFORD			CIN:	
Program WBS Designator: 1.2.2.1			Due Date: 9/30/99	
PBS No: RL-NM04				
MC #: A2H-99-002		TPA No: M-32-03		Rev:
MILESTONE LEVEL: ☒ DOE-HQ ☐ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	MILESTONE TYPE: ☒ EA ☐ PEG ☐ OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: ☐ Report ☒ Letter ☐ Drawing(s) ☐ Other (Specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (Specify)
Milestone Description: Complete T Plant tank actions.				
Description of what constitutes completion of this milestone: Letter to DOE-RL.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMPLETE IDENTIFIED DANGEROUS WASTE TANK CORRECTIVE ACTIONS				Date: 7/15/97	
Assigned To: R.E. ENGELMAN				CIN:	
Program NBS Designator: 1.2.2.1				Due Date: 9/30/99	
PBS No: RL-WM04					
MC #: A2H-99-003			TPA No: M-32-00		Rev:
MILESTONE LEVEL: X DOE-HQ DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: X EA PEG OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)	
Milestone Description: Complete identified dangerous waste tank corrective actions. Completion of interim milestone tasks may identify the need for additional actions or interim milestones in the future.					
Description of what constitutes completion of this milestone: Letter to DOE-RL.					

PHMC
MILESTONE DESCRIPTION SHEET

Title: COMPL. NEPA REQ'NTS FOR STABILIZATION OF CH- LCMW			Date: 10/03/96	
Assigned To: D.E. MCKENNEY			CIN:	
Program WBS Designator: 1.2.2.1			Due Date: 9/30/96	
PBS No: RL-WMD4				
MC #: A2G-9B-001		TPA No: N-19-D1-T03		Rev:
MILESTONE LEVEL: DOE-HQ ☒ DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG ☒ OTHER	DMFSB STATUS: DMFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report ☒ Letter Drawing(s) Other (Specify)	ADDRESS TO: - DOE-HQ ☒ DOE-RL Other (Specify)
Milestone Description: Complete all NEPA requirements related to the commercial contract for stabilization of Contact Handled Low Level Mixed Waste.				
Description of what constitutes completion of this milestone: Letter to DOE-RL.				

PHMC **MILESTONE DESCRIPTION SHEET**

Title: INITIATE TREATMENT OF CH-LLMW				Date: 10/03/96	
Assigned To: D.E. MCKENNEY				CIN:	
Program WBS Designator: 1.2.2.1				Due Date: 9/30/98	
PBS No: RL-WM04					
MC #: A26-99-002			TPA No: M-19-01		Rev:
MILESTONE LEVEL: X DOE-HQ DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: X EA PEG OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)	
Milestone Description: Initiate treatment of Contact Handled Low Level Mixed Waste.					
Description of what constitutes completion of this milestone: Letter to DOE-RL.					

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMP TREATMENT/DISPOSAL OF 1,644 C.M. OF CH-LLMW				Date: 10/03/95	
Assigned To: D.E. MCKENNEY				CIN:	
Program WBS Designator: 1.2.2.1				Due Date: 9/30/99	
PBS No: RL-WN04					
NC #: A2G-02-DD3			TPA No: M-19-00		Rev:
MILESTONE LEVEL:	MILESTONE TYPE:	DMFSB STATUS:	DELIVERABLE:	ADDRESS TO:	
X DOE-HQ DOE-RL DOE-FO CONTRACTOR	X EA PEG OTHER	DMFSB (Y/N): N COMMIT #: RECOMM #:	Report X Letter Drawing(s) Other (Specify)	DOE-HQ X DOE-RL Other (Specify)	
<p>Milestone Description: Complete treatment and/or direct disposal of at least 1,644 cubic meters of Contact Handled Low Level Mixed Waste already in storage as of October 1, 1995; as well as newly generated Hanford Site Low Level Mixed Waste. — Cumulative treatment and/or direct disposal rates will be at least 246 — cubic meters by the end of FY 2000, 822 cubic meters by the end of FY 2001, and 1,644 cubic meters by the end of FY 2002. For the purpose of these M-19 series milestones, direct disposal of Low Level Mixed Waste will be considered equivalent to treatment. —</p>					
<p>Description of what constitutes completion of this milestone: Letter to DOE-RL.</p>					

PHMC
MILESTONE DESCRIPTION SHEET

Title: INITIATE PROCESSING OF CH-TRU/TRUM AT WRAP1			Date: 12/31/96	
Assigned To: D.E. MCKENNEY			CIN:	
Program WBS Designator: 1.2.2.1			Due Date: 12/31/98	
PBS No: RL-WM04				
MC #: A2F-99-001		TPA No: M-91-02		Rev:
MILESTONE LEVEL: X DOE-HQ DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: X EA PEG OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Initiate processing of Contact Handled TRU/TRUM Waste at Waste Receiving and Processing Facility / WRAP 1 (Contact Handled, Small Container).				
Description of what constitutes completion of this milestone: Letter to DOE-RL.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: SUBMIT LLNW & GTC3 PMP TO ECOLOGY (HAN-CJB-2)			Date: 12/31/96	
Assigned To: D.E. MCKENNEY			CIN:	
Program WBS Designator: 1.2.2.1			Due Date: 6/30/99	
PBS No: RL-WM04				
MC #: A2G-99-101		TPA No: M-91-10		Rev:
MILESTONE LEVEL:	MILESTONE TYPE:	DMFSB STATUS:	DELIVERABLE:	ADDRESS TO:
☒ DOE-HQ ☐ DOE-RL ☐ DOE-FO CONTRACTOR	☒ EA ☐ PEG ☐ OTHER	DMFSB (Y/N): N COMMIT #: RECONM #:	Report Letter Drawing(s) ☒ Other (Specify) PMP	DOE-HQ DOE-RL ☒ Other (Specify) ECOLOGY
Milestone Description: Submit Hanford Site LLNW and Greater Than Class 3 (GTC3) Waste project management plan (PMP) to Ecology pursuant to agreement action plan section 11.5.				
Description of what constitutes completion of this milestone: Submit PMP to Ecology.				

PIMC

MILESTONE DESCRIPTION SHEET

Title: COMP CONST OF CH TRU/TRUM RETRIEVAL FACILITY				Date: 12/31/96	
Assigned To: D.E. MCKENNEY				CIN:	
Program WBS Designator: 1.2.2.1				Due Date: 9/30/00	
PBS No: RL-WND4					
MC #: A23-00-001			TPA No: M-91-04		Rev:
MILESTONE LEVEL: ☒ DOE-HQ ☐ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	MILESTONE TYPE: ☒ EA ☐ PEG ☐ OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT F: RECOMM #:	DELIVERABLE: ☐ Report ☒ Letter ☐ Drawing(s) ☐ Other (Specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (Specify)	
Milestone Description: Complete construction of Small Container Contact Handled (CH) TRU/TRUM Retrieval Facility(s), and initiate (Project W-113) retrieval of small container TRU/TRUM from 200 area burial grounds.					
Description of what constitutes completion of this milestone: Letter to DOE-RL.					

PHMC

MILESTONE DESCRIPTION SHEET

Title: SUBMIT TRU/TRUM PMP TO ECOLOGY			Date: 12/31/96	
Assigned To: D.E. MCKENNEY			CIN:	
Program WBS Designator: I.2.2.1			Due Date: 6/30/00	
PBS No: RL-WM04				
NC #: A2G-00-102		TPA No: M-91-03		Rev: —
MILESTONE LEVEL: ☒ DOE-HQ ☐ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	MILESTONE TYPE: ☒ EA ☐ PEG ☐ OTHER	DMFSB STATUS: DMFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report Letter Drawing(s) ☒ Other (Specify) PMP	ADDRESS TO: DOE-HQ DOE-RL ☒ Other (Specify) ECOLOGY
Milestone Description: Submit Hanford Site TRU/TRUM Waste project management plan (PNP) to Ecology pursuant to agreement section 11.5.				
Description of what constitutes completion of this milestone: Submit PMP to Ecology.				

PHMC
MILESTONE DESCRIPTION SHEET

Title: SUBMIT LLNW FACILITY ES/FDC TO ECOLOGY			Date: 12/31/96	
Assigned To: D.E. MCKENNEY			CIN:	
Program MBS Designator: 1.2.2.1			Due Date: 12/31/00	
MBS No: RL-MMD4				
MC #: A26-01-103		TPA No: H-91-11-T01		Rev:
MILESTONE LEVEL: DOE-HQ ☒ DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG ☒ OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report Letter Drawing(s) ☒ Other (Specify) ES/FDC	ADDRESS TO: DOE-HQ DOE-RL ☒ Other (Specify) ECOLOGY
Milestone Description: Complete and submit LLNW treatment facility engineering study / <u>functional</u> design criteria study to Ecology.				
Description of what constitutes completion of this milestone: Submit ES/FDC to Ecology.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: INITIATE THERMAL TREATMENT OF CH-LLMW				Date: 12/31/96	
Assigned To: D.E. MCKENNEY				CIN:	
Program WBS Designator: 1.2.2.1				Due Date: 12/31/00	
PBS No: RL-WND4					
MC #: A26-01-104			TPA No: M-91-12		Rev:
MILESTONE LEVEL:	MILESTONE TYPE:	DMFSB STATUS:	DELIVERABLE:	ADDRESS TO:	
X DOE-HQ DOE-RL DOE-FO CONTRACTOR	X EA PEG OTHER	DMFSB (Y/N): N COMMIT #: RECDNM #:	Report X Letter Drawing(s) Other (Specify)	DOE-HQ X DOE-RL Other (Specify)	
Milestone Description: Initiate thermal treatment of currently stored and newly generated CH LLMW. At least 600 cubic meters will be provided for treatment by December 2005.					
Description of what constitutes completion of this milestone: Letter to DOE-RL.					

PIMC

MILESTONE DESCRIPTION SHEET

Title: SUBMIT TRU/TRUM FACILITY ES/FDC TO ECOLOGY				Date: 12/31/96	
Assigned To: D.E. MCKENNEY				CTM:	
Program WBS Designator: 1.2.2.1				Due Date: 12/31/02	
PBS No: RL-WN04					
MC #: A2G-03-105			TFA No: M-91-05-T01		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report Letter Drawing(s) X Other (Specify) ES/FDC	ADDRESS TO: DOE-HQ DOE-RL X Other (Specify) ECOLOGY	
Milestone Description: Complete and submit TRU/TRUM retrieval and processing facility engineering study / functional design criteria study to Ecology.					
Description of what constitutes completion of this milestone: Submit ES/FDC to Ecology.					

PHMC

MILESTONE DESCRIPTION SHEET

Title: AWARD CONTRACTS FOR RH TRU/TRUM				Date: 12/31/96	
Assigned To: D.E. MCKENNEY				CIN:	
Program WBS Designator: 1.2.2.1				Due Date: 9/30/03	
PBS No: RL-WM04					
MC #: A2G-03-106			TPA No: N-91-06-T01		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DMFSB STATUS: DMFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)	
Milestone Description: Award necessary privatized contracts for processing Remote Handled (RH) and Large Size TRU/TRUM.					
Description of what constitutes completion of this milestone: Letter to DOE-RL.					

PHMC

MILESTONE DESCRIPTION SHEET

Title: AWARD CONTRACTS FOR RH & LARGE LLMW			Date: 12/31/95	
Assigned To: D.E. MCKENNEY			CIM:	
Program WBS Designator: 1.2.2.1			Due Date: 10/30/03	
PBS No: RL-LM04				
MC #: A2G-D4-107		TPA No: M-91-14-T01		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ — X DOE-RL Other (Specify)
Milestone Description: Award commercialization contract(s) for treatment of RH and Large Size LLMW per approved LLNM/GTC3 PNP and associated agreement change requests.				
Description of what constitutes completion of this milestone: Letter to DOE-RL.				

PHMC
MILESTONE DESCRIPTION SHEET

Title: COMP W-113 FOR POST-1970 CH TRU/TRUM RETRIEVAL				Date: 12/31/96	
Assigned To: D.E. MCKENNEY				CIN:	
Program MBS Designator: 1.2.2.1				Due Date: 9/30/04	
PBS No: RL-WM04					
NC #: A2J-D4-002			TPA No: M-91-07		Rev:
MILESTONE LEVEL: X DOE-HQ DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: X EA PEG OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)	
Milestone Description: Complete Project W-113 for post-1970 CH TRU/TRUM retrieval.					
Description of what constitutes completion of this milestone: Letter to DOE-RL.					

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMP CONST / START OPS OF RH-TRU/TRUM FACILITY				Date: 12/31/96	
Assigned To: D.E. MCKENNEY				CIN:	
Program MBS Designator: 1.2.2.1				Due Date: 6/30/05	
PBS No: RL-WM04					
MC #: A2G-05-108			TPA No: M-91-08-T01		Rev:
MILESTONE LEVEL: DOE-HQ ☒ DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG ☒ OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECONN #:	DELIVERABLE: Report ☒ Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ ☒ DOE-RL Other (Specify)	
Milestone Description: Complete construction and initiate hot operations of RH and Large Size TRU/TRUM processing facility (A final acquisition schedule for this facility will be established as an interim milestone no later than December 2000).					
Description of what constitutes completion of this milestone: Letter to DOE-RL.					

PHMC MILESTONE DESCRIPTION SHEET

Title: COMPLETE FACILITIES/INITIATE TREATMENT OF RH/CH-LLNM				Date: 12/31/96	
Assigned To: D.E. MCKENNEY				CIN:	
Program MBS Designator: 1.2.2.1				Due Date: 6/30/08	
PBS No: RL-WMD4					
MC #: A2G-08-109			TPA No: N-91-15		Rev:
MILESTONE LEVEL: ☒ DOE-HQ ☐ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	MILESTONE TYPE: ☒ EA ☐ PEG ☐ OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: ☒ Report ☒ Letter ☐ Drawing(s) ☐ Other (Specify)	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL ☐ Other (Specify)	
Milestone Description: Complete acquisition of facilities and initiate treatment of RH and Large Container (CH) LLNM.					
Description of what constitutes completion of this milestone: Letter to DOE-RL.					

HNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.2

FY1998

August 29, 1997

B.2.4.0 Cost Baseline

WASTE MANAGEMENT PROJECT
SUMMARY OF LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS: 1.2.2.1												SUBTOT
PBS TITLE	PBS NO	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997- FY2006
SOLID WASTE TREATMENT	RL-WM04	42,885	29,442	28,471	78,102	87,728	105,606	91,205	80,528	91,920	93,562	726,551
												-
												-
												-
												-
												-
												-
												-
												-
												-
												-
												-
												-
TOTAL BCWS/PMB¹		42,885	29,442	28,471	78,102	87,728	105,606	91,205	80,528	91,920	93,562	726,551

Note: This information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the

Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS)

Equals Performance Measurement Baseline

(PMB). Expense Carryover is NOT included

WASTE MANAGEMENT PROJECT
SUMMARY OF LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS : 1.2.2.1											TOTAL
PBS TITLE	PBS NO	FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	FY1997- FY2050
SOLID WASTE TREATMENT	RL-WM04	199,344	216,900	213,570	209,960	207,210	137,292				1,907,847
											-
											-
											-
											-
											-
											-
											-
											-
											-
											-
											-
											-
											-
											-
TOTAL BCWS/PBS¹		199,344	216,900	213,570	209,960	207,210	137,292	-	-	-	1,907,847

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS)
 Equals Performance Measurement Baseline
 (PMB); Expense Carryover is NOT included.

WASTE MANAGEMENT PROJECT
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999

(\$000s)

PROJECT PBS 11231												SUBTOT
PBS NO. 11231												FY1997- FY2006
PBS TITLE Solid Waste Treatment												
FUND TYPE	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006		
OPERATING EXPENSE	33,600	24,642	26,431	66,022	86,479	96,107	86,397	76,473	48,347	77,665	626,346	
CEMATIC	379			2,891	1,072	1,988	1,130	1,165	1,193	1,221	10,833	
GENERAL PLANT PROJECT	3,793			1,974	130						6,997	
LINE ITEM (LH) Bulk Coal												
Project 11-201 Secondary Containment	4,465	4,600									9,065	
Project 11-202 WMP	933										933	
Project 11-203 WMP	147			4,836							5,086	
11-21 RM Waste				7,980	10,836						18,816	
11-21 Phase II				4,636	9,086	15,506	3,790				30,946	
11-150 Colliery Removal									8,298		14,475	
Subtotal Line Items	5,849	4,600		17,836	20,929	15,808	3,790		8,298		54,475	
TOTAL BCWS (PBS)	42,208	29,442	26,431	78,162	87,728	105,606	91,260	80,628	51,920	93,982	726,361	
WMP RESERVE												
LINE ITEM CONTINGENCY												
OFFSITE TRANSFER												
Subtotal												
TOTAL	42,208	29,442	26,431	78,162	87,728	105,606	91,260	80,628	51,920	93,982	726,361	

Note: The exception for FY1998 and FY1999 across the planning guidance with FY2000 and beyond contains the Project Baseline Summary guidance.

Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB)

Expense Carryover NOT Included

Management Reserve and Contingency Held by PM

Work Performed at Sites Other Than Hanford

**WASTE MANAGEMENT PROJECT
FY 1998 COST BASELINE (BCWS) BY MONTH
BY PROJECT BASELINE SUMMARY (PBS)
BY ACTIVITY DATA SHEET (ADS)
EXECUTION YEAR**

(\$000s)

PROJECT WBS: 1.2.2.1															
PBS NO: RL-WM04															
PBS TITLE: Solid Waste Treatment															
ADS TITLE	ADS NO	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
Solid Waste	2009-0	OP EXP	1,148	821	1,018	1,023	889	1,082	1,035	908	1,035	978	978	1,329	12,244
		CONSTR													-
		GPP													-
		LI													-
		SUBTOT	1,148	821	1,018	1,023	889	1,082	1,035	908	1,035	978	978	1,329	12,244
Waste and Decon Services	2229-0	OP EXP	1,088	826	973	973	863	1,029	1,051	951	1,051	971	971	971	11,698
		CONSTR													-
		GPP													-
		LI													-
		SUBTOT	1,088	826	973	973	863	1,029	1,051	951	1,051	971	971	971	11,698
T Plant Secondary Containment	2330-3	OP EXP	110	76	93	59	52	63	68	68	68	88	69	82	590
		CONSTR													-
		GPP													-
		LI	423	330	365	365	348	409	409	387	401	385	385	368	4,503
		SUBTOT	533	406	458	424	400	472	477	455	469	474	474	450	5,093
		OP EXP													-
		CONSTR													-
		GPP													-
		LI													-
		SUBTOT													-

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover is NOT Included.

**WASTE MANAGEMENT PROJECT
FY 1998 COST BASELINE (BCWS) BY MONTH
BY PROJECT BASELINE SUMMARY (PBS)
BY ACTIVITY DATA SHEET (ADS)
EXECUTION YEAR**

(\$000s)

PROJECT WBS: 1.2.2.1															
PBS NO: RLWHRM															
PBS TITLE: Solid Waste Treatment															
ADS TITLE	ADS NO	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
		OP EXP													-
		CBMKTG													-
		OPP													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
		OP EXP													-
		CBMKTG													-
		OPP													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
		OP EXP													-
		CBMKTG													-
		OPP													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
		OP EXP													-
		CBMKTG													-
		OPP													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL BCWS/PBS			2,749	2,053	2,406	2,410	2,152	2,577	2,555	2,284	2,955	2,429	2,429	2,757	28,442

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

*Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover is NOT included.

WASTE MANAGEMENT PROJECT
FY 1996 COST BASELINE (BCWS) BY MONTH BY FUND TYPE BY PROJECT
EXECUTION YEAR
(\$000s)

PROJECT WBS	PROJECT TITLE	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
1.2.2.1	Solid Waste Treatment (R)-(W0004)	Operating Expense	2,317	1,723	2,062	2,066	1,815	2,185	2,153	1,818	2,153	2,038	2,038	2,362	24,642
		GENRTC													0
		GPP													0
		Line Item	423	330	385	385	348	403	403	387	401	388	385	386	4,600
		Total BCWSAPMB ¹	2,740	2,053	2,447	2,441	2,163	2,588	2,556	2,205	2,554	2,424	2,424	2,751	29,442
		Mgmt Reserve ²													0
		Line Item Contingency ³													0
		Offsite Transfers ⁴													0
Total			2,740	2,053	2,447	2,441	2,163	2,588	2,556	2,205	2,554	2,424	2,424	2,751	29,442

Note: The information for FY1996 and FY1997 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹Outgoing Cost of Work Scheduled (BCWS) County Performance Measurement Baseline (PMBL) Expense Category is Not Included

²Management Reserve and Line Item Contingency Held By RL

WASTE MANAGEMENT PROJECT
FY 1998 COST BASELINE (BCWS) BY MONTH BY COST ELEMENT BY PROJECT
EXECUTION YEAR
(\$000s)

PROJECT WBS	PROJECT TITLE	COST ELEMENT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	
1.2.2.1	Solid Waste Treatment (RL-WM04)	0 Balance	1,204	964	1,104	1,089	960	1,120	1,165	1,065	1,165	1,105	1,104	1,146	12,139	
		1 Material	81	71	83	84	73	87	87	78	87	89	83	83	962	
		2 Purchased Serv	136	108	126	128	114	182	135	125	136	125	125	165	1,609	
		3 Other Contr Chgs	25	18	23	23	20	24	24	21	24	23	23	23	273	
		4 Internal Serv	183	120	140	149	128	148	145	183	148	140	148	155	1,884	
		5 Internal Chgs	48	30	40	42	35	44	44	40	44	42	42	42	507	
		6 Unisl	0	0	0	0	0	0	0	0	0	0	0	0	0	
		7 Overhead	819	484	831	825	474	848	854	803	864	831	831	830	8,284	
		8 Revenue														0
		9 Enterprise Cos	412	323	378	378	340	388	385	349	368	378	378	378	4,498	
Total BCWS/PMB ¹			2,883	2,088	2,490	2,439	2,095	2,514	2,548	2,130	2,548	2,430	2,491	2,894	28,442	

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

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

WASTE MANAGEMENT PROJECT
SUMMARY OF LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS : 1.2.2.1												BUDTOT
PBS TITLE	PBS NO	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997- FY2006
SOLID WASTE TREATMENT	RL-WM04	34,862	28,442	25,471	78,102	87,728	106,608	91,208	80,628	91,920	93,562	718,527
												-
												-
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												-
TOTAL NEW B/A		34,862	28,442	25,471	78,102	87,728	106,608	91,208	80,628	91,920	93,562	718,527

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

WASTE MANAGEMENT PROJECT
SUMMARY OF LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS : 1.1.2.1											TOTAL
PBS TITLE	PBS NO	FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	FY1997- FY2000
SOLID WASTE TREATMENT	RL-WM04	198,344	218,900	213,570	209,060	207,210	197,292				1,899,823
											-
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Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

WASTE MANAGEMENT PROJECT
LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS: 1.2.3.1												SUBTOT
PBS NO: RL-WM04												FY1997- FY2006
PBS TITLE: Solid Waste Treatment												
FUND TYPE	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006		
OPERATING EXPENSE	28,482	24,842	25,471	55,802	68,478	80,107	86,367	79,473	85,341	77,886		820,330
CENRTC	48			2,681	1,072	1,983	1,130	1,155	1,183	1,221		10,503
GENERAL PLANT PROJECT	2,332			1,974	158							4,464
LINE ITEM (Line Each Desc)												
Project Yr200 Secondary Containment	4,000	4,600										8,600
W-21 RM Waste				7,960	10,624							18,584
W-21 Phase II Retrieval				4,838	8,065	13,506	3,709					30,948
W-113 TRU Retrieval				4,939					5,385	14,475		24,800
W-158 Cesium Retrieval												-
Subtotal Line Items	4,000	4,600	-	17,535	20,018	13,506	3,709	-	5,386	14,475		63,230
TOTAL NEW B/A	34,862	29,442	25,471	78,102	87,728	105,608	91,206	86,628	91,820	93,562		718,527

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

WASTE MANAGEMENT PROJECT
LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS:	1.2.2.1									
PBS NO:	RL-WMD4									
PBS TITLE:	Solid Waste Treatment									
FUND TYPE	FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	TOTAL FY1997- FY2050
OPERATING EXPENSE	176,460	214,996	211,585	208,095	205,395	136,495				1,773,965
CENRTC	4,684	1,905	1,975	1,885	1,816	797				23,764
GENERAL PLANT PROJECT										4,464
LINE ITEM (List Each One)										
Project W-256 Secondary Containment										6,600
W-81 RH Waste										16,534
W-221 Phase II Retrieval										30,966
W-113 TRU Retrieval										24,500
W-156 Calson Retrieval	15,000									15,000
Subtotal Line Items	15,000	-	-	-	-	-	-	-	-	96,230
TOTAL NEW B/A	196,344	216,900	213,570	209,880	207,210	137,292	-	-	-	1,899,823

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

**Waste Management Project
3 DIGIT CONTRACTOR IDENTIFIER-PR-WM12**

Revision 0

AVERAGE ANNUAL FULL TIME EQUIVALENTS

(Includes Major Subcontractors but not Enterprise Companies)

PHBS 1.2.1.1

Submittal Date: 8/29/97

PBS Number	PBS Title	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
RL-WM04	Solid Waste										
	Treatment	178	182	182	182	182	182	182	182	182	182
Total PBS FTEs		<u>178</u>	<u>182</u>	<u>182</u>	<u>182</u>	<u>182</u>	<u>182</u>	<u>182</u>	<u>182</u>	<u>182</u>	<u>182</u>

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

HNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.2

FY1998

August 29, 1997

B.3 Technical Baseline (RL-WM05)

B.3 Liquid Effluents Project (RL-WM05)

B.3.1.0 Liquid Effluents Project Technical Baseline (RL-WM05)

B.3.1.1 Liquid Effluents Project Organization Mission (RL-WM05)

The Liquid Effluent Project (LEP) provides integrated liquid effluent management to support cleanup of the Hanford Site. Its mission is to responsibly manage current and future liquid effluent streams in a safe, cost effective, and environmentally-compliant manner. Waste volume reduction support is also provided to tank waste remediation. The mission is achieved through planning and integration, stakeholder interaction, definition of requirements for generators, and provision of timely storage, treatment and disposal capability.

The LEP receives, treats, and disposes of liquid effluents from other projects. Waste acceptance criteria are established for liquid effluents, and compliance with discharge limits is verified. Transfers to other projects include solid waste from liquid effluent treatment, samples, and deactivated facilities.

This activity includes operation, maintenance, technical support, and management/administration of the following facilities: 242-A Evaporator, Liquid Effluent Retention Facility (LERF), 200 Area Effluent Treatment Facility (ETF), 200 Area Treated Effluent Disposal Facility (200 Area TEDF), 300 Area Treated Effluent Disposal Facility (300 Area TEDF), and 340 Waste Handling Facility. The LEP operates and maintains the process sewer (PS) system, retention process sewer (RPS) system including the 307 Retention Basins, and Radioactive Liquid Waste System (RLWS) all of which are in the 300 Area. The LEP is responsible for commitments identified in the Miscellaneous Streams Plan and Schedule, and for coordinating management of Miscellaneous Streams to ensure the requirements of discharge permits are met. The LEP is also responsible for shutdown planning and integration for the 340 Waste Handling Facility, preparation of a biennial bromine treatment technology report as required by the Tri Party Agreement, and management of waste sites in the Hanford Site Waste Information Data System (WIDS) assigned to the LEP.

The LEP baseline and project planning assumptions are:

1. **BASILINE:** 340 Waste Handling Facility ceases receipt of wastes at end of FY 1998. Facility Stabilization Project will take custody of the 340 Waste Handling Facility in FY 2001. (NOTE: Facility Stabilization planning guidance does not fund transition of 340 Waste Handling Facility until FY 2003.)
2. **BASILINE:** 242-A Evaporator will cease operations in FY 2011, cleanup occurs in FY 2012 and FY 2013.
3. **BASILINE:** 300 Area TEDF will be turned over to a private entity for operation at the end of FY 2025.
4. **BASILINE:** TWRS privatization schedule is: Phase 1 from 6/02 to 5/12, Phase 2 from 10/11 to 12/29.
5. **BASILINE:** TWRS Phase 2 facilities include evaporation capability.
6. **PLANNING:** Liquid Effluent Facilities will be fully utilized in cleaning up Hanford Site.
7. **PLANNING:** 300 Area TEDF will require general plant upgrades starting in FY 2000 and every five years thereafter.
8. **BASILINE:** ETF/LERF will receive process waste from TWRS until FY 2030, deactivation waste receipts will end in FY 2034, ETF/LERF will be turned over to Facility Stabilization in FY 2033. Cleanup and stabilization of

LERF/ETF will occur in FY 2031 and FY 2032; funding equal to the min. sale budget will be required for LERF/ETF in those years.

9. **PLANNING:** 200 Area ETF and LERF upgrades will be necessary in FY 2032 and every 3 years of operation thereafter. 242-A Evaporator upgrades will be necessary in FY 2002.

10. **BASISLINE:** The mission for 200 Area TEDF will end in FY 2030; deactivation will be complete in FY 2051. A new pond or major upgrades will be necessary in FY 2010.

11. The 300 Area TEDF will be operated for as long as the 300 Area process sewer waste water streams continue (estimated to be FY 2025). The 300 Area TEDF may then be privatized to commercial operation in support of economic diversification of the 300 Area.

5.3.1.2 Liquid Effluents Project End Point Targets from Hanford Strategic Plan

5.3.1.2.1 Liquid Effluents Project Principal End Point Targets

- Reuse facilities in the south 600 area for economic diversification where feasible.

5.3.1.2.2 Liquid Effluents Project Supported End Point Targets

- Spent fuel removed and K-Basins cleaned sufficient to transition to D&D.
- Groundwater use remains restricted for a yet to be determined period, groundwater intercepted or contained to within designated boundaries.
- Operate the ERDF to accept waste from remediation of CERCLA units across the Hanford Site.
- Drain, decontaminate, and stabilize K-Basins Facility.
- Transition high cost surplus facilities in the central plateau and south 600 areas to a low cost, stable, deactivated condition.
- Continue to provide safe storage for Cs/Sr capsules in the WESF indefinitely.
 - (1) WESF decoupled and a standalone facility.
- Complete transition of the 300 Area Fuels Supply.
- Transition the 834/827 Buildings to a low cost, stable, deactivated condition and disposition their nuclear materials (including 324 Building radioactive tank wastes).
- Low level and low level mixed waste from on-site and off-site sources (including PNNL special case wastes) will continue to be disposed of in the 200 Area.
- 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.3.1.3 Liquid Effluents Project Major Facilities

B.3.1.3.1 242-A Evaporator Facility

B.3.1.3.1.1 242-A Evaporator Facility Description

The 242-A Evaporator concentrates dilute liquid tank wastes by evaporation. The volume of tank wastes is reduced to eliminate the need to construct additional storage tanks. The concentrated tank waste is returned to the DSTs for storage. Process condensate from the 242-A Evaporator is sent to the LERF for storage while awaiting treatment in the ETF. The 242-A Evaporator is a RCRA-compliant facility and the only waste volume reduction facility for tank wastes. It began operation in 1977 and has a waste volume reduction capacity of 70,000 gal/day.

B.3.1.3.1.2 242-A Evaporator Facility Technical Logic:

The technical logic for the 242-A Evaporator is captured in the facility's functional flow block diagram which shows the functions performed for each applicable life cycle phase of the facility and the sequence in which the functions are executed.

Figure B-12-242-A EVAPORATOR

B.3.1.3.1.3.242-A Evaporator Requirements and Life Cycle Function Descriptions

Requirements:

- Operation of the 242-A Evaporator shall be in accordance with the Hanford Facility RCRA Permit WA7890006967
- The draft Hanford Air Operating Permit contains terms and conditions of the Washington Department of Ecology Air Operating Permit (permit number not established; application DOEHL-95-07), and the Washington Department of Health Hanford Site Radioactive Air Emissions License No. FF-01
- Operation and maintenance of the 242-A Evaporator shall be in accordance with the 242-A Evaporator/Crystallizer Safety Analysis Report, WHC-SD-WM-SAR-023
- Waste volume reduction support shall be provided to tank waste remediation
- Facilities which reach the end of their mission and are removed from operational status shall meet the acceptance criteria for turnover of surplus facilities for deactivation and decommissioning as specified in WHC-CM-1-3, Management Requirements and Procedures, MRP 8.15, "Facility Shutdown, Standby, and Transfer"
- Radioactive airborne emissions shall not exceed the DOGs in WHC-CM-7-5, Environmental Compliance, Appendix C. Emissions of other contaminants shall not exceed the threshold values in WHC-CM-4-40, Industrial Hygiene Manual (40 CFR 61, WAC 173-480, WAC 240-247)
- Pollution prevention and waste minimization requirements are specified in WHC-CM-7-5, Environmental Compliance, Section 14, "Pollution Prevention." Facilities shall minimize the volume of system-generated waste
- Solid low level waste and mixed low level waste transferred to the Central Waste Complex shall meet the acceptance criteria for onsite storage and disposal specified in Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063

Life Cycle Function Descriptions:

B.3.1.3.1.3.1 242-A EVAPORATOR PROGRAM PLANNING WORK SCOPE SUMMARY

No Description

B.3.1.3.1.3.2 242-A EVAPORATOR OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

242-A EVAPORATOR OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B.3.1.3.1.3.3 Concentrate Liquid Tank Waste

Concentrate liquid tank waste using the 242-A Evaporator to reduce the volume of waste. Return the concentrated tank waste to tank farms and transfer the process condensate to the LERF.

B.3.1.3.1.4 242-A Evaporator Boundary Diagram

Table B.3-1 242-A Evaporator Boundary Diagram

External Interfaces		External Interfaces
<p>Waste</p> <p>Wastford Site Environmental System Interfaces</p> <p>Items: 2.3.2 Double Shell Tank (DST) System</p> <p>Items: 2.3.3 Central Plateau Storage System</p> <p>Items: 2.3.4 Central Plateau Water System</p> <p>Items: 2.3.5 Central Plateau Office Facilities</p> <p>Items: 2.3.6 Central Plateau Electrical Systems</p> <p>Items: 2.3.7 Central Plateau Telecommunications System</p> <p>Items: 2.3.8 Central Plateau Shop Facilities</p> <p>Items: 2.3.10 Central Plateau Storage Support Facilities</p> <p>Items: 2.3.15 Central Plateau Road System</p> <p>Items: 4.2.9 Misc. Rad Labs</p> <p>Items: 4.2.1 301 Geophysics</p> <p>Items: 4.2.4 201 Cellulose</p>		<p>Offsite Landfill</p> <p>Wastford Site Environmental System Interfaces</p> <p>Items: 2.2.10 Liquid Effluent Retention Facility</p> <p>Items: 2.3.2 Double Shell Tank (DST) System</p> <p>Items: 2.4.3 800 Area Treated Effluent Disposal Facility</p> <p>Items: 2.5.1 222-B Laboratory</p>

6.3.1.3.1.5 242-A Evaporator Interface Description and Forecast

EXTERNAL INPUTS

None

INTERNAL INPUTS

Table 6.3-2 Internal Inputs for 242-A Evaporator

Item	Category	Period	Quantity	Units
Item 2.3.2 Double Shift Task (201) System				
Double Shift Task (201) System	HWF	1997-2011	132000	cost review
Item 2.3.3 Central Plant Office System				
System for 242-A Evap	Secure	1998-2010	125.0	MBps
Item 2.3.4 Central Plant Office System				
Potable Water for 242-A Evap	Potable Water	1998-2010	0.8	kgal
Item 2.3.5 Central Plant Office System				
Office Space (Infrastructure Demand) for 242-A Evap	Office Space (Infrastructure Demand)	1998-2010	450000	sq ft
Office Space (Program Demand) for 242-A Evap	Office Space (Program Demand)	1998-2010	87500	sq ft
Item 2.3.6 Central Plant Office System				
Electricity for 242-A Evap	Electricity	1998-2010	25400	MWhr
Item 2.3.7 Central Plant Office System				
Voice (Telephone) Communication for 242-A Evap	Voice (Telephone) Communication	1998-2010	704.0	no of phone
Voice (Telephone) Communication for 242-A Evap	Voice (Telephone) Communication	1998-2010	800.0	no of PCs
Item 2.3.8 Central Plant Office System				
Fabrication Services Electrical for 242-A Evap	Fabrication Services Electrical	1998-2010	1.6	FTE
Maintenance Services Electrical for 242-A Evap	Maintenance Services Electrical	1998-2010	1.6	FTE
Fabrication Services Pipefit for 242-A Evap	Fabrication Services Pipefit	1998-2010	4.8	FTE
Maintenance Services Pipefit for 242-A Evap	Maintenance Services Pipefit	1998-2010	4.8	FTE
Lifting (Crane) for 242-A Evap	Lifting (Crane)	1998-2010	180.0	cost days
Item 2.3.9 Central Plant Office System				
Allocated Storage for 242-A Evap	Allocated Storage	1998-2010	100000	sq ft
Item 2.3.10 Central Plant Office System				
Security/Light Trucks for 242-A Evap	Security/Light Trucks	1998-2010	32.0	no of vehicles
Item 2.3.11 HWF Fuel Cells				
Biodiesel and Diesel Fuel System for 242-A Evap	Biodiesel and Diesel Fuel System	1998-2010	57000	gallons
Biodiesel and Diesel Fuel System for 242-A Evap	Biodiesel and Diesel Fuel System	1998-2010	57000	calories
Item 2.3.12 HWF Fuel Cells				
Industrial Hygiene Services for 242-A Evap	Industrial Hygiene Services	1998-2010	1000	samples

EXTERNAL OUTPUTS

Table B.3-3 External Outputs for 242-A Evaporator

Stream	Category	Period	Quantity	Units
Offsite Landfill 242-A Evaporator Secondary Solid Waste Secondary solid waste generated during day to day operations of the 242-A Evaporator.	Secondary Solid Waste	1968 - 2013	0.8	tons

INTERNAL OUTPUTS

Table B.3-4 Internal Outputs for 242-A Evaporator

Stream	Category	Period	Quantity	Units
Process 2.2.15 Liquid Effluent Recirculation Facility 242-A Evaporator Desalination Wastewater Waste water generated during desalination of the 242-A evaporator facility. 242-A Evaporator Process Condensate Waste water generated during operation of offsite tank waste.	Waste Water Waste Water	2012 - 2013 1998 - 2011	757.0 59856	cubic meters cubic meters
Process 2.2.2 Double Shell Tank (DST) System 242-A HLW from Tanking Phase HLW generated from tanking runs of the 242-A evaporator. Concentrated Tank Waste HLW Transferred by 242-A Evaporator.	HLW HLW	1997 - 2011 1997 - 2011	10700 93208	cubic meters cubic meters
Process 2.2.3 200 Area Treated Effluent Disposal Facility 242-A Evaporator Cooling Water Treated Liquid Effluent Transferred by 242-A Evaporator. 242-A Evaporator Steins Condensate Steins Condensate sent 242-A Evaporator for disposal.	Treated Liquid Effluent Treated Liquid Effluent	1998 - 2011 1998 - 2011	14488870 885888	cubic meters cubic meters
Process 2.2.7 225-S Laboratory Analytical Laboratory Services for 242-A Evap Analytical Laboratory Services for 242-A Evap	Analytical Laboratory Services	1968 - 2013	1290	samples

B.3.1.3.2 200 Area Effluent Treatment Facility

B.3.1.3.2.1 200 Area Effluent Treatment Facility Description

Liquid effluents from the LERF are treated in the ETF to remove toxic metals, radionuclides, and ammonia and to destroy organics. The ETF treatment process constitutes best available treatment (BAT) technology and includes pH adjustment, filtration, ultraviolet light/peroxide (UV/O₃) destruction of organics, reverse osmosis (RO), and ion exchange. Treatment capacity of the ETF is 150 gpm/hr. Storage tanks allow for holdup of the treated effluent to allow verification that the effluent has been treated to acceptable levels prior to discharge. The treated effluent is discharged under a WAC 173-216 State Waste Discharge Permit to a state-approved land disposal site (BALDS) located north of the 200 West Area. The ETF began operation in December, 1995 and has a 30-year design life.

The LERF/ETF can generally accept low level, RCRA regulated, mixed low level, and CERCLA regulated liquid effluents, and also industrial wastewaters for storage and treatment. A detritus pit/lagoon was specifically approved for treating 242-A Evaporator process condensate for the waste codes F001 through F006 and F009 leachate (as derived from F001 through F005). A truck unloading station enables liquid effluents to be received from other projects and transferred to either the LERF for storage, or directly to the ETF for treatment. A groundwater transfer system is available for transferring groundwater from the 200 West Area to LERF for treatment in the ETF.

B.3.1.3.2.2 200 Area Effluent Treatment Facility Facility Technical Logic

The technical logic for the 200 Area Effluent Treatment Facility is captured in the facility's functional flow block diagram which shows the functions performed for each applicable life cycle phase of the facility and the sequence in which the functions are executed.

Figure 6-13 200 AREA EFFLUENT TREATMENT FACILITY

B.3.1.3.2.3 200 Area Effluent Treatment Facility Requirements and Life Cycle Function Descriptions

Requirements:

- Discharge limits for the ETF are specified in the WAC 173-216 State Waste Discharge Permit No ST 4500, and the U.S. Environmental Protection Agency (EPA) approval of the 200 Area Effluent Treatment Facility Existing Permit, DOE/RL-92-72 (documented in 60 FR 31115 and codified in 40 CFR 261, Appendix IX, Table 2). Constituents not identified in the permit are subject to the limits in WAC 173-200 Water Quality Standards for Ground Waters of the State of Washington, and 4 percent of the derived concentration guide values in DOE Order 5400.5, Radiation Protection of the Public and Environment, as applicable.
- Operation of the ETF shall be in accordance with the Hanford Facility RCRA Permit WA7890008367.
- The draft Hanford Air Operating Permit contains terms and conditions of the Washington Department of Ecology Air Operating Permit (permit number not established, application DOE/RL-95-07), and the Washington Department of Health Hanford Site Radiosource Air Emissions License No. FF-01.
- Solid waste transferred to the ERDF shall meet the waste acceptance criteria specified in Environmental Restoration Disposal Facility Waste Acceptance Criteria, BRH-00139.
- Operation and maintenance of the ETF shall be in accordance with the Hazard Categorization Report for the 200 Area Effluent Treatment Facility, WHC-SD-C016H-002, and the 200 Area Effluent Treatment Facility Auditable Safety Analysis, WHC-SD-ETF-ASA-001.
- Operation of the ETF must be consistent with the information and limits contained in the Notice of Construction (NOC) Application DOE/RL No. 93 RPB-058 (EPA) and No. 93 RPB-275 (Phase II).
- Facilities which reach the end of their mission and are removed from operational status shall meet the acceptance criteria for turnover of surplus facilities for deactivation and decommissioning as specified in WHC-CM-1-9, Management Requirements and Procedures, MRP 6.15, "Facility Shutdown, Standby, and Transfer."
- Radioactive airborne emissions shall not exceed the DOGs in WHC-CM-7-5, Environmental Compliance, Appendix C. Emissions of other contaminants shall not exceed the threshold values in WHC-CM-4-40, Industrial Hygiene Manual. [40 CFR 61, WAC 173-450, WAC 246-247].
- Pollution prevention and waste minimization requirements are specified in WHC-CM-7-5, Environmental Compliance, Section 14, "Pollution Prevention." Facilities shall minimize the volume of system-generated waste.
- Solid low-level waste and mixed low-level waste transferred to the Central Waste Complex shall meet the acceptance criteria for onsite storage and disposal specified in Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063.

Life Cycle Function Descriptions:

B.3.1.3.2.3.1 200 AREA EFFLUENT TREATMENT FACILITY PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program, establishing broad priorities, providing program technical direction, preparing and defending the program budget, controlling milestones, integrating all components

of the program, providing public and private sector policy liaison, expediting interface activities and follow-up actions, and retaining overall accountability for program success.

B.3.1.3.2.3.2 200 AREA EFFLUENT TREATMENT FACILITY OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

200 AREA EFFLUENT TREATMENT FACILITY OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B.3.1.3.2.3.3 Dispose of Liquid Effluents Treated by the ETF

Dispose of liquid effluents treated by the ETF and meeting discharge requirements to the 200 West Area BALDS.

B.3.1.3.2.3.4 Treat Liquid Effluents in the ETF

Treat liquid effluents in the ETF by removing or destroying contaminants sufficient to meet discharge requirements.

B.3.1.3.2.4 200 Area Effluent Treatment Facility Boundary Diagram

Table B.3-5 200 Area Effluent Treatment Facility Boundary Diagram

Internal Interfaces		External Interfaces
<p>-HAPs</p> <p>Hanford Site Environmental System Interfaces</p> <p>Items: 25.38 Liquid Effluent Retention Facility</p> <p>Items: 25.4 Central Plateau Water System</p> <p>Items: 25.5 Central Plateau Water Facility</p> <p>Items: 25.6 Central Plateau Electrical System</p> <p>Items: 25.8 Central Plateau Storage Facility</p> <p>Items: 25.15 Central Plateau Road System</p> <p>Items: A7.1 321 Complex</p> <p>Items: A7.2 321 Complex</p>		<p>ECOH BALDS</p> <p>Hazardous Waste Disposal Contracts</p> <p>Off-site Landfill</p> <p>Hanford Site Environmental System Interfaces</p> <p>Items: 25.5 Central Plateau Complex</p> <p>Items: 25.2 Waste Sampling and Characterization Facility</p> <p>Items: 25.7 Central Plateau Liquid Sanitary Waste System</p>

B.3.1.5.2.5 200 Area Effluent Treatment Facility Interface Description and Forecast

EXTERNAL INPUTS

-None-

INTERNAL INPUTS

Table B.3-6 Internal Inputs for 200 Area Effluent Treatment Facility

Stream	Category	Period	Baseline	Units
Stream 2.3.4 Liquid Effluent Retention Facility LEEF Waste Water Transfer (LEEF Liquid) Transferred from LEEP to the Effluent Treatment Facility	Waste Water	1991 - 2030	1740000	cubic meters
Stream 2.3.4 Central Planting Water System Potable Water for 2004-LEF Potable Water for 2004-LEF Raw Water for 2004-LEF Raw Water for 2004-LEF	Potable Water	1991 - 2032	17.5	Mgal
Stream 2.3.5 Central Planting Office Facilities Office Space (Program Owned) for 2004-LEF Office Space (Program Owned) for 2004-LEF	Office Space (Program Owned)	1991 - 2032	45000	sq. ft.
Stream 2.3.6 Central Planting Electrical System Electricity for 2004-LEF Electricity for 2004-LEF	Electricity	1991 - 2032	187000	kWh/yr
Stream 2.3.6 Central Planting Shop Facilities Contracted Services for 2004-LEF Contracted Services for 2004-LEF Fish Shop Services for 2004-LEF Fish Shop Services for 2004-LEF Lifting (Contract) for 2004-LEF Lifting (Contract) for 2004-LEF	Contracted Services (none forecasted) Lifting (Contract)	1991 - 2032	450000 175.0	sq. ft. cubic yards
Stream 2.3.6 Central Planting Road System Heavy Equipment for 2004-LEF Heavy Equipment for 2004-LEF Sediment Trucks for 2004-LEF Sediment Trucks for 2004-LEF	Heavy Equipment Sediment Trucks	1991 - 2032	350.0 140.0	equipment days no. of vehicles
Stream 2.6 South 600 Area Radiological Lab Radiation Standards (Calibration) for 2004-LEF Radiation Standards (Calibration) for 2004-LEF	Radiation Standards (Calibration)	1991 - 2032	2540	calibrations
Stream 2.6.1 SSI Complex Removal Standards (Calibration) for 2004-LEF (non-rod Standards (Calibration) for 2004-LEF Industrial Hygiene Services for 2004-LEF Industrial Hygiene Services for 2004-LEF	Removal Standards (Calibration) Industrial Hygiene Services	1991 - 2032	2500 6000	calibrations samples

EXTERNAL OUTPUTS

Table B.3-7 External Outputs for 200 Area Effluent Treatment Facility

Stream	Category	Period	Baseline	Units
200W SALUS Treated Liquid Effluent Discharged to 200W SALUS Treated Liquid Effluent Discharged by 200 Area Effluent Treatment Facility	Treated Liquid Effluent	1991 - 2030	1740000	cubic meters
200W SALUS WTS, MAX HAZ Transferred by 200 Area Effluent Treatment Facility	HAZ	1991 - 2034	84.4	cubic meters
200W SALUS WTS, Sanitary Solid Waste Sanitary Solid Waste Transferred by the Sanitary Transfer ETP SAN (Solid to Atmosphere)	Sanitary Solid Waste	1991 - 2034	381.0	tons

INTERNAL OUTPUTS

Table B.3-8 Interval Outputs for 200 Area Effluent Treatment Facility

Stream	Category	Period	Quantity	Units
Stream B.3.1.5 Capital Waste Complet				
ETP, CHILLWATER	CHILLWATER	1997 - 2000	30.9	cubic meters
CHILLWATER effluent waste generated during treatment of critical low level liquid waste	CHILLWATER	1997 - 2000	32.4	cubic meters
ETP, CHILLWATER	CHILLWATER	1997 - 2000	2500	cubic meters
CHILLWATER Transferred by 200 Area Effluent Treatment Facility	CHILLWATER	1997 - 2000	2500	cubic meters
Stream B.3.1.6 Waste Sampling and Characterization Facility				
Analytical Laboratory Services for 200A-LEF	Analytical Laboratory Services	1999 - 2002	5000	samples
Analytical Laboratory Services for 200A-LEF	In-Field Laboratory Services	1999 - 2002	7940	samples
In-Field Laboratory Services for 200A-LEF				
Stream B.3.1.7 Control Plant or Liquid Effluent Waste System				
ETP, Effluent Liquid Waste	Effluent Liquid Waste	1999 - 2002	17.5	kgal
Effluent Liquid Waste from day to day operations of treated liquid waste				

B.3.1.3.3 Liquid Effluent Retention Facility

B.3.1.3.3.1 Liquid Effluent Retention Facility Description

The LERF consists of three RCRA-compliant surface impoundments for temporarily storing process condensate from the 242-A Evaporator and other liquid effluents. The LERF provides equalization of the flow and pH of the feed to the ETP. Each LERF basin has a capacity of 8.5 million gallons. Spare capacity is maintained equal to the volume of one LERF basin as contingency in the event a leak should develop in an operational basin. The basins are constructed of two high-density polyethylene (HDPE) flexible membrane liners. A system is provided to detect, collect, and remove leachate from between the primary and secondary liners. Beneath the secondary liner is a 3 ft. thick geotextile barrier should the primary and secondary liners fail. Each basin has a mechanically-tensioned floating membrane cover constructed of very low-density polyethylene (VLDPE) to keep out unwanted material and to minimize evaporation of the basin contents. The LERF began operation in April 1994 and is designed for a 20-year life.

B.3.1.3.3.2 Liquid Effluent Retention Facility Facility Technical Logic

The technical logic for the Liquid Effluent Retention Facility is captured in the facility's functional flow block diagram which shows the functions performed for each applicable life cycle phase of the facility and the sequence in which the functions are executed.

Figure B 14 LIQUID EFFLUENT RETENTION FACILITY

8.3.1.3.3.3 Liquid Effluent Retention Facility Requirements and Life Cycle Function Descriptions

Requirements:

- Operation of the LERF shall be in accordance with the Hanford Facility RCRA Permit WA72800008967
- Operations and maintenance of the LERF shall be in accordance with the Liquid Effluent Retention Facility Final Hazard Categorization Report, HNF-SO-WM-SAD-040, and the Liquid Effluent Retention Facility Auditable Safety Analysis, HNF-SO-LEF-ASA-002
- Solids shall not be allowed to accumulate in the LERF basins which may require special cleanout actions. [LERF Treatment] Exemption, 95 LEP-016, 40 CFR 268.1]
- Storage of wastewater containing LDR constituents shall be allowed for up to one year prior to treatment in the ETX. [LERF Treatment Exemption, 95 LEP-016, 40 CFR 268]
- Operation of the LERF must be consistent with the information and limits contained in the Notice of Construction (NOC) Application DOE/RL No. 9001137
- Facilities which reach the end of their mission and are removed from operational status shall meet the acceptance criteria for removal of surplus facilities for deactivation and decommissioning as specified in WHC-CM-1-3, Management Requirements and Procedures, NERP 8-15, "Facility Shutdown, Standby, and Transfer"
- Radioactive airborne emissions shall not exceed the DOEs in WHC-CM-7-6, Environmental Compliance, Appendix C. Emissions of other contaminants shall not exceed the threshold values in WHC-CM-4-40, Industrial Hygiene Manual. [40 CFR 61, WAC 173-480, WAC 246-247]
- Pollution prevention and waste minimization requirements are specified in WHC-CM 7-6, Environmental Compliance, Section 14, "Pollution Prevention." Facilities shall minimize the volume of system-generated waste
- Solid low-level waste and mixed low level waste transferred to the Central Waste Complex shall meet the acceptance criteria for onsite storage and disposal specified in Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063

Life Cycle Function Descriptions:

B 3 1 3 3 3 1 LIQUID EFFLUENT RETENTION FACILITY PROGRAM PLANNING WORK SCOPE SUMMARY

No Description

B 3 1 3 3 3 2 LIQUID EFFLUENT RETENTION FACILITY OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose

LIQUID EFFLUENT RETENTION FACILITY OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B 3 1 3 3 3 3 Store Liquid Effluents in the LERF

Collect and store liquid effluents in the LERIF for treatment in the ETF.

5.3.1.3.2.4 Liquid Effluent Retention Facility Boundary Diagram

Table 5.3-5 Liquid Effluent Retention Facility Boundary Diagram

<p>External Interface -Nevada Legacy -Nevada Site Environmental System Interface -Nevada 1.1.2 Reaction on the Filter Soil Site Operable Units -Nevada 1.2.1 RDD Area Facilities -Nevada 2.1.1 Central Plutonium Groundwater Operable Units -Nevada 2.2.1 LWR Plant, Phase I -Nevada 2.2.2 LWR Plant, Phase II -Nevada 2.2.3 LWR Treatment Facility, Phase I -Nevada 2.2.4 LWR Treatment Facility, Phase II -Nevada 2.2.5 SRS-A Engineered -Nevada 2.4.2 Mixed Waste Disposal Facility -Nevada 2.4.4 Environmental Restoration/Disposal Facility</p>		<p>External Interface -Nevada -Nevada Site Environmental System Interface -Nevada 2.2.7 RDD Area Effluent Treatment Facility</p>
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B.3.1.3.3.5 Liquid Effluent Retention Facility Interfact Description and Forecast

EXTERNAL INPUTS:

Table E.3-10 External Inputs for Liquid Effluent Treatment Facility

Sitings	Category	Period	Baseline	Index
6.6. Hazardous Legacy LAMP Shredding Inventory Initial study's water in LAMP balance	Waste Water	1990 - 1998	20000	6.6.6.1 (table)

INTERNAL INPUTS

Table E.3-11 Internal loads for Liquid Effluent Retention Facility

Process	Category	Period	Materials	Units
Process 1.1.2 Bacteria on the River Side Bacteria Operable Units K Basin Waste Water Waste water generated during operation of the K Basins	Waste Water	1998 - 1999	3798	cubic meters
Process 1.2.1 T-6 K Basin Facility K Basin Groundwater Water/Water Waste water generated during decontamination of the K Basins K Basin Level Control Water K Basin level control water	Waste Water	2002 - 2005	8339	cubic meters
	Waste Water	1998 - 2001	1614	cubic meters
Process 2.1.1 Central Plantroom Groundwater Operable Units 2ND-UP-1 Groundwater LJ19 Subject Transferred by Central Plantroom Groundwater Operable Units 2ND Waste Water 2ND wastewater collected to start in 1999, 2nd wastewater 16 million cubic Groundwater Wastewater Purgewater Groundwater monitoring purgewater	Waste Water	1998 - 1999	24686	cubic meters
	Waste Water	1998 - 2000	13299	cubic meters
	Waste Water	1998 - 2000	28699	cubic meters
Process 2.2.1 LAW Plant, Phase I LAW Phase 1 Waste Water Waste water generated during decontamination of low activity tank waste LAW Phase 1 Disposal Unit Waste Water Waste water generated by LAW Plant, Phase 1 during decontamination	Waste Water	2002 - 2011	118000	cubic meters
	Waste Water	2011 - 2012	855.6	cubic meters
Process 2.2.2 LAWMLN Plant, Phase I LAWMLN Phase 1 Waste Water Waste water transferred by LAWMLN Plant, Phase 1 LAWMLN Plant, Phase 1 Decontamination Waste Water Waste water transferred by LAWMLN Plant, Phase 1	Waste Water	2002 - 2011	244000	cubic meters
	Waste Water	2011 - 2012	624.0	cubic meters
Process 3.2.2 LAW Treatment Facility, Phase II LAW Phase 2 Decontamination Waste Water Waste water generated during decontamination of the phase 2 low activity tank waste decontamination facility LAW Phase 1 Waste Water Waste water generated during phase 2 decontamination of low activity tank waste	Waste Water	2002 - 2009	1600	cubic meters
	Waste Water	2012 - 2020	551000	cubic meters
Process 2.2.3 HLW Treatment Facility, Phase II HLW Phase 2 Decontamination Waste Water Waste water generated during decontamination of the Phase 2 high level tank waste decontamination facility HLW Phase 2 HLW Waste Water Waste water generated during Phase 2 decontamination of high level tank waste	Waste Water	2009 - 2020	1600	cubic meters
	Waste Water	2012 - 2020	551000	cubic meters
Process 2.2.4 242-A Evaporator 242-A Evaporator Decontamination Waste Water Waste water generated during decontamination of the 242-A evaporator facility 242-A Evaporator Process Condensate Waste water generated during evaporation of dilute tank waste	Waste Water	2012 - 2013	757.0	cubic meters
	Waste Water	1998 - 2011	65999	cubic meters
Process 2.4.2 Mixed Waste Deepwell Trenches Mixed Waste Disposal Trench Leachate Waste water from Mixed Waste Disposal Trench Facility	Waste Water	1998 - 2000	48400	cubic meters
Process 2.4.4 Environmental Restoration Disposal Facility ERDF Leachate Waste water leachate from the Environmental Restoration Disposal Facility	Waste Water	1998 - 2014	54520	cubic meters

EXTERNAL OUTPUTS

400

Waste Management Project

WMP-SF-1222

Rev. 0

Waste Management Project Fiscal Year 1999 Multi-Year Work Plan

WBS 1.2

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INTERNAL OUTPUTS

Table B.3-12 Internal Outputs for Liquid Effluent Retention Facility

Stream	Category	Period	Baseline	Units
Process 2.3.11 200 Area Effluent Treatment Facility				
LERF Waste Water Transfer	Waste Water	1999 - 2020	1740000	cubic meters
LERF (Liquid) Transferred from LERF to the Effluent Treatment Facility				

B.3.1.3.4 200 Area Treated Effluent Disposal Facility

B.3.1.3.4.1 200 Area Treated Effluent Disposal Facility Description

The 200 Area Treated Effluent Disposal Facility (TEDF) is a collection and disposal system for non-RCRA permitted waste streams. The discharge from the 200 Area TEDF must comply with limits specified in the WAC 173-216 state waste discharge permit. The 200 Area TEDF began operation in April 1995 and has a 30 year life. Design capacity of the 200 Area TEDF is 3400 gal/min; testing has shown the 200 Area TEDF can accommodate up to 4200 gal/min. The 200 Area TEDF includes more than 12 miles of polyvinyl chloride pipe up to 14 inches in diameter. The effluent is discharged to two 5 acre disposal ponds located east of the 200 East Area.

B.3.1.3.4.2 200 Area Treated Effluent Disposal Facility Facility Technical Logic

The technical logic for the 200 Area Treated Effluent Disposal Facility is captured in the facility's functional flow block diagram which shows the functions performed for each applicable life cycle phase of the facility and the sequence in which the functions are executed.

Figure B-15 200-Area Treated Effluent Disposal Facility

B 3 1 3 4 3 200 Area Treated Effluent Disposal Facility Requirements and Life Cycle Function Descriptions

Requirements:

- The discharge from the 200 Area TEFDF must meet the limits specified in the WAC 173 240 Sludge/Waste Discharge Permit No. ST 4502. Constituents not identified in the permit are subject to the limits in WAC 173 200, Water Quality Standards for Ground Waters of the State of Washington, and 4 percent of the derived concentration guide values in DOE Order 5400.8, Radiation Protection of the Public and Environment, as applicable. The wastewater can not contain any listed dangerous waste.
- Facilities discharging to the 200 Area TEFDF shall implement Best Available Technology (BAT)/All Known, Available, and Reasonable Treatment (AKART). The generator shall provide the information required by WAC 173-240, Submission of Plans and Reports for Construction of Waste Water Facilities.
- Operation and maintenance of the 200 Area TEFDF shall be in accordance with the general safety requirements in WHC-CM-1-10, Safety Manual. A preliminary safety evaluation was completed for the 200 Area TEFDF titled "Preliminary Safety Evaluation - 200 Area Treated Effluent Disposal Facility, Project W-046H." The 200 Area TEFDF is a general-use facility and safety documentation is not required according to DOE Order 5461.1B.
- Facilities which reach the end of their mission and are removed from operational status shall meet the acceptance criteria for turnover of surplus facilities for deactivation and decommissioning as specified in WHC-CM-1-3, Management Requirements and Procedures, MRP 6.15, "Facility Shutdown, Standby, and Transfer."
- Radioactive airborne emissions shall not exceed the DCGs in WHC-CM-7-5, Environmental Compliance, Appendix C. Emissions of other contaminants shall not exceed the threshold values in WHC-CM 4 40 Industrial Hygiene Manual (40 CFR 61, WAC 173-490, WAC 246-247).
- Pollution prevention and waste minimization requirements are specified in WHC-CM 7-5, Environmental Compliance, Section 14, "Pollution Prevention." Facilities shall minimize the volume of system-generated waste.
- Solid low-level waste and mixed low-level waste transferred to the Central Waste Complex shall meet the acceptance criteria for onsite storage and disposal specified in Hanford Site Solid Waste Acceptance Criteria, WHC-EP 0063.
- Requirements for effluent monitoring, sampling, analysis, operating group notification, physical interface points, implementing procedures, and configuration control are documented in the 200 Area Treated Effluent Disposal Facility Interface Control Document, HNF-6D-WD46H-ICD-001.

Life Cycle Function Descriptions:

B 3 1 3 4 3 1 200 AREA TREATED EFFLUENT DISPOSAL FACILITY PROGRAM PLANNING WORK SCOPE SUMMARY

No Description

B 3 1 3 4 3 2 200 AREA TREATED EFFLUENT DISPOSAL FACILITY OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

200 AREA TREATED EFFLUENT DISPOSAL FACILITY OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B.3.1.3.4.3.3 Collect Liquid Effluent Streams in the 200 Area TEDF

Collect liquid effluents from generators that have implemented Best Available Technology/All Known and Reasonable Treatment (BAT/IAKART) on the liquid effluent streams.

B.3.1.3.4.3.4 Dispose of Liquid Effluents Received by the 200 Area TEDF

Dispose of liquid effluents received by the 200 Area TEDF and meeting discharge requirements to the 200 East Area SALDS.

B.3.1.3.4.4 200 Area Treated Effluent Disposal Facility Boundary Diagram

Table B.3-13 200 Area Treated Effluent Disposal Facility Boundary Diagram

External Interfaces		External Interfaces
-None-		200E SALDS
Nearest Site Environmental System Interfaces		Nearest Site Environmental System Interfaces
Items 2.2.1 LADW Plant, Phase I		-None-
Items 2.2.2 LADW Plant, Phase I		
Items 2.2.3 LADW Treatment Facility, Phase II		
Items 2.2.4 LADW Treatment Facility, Phase II		
Items 2.2.5 300-A Evaporator		
Items 2.2.6 Plutonium/Uranium Extraction Plant		
Items 2.2.7 B Plant		
Items 2.2.8 Waste Encapsulation and Storage Facility		
Items 2.2.9 Plutonium Finishing Plant		
Items 2.2.10 T-4 Plant Facility		
Items 2.3.1 Single Shell Tank (SST) System		
Items 2.3.4 SST-9 Laboratory		
Items 2.3.3 Central Process Water System		
Items 2.3.4 Central Process Water System		

B.3.1.3.4.5 200 Area Treated Effluent Disposal Facility Interface Description and Forecast

EXTERNAL INPUTS

-None-

INTERNAL INPUTS

Table B.3-14 Internal Inputs for 200 Area Treated Effluent Disposal Facility

Stream	Category	Period	Baseline	Units
Items 2.2.1 LARSW Plant Phase I LARSW Plant Phase I Non-hazardous/Non-dangerous Liquid Effluent Treated Liquid Effluent Transferred by the Junction LARSW PLANT PHASE I	Treated Liquid Effluent	2002 2011	330000	cubic meters
Items 2.2.2 LARSW Plant Phase I LARSW Plant Phase I Non-hazardous/Non-dangerous Liquid Effluent Treated Liquid Effluent Transferred by the Junction LARSW PLANT PHASE I	Treated Liquid Effluent	2002 2011	462000	cubic meters
Items 2.2.3 LARW Treatment Facility Phase II LARW Phase II Non-hazardous/Non-dangerous Liquid Effluent Treated Liquid Effluent Transferred by the Junction LARW TREATMENT FACILITY PHASE II OPERATIONS & MAINTENANCE	Treated Liquid Effluent	2012 2026	3400000	cubic meters
Items 2.2.4 LARW Treatment Facility Phase II LARW Phase II Non-hazardous/Non-dangerous Liquid Effluent Treated Liquid Effluent Transferred by the Junction LARW TREATMENT FACILITY PHASE II OPERATIONS & MAINTENANCE	Treated Liquid Effluent	2012 2026	3400000	cubic meters
Items 2.2.5 242 A Evaporator 242 A Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 A Evaporator 242 A Evaporator Steam Condensate Steam Condensate from 242 A Evaporator for disposal	Treated Liquid Effluent	1999 2013	11400000	cubic meters
Items 2.2.6 242 A Evaporator 242 A Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 A Evaporator 242 A Evaporator Steam Condensate Steam Condensate from 242 A Evaporator for disposal	Treated Liquid Effluent	1999 2013	660000	cubic meters
Items 2.2.7 242 B Evaporator 242 B Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 B Evaporator 242 B Evaporator Steam Condensate Steam Condensate from 242 B Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.8 242 C Evaporator 242 C Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 C Evaporator 242 C Evaporator Steam Condensate Steam Condensate from 242 C Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.9 242 D Evaporator 242 D Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 D Evaporator 242 D Evaporator Steam Condensate Steam Condensate from 242 D Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.10 242 E Evaporator 242 E Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 E Evaporator 242 E Evaporator Steam Condensate Steam Condensate from 242 E Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.11 242 F Evaporator 242 F Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 F Evaporator 242 F Evaporator Steam Condensate Steam Condensate from 242 F Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.12 242 G Evaporator 242 G Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 G Evaporator 242 G Evaporator Steam Condensate Steam Condensate from 242 G Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.13 242 H Evaporator 242 H Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 H Evaporator 242 H Evaporator Steam Condensate Steam Condensate from 242 H Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.14 242 I Evaporator 242 I Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 I Evaporator 242 I Evaporator Steam Condensate Steam Condensate from 242 I Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.15 242 J Evaporator 242 J Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 J Evaporator 242 J Evaporator Steam Condensate Steam Condensate from 242 J Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.16 242 K Evaporator 242 K Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 K Evaporator 242 K Evaporator Steam Condensate Steam Condensate from 242 K Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.17 242 L Evaporator 242 L Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 L Evaporator 242 L Evaporator Steam Condensate Steam Condensate from 242 L Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.18 242 M Evaporator 242 M Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 M Evaporator 242 M Evaporator Steam Condensate Steam Condensate from 242 M Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.19 242 N Evaporator 242 N Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 N Evaporator 242 N Evaporator Steam Condensate Steam Condensate from 242 N Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.20 242 O Evaporator 242 O Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 O Evaporator 242 O Evaporator Steam Condensate Steam Condensate from 242 O Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.21 242 P Evaporator 242 P Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 P Evaporator 242 P Evaporator Steam Condensate Steam Condensate from 242 P Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.22 242 Q Evaporator 242 Q Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 Q Evaporator 242 Q Evaporator Steam Condensate Steam Condensate from 242 Q Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.23 242 R Evaporator 242 R Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 R Evaporator 242 R Evaporator Steam Condensate Steam Condensate from 242 R Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.24 242 S Evaporator 242 S Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 S Evaporator 242 S Evaporator Steam Condensate Steam Condensate from 242 S Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.25 242 T Evaporator 242 T Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 T Evaporator 242 T Evaporator Steam Condensate Steam Condensate from 242 T Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.26 242 U Evaporator 242 U Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 U Evaporator 242 U Evaporator Steam Condensate Steam Condensate from 242 U Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.27 242 V Evaporator 242 V Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 V Evaporator 242 V Evaporator Steam Condensate Steam Condensate from 242 V Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.28 242 W Evaporator 242 W Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 W Evaporator 242 W Evaporator Steam Condensate Steam Condensate from 242 W Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.29 242 X Evaporator 242 X Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 X Evaporator 242 X Evaporator Steam Condensate Steam Condensate from 242 X Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.30 242 Y Evaporator 242 Y Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 Y Evaporator 242 Y Evaporator Steam Condensate Steam Condensate from 242 Y Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters
Items 2.2.31 242 Z Evaporator 242 Z Evaporator Cooling Water Treated Liquid Effluent Transferred by 242 Z Evaporator 242 Z Evaporator Steam Condensate Steam Condensate from 242 Z Evaporator for disposal	Treated Liquid Effluent	1999 2013	200000	cubic meters

EXTERNAL OUTPUTS

Waste Management Project

HAZ 6A 1226

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Table B.3-15 External Outputs for 200 Area Treated Effluent Disposal Facility

Stream	Category	Period	Baseline	Units
200E SALDS				
Treated Liquid Effluent Discharged to 200E SALDS	Treated Liquid Effluent	1995 - 2000	23200000	cubic meters
Treated Liquid Effluent Disposed by 200 Area Treated Effluent Disposal Facility				

INTERNAL OUTPUTS

-None-

B.3.1.2.5 300 Area Treated Effluent Disposal Facility

B.3.1.2.5.1 300 Area Treated Effluent Disposal Facility Description

The 300 Area Treated Effluent Disposal Facility (TEDF) provides treatment for wastewater from laboratories, research facilities, office buildings, and fuel fabrication facilities in the 300 Area. The waste water is received via the 300 Area Process Sewer (PS). The 300 Area TEDF is designed for continuous receipt of waste waters with storage capacity of up to 5 days at the design flow rate of 300 gpm/min. The facility treats the wastewater using Best Available Technology. The treatment process includes iron co-precipitation, pH adjustment, filtration, ultraviolet light/peroxide (UV/OX) destruction of organics, and ion exchange. Sludge from the iron co-precipitation process is dewatered and used for backfill in the low-level waste trench. The treated liquid effluent is monitored and discharged through an outfall to the Columbia River under a NPDES permit. Capability exists to divert the treated effluent to holding tanks prior to discharge if needed until determination can be made for final disposal based on sampling.

B.3.1.2.5.2 300 Area Treated Effluent Disposal Facility Facility Technical Logic:

The technical logic for the 300 Area Treated Effluent Disposal Facility is captured in the facility's functional flow block diagram which shows the functions performed for each applicable life cycle phase of the facility and the sequence in which the functions are executed.

Figure B-16-300 AREA TREATED EFFLUENT DISPOSAL FACILITY

B.3.1.3.5.3 300 Area Treated Effluent Disposal Facility Requirements and Life Cycle Function Descriptions

Requirements:

- Discharge limits for the 300 Area TEDF are specified in the National Pollutant Discharge Elimination System Permit No. WA-002591-7, and the Washington Department of Natural Resources Land Lease. Constituents not identified in the permit are subject to the limits in WAC 173-201A, Water Quality Standards for Surface Waters of the State of Washington, and 4 percent of the derived concentration guide values in DOE Order 5400.5, Radiation Protection of the Public and Environment, as applicable.
- South 300 Area inactive facilities shall be surveilled and maintained within the approved safety envelope.
- Facilities which reach the end of their mission and are removed from operational status shall meet the acceptance criteria for turnover of surplus facilities for deactivation and decommissioning as specified in WHC-CM-1-3, Management Requirements and Procedures, MRP 8.15, Facility Shutdown, Standby, and Transfer.
- Radioactive airborne emissions shall not exceed the DOGs in WHC-CM-7-5, Environmental Compliance, Appendix C. Emissions of other contaminants shall not exceed the threshold values in WHC-CM-4-40, Industrial Hygiene Manual [40 CFR 61, WAC 173-480, WAC 246-247].
- Pollution prevention and waste minimization requirements are specified in WHC-CM-7-5, Environmental Compliance, Section 14, 'Pollution Prevention'. Facilities shall minimize the volume of system-generated waste.
- Solid low-level waste and mixed low-level waste transferred to the Central Waste Complex shall meet the acceptance criteria for on-site storage and disposal specified in Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063.
- Operation and maintenance of the 300 Area TEDF shall be in accordance with the Hanford 300 Area Treated Effluent Disposal Facility Inventory at Risk Calculations and Safety Analysis, WHC-SD-WM-SAD-025.

Life Cycle Function Descriptions:

B 3 1 3 5 3 1 300 AREA TREATED EFFLUENT DISPOSAL FACILITY PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program, establishing broad priorities, providing program technical direction, preparing and defending the program budget, controlling milestones, integrating all components of the program, providing public and private sector policy liaison, expediting interface activities and follow-up actions, and retaining overall accountability for program success.

B 3 1 3 5 3 2 300 AREA TREATED EFFLUENT DISPOSAL FACILITY OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

300 AREA TREATED EFFLUENT DISPOSAL FACILITY OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B 3 1 3 5 3 3 Collect Non-Listed Liquid Waste in the 300 Area

Collect non-listed liquid effluents from facilities located in the 300 Area.

B.3.1.3.5.3.4 Dispose of Liquid Effluents Treated by the 300 Area TEDF

Dispose of liquid effluents treated by the 300 Area TEDF and meeting discharge requirements to the Columbia River.

B.3.1.3.5.3.5 Treat Liquid Effluents in the 300 Area TEDF

Treat liquid effluents in the 300 Area TEDF by removing or destroying contaminants sufficient to meet discharge requirements. Operate and maintain the process sewer system and the retention process sewer system in the 300 Area.

B.3.1.3.5.3.6 300 AREA TREATED EFFLUENT DISPOSAL FACILITY POST OPERATIONS WORK SCOPE SUMMARY

Day-to-day work, including pre-stabilization surveillance and maintenance, stabilization, post-stabilization surveillance and maintenance, deactivation, and post-deactivation surveillance and maintenance, that is required to allow safe closeout or transition to private entity.

300 AREA TREATED EFFLUENT DISPOSAL FACILITY POST OPERATIONS SPECIFIC FUNCTIONS

B.3.1.3.5.3.7 Maintain Safe & Compliant 300 Area Treated Effluent Disposal Facility

Maintain the 300 Area TEDF facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facilities are made available for clean-up.

B.3.1.3.5.3.8 Transition 300 Treated Effluent Disposal Facility

Initiate the transition phase for the 300 Area Treated Effluent Disposal Facility

B.3.1.3.5.4 300 Area Treated Effluent Disposal Facility Boundary Diagram

Table 3-16 300 Area Treated Effluent Disposal Facility Boundary Diagram

<p>Estimated Interphase None</p> <p>Modified Site Environmental System Interphase</p> <p>Interphase 4.2.2 303 Hazardous Waste</p> <p>Interphase 4.2.3 340 Hazardous Waste Handling Facility</p> <p>Interphase 4.2.4 306 Area Fuel Supply System</p> <p>Interphase 4.3.4 308 Building</p> <p>Interphase 4.4.1 South 600 Area Electrical System</p> <p>Interphase 4.4.2 South 600 Area Storm System</p> <p>Interphase 4.4.3 South 600 Area Water System</p> <p>Interphase 4.4.5 South 600 Area Telecommunications System</p> <p>Interphase 4.4.6 South 600 Area Office Facilities</p> <p>Interphase 4.4.7 South 600 Area Shop Facilities</p> <p>Interphase 4.4.8 South 600 Area Storage Facilities</p> <p>Interphase 4.4.9 South 600 Area Road System</p> <p>Interphase 4.4.11 South 600 Area Rail System</p> <p>Interphase 4.5.1 336</p> <p>Interphase 4.5.6 3667</p> <p>Interphase 4.5.6 329 / 3730 / 3745</p> <p>Interphase 4.5.6 Area Road Label</p> <p>Interphase 4.7.1 331 Complex</p>	<p>Estimated Interphase Collapsing South Office Landfill</p> <p>Modified Site Environmental System Interphase</p> <p>Interphase 2.2.5 Central Waste Complex</p> <p>Interphase 2.2.2 Waste Sampling and Characterization Facility</p> <p>Interphase 4.4.4 South 600 Area Liquid Sanitary Waste System</p>
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B.3.1.3.5.5 300 Area Treated Effluent Disposal Facility Interface Description and Forecast

EXTERNAL INPUTS

None

INTERNAL INPUTS

Table B.3-17 Internal Impacts for 300 Area Treated Effluent Disposal Facility

Stream	Category	Period	Results	Units
Source A.1.1 307 Wastewater Reclaim				
307 Industrial Waste Water	Industrial Waste Water	1938 - 2025	616000	cumulation
Industrial Waste Water Received by 300 T20F 1967-2025 (2) RECEIVED				
Source A.1.2 340 Waste Handling Facility				
340 Facility Industrial Waste Water Treatment	Industrial Waste Water	1938 - 1998	25000	cumulation
Industrial waste water generated from ongoing 340 Waste Handling Facility operations. Waste water volume is estimated from historic 300 T20F throughput and assuming equal contribution from all inputs to the 300 Area Process Server.				
Source A.2.2 300 Area Fuel Supply System				
300 Area Fuel Supply System Industrial Waste Water Treatment	Industrial Waste Water	1938 - 2025	200000	cumulation
Industrial waste water generated from ongoing 300 Area Fuel Supply System operations. Waste water volume is estimated from historic 300 T20F throughput and assuming equal contribution from all inputs to the 300 Area Process Server.				
Source A.3.4 300 Building				
300 Building Industrial Waste Water Treatment	Industrial Waste Water	1938 - 1998	25000	cumulation
Industrial waste water generated from ongoing 300 Building operations. Waste water volume is estimated from historic 300 T20F throughput and assuming equal contribution from all inputs to the 300 Area Process Server.				
Source A.4.5 South 600 Area Electrical System				
Electricity for 300A-LEF	Electricity	1998 - 2025	90000	kWh/yr
Electricity for 300A-LEF				
Source A.4.2 South 600 Area Steam System				
600 Area Steam System Industrial Waste Water Treatment	Industrial Waste Water	1968 - 1998	25000	cumulation
Industrial waste water generated from ongoing 600 Area Steam System operations. Waste water volume is estimated from historic 300 T20F throughput and assuming equal contribution from all inputs to the 300 Area Process Server.				
Source A.3.3 South 600 Area Water System				
Potable Water for 300A-LEF	Potable Water	1998 - 2025	14.0	mgd
Potable Water for 300A-LEF				
South 600 Area Water System Waste Water Treatment	Industrial Waste Water	1968 - 2025	720000	cumulation
Industrial waste water generated from ongoing South 600 Area Water System operations. Waste water volume is estimated from historic 300 T20F throughput and assuming equal contribution from all inputs to the 300 Area Process Server.				
Source A.4.3 South 600 Area Telecommunications System				
Data (LAN/WAN) Transmission for LEP	Data (LAN/WAN) Transmission	1968 - 2025	482.0	NO. OF PCs
Data (LAN/WAN) Transmission for 300A-LEF				
Data (LAN/WAN) Transmission for 300A-LEF	Data (LAN/WAN) Transmission	1968 - 2025	680.0	no. of PCs
Data (LAN/WAN) Transmission for 300A-LEF				
Pager Service for 300A-LEF	Pager Service	1968 - 2025	580.0	no. of pagers
Pager Service for 300A-LEF				
Voice (Telephone) Communication for 300A-LEF	Voice (Telephone) Communication	1968 - 2025	700.0	no. of phones
Voice (Telephone) Communication for 300A-LEF				
Voice (Telephone) Communication for LEP	Voice (Telephone) Communication	1968 - 2025	482.0	NO. OF PHONES
Voice (Telephone) Communication for LEP				
Pager Service for LEP	Pager Service	1968 - 2025	140.0	NO. OF PAGES
Pager Service for LEP				
Source A.4.1 South 600 Area Office Facilities				
Office Space (Leased) for LEP	Office Space (Leased)	1968 - 2025	66000	SQ. FT.
Office Space (Leased) for LEP				
Office Space (Program Change) for 300A-LEF	Office Space (Program Change)	1968 - 2025	10000	SQ. FT.
Office Space (Program Change) for 300A-LEF				
Office Space (Program Change) for 300A-LEF				
Office Space (Program Change) for 300A-LEF	Industrial Waste Water	1968 - 2025	720000	cumulation
Industrial waste water generated from ongoing South 600 Area Office Facilities operations. Waste water volume is estimated from historic 300 T20F throughput and assuming equal contribution from all inputs to the 300 Area Process Server.				
Source A.4.7 South 600 Area Shop Facilities				
Lifting (Crane) for 300A-LEF	Lifting (Crane)	1968 - 2025	480.0	crane days
Lifting (Crane) for 300A-LEF				

Table B.3-17 Internal Inputs for 300 Area Treated Effluent Disposal Facility (Continued)

Stream	Category	Period	Baseline	Units
Maintenance Services Electrical for 300A LEF	Maintenance Services Electrical	1990-2025	0.4	FTG
Maintenance Services Electrical for 300B LEF	Maintenance Services Electrical	1990-2025	0.4	FTG
Custodial Services for 300A LEF	Custodial Services	1990-2025	10000	sq ft
Custodial Services for 300B LEF	Custodial Services	1990-2025	10000	sq ft
Building Maintenance for 300A LEF	(none forecasted)			
Building Maintenance for 300B LEF	(none forecasted)			
Custodial Services for LEF	Custodial Services	1990-2025	5000	sq ft
Food Shop Services for 300A LEF	(none forecasted)			
Food Shop Services for 300B LEF	(none forecasted)			
Maintenance Services Pipelines for 300A LEF	Maintenance Services Pipelines	1990-2025	30 ft	FTG
Maintenance Services Pipelines for 300B LEF	Maintenance Services Pipelines	1990-2025	30 ft	FTG
Section 4.4.6 South 600 Area Storage Facilities				
50 Storage Industrial Waste Water	Industrial Waste Water	1990-2025	750000	cu meters
Industrial waste water generated from ongoing South 600 Area Storage Facilities operations throughout and assuming equal contribution from all inputs to the 300 Area Process Sewer	Industrial Waste Water	1990-2025	750000	cu meters
Section 4.4.10 South 600 Area Road System				
Harford Road Sys Heavy Trucks for 300A LEF	Harford Road Sys Heavy Trucks	1990-2025	3300	truck loads
Harford Road Sys Heavy Trucks for 300B LEF	Harford Road Sys Heavy Trucks	1990-2025	3300	truck loads
Heavy Equipment for 300A LEF	(none forecasted)			
Heavy Equipment for 300B LEF	(none forecasted)			
Heavy Trucks for 300A LEF	Heavy Trucks	1990-2025	5000	vehicle days
Heavy Trucks for 300B LEF	Heavy Trucks	1990-2025	5000	vehicle days
Sediment Light Trucks for 300A LEF	Sediment Light Trucks	1990-2025	340	no. of vehicles
Sediment Light Trucks for 300B LEF	Sediment Light Trucks	1990-2025	340	no. of vehicles
Section 4.4.11 South 600 Area Rail System				
Rail Transportation for 300A LEF	(none forecasted)			
Rail Transportation for 300B LEF	(none forecasted)			
Section 4.5.1 300				
330 Building Industrial Waste Water Transfer	Industrial Waste Water	1990-2025	750000	cu meters
Industrial waste water generated from ongoing 330 Building operations throughout and assuming equal contribution from all inputs to the 300 Area Process Sewer	Industrial Waste Water	1990-2025	750000	cu meters
Section 4.5 South 600 Area Radiological Labs				
Radiocative Standards (Calibration) for 300A LEF	(none forecasted)			
Radiocative Standards (Calibration) for 300B LEF	(none forecasted)			
Section 4.5.5 300W				
300W Industrial Waste Water Transfer	Industrial Waste Water	1990-2025	200000	cu meters
Industrial waste water generated from ongoing 300W Building operations throughout and assuming equal contribution from all inputs to the 300 Area Process Sewer	Industrial Waste Water	1990-2025	200000	cu meters
Section 4.5.6 300J/300K/300L				
320, 3020, 3745 Building Industrial Waste Water Transfer	Industrial Waste Water	1990-2025	750000	cu meters
Industrial waste water generated from ongoing 320, 3020, 3745 Building operations throughout and assuming equal contribution from all inputs to the 300 Area Process Sewer	Industrial Waste Water	1990-2025	750000	cu meters
Section 4.5.8 Misc Road Labs				
Misc Road Lab Industrial Waste Water Transfer	Industrial Waste Water	1990-2025	750000	cu meters
Industrial waste water generated from ongoing Miscellaneous Radiological Laboratory operations throughout and assuming equal contribution from all inputs to the 300 Area Process Sewer	Industrial Waste Water	1990-2025	750000	cu meters
Section 4.5.9 301 Complex				
Non-rail Standards (Calibration) for 300A LEF	Non-rail Standards (Calibration)	1990-2025	1400	calibrations
Non-rail Standards (Calibration) for 300B LEF	Non-rail Standards (Calibration)	1990-2025	1400	calibrations
301 Complex Industrial Waste Water Transfer	Industrial Waste Water	1990-2025	750000	cu meters
Industrial waste water generated from ongoing 301 Building operations throughout and assuming equal contribution from all inputs to the 300 Area Process Sewer	Industrial Waste Water	1990-2025	750000	cu meters
Industrial Hygiene Services for 300A LEF	Industrial Hygiene Services	1990-2025	900	samples
Industrial Hygiene Services for 300B LEF	Industrial Hygiene Services	1990-2025	900	samples

EXTERNAL OUTPUTS

Table B.3-18 External Outputs for 300 Area Treated Effluent Disposal Facility

Stream	Category	Period	Baseline	Units
K Columbia River 300 Area TEDF Discharge Secondary Liquid Waste Transferred	Treated Liquid Effluent	1990-2025	9100000	cubic meters

Table B.3-18 External Outputs for 300 Area Treated Effluent Disposal Facility (Continued)

System	Category	Period	Quantity	Units
CHULBY Solid Sanitary Waste Solid sanitary waste generated from 300 Area liquid effluent activities	Sanitary Solid Waste	1985 - 2025	220.9	tons

INTERNAL OUTPUTS

Table B.3-19 Internal Outputs for 300 Area Treated Effluent Disposal Facility

System	Category	Period	Quantity	Units
CHULBY 300 TRDFCH LLW I Secondary solid waste from treating industrial waste water in the 300 Area TRDF	CHULBY I	1987 - 2025	54.60	cubic meters
CHULBY In-Field Laboratory Services for 300A-LIF In-Field Laboratory Services for 300A-LIF	Artificial Laboratory Services In-Field Laboratory Services	1990 - 2025	5554	samples
CHULBY In-Field Laboratory Services for 300A-LIF In-Field Laboratory Services for 300A-LIF	Artificial Laboratory Services In-Field Laboratory Services	1990 - 2025	56.4	samples
CHULBY 300 LDF Liquid Sanitary Waste Subsystem Liquid sanitary waste generated from 300 Area liquid effluent activities	Sanitary Liquid Waste	1988 - 2025	8.97	kgal

8.3.1.3.6 307 Retention Basins Facility

8.3.1.3.6.1 307 Retention Basins Facility Description

The 300 Area Retention Process Sewer (RPS) system collects liquid effluents in the 300 Area which are potentially radioactively contaminated. These liquid effluents normally are collected in the 307 Retention Basins where they are monitored and batched released to the Process Sewer (PS) for subsequent treatment in the 300 Area TEDF. Provisions exist for transferring off-specification liquid effluents to the Radioactive Liquid Waste system (RLWS) and 340 Waste Handling Facility for subsequent storage and transfer to Double-Shell Tanks (DSTs) in the 200 East Area. The 307 Retention Basins consist of four basins with associated valves, pumps, and controls. Each basin has a holding capacity of 95 cubic meters (25,000 gal) with overflow to the adjacent basin.

8.3.1.3.6.2 307 Retention Basins Facility Technical Logic:

The technical logic for the 307 Retention Basins are captured in the functional flow block diagram which shows the functions performed for each applicable life cycle phase of the basins and the sequence in which the functions are executed.

B.3.1.3.6.3 307 Retention Basins Requirements and Life Cycle Function Descriptions

Requirements:

- Facilities which reach the end of their mission and are removed from operational status shall meet the acceptance criteria for turnover of surplus facilities for deactivation and decommissioning as specified in WHC-CM-1-3, Management Requirements and Procedures, MRP 6.16, "Facility Shutdown, Standby, and Transfer."
- Radioactive airborne emissions shall not exceed the DOGs in WHC-CM-7-5, Environmental Compliance, Appendix C. Emissions of other contaminants shall not exceed the threshold values in WHC-CM-4-40, Industrial Hygiene Manual, [40 CFR 61, WAC 173-480, WAC 249-247]
- Pollution prevention and waste minimization requirements are specified in WHC-CM-7-5, Environmental Compliance, Section 14, "Pollution Prevention." Facilities shall minimize the volume of system-generated waste.
- Solid low-level waste and mixed low-level waste transferred to the Central Waste Complex shall meet the acceptance criteria for onsite storage and disposal specified in Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0033.
- Operation and maintenance of the 307 Retention Basins shall be in accordance with the Hanford 300 Area Retention Process Sewer Inventory at Risk Calculations and Safety Analysis, WHC-SID-WM-SAD-027.

Life Cycle Function Descriptions:

B.3.1.3.6.3.1 307 RETENTION BASINS PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program; establishing broad priorities; providing program technical direction; preparing and defending the program budget; controlling milestones; integrating all components of the program; providing public and private sector policy liaison; expediting interface activities and follow-up actions; and retaining overall accountability for program success.

B.3.1.3.6.3.2 307 RETENTION BASINS OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

307 RETENTION BASINS OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B.3.1.3.6.3.3 Collect Potentially-Contaminated Liquid Effluents in the 307 Retention Basins

Collect and monitor potentially-contaminated liquid effluents for transfer to the 300 Area TEDF or 340 Facility.

B.3.1.3.6.3.4 Provide Lag Storage for Non-Dangerous Liquid Waste in the 300 Area

Provide lag storage for collected liquid effluents from 300 Area facilities for the purpose of sampling to determine if the liquid can be processed through the 300 Area TEDF. Liquid effluent not suitable for treatment at the 300 Area TEDF will be transferred to the 340 Waste Handling Facility for future transport to double-shell tanks in the central plateau.

S.3.1.3.6.4 307 Retention Basins Boundary Diagram**Table S.3-20 307 Retention Basins Boundary Diagram**

External Interfaces None Marine Site Environmental System Interfaces Interface 4.1.1 304 Building Interface 4.1.3 325 Building Interface 4.1.4 307 Building Interface 4.1.5 327 Building	Internal Interfaces None Marine Site Environmental System Interfaces Interface 4.2.1 307 Area Treated Effluent Disposal Facility Interface 4.2.3 349 Waste Handling Facility
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B.3.1.3.6.5 307 Retention Basins Interface Description and Forecast

EXTERNAL INPUTS

None

INTERNAL INPUTS

Table B.3-21 Internal Inputs for 307 Retention Basins

Stream	Category	Period	Baseline	Units
Stream # 61 304 Building				
304 Potentially Contaminated Waste Water Industrial waste water from 304 Building operations. The volume of waste water is estimated based on historical throughput in the 307 Retention Basins and assuming equal contribution from all inputs to the RFS	Industrial Waste Water	1998 - 2025	43964	ccr/yr
Stream # 62 305 Building				
305 Potentially Contaminated Waste Water Industrial waste water from 305 Building activities. The volume of waste water is estimated based on historical throughput in the 307 Retention Basins and assuming equal contribution from all inputs to the RFS	Industrial Waste Water	1998 - 2025	263600	ccr/yr
Stream # 63 307 Building				
307 Potentially Contaminated Waste Water Industrial waste water from 307 Building activities. The volume of waste water is estimated based on historical throughput in the 307 Retention Basins and assuming equal contribution from all inputs to the RFS	Industrial Waste Water	1998 - 2025	43964	ccr/yr
Stream # 65 309 Building				
309 Potentially Contaminated Waste Water Industrial waste water from 309 Building activities. The volume of waste water is estimated based on historical throughput in the 307 Retention Basins and assuming equal contribution from all inputs to the RFS	Industrial Waste Water	1998 - 2025	263600	ccr/yr

EXTERNAL OUTPUTS

None

INTERNAL OUTPUTS

Table B.3-22 Internal Outputs for 307 Retention Basins

Stream	Category	Period	Baseline	Units
Stream # 11 300 Airs Thermal Effluent Disposal Facility				
307 Industrial Waste Water Industrial Waste Water Received by 300 TEDF 1997-2025 (7) RECEIVED	Industrial Waste Water	1998 - 2025	519000	ccr/yr
Stream # 13 340 Waste Handling Facility				
307 Basins Partitioned Solid and Liquid Waste (none forecasted) Residue and liquid waste transferred from the 307 Basins to the 340 Dispersive Waste Handling Facility	(none forecasted)			

B.3.1.3.7 340 Waste Handling Facility

B.3.1.3.7.1 340 Waste Handling Facility Description

The 340 Waste Handling Facility provides receipt, storage, and loadout capability for low-level radioactive/low-level liquid waste generated during laboratory operations in the 300 Area. Waste is received via the radioactive liquid waste system (RLWS) or the retention process sewer (RPS) system. The waste is accumulated and stored in two 15,000 gal tanks located in a covered, below-grade vault in the 340 building. Six additional 8,000 gal tanks in the adjacent 340-A building provide backup storage capability. The 340-B building is used for rail loadout of the waste. The waste is transported to the 204-AR Unloading facility in the 200 East Area for neutralization and storage in double-shell tanks. The 340 Waste Handling Facility does not have a RCRA permit and these waste transfers must occur within a 90 day storage limit.

The 340 Waste Handling Facility will no longer receive waste after September 1998. A new waste handling facility is being provided for the 325 building. The 340 Waste Handling Facility will be shutdown and cleaned out, deactivated, and decontaminated and decommissioned.

B.3.1.3.7.2 340 Waste Handling Facility Facility Technical Logic

The technical logic for the 340 Waste Handling Facility is captured in the facility's functional flow block diagram which shows the functions performed for each applicable life cycle phase of the facility and the sequence in which the functions are executed.

Figure B-18 340 WASTE HANDLING FACILITY

B.3.1.3.7.3 340 Waste Handling Facility Requirements and Life Cycle Function Descriptions

Requirements:

- South 600 area facilities shall be made available for other uses
- Facilities which reach the end of their mission and are removed from operational status shall meet the acceptance criteria for turnover of surplus facilities for deactivation and decommissioning as specified in WHC-CM-1-3 Management Requirements and Procedures, MRP 6 15, Facility Shutdown, Standby, and Transfer?
- Radioactive airborne emissions shall not exceed the DCGs in WHC-CM-7-5, Environmental Compliance, Appendix C. Emissions of other contaminants shall not exceed the threshold values in WHC-CM-4-40, Industrial Hygiene Manual. [40 CFR 61, WAC 173-480, WAC 24B-247]
- Pollution prevention and waste minimization requirements are specified in WHC-CM-7-5, Environmental Compliance, Section 14, "Pollution Prevention." Facilities shall minimize the volume of system-generated waste.
- Solid low-level waste and mixed low-level waste transferred to the Central Waste Complex shall meet the acceptance criteria for onsite storage and disposal specified in Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0083.
- Operation and maintenance of the 340 Waste Handling Facility shall be in accordance with the 340 Waste Handling Facility Interim Safety Basis (ISB), WHC-SD-WM-ISB-003, and the Safety Analysis Report for Packaging (On-Site) Double-Shell Tank Car, WHC-SD-TS-SARP-015.

Life Cycle Function Descriptions:

B.3.1.3.7.3.1 340 WASTE HANDLING FACILITY PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program, establishing broad priorities, providing program technical direction, preparing and defending the program budget, controlling milestones, integrating all components of the program, providing public and private sector policy liaison, expediting interface activities and follow-up actions, and retaining overall accountability for program success.

B.3.1.3.7.3.2 340 WASTE HANDLING FACILITY OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

340 WASTE HANDLING FACILITY OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B.3.1.3.7.3.3 Store Radioactive/Mixed Liquid Waste in the 340 Facility

Collect and store radioactive/mixed liquid waste in the 340 Facility for transfer to DSTs. Operate and maintain the radioactive/mixed liquid waste system in the 300 Area.

B.3.1.3.7.3.4 340 WASTE HANDLING FACILITY POST OPERATIONS WORK SCOPE SUMMARY

Day-to-day work, including pre-stabilization surveillance and maintenance, stabilization, post-stabilization surveillance and maintenance, deactivation, and post-deactivation surveillance and maintenance, that is required to

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340 WASTE HANDLING FACILITY POST OPERATIONS SPECIFIC FUNCTIONS

B.3.1.3.7.3.5 Maintain Safe & Compliant 340 Waste Handling Facility in South 600 Areas

Maintain the 840 facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facilities are made available for clean-up.

B.3.1.3.7.3.8 Transition 340 Waste Handling Facility

Initiate the transition phase of decontamination and decommissioning for the 34D Waste Handling Facility. Develop and obtain approval of the endpoint criteria needed for transfer to the Facility Stabilization project.

B.3.1.3.7.4 340 Waste Handling Facility Boundary Diagram

Table B.3-23 540 Waste Handling Facility Boundary Diagram

External Interactions	Internal Interactions
None	SW Column
Harford Gas Environmental System Interceptor	Harford Gas Environmental System Interceptor
Interne A.2.2 307 Radiation Ducts	Interne A.2.3 Double Steel Tank K&S7 System
Interne A.4.1 South 600 Area Electrical System	Interne A.2.4 309 Area Treated Effluent Disposal Facility
Interne A.4.5 South 600 Area Telecommunication System	
Interne A.4.8 South 600 Area Office Facilities	
Interne A.4.7 South 600 Area Shop Facilities	
Interne A.4.14 South 600 Area Rail System	
Interne A.6.1 324 Building	
Interne A.6.2 325 Building	
Interne A.6.3 325 Building	
Interne A.6.4 329 Building	
Interne A.6.5 329 Building	
Interne A.6.9 Misc. Shed Lights	

6.3.1.3.7.5 340 Waste Handling Facility Interface Description and Forecast

EXTERNAL INPUTS

None

INTERNAL INPUTS

Table 6.3-24 Internal Inputs for 340 Waste Handling Facility

Structure	Category	Period	Baseline	Units
Item 6.3.2 307 Hazardous Basins 307 Basins (Redesignated Liquid Waste) to Waste Receiving Liquid waste transferred from the 307 Basins to the 340 Hazardous Waste Handling Facility.	Other (baseline)			
Item 6.3.4 304 Area Electrical System Electricity for 304-340 Electricity for 304-340	Electricity	1996-2001	1200	MWh-yr
Item 6.3.5 304 Area Telecommunications System Voice (Telephone) Communications for 304-340 Voice (Telephone) Communications for 304-340 Data (PLMN) Transmissions for 304-340 Data (PLMN) Transmissions for 304-340	Voice (Telephone) Communications Data (PLMN) Transmissions	1996-2001	60.6	no. of phones
Item 6.3.6 304 Area Office Facilities Office Space (Program Owned) for 304-340 Office Space (Program Owned) for 304-340 Paper Services for 304-340 Paper Services for 304-340	Office Space (Program Owned) Paper Services	1996-2001	4000	sq. ft.
Item 6.3.7 304 Area Shop Facilities Maintenance Services (Electrician) for 304-340 Maintenance Services (Electrician) for 304-340 Custodial Services for 304-340 Custodial Services for 304-340 Maintenance Services (Plumber) for 304-340 Maintenance Services (Plumber) for 304-340	Maintenance Services (Electrician) Custodial Services Maintenance Services (Plumber)	1996-2001	1.8	FTE
Item 6.3.8 304 Area Rail System Rail Transportation for 304-340 Rail Transportation for 304-340	Rail Transportation	1996-2001	24.0	shipments
Item 6.3.9 304 Building 304 Radioactive/Liquid Waste Radioactive/Liquid waste to the 340 Waste Handling Facility. Waste volume estimates assume equal waste volume transferred from the 304, 305, 306, 307, and 308 buildings.	Waste (Liquid)	1996-1998	20.0	cubic meters
Item 6.3.10 305 Building 305 Radioactive/Liquid Waste Radioactive/Liquid waste to the 340 Waste Handling Facility. Waste volume estimates assume equal waste volume transferred from the 304, 305, 306, 307, and 308 buildings.	Waste (Liquid)	1996-1998	20.0	cubic meters
Item 6.3.11 306 Building 306 Radioactive/Liquid Waste Radioactive/Liquid waste to the 340 Waste Handling Facility. Waste volume estimates assume equal waste volume transferred from the 304, 305, 306, 307, and 308 buildings.	Waste (Liquid)	1996-1998	20.0	cubic meters
Item 6.3.12 307 Building 307 Radioactive/Liquid Waste Radioactive/Liquid waste to the 340 Waste Handling Facility. Waste volume estimates assume equal waste volume transferred from the 304, 305, 306, 307, and 308 buildings.	Waste (Liquid)	1996-1998	20.0	cubic meters
Item 6.3.13 308 Building 308 Radioactive/Liquid Waste Radioactive/Liquid waste to the 340 Waste Handling Facility. Waste volume estimates assume equal waste volume transferred from the 304, 305, 306, 307, and 308 buildings.	Waste (Liquid)	1996-1998	20.0	cubic meters
Item 6.3.14 Misc. Facilities Radioactive Standards (Calibrations) for 304-340 Radioactive Standards (Calibrations) for 304-340	Radioactive Standards (Calibrations)	1996-2001	40.0	calibrations

EXTERNAL OUTPUTS

Table E.3-25 External Outputs for 340 Waste Handling Facility

Stream	Category	Period	Baseline	Units
K. Solid Columns 340 Waste Handling Facility Sanitary Liquid Waste Sanitary liquid waste generated during day-to-day operations of the 340 Waste Handling Facility.	Sanitary Liquid Wastes	1995 - 2004	0.24	Mgd

INTERNAL OUTPUTS

Table E.3-26 Internal Outputs for 340 Waste Handling Facility

Stream	Category	Period	Baseline	Units
Process 2.3.2 Double Shell Tank (DST) System 340 Bldg. LLSMW (Liquid)	MLW LLSMW (Liquid)	1997 - 2015 1995 - 2004	5980 495.0	cubic meters cubic meters
REW Transferred by 340 Waste Handling Facility.				
Process 4.3.1 340 Area Thermal Effluent Disposal Facility 340 Facility Industrial Waste Water Transfers Industrial waste water generated from ongoing 340 Waste Handling Facility operations. Waste water volume is estimated based historic 200 TEPF throughput and assuming equal contribution from all inputs to the 300 Area Process Sewer.	Industrial Waste Water	1995 - 1999	25000	on meters

B.3.1.3.3 Miscellaneous Streams System Facility

B.3.1.3.3.1 Miscellaneous Streams System Facility Description

Miscellaneous Streams include liquid effluents generated from hydrotest, maintenance, and construction activities; cooling water and condensate discharges; and storm water run-off. These discharges are considered non-hazardous and non-radioactive. Miscellaneous Streams may or may not discharge to an engineered disposal structure. Waste streams not included are those that already have discharge permits in place, streams for which permit applications have been submitted, or streams which are covered under a NPDDES permit. The Washington State Department of Ecology Consent Order No. DE-81NM-177 identifies several requirements and milestones Miscellaneous Streams. A plan for managing the Miscellaneous Streams and ensuring they will be in compliance with applicable state regulations (i.e., WAC 173-218 and WAC 173-218) is described in Plan and Schedule for Disposition and Regulatory Compliance for Miscellaneous Streams, DOE/RL-93-94. The current inventory of Miscellaneous Streams is reported in the Inventory of Miscellaneous Streams, DOE/RL-95-82.

B.3.1.3.3.2 Miscellaneous Streams System Facility Technical Logic

The technical logic for the Miscellaneous Waste Water Collection System is captured in the functional flow block diagram which shows the functions performed for each applicable life cycle phase of the system and the sequence in which the functions are executed.

Figure B-19 Miscellaneous Waste Water Collection System

B.3.1.3.3 Miscellaneous Streams System Requirements and Life Cycle Function Descriptions

Requirements:

- The plan for managing Miscellaneous Streams and ensuring they will be in compliance with applicable state regulations is described in the Plan and Schedule for Disposition and Regulatory Compliance for Miscellaneous Streams, DOE/RL-93-94. Commitments established in the plan and schedule include registration of injection wells, submittal of applications for categorical discharge permits, annual update of the Miscellaneous Streams inventory until FY1999, and implementation of best management practices.

Life Cycle Function Descriptions:

B.3.1.3.3.1 MISCELLANEOUS WASTE WATER COLLECTION SYSTEM PROGRAM PLANNING WORK SCOPE SUMMARY

No Description

MISCELLANEOUS WASTE WATER COLLECTION SYSTEM PROGRAM PLANNING SPECIFIC FUNCTIONS

B.3.1.3.3.4 Miscellaneous Streams System Boundary Diagram

Table B.3-37 Miscellaneous Streams System Boundary Diagram

External Interfaces		External Interfaces
-None-		-None-
Waste Site Environmental System Interfaces		Waste Site Environmental System Interfaces
-None-		-None-

8.3.1.3.8.5 Miscellaneous Streams System Interface Description and Forecast

EXTERNAL INPUTS

-None-

INTERNAL INPUTS

-None-

EXTERNAL OUTPUTS

-None-

INTERNAL OUTPUTS

-None-

B.3.1.4 Drivers for Liquid Effluents Project

Table B.3-28 Source Documents for Liquid Effluents Project

Name	Title	
40 CFR 261.268	RCRA/Hazardous Wastes/Land Disposal Restrictions	
40 CFR 61	National Emissions Standards for Hazardous Air Pollutants	
Consent Order DE-91NM-177	State of Washington Waste Discharge Permit Program Consent Order	—
DE-AC06-96RL13200	Project Hanford Management Contract, Fluor Daniel Hanford, Inc.	
DOE/ER-02220	Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan	—
DOE/RL-93-84	Plan and Schedule for Disposition and Regulatory Compliance for Miscellaneous Streams	—
DOE/RL-96-14	Updated Draft Mission Direction Document, June 1996	
DOE/RL-96-92	Hanford Strategic Plan	—
HMF-SD-WM49H-100-001	200 Area Treated Effluent Disposal Facility Interface Control Document	—
N/A	Washington Department of Natural Resources Land Lease	—
ST 4500	State Waste Discharge Permit for the 200 Area ETDF	
ST 4502	State Waste Discharge Permit for the 200 Area TEDF	—
WA-002591-7	National Pollutant Discharge Elimination System Permit for the 300 Area TEDF	
WA780008967	Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit	
WAC 173-300	Water Quality Standards for Ground Waters of the State of Washington	
WAC 173-201A	Water Quality Standards for Surface Waters of the State of Washington	
WAC 173-216	State Waste Discharge Permit Program	—
WAC 173-308	Dangerous Waste Regulations	—
WAC 173-480	Ambient Air Quality Standards and Emission Limits for Radionuclides	—
WAC 246-247	Radiation Protection - Air Emissions	—
WHC-CM-1-3	Management Requirements and Procedures	—
WHC-CM-4-40	Industrial Hygiene Manual	
WHC-CM-7-6	Environmental Compliance	—
WHC-EP-0063-4	Hanford Site Solid Waste Acceptance Criteria	—
WHC-SD-WM-HSE-003	340 Waste Handling Facility Interim Safety Basis (ISB)	—
WHC-SD-WM-SAD-025	Hanford 300 Area Treated Effluent Disposal Facility Inventory at Risk Calculations and Safety Analysis	—
WHC-SD-WM-SAD-027	Hanford 300 Area Retention Process Sewer Inventory at Risk Calculations and Safety Analysis	—
WHC-SD-WM-SAR-023	242-A Evaporator/Crystallizer Safety Analysis Report	—
WHC-SD-WM-SAR-023 Rev 1B		

B.3.1.5 Liquid Effluents Project Risk Management

Units of Analysis and associated RDSs:

- Liquid Effluent Minimum Safe Program Management (R96N0135) —
- 200 Area Liquid Effluent Facility Minimum Safe (R96W0001, R96N0041, R96N0058, R96N0069, R96N0100) —
- 200 Area Liquid Effluent Facility Operations (R96W0037, R96N0040, R96N0150, R96N0174) —
- 300 Area Liquid Effluent Facility Minimum Safe (R96N0032, R96N0039, R96N0067) —
- 340 Waste Handling Facility Shutdown (R96W0253, R96N0260) —
- Miscellaneous Streams (R96N0036) —

Identification of relevant PBS interfaces -- e.g., if the project ends and is transferred to another PBS.

Liquid effluents are received for treatment and disposal from the Tank Waste Remediation System Project, Spent Nuclear Fuels Project, Waste Management Project, Facility Stabilization Project, Infrastructure Project, Environmental Restoration Project (ERH), and the Technology Management Project (TNML). Dilute liquid tank waste is received from the Tank Waste Remediation System Project for evaporation. Solid waste is transferred to the Solid Waste Program in the Waste Management Project.

After shutdown, contaminated Liquid Effluents Facilities (242-A Evaporator, LEHF, ETF, 340 Facility) will be transferred to Facility Stabilization for deactivation. The 200 Area TEDF will be turned over to Infrastructure Project (Landford) for re-use or demolition. The 300 Area TEDF will likely be turned over to a private entity for commercial operation.

Brief description of Project, hazards and activities.

Liquid effluents are generated by site cleanup activities (e.g., tank waste remediation). The LWMP treats and disposes of these liquid effluents in accordance with applicable requirements. Tank waste volume reduction is also performed. The liquid effluents and tank wastes contain radioactive materials and hazardous chemicals. The equipment and operations in the facilities are potential industrial hazards.

The Liquid Effluent Facilities and 242-A Evaporator each have their own risk levels because of differences in waste and materials, condition of the facilities, and the support provided to other projects. The maximum risk is reported here, and generally the risk for the 200 Area Liquid Effluent Facilities (LEHF, ETF, 200 Area TEDF) and 242-A Evaporator is greater than the risk for the 300 Area Liquid Effluent Facilities (300 Area TEDF, 340 Facility). However, risk for each of the facilities was considered in this evaluation.

Risk reduction measure(s) and demonstration of risk levels.

How will this project reduce Hanford risks? What key project events are planned that will change risk?

The LWMP is a service organization and has no specific interim or final endpoint targets in the Hanford Mission Document or Hanford Strategic Plan. However, this project supports site cleanup activities necessary to ensure public health and worker safety, and protect the environment. The Liquid Effluent Facilities and 242-A Evaporator must be available to treat and dispose of liquid effluents, and reduce the volume of tank wastes, as needed. The endpoint targets assigned to other programs which are supported by the LWMP are identified in the MWMP, Section 1.2.1 and are also listed in Section A.1.2 of this document.

What risk performance measures have been selected to track changes in risk? Are these direct metrics such as dose or indirect metrics such as volume of stabilized material?

Only indirect metrics are possible. Liquid effluents received for treatment must meet established waste acceptance criteria. The volume of liquid effluents is dependent on the progress of site cleanup by others. Limits of operation have been established for the Liquid Effluent Facilities by analyzing the hazards associated with each facility. Public health and worker safety, and protection of the environment, are contingent on operating within these limits.

Public Health metric(s)

Discharges from the Liquid Effluent Facilities and 242-A Evaporator shall not exceed permit limits or otherwise result in a Notice of Violation. The permit limits take into consideration protection of public health.

Worker Health & Safety metrics)

Operation of the Liquid Effluent Facilities and 242-A Evaporator shall be in accordance with Occupational Safety and Health Standards, 29 CFR 1910. Radiation exposure to workers shall comply with limits set forth in Hanford Site Radiological Control Manual, HSRCM-1.

Environmental Health metric(s)

Discharges from the Liquid Effluent Facilities and 242-A Evaporator shall not exceed permit limits or otherwise result in a Notice of Violation. The permit limits take into consideration protection of the environment.

Risk Drivers (primary accident and/or exposure scenarios, with frequency or probability and rough estimate of magnitude)

Operation of the Liquid Effluent Facilities and 242-A Evaporator, and their support to site cleanup, is the primary risk driver. No quantitative estimates have been made of the risk associated with this scenario. Hazards for the Liquid Effluent Facilities and 242-A Evaporator have been formally assessed; references are provided in Section A.1.7. The hazard categories of these facilities are shown below. An Auditable Safety Analysis is being prepared for the LERF and its hazard category will change to Radiological.

Facility	Hazard Category
242-A Evaporator	Category 3 Nuclear
LERF	Radiological
ETF	Radiological
200 Area TEOF	General Use
300 Area TEOF	General Use
340 Facility	Category 3 Nuclear

Where are we now? BASELINE risks existing at the beginning of 1997 - "stopped project" risks against which progress will be measured (scenarios, contaminants/materials, concentrations, risk levels).

Existing conditions, inventories

The Hanford 'Legacy' includes radioactive and hazardous tank wastes, spent nuclear fuel, contaminated soil and groundwater, and facilities with high mortgages for continued surveillance and maintenance. The LWP is essential to the cleanup and remediation of the Hanford Site.

Baseline public health risks

Public health risk is medium. Not operating the 242-A Evaporator and ETF would reduce the ability to manage tank wastes. Tank wastes would be required to be stored longer. New waste additions would increase the volume of waste stored in the tanks. Saltwell pumping to remove liquids from SSTs would be restricted. The potential for LERF leaks which could contaminate the groundwater and impact public safety and health would increase.

Baseline worker health & safety risks

Worker safety risk is medium. Not operating the 242-A Evaporator and ETF would make management of tank wastes more complex. The frequency of spills and releases requiring cleanup would increase. Accidents affecting the safety of workers would be more likely to occur. Existing radioactive contamination would be uncontrolled. Inadvertent radiation exposure would occur to workers.

Baseline environmental health risks

Environmental risk is high. Not operating the 242-A Evaporator and ETF would reduce the ability to manage tank

wastes. The frequency of spills and releases, and the potential for tank leaks, would increase. Contamination would spread and adversely affect the environment.

Where are we going? Conditions at project completion or transfer and risk-related conditions in the outyears that relate to long-term ENDSTATE commitments. Latent and final risk goals, all residual hazards and contamination, condition of all remaining materials, long-term custodial requirements, institutional controls, relation to Hanford Strategic Plan. Note: materials and contaminants must be described even if the project is in a "clean and stable" condition or if the site has been remediated to allow certain interim or endstate uses.

Endstate conditions, inventories

This activity will be complete when the endpoint targets and cleanup goals identified for other projects in the Hanford Mission Decision Document and Hanford Strategic Plan are achieved.

Endstate public health risks

Negligible risk to public health will exist. The Liquid Effluent Facilities and 242-A Evaporator are operated in a safe and environmentally-compliant manner. Radioactive and hazardous materials will be removed and the facilities placed in a safe shutdown condition. Facilities will then undergo deactivation and D&D as necessary.

Endstate worker health & safety risks

Negligible risk to worker health and safety will exist. The Liquid Effluent Facilities and 242-A Evaporator are operated in a safe and environmentally-compliant manner. Radioactive and hazardous materials will be removed and the facilities placed in a safe shutdown condition. Facilities will then undergo deactivation and D&D as necessary.

Endstate environmental health risks

Negligible risk to the environment will exist. The Liquid Effluent Facilities and 242-A Evaporator are operated in a safe and environmentally-compliant manner. Radioactive and hazardous materials will be removed and the facilities placed in a safe shutdown condition. Facilities will then undergo deactivation and D&D as necessary.

How are we getting there? Risks that REMAIN at the end of each budget year as currently planned (Purpose: to show how much progress in risk reduction will have been made, and how much risk would still remain if the project were stopped at the end of that year and never restarted. Refer to Table C-1 A).

General rationale

Risk of stopping this project will be reduced as site cleanup activities which depend on the Liquid Effluent Facilities and 242-A Evaporator are completed. Hazardous materials will be immobilized and unsafe conditions remediated.

Public health and critical project events & years

Public health risk is reduced to low with completion of SST waste retrieval in FY 2018. All tank waste will then be contained in DSTs and the possibility of tank leaks contaminating the groundwater will no longer exist. Public health risk is eliminated with completion of Low Activity Waste (LAW) immobilization in FY 2022, and completion of High Level Waste (HLW) immobilization in FY 2029. All tank waste will then be remediated.

Worker health & safety and critical project events & years (e.g., risks to other Hanford workers if this project were stopped).

Worker safety risk is reduced to low with completion of SST waste retrieval in FY 2018, completion of LAW immobilization in FY 2022, and completion of HLW immobilization in FY 2029. Tank waste management will be less complex and the likelihood of accidents reduced. Risk of inadvertent radionuclide exposure and industrial accidents will continue until shutdown of the Liquid Effluent Facilities.

Environmental health and critical project events & years

Environmental risk is reduced to low with completion of SST waste retrieval in FY 2018. All tank waste will then be contained in DSTs and the possibility of tank leaks contaminating the groundwater will no longer exist.

Environmental risk due to spills and releases will continue until completion of LAW immobilization in FY 2022, and completion of HLW immobilization in FY 2029.

ANNUAL risks for key project years (identify years in which key planned project activities would be implemented that affect risks, such as increased worker risks during particular activities, or reduced risk as stabilization phases are completed. Annual worker risk during project implementation will be used to fill in the spreadsheet.)

The 340 Facility will shut down at the end of FY 1996. Worker safety risk will increase from low to medium during cleanout in FY 1999-2001, public health risk and environmental risk for the 340 Facility will remain low. (Worker risk due to other project activities in these years is also medium.) Plant systems not required for long-term surveillance and monitoring will be shut down. Radioactive and hazardous materials will be removed to the extent possible. Cleanout will require work in contaminated areas and nonroutine operations. Similarly, worker risk which is medium for operation of the 242-A Evaporator, will remain medium after shutdown in FY 2011 and during cleanout in FY 2012-2014. Worker risk which is low for operation of the LERF and ETF, will remain low after shutdown in FY 2030 and during cleanout in FY 2031 and 2032, due to the reduced inventory of radioactive and hazardous materials at these facilities.

Risk Interfaces, Related Projects, Issues

Interfaces and transitions

After shutdown and cleanout the 242-A Evaporator, LERF, ETF, and 340 Facility will be turned over to the Facility Stabilization Project for deactivation. The 200 Area TEDF will be turned over to the Infrastructure Project (Landford) for possible reuse or demolition. The 300 Area TEDF will likely be turned over to a private entity for commercial operation.

Related & interdependent projects

The Facility Stabilization Project must provide funding for deactivation of the 242-A Evaporator, LERF, ETF, and 340 Facility.

Waste streams, disposal plans, long-term risks

Waste volume projections have been entered in the Hanford Site Technical baseline managed by Site Systems Integration. Treated effluents are discharged in accordance with applicable permits. Solid waste is transferred to the Solid Waste Program in the Waste Management Project for safe disposal. No long-term risks exist after completing the project.

Major risk issues and risk assumptions related to project implementation and interim and final endstates:
None

References

References are provided in Section A 1.7.

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Rev. 0
Waste Management Project
WBS 1.2

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B.3.2.0 Work Breakdown Structure (WBS)

B.3.2.1 WBS Dictionary

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: 200A TEDF/ETF/LERF SMCDO		2. Date	3. PBS Number RL-WM05	4. Dict Rev
5. Contract WBS No. 1.2.3.1.1B	6. Corresponding FDS No. 1A4B	7. Baseline CR No.		
8. Organization Name 32200 - 200 Area Liquid Waste Processing Facilities				9. B & R No.
<p>10. Scope of Work</p> <p>This activity provides for safe, cost effective and environmentally compliant operation, maintenance, and engineering support for the 200 Area Treated Effluent Disposal Facility (TEDF) and Liquid Effluent Retention Facility (LERF), and minimum operations and maintenance activities to maintain the 200 Area Effluent Treatment Facility (ETF) in a stand-by mode. The 200 Area TEDF is a collection and disposal system for non-RCRA permitted waste streams which already meet discharge requirements. The types of waste streams which discharge to the 200 Area TEDF include cooling water, steam condensate, floor drains, HVAC condensate, and rainwater. Facilities which discharge to the 200 Area TEDF include the Plutonium Finishing Plant, 222-S Laboratory, T Plant, 284-W Power Plant, PUREX Plant, B Plant, 242-A-81 Water Services Building, 242-A Evaporator cooling water and steam condensate, 241-A tank farm cooling water, B Plant/WESF cooling water, and 284-E Power Plant. Each facility must comply with discharge limits in the WAC 173-216 State Waste Discharge Permit without further treatment.</p> <p>The LERF provides temporary storage for liquid effluents awaiting treatment in the ETF. It also provides flow and pH equalization of the feed to the ETF. Projects which send liquid effluents to the LERF, or will in the future, include TWRS (process condensate from the 242-A Evaporator, waste water from Phase I and II privatization); Spent Nuclear Fuels (basin level control water, K Basins water); Waste Management (mixed waste trench leachate, T Plant, waste water from 222-S and WSCF Laboratories); Facility Stabilization (B Plant waste water); and Environmental Restoration (M Basin water, ERDF leachate, 200-UP-1 groundwater).</p> <p>The ETF must be maintained in a safe, environmentally compliant standby mode to allow restart and operation as needed. The ETF is a RCRA-permitted facility that uses best available technology to treat the process condensate from the 242-A Evaporator and other waste water. Activities include surveillances, operations readiness, maintenance, monitoring, reporting and other support activities as required.</p> <p>This activity also includes preparation of a biennial tritium treatment technology report as required by the Tri-Party Agreement.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: 200 AREA LIQUID EFFLUENT FACILITY CEMRTC		2. Date	3. PBS Number RL-WM05	4. Dict Rev
5. Contract WBS No. 1.2.3.1.2B	6. Corresponding FDS No. 2A48	7. Baseline CR No.		
8. Organization Name 3Z200 - 200 Area Liquid Waste Processing Facilities				9. B & R No.
10. Scope of Work Procurement of capital equipment/instrumentation for the 200 Area Liquid Waste Processing Facilities to support safe and compliant operations and maintenance activities.				

HAMFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: ETF OPERATING CAMPAIGNS		2. Date	3. PBS Number RL-WN05	4. Dict Rev
5. Contract WBS No. 1.2.3.1.1C	6. Corresponding FDS No. 1A4C	7. Baseline CR No.		
8. Organization Name 32200 - 200 Area Liquid Waste Processing Facilities				9. B & R No.
<p>10. Scope of Work</p> <p>This activity provides for safe, cost effective and environmentally compliant operation, maintenance, and engineering support for the 200 Area Effluent Treatment Facility (ETF).</p> <p>The ETF is a RCRA-permitted facility that uses best available technology to treat radioactive and hazardous waste water. The ETF provides for collection of liquid effluents, treatment to acceptable levels, verification of compliance with discharge limits, and discharge to a state-approved land disposal site. Projects which generate liquid effluents which are, or will be, treated in the ETF include TWRS (process condensate from the 242-A Evaporator, waste water from Phase I and II privatization); Spent Nuclear Fuels (basin level control water, K Basins water), Waste Management (mixed waste trench leachate, T Plant, waste water from 222-S and WSCF laboratories); Facility Stabilization (B Plant waste water); and Environmental Restoration (M Basin water, ERDF leachate, 200-UF-1 groundwater).</p>				

HAMFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: 242A EVAPORATOR SNECO	2. Date	3. PBS Number RL-WM05	4. Dict Rev
5. Contract WBS No. 1.2.3.1.10	6. Corresponding FDS No. 1A4D	7. Baseline CR No.	
8. Organization Name 32200 - 200 Area Liquid Waste Processing Facilities			9. B & R No.
<p>10. Scope of Work</p> <p>This activity provides for minimum safe, cost effective and environmentally compliant operations and maintenance activities to maintain the 242-A Evaporator in a stand-by mode.</p> <p>The 242-A Evaporator must be maintained in a safe, environmentally compliant standby mode to allow restart and operation as needed. The 242-A Evaporator provides waste volume reduction support to tank waste remediation. It reduces the volume of tank wastes to eliminate the need to construct additional storage tanks. Activities include surveillances, operations readiness, maintenance, monitoring, reporting and other support activities as required.</p>			

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY WASTE MANAGEMENT

WBS: 1.2

8/25/1997

1. Activity Title: 242A EVAPORATOR CAMPAIGNS		2. Date	3. PBS Number RL-WM05	4. Dict Rev
5. Contract WBS No. 1.2.3.1.1E	6. Corresponding FDS No. 1A4E	7. Baseline CR No.		
8. Organization Name 32200 - 200 Area Liquid Waste Processing Facilities				9. B & R No.
<p>10. Scope of Work</p> <p>This activity provides for safe, cost effective and environmentally compliant operation, maintenance, and engineering support for the 242-A Evaporator.</p> <p>Available storage space in the double-shell tanks (DSTs) to support remediation of the tank waste and cleanup of the Hanford Site is limited. Dilute liquid tank wastes are concentrated in the 242-A Evaporator to reduce their volume. This makes space available in the DSTs and eliminates the need to construct additional DSTs. The concentrated waste is returned to the DSTs. The process condensate from the 242-A Evaporator is temporarily stored in the Liquid Effluent Retention Facility (LERF) while awaiting treatment in the ETF. Activities include operations, sampling, sample analysis, process control plan preparation, startup maintenance and other support activities as required.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: 310 FACILITY SNECO	2. Date	3. PBS Number RL-WW05	4. Dfct Rev
5. Contract WBS No. 1.2.3.1.1F	6. Corresponding FDS No. 1A4F	7. Baseline CR No.	
8. Organization Name 32300 - 300 Area Liquid Waste Processing Facilities			9. B & R No.
<p>10. Scope of Work</p> <p>This activity provides for safe, cost-effective and environmentally sound operation, maintenance and engineering support for the 300 Area Treated Effluent Disposal Facility (TEDF).</p> <p>The 300 Area TEDF receives a continuous feed of wastewater from over three dozen 300 Area facilities through the Process Sewer system, and operation of the TEDF is essential to continuing 300 Area activities. The 300 Area TEDF provides for treatment of liquid industrial wastes, much of which is generated by the 300 Area laboratories, which are critical to the site cleanup mission as support for waste characterization and technology development for tank waste remediation efforts. The constituents requiring treatment are heavy metals and organics. After treatment, the effluent is monitored and discharged through an outfall to the Columbia River under a National Pollutant Discharge Elimination System (NPDES) permit. Solid waste generated from the process is disposed as fill material by the Solid Waste Program.</p>			

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: 300 AREA LIQUID EFFLUENT FACILITY CENRTC		2. Date	3. PBS Number RL-WN05	4. Dict Rev
5. Contract WBS No. 1.2.3.1.2F	6. Corresponding FDS No. 2A4F	7. Baseline CR No.		
8. Organization Name 32300 - 300 Area Liquid Waste Processing Facilities				9. B & R No. -
10. Scope of Work Procurement of capital equipment/instrumentation for the 300 Area Liquid Waste Processing Facilities to support safe and compliant operations a maintenance activities.				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: 340 FACILITY SMECO	2. Date	3. PBS Number RL-WM05	4. Dict Rev
5. Contract WBS No. 1.2.3.1.16	6. Corresponding FDS No. JAMG	7. Baseline CR No.	
8. Organization Name 32300 - 300 Area Liquid Waste Processing Facilities			9. B & R No.
<p>10. Scope of Work</p> <p>This activity provides for safe, cost-effective and environmentally sound operation, maintenance and engineering support for the the 340 Waste Handling Facility / 307 Retention Basins.</p> <p>The 340 Waste Handling Facility (including the 307 Basins) collects radioactively contaminated liquid wastes through the Radioactive Liquid Waste System (RLWS) sewer and potentially radioactively contaminated waste through the Retention Process Sewer (RPS) which serve the laboratories and other facilities in the 300 Area (primarily 324, 325, 326, 327, and 329 Buildings/Laboratories). These facilities perform tank waste and spent fuels related characterization and technology development in support of the site cleanup mission. The collected waste is periodically transferred via rail tank car to the 200 Area for storage in double shell tanks. Because there is no RCRA permit in place, wastes cannot be stored at the 340 Facility for greater than 90 days.</p>			

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B.3.2.2 Responsibility Assignment Matrix

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Mission Area Responsibility Assignment Matrix

Proj Lvl (PBS #)	FDS Act Number	Activity Title	Activity Manager	Responsible Organization	Cost Account
RL-4405		LIQUID EFFLUENT PROJECT			
	144B	200A TEF/ETF/LRF SCHED	D. W. LINDSEY	32200 - 200 Area Liquid Waste Processing	
	144C	ETF OPERATIONS CAMPAIGNS	D. W. LINDSEY	32200 - 200 Area Liquid Waste Processing	
	144D	202A EVAPORATOR SCHED	D. W. LINDSEY	32200 - 200 Area Liquid Waste Processing	
	144E	202A EVAPORATOR CAMPAIGNS	D. W. LINDSEY	32200 - 200 Area Liquid Waste Processing	
	144F	300 FACILITY SCHED	R. BARNETT-LOR	32300 - 300 Area Liquid Waste Processing	
	144B	300 FACILITY SCHED	R. BARNETT-LOR	32300 - 300 Area Liquid Waste Processing	
	244B	200 AREA LIQUID EFFLUENT FACILITY CONTR	D. W. LINDSEY	32200 - 200 Area Liquid Waste Processing	
	244F	300 AREA LIQUID EFFLUENT FACILITY CONTR	R. BARNETT-LOR	32300 - 300 Area Liquid Waste Processing	

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B.3.3.0 Schedule Baseline

Note: The Information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains Project Baseline Summary (PBS) guidance.

Activity ID	Activity Description	Early Start	Early Finish	
KL WIM05 Liquid Waste				
Project Administration				
LW001	Liquid Waste Program - Program Management	01 OCT 97	30 SEP 98	Liquid Waste Program - Program Management
LW002	LWP - Program Management Outyears	01 OCT 98	30 SEP 98	LWP - Program Management Outyears
LW003	200 Area Operations	01 OCT 97	30 SEP 98	200 Area Operations
LW017	Prep Semi-Annual Tritium Eval. Tech	01 OCT 98	31 AUG 99	Prep Semi-Annual Tritium Eval. Tech
LW018	M-25-06F Comp Semi-Annual Tritium Eval. Tech		31 AUG 99	M-25-06F Comp Semi-Annual Tritium Eval. Tech LEP-001
LW019	Prep Semi-Annual Tritium Eval. Tech	02 OCT 97	17 SEP 98	Prep Semi-Annual Tritium Eval. Tech
LW020	M-25-06H Comp Semi-Annual Tritium Eval. Tech		17 SEP 98	M-25-06H Comp Semi-Annual Tritium Eval. Tech LEP-001
LW035	200 Area Operations	01 OCT 97	30 SEP 98	200 Area Operations
LW044	Waste/Water Streams	01 OCT 97	30 SEP 98	Waste/Water Streams
242-A EVAPORATOR OPERATIONS				
EW030	242-A EVAPORATOR OPERATIONS	01 OCT 97	30 SEP 98	242-A EVAPORATOR OPERATIONS
EW032	242-A EVAPORATOR OPERATIONS - OUT YEARS	01 OCT 98	30 SEP 98	242-A EVAPORATOR OPERATIONS - OUT YEARS
EW032A	To FB - 242A		30 SEP 98	SSS - M01 To FB - 242A
EW033	242-A EVAPORATOR CAMPAIGNS	01 OCT 97	30 SEP 98	242-A EVAPORATOR CAMPAIGNS
EW034	242-A EVAPORATOR CAMPAIGNS - OUT YEARS	01 OCT 98	30 SEP 98	242-A EVAPORATOR CAMPAIGNS - OUT YEARS
EW034A	To AB - Provide 222-B to 242-A Evaporator		30 SEP 98	To AB - Provide 222-B to 242-A Evaporator

WASTE MANAGEMENT HANFORD
PBB WIM05 - LIQUID EFFLUENT
PROJECT MASTER BASELINE SCHEDULE

Scale: 1" = 100'

Activity ID	Activity Description	Early Start	Early Finish	Activity Details
HSEME 2.2 21.8 200 Area ETP Ops & Maint				
LWA12	200 A Effluent Treatment Facilities (ETP)	01OCT97*	30SEP02	200 A Effluent Treatment Facilities (ETP)
LWA12B	From TW - PH1 HOT STARTUP		30SEP02	From TW - PH1 HOT STARTUP
LWA12B	To AS - Provide Z22-B Suppt to 200 Area ETP		30SEP02	To AS - Provide Z22-B Suppt to 200 Area ETP
LWA12B	To AS - Provide WSCF Suppt to 200 Area ETP		30SEP02	To AS - Provide WSCF Suppt to 200 Area ETP
LWA12B	To FS - 200 Area ETP		30SEP02	To FS - 200 Area ETP
LWA12B	To SW - Operate RAINWATER Storage		30SEP02	To SW - Operate RAINWATER Storage
LWA24	200 A ETP PROCESSING	01OCT97*	30SEP02	200 A ETP PROCESSING
LWA25	200 A ETP PROCESSING OUT TANKS	01OCT02	30SEP02	200 A ETP PROCESSING OUT TANKS
LWA25A	From TW - FILM VITRIFICATION		30SEP02	From TW - FILM VITRIFICATION
LWA25B	From ER - EPDP LEACHATE		30SEP02	From ER - EPDP LEACHATE
LWA25C	From ER - H Basin Water		30SEP02	From ER - H Basin Water
LWA25C	From ETP - Operate RAINW Treatment - Disposal		30SEP02	From ETP - Operate RAINW Treatment - Disposal
LWA25E	From TW - D&D LWA FACILITY		30SEP02	From TW - D&D LWA FACILITY
HSEME 2.2 21.8 200 Area LERF Ops & Maint				
LWA21	200 A LERF SMOCO	01OCT97*	30SEP02	200 A LERF SMOCO
LWA23	200 A LERF SMOCO Outgase activities	01OCT02	30SEP02	200 A LERF SMOCO Outgase activities
LWA23A	To FS - 200 Area LERF SMOCO		30SEP02	To FS - 200 Area LERF SMOCO

Activity ID	Activity Description	Early Start	Early Finish	Activity ID	Activity Description	Early Start	Early Finish
HSRMS 2.4.3.8 200 Area TIEOFF Ops & Maint				200 A Treated Effluent Disposal Facility (TIEOFF)			
LNW404	200 A Treated Effluent Disposal Facility (TIEOFF)	01OCT97	30SEP98	LNW404	From FS - 8 PLANT EFFLUENT		
LNW404B	From FS - 8 PLANT EFFLUENT		30SEP98	LNW404C	From FS - PFP EFFLUENT		
LNW404C	From FS - PFP EFFLUENT		30SEP98	LNW404D	From AS - Sand 2228 LAS LIQUID Cont to 200A TIEOFF		
LNW404D	From AS - Sand 2228 LAS LIQUID Cont to 200A TIEOFF		30SEP98	LNW404E	From FS - WSEF MISSION COMPLETE		
LNW404E	From FS - WSEF MISSION COMPLETE		30SEP98	LNW404F	From SW - LOWDOSE EQUIP DECOMSAMP		
LNW404F	From SW - LOWDOSE EQUIP DECOMSAMP		30SEP98	LNW404G	To AS - Provide WSCF Suppt to 200 Area TIEOFF		
LNW404G	To AS - Provide WSCF Suppt to 200 Area TIEOFF		30SEP98	LNW404H	From TW - 241 Tank Farm Cooling Effluent		
LNW404H	From TW - 241 Tank Farm Cooling Effluent		30SEP98	LNW404I	From FS - 22H-Z		
LNW404I	From FS - 22H-Z		30SEP98	LNW404J	To FS - 200 Area TIEOFF		
LNW404J	To FS - 200 Area TIEOFF		30SEP98				
HSRMS 2.4.3.9 340 Waste Handling Fac Op & Maint				340 Operations / Come waste receipt			
LNW405	340 Operations / Come waste receipt	01OCT97	30SEP98	LNW405	340 Facility Surveillance & Maintenance		
LNW405B	340 Facility Surveillance & Maintenance	01OCT97	30SEP98	LNW405C	To FS - 340 Facility		
LNW405C	To FS - 340 Facility		30SEP98				
HSRMS 2.4.3.10 340 Waste Handling Fac Post Op				340 Facility Shutdown			
LNW406	340 Facility Shutdown	01OCT98	28SEP01	LNW406B	From TW - 204-AR Meds		
LNW406B	From TW - 204-AR Meds	01OCT98		LNW406C	From PW - 325 Upgrade		
LNW406C	From PW - 325 Upgrade	01OCT98					

Activity ID	Activity Description	Early Start	Early Finish	
HSRMS 4.3.2.6 307 Lqd Wt K4er Fac Basln O & M				
UWA40	307 Basin Operations	01OCT97	30SEP98	307 Basin Operations
UWA41	307 Basin Modified Operations	01OCT98	30SEP99	307 Basin Modified Operations
HSRMS 4.4.1.6 300 Area TIEDF Ops & Maint				
UWA36	310 Facility Operations (TIEDF)	01OCT97	30SEP98	310 Facility Operations (TIEDF)
UWA37	310 Facility Operations (TIEDF)	01OCT98	30SEP99	310 Facility Operations (TIEDF)
UWA37C	To AS - Provide Cowen Suppt to 300 Area TIEDF		30SEP99	To AS - Provide Cowen Suppt to 300 Area TIEDF
UWA37D	To EPL - 300 Area TIEDF		30SEP99	To EPL - 300 Area TIEDF
OTHER				
UWA05	Perform review 200A TIEDF Spill Contingency		17APR98	Perform review 200A TIEDF Spill Contingency LEP-08-05
UWA06	Perform 200A TIEDF Spill Waste Control Plan		17APR98	Perform 200A TIEDF Spill Waste Control Plan LEP-08-06
UWA07	Update 200A TIEDF Operations Plans/Summary Matrix		17APR98	Update 200A TIEDF Operations Plans/Summary Matrix LEP-08-07
UWA08	Submit 200A TIEDF Discharge Mon. Rpt. to RL		14JUN98	Submit 200A TIEDF Discharge Mon. Rpt. to RL LEP-08-08
UWA09	Operate 200A TIEDF with SHD permit ST-4502		30SEP98	Operate 200A TIEDF with SHD permit ST-4502 LEP-08-09
UWA13	Submit Rev. of ETP Ops and Maint. Manuals		01OCT97	Submit Rev. of ETP Ops and Maint. Manuals LEP-08-13
UWA14	Submit ETP Discharge Rpt. to RL		14JUN98	Submit ETP Discharge Rpt. to RL LEP-08-14
UWA15	Operate ETP in Accordance with SHD permit ST-4504		30SEP98	Operate ETP in Accordance with SHD permit ST-4504 LEP-08-15
UWA20A	Comp. Biennial Eval. of Tritium Treatment Tech.		28JUN99	Comp. Biennial Eval. of Tritium Treatment Tech. LEP-09-01
UWA20B	Comp. Biennial Eval. of Tritium Treatment Tech.		21JUN99	Comp. Biennial Eval. of Tritium Treatment Tech. LEP-09-01

Activity ID	Activity Description	Early Start	Early Finish	Activity Name
LWAS1	Complete Outage and Campaign for 242A Evap	30SEP90*	30SEP90*	Complete Outage and Campaign for 242A Evap ◆LEP-46-020
LWAS5A	310 Facility will be operated with <10% downtime	30SEP90*	30SEP90*	310 Facility will be operated with <10% downtime ◆LEP-46-016
LWAS6B	310 TSDP will be operated within NPOES guidelines	30SEP90*	30SEP90*	310 TSDP will be operated within NPOES guidelines ◆LEP-46-021
LWAS6A	340 Facility Shipments Compliant with Reg. Req	30SEP90*	30SEP90*	340 Facility Shipments Compliant with Reg. Req ◆LEP-46-017
LWAS6B	Perform Review of 340 Facility Auth. Status	30SEP90*	30SEP90*	Perform Review of 340 Facility Auth. Status ◆LEP-46-019
LWAS6B	Submit Annual Inv. of Marc. Streams	30SEP90*	30SEP90*	Submit Annual Inv. of Marc. Streams ◆LEP-46-020
LWAS6B	Comp. WAC 310 Permit App for Cat. 4 Marc. Stream	30SEP90*	30SEP90*	Comp. WAC 310 Permit App for Cat. 4 Marc. Stream ◆LEP-46-020

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 Project Name: WASTE MANAGEMENT HANFORD
 Date: 10/10/90
 Author: J. J. J.

WASTE MANAGEMENT HANFORD
 PBS WM05 - LIQUID EFFLUENT
 PROJECT MASTER BASELINE SCHEDULE

Activity ID	Activity Description	Early Start	Early Finish	FY98												FY99		
				OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
RL-WM05 Liquid Waste																		
Project Administration																		
LW001	Liquid Waste Program - Program Management	01OCT97	30SEP98	Liquid Waste Program - Program Management														
LW002	200 Area Operations	01OCT97	30SEP98	200 Area Operations														
LW003	300 Area Operations	01OCT97	30SEP98	300 Area Operations														
LW004	Miscellaneous Streams	01OCT97	30SEP98	Miscellaneous Streams														
HSEMS 2.2.1.5 200 A Evaporator Operations																		
LW005	200 A EVAPORATOR OPERATIONS	01OCT97	30SEP98	200 A EVAPORATOR OPERATIONS														
LW006	200 A EVAPORATOR CAMPAIGNS	01OCT97	30SEP98	200 A EVAPORATOR CAMPAIGNS														
HSEMS 2.2.1.5 200 Area ETF Ops & Maint																		
LW012	200 A Effluent Treatment Facilities (ETF)	01OCT97	30SEP98	200 A Effluent Treatment Facilities (ETF)														
LW024	200 A ETF PROCESSING	01OCT97	30SEP98	200 A ETF PROCESSING														
HSEMS 2.3 2.3.5 200 Area LERF Ops & Maint																		
LW021	200 A LERF BMECO	01OCT97	30SEP98	200 A LERF BMECO														
HSEMS 2.4.3.5 200 Area TEDF Ops & Maint																		
LW004	200 A Treated Effluent Disposal Facility (TEDF)	01OCT97	30SEP98	200 A Treated Effluent Disposal Facility (TEDF)														
HSEMS 4.3.1.5 300 West Hanford P&W Ops & Maint																		
LW036	300 Operations / Closure waste receipts	01OCT97	30SEP98	300 Operations / Closure waste receipts														
<div> <div> <div>Waste Data</div> <div>Project Name</div> <div>Start Date</div> <div>End Date</div> </div> <div> <div>Activity ID</div> <div>Activity Description</div> <div>Early Start</div> <div>Early Finish</div> </div> <div> <div>Activity ID</div> <div>Activity Description</div> <div>Early Start</div> <div>Early Finish</div> </div> </div>				<div> <div>WASTE MANAGEMENT HANFORD</div> <div>PBS WM05 - LIQUID EFFLUENT</div> <div>FY98 - EXECUTION YEAR PMBS</div> </div>

Activity ID	Activity Description	Early Start	Early Finish
HSEMS 4.3.2.5 307 Lqd Wst X-4ar Fac Basln C/S & M			
LWA40	307 Basin Operations	01OCT97*	30SEP98
HSEMS 4.4.1.6 308 Airtex TEDF C/po & Maint			
LWA38	310 Facility Operations(TEDF)	01OCT97*	30SEP98
OTHER			
LWA45	Perform Rev. of 200A TEDF Spill Contingency Plan		17APR98*
LWA46	Perform Rev. 200A TEDF Solid Waste Cont. Plan		17APR98*
LWA47	Update 200A TEDF Operating Plans Summary Matrix		17APR98*
LWA48	Submit 200A TEDF Discharge Monr Rpt to RL		14AJUN98*
LWA49	Operate 200A TEDF w/lt BYD Permit ST-4522		30SEP98*
LWA53	Substn Rev. of ETF Oper/Maint. Manuals		10OCT97*
LWA54	Submit ETP Discharge Rpt. to RL		14AJUN98*
LWA55	Operate ETF In Accordance with BMD ST-4522		30SEP98*
LWA57	Complete Damage and Campaign SARA Exposure		30SEP98*
LWA58A	310 Facility to be operated with <10% Downflow		30SEP98*
LWA58B	310 TEDF will be operated within NPDES Guidelines		30SEP98*
LWA58C	340 Facility Shipments Compliant with Reg. Req.		30SEP98*
LWA59	Perform Review of 340 Facility Auth Basis		30SEP98*
LWA60	Submit Annual Inv. of Winc. Streams		26AUG98*

Project Manager
Project Sub-Manager
Ass. Sub-Manager
Res. Dir.

Waste Management Division

Approved by:

Date:

WASTE MANAGEMENT HANFORD
PBS WMDS - LIQUID EFFLUENT
FY98 - EXECUTION YEAR PMBS

MYMP/SSPP PLANNING MILESTONE LIST
REPORTING PERIOD 10/01/97 TO 9/30/200

MILESTONE CONTROL #	TPA-MS NUMBER	TPA TYPE	MS LEVEL	MS TITLE	TYPE	DATES			FSDA CCH	PDS #
						PLANNED BASELINE	APPROVED BASELINE	REVISED BASELINE		
LEP-98-067			RL	SUBMIT 200A TEF DISCHARGE MONITORING REPORT TO RL	OTH	8/15/98				RL-WMMS
LEP-98-021			RL	OPERATE 360 AREA TEF WITHIN HMPES PERMIT ENFORCEMENT LIMITS	OTH	9/30/98				RL-WMMS
LEP-99-001	M-26-MSF	1	HQ	SUBMIT TO EPA & ECOL EVAL OF DEVEL STATUS OF TRITIUM TREAT TECH	EA	7/31/99	7/31/99			RL-WMMS
LEP-01-001	M-26-MSH	1	HQ	SUBMIT TO EPA & ECOL EVAL OF DEVEL STATUS OF TRITIUM TREAT TECH	EA	7/31/01	8/31/01			RL-WMMS
LEP-03-001	M-26-05J	1	HQ	COMPLETE BIOCHEMICAL EVALUATION OF TRITIUM TREATMENT TECHNOLOGY	EA	8/31/03	8/31/03			RL-WMMS
LEP-05-001	M-26-05L	1	HQ	COMPLETE BIOCHEMICAL EVALUATION OF TRITIUM TREATMENT TECHNOLOGY	EA	8/31/05	8/31/05			RL-WMMS
LEP-98-088			RL	PERFORM REVIEW OF 200A TEF SPILL CONTROL/CONTINGENCY PLANS	OTH	4/17/98				RL-WMMS
LEP-98-009			RL	PERFORM REVIEW OF 200A TEF SOLID WASTE CONTROL PLAN	OTH	4/17/98				RL-WMMS
LEP-98-010			RL	UPDATE 200A TEF OPS/MAINT PLANS AND SUMMARY MATRIX	OTH	4/17/98				RL-WMMS
LEP-98-011			RL	SUBMIT ETF DISCHARGE MONITORING REPORT TO RL	OTH	8/15/98				RL-WMMS
LEP-98-012			RL	OPERATE 200A TEF IN ACCORDANCE WITH SMO PERMIT SY-4502	OTH	9/30/98				RL-WMMS
LEP-98-013			RL	OPERATE ETF IN ACCORDANCE WITH SMO PERMIT SY-4500	OTH	9/30/98				RL-WMMS
LEP-98-015			RL	SUBMIT REVIEW OF ETF OPS AND MAINTENANCE MANUALS	OTH	10/12/97				RL-WMMS
LEP-98-020			RL	COMPLETE OUTAGE AND CAMPAIGN FOR S42-A EVAPORATOR	OTH	9/30/98				RL-WMMS
LEP-98-017			RL	360 FACILITY SHIPMENTS COMPLIANT WITH REGULATORY REQUIREMENTS	OTH	9/30/98				RL-WMMS
LEP-98-018			RL	360 FACILITY MUST BE OPERATED WITH LESS THAN 10% DOWNTIME	OTH	9/30/98				RL-WMMS
LEP-98-019			RL	PERFORM REVIEW OF 360 FACILITY AUTHORIZATION BASIS	OTH	9/30/98				RL-WMMS
LEP-98-003	M-17-006	M	FO	COMPLETE IMPLEMENTATION OF BAITAKART FOR ALL PHASE II STREAMS	EA	10/30/97	10/31/97			RL-WMMS

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMPLETE IMPLEMENTATION OF BAT/AKART FOR ALL PHASE II STREAMS			Date:	
Assigned To: D. W. Lindsey			CIN:	
Program MBS Designator: 1.2.3.1			Due Date: 10/30/97	
PBS No: RL-NM05				
MC #: LEP-98-003		TPA No: N-17-00B		Rev:
MILESTONE LEVEL:	MILESTONE TYPE:	DNFSB STATUS:	DELIVERABLE:	ADDRESS TO:
DOE-HQ DOE-RL X DOE-FO CONTRACTOR	X EA PEG OTHER	DNFSB (Y/M): N COMMIT #: RECOMM #:	Report X Letter Drawing(s) Other (Specify)	DOE-HQ X DOE-RL Other (Specify)
<p>Milestone Description: Completion of BAT/AKART for Phase II Streams in each facility.</p>				
<p>Description of what constitutes completion of this milestone: Letter sent to RL with documentation that each Phase II stream facility is tied to the 200 Area TEDF or has been eliminated and BAT/AKART for all Phase II Liquid Effluent streams has been accomplished.</p>				

PHMC

MILESTONE DESCRIPTION SHEET

Title: SUBMIT 200A TEDF DISCHARGE MONITORING REPORT TO RL			Date:	
Assigned To: D. M. Lindsey			CIN:	
Program WBS Designator: I.2.3.1			Due Date: 8/15/98	
PBS No: RL-WM05				
NC #: LEP-98-007		TPA No:		Rev:
NILESTONE LEVEL:	NILESTONE TYPE:	DNFSB STATUS:	DELIVERABLE:	ADDRESS TO:
DOE-HQ X DOE-RL DOE-FO CONTRACTOR	EA PEG X OTHER	DNFSB (Y/N): N COMMIT #: RECOMM #:	X Report Letter Drawing(s) Other (Specify)	DOE-HQ X DOE-RL Other (Specify)
<p>Milestone Description: Report results to RL of monitoring the total effluent and groundwater to verify compliance with all permit enforcement limits and determine if Early Warning Values are being approached. This monitoring will also be used to verify that BAT/AAART source, treatment, and technology controls are being met. Based on permit, this report is due 90 days after the completed reporting period; however, Ecology has agreed to allow 60 days until further notice. Due dates are based on 60 days. For details see Sections 5.9 and 6.11 of the permit. Quarterly due dates to RL for FY 1998 are 11/15/97, 2/15/98, 5/16/98, and 8/15/98.</p>				
<p>Description of what constitutes completion of this milestone: Report to RL describing the results of the period's monitoring. This milestone supports RL submittal of the DMRs 60 days from the end of the reporting period.</p>				

PHMC
MILESTONE DESCRIPTION SHEET

Title: PERFORM REVIEW OF 200A YEDF SPILL CONTROL/CONTINGENCY PLANS			Date:	
Assigned To: D. W. Lindsey			CIN:	
Program WBS Designator: 1.2.3.1			Due Date: 4/17/98	
PBS No: RL-WM05				
NC #: LEP-98-008		TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: X Report Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Review and update spill control plans made available to Ecology upon the effective date of the permit, as needed, or annually as a minimum. See Section G.19 of the permit for complete description of requirements.				
Description of what constitutes completion of this milestone: Letter report to RL indicating that reviews have been completed and identifying changes, if any. For revisions, a letter describing the requested changes will be submitted for approval. This milestone supports RL submittal of the review to Ecology by 5/17 each year.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: PERFORM REVIEW OF 200A TEDF SOLID WASTE CONTROL PLAN			Date:	
Assigned To: D. N. Lindsey			CIN:	
Program NBS Designator: 1.2.3.1			Due Date: 4/17/98	
PBS No: RL-WN05				
MC #: LEP-98-009		TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: X Report Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
<p>Milestone Description: Solid Waste Control Plans were made available to Ecology by the effective date of the permit. Each plan is required to be reviewed annually and updated as needed. Any proposed revision or modification to the solid waste control plans must be submitted to Ecology for prior approval. See Section G.19 of the permit for complete description.</p>				
<p>Description of what constitutes completion of this milestone: Letter report to RL indicating reviews have been completed. For revisions, a letter describing the requested change will be submitted for approval. This milestone supports the RL submittal of the review to Ecology by 5/17 each year.</p>				

PHMC
MILESTONE DESCRIPTION SHEET

Title: UPDATE 200A TEDF OPS/MAINT PLANS AND SUMMARY MATRIX			Date:	
Assigned To: D. W. Lindsey			CIN:	
Program WBS Designator: 1.2.3.1			Due Date: 4/17/98	
PBS No: RL-WMD5				
MC #: LEP-98-010		TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
<p>Milestone Description: The State Waste Discharge Permit for the 200 Area TEDF requires that annually RL submit to Ecology a letter which confirms that an annual review and update of all ETF Operations and Maintenance manuals has been completed. This includes the facility Solid Waste and Spill Control Plans.</p>				
<p>Description of what constitutes completion of this milestone: The transmission of a letter to RL indicating the completion of the annual review. This milestone supports RL submittal of the annual review to Ecology by 5/17 each year.</p>				

PHMC

MILESTONE DESCRIPTION SHEET

Title: SUBMIT ETF DISCHARGE MONITORING REPORT TO RL			Date:	
Assigned To: D. W. Lindsay			CIN:	
Program WBS Designator: 1.2.3.1			Due Date: 8/15/98	
PBS No: RL-WM05				
NC #: LEP-98-011		TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): M COMMIT #: RECOMM #:	DELIVERABLE: X Report Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Report results to RL of monitoring the total effluent and groundwater to verify compliance with all permit enforcement limits and determine if Early Warning Values are being approached. This monitoring will also be used to verify that BAT/AKARY source, treatment, and technology controls are being met. For details see Sections S.2, S.6, S.7 and G.11 of the permit. The quarterly due dates to RL in FY 1998 are 11/15/97, 02/15/98, 05/16/98 and 08/15/98.				
Description of what constitutes completion of this milestone: Report to RL describing the results of the period's monitoring. This milestone supports RL submittal of the DMRs 60 days from the end of the reporting period.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: OPERATE 200A TEDF IN ACCORDANCE WITH SWD PERMIT ST-4502			Date:	
Assigned To: D. W. Lindsey			CIN:	
Program WBS Designator: 1.2.3.1			Due Date: 9/30/98	
PBS No: RL-WM05				
NC #: LEP-98-012		TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DMFSB STATUS: DMFSB (Y/N): N COMMIT #: RECONM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Operate 200 Area TEDF in accordance with State Waste Discharge Permit No. ST-4502 with no formal notice of violation from Ecology.				
Description of what constitutes completion of this milestone: Submittal of a letter to RL documenting no Notices of Violation issued by EPA Region X and/or Ecology attributable to the improper operation and maintenance of the 200 Area TEDF. Any violations caused by inappropriate generator discharges to the 200 Area TEDF are specifically excluded from the scope of this measure due to the lack of retention capabilities or real time monitoring at the facilities.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: OPERATE ETF IN ACCORDANCE WITH SMD PERMIT ST -4500			Date:	
Assigned To: D. W. Lindsey			CIN:	
Program NBS Designator: 1.2.3.1			Due Date: 9/30/98	
PBS No: RL-MM05				
KC #: LEP-98-013		TPA No:		Rev:
NILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	NILESTONE TYPE: EA PEG X OTHER	DMFSB STATUS: DMFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Operate the 200 Area ETF in accordance with State Waste Discharge Permit No. 4500 with no formal notice of violation from Ecology.				
Description of what constitutes completion of this milestone: Submittal of a letter to RL documenting that no Notices of Violation were issued by EPA Region X and/or Ecology attributable to the improper operation and maintenance of the 200 Area ETF. The violation point for the 200 Area ETF is the sample results from the verification tanks. Any violations measured at the groundwater under the SALDS but not attributable to discharges in excess of ETF discharge limitations are specifically excluded from this measure.				

PHMC
MILESTONE DESCRIPTION SHEET

Title: SUBMIT REVIEW OF ETF OPS AND MAINTENANCE MANUALS				Date:	
Assigned To: D. W. Lindsey				CIN:	
Program WBS Designator: 1.2.3.1				Due Date: 10/12/97	
PBS No: RL-WND5					
MC #: LEP-98-015			TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)	
Milestone Description: The State Waste Discharge Permit for the 200 Area ETF requires that annually RL submit to Ecology a letter which confirms that an annual review and update of all ETF Operations and Maintenance Manuals has been completed.					
Description of what constitutes completion of this milestone: Transmittal of a letter to RL, for forwarding to Ecology, stating completion of the annual review. This milestone supports an RL commitment to submit the annual review to Ecology by 11/12 each year.					

PHMC
MILESTONE DESCRIPTION SHEET

Title: 340 FACILITY SHIPMENTS COMPLIANT WITH REGULATORY REQUIREMENTS			Date:	
Assigned To: R. Barmettlor			CIN:	
Program WBS Designator: 1.2.3.1			Due Date: 9/30/98	
PBS No: RL-WM05				
MC #: LEP-98-017		TPA No:		Rev: 0
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Shipment from the 340 Waste Handling and Receiving Facility will be compliant with regulatory requirements, including the 90-day clock requirement.				
Description of what constitutes completion of this milestone: No notice of regulatory requirement violations or exceedance of 90-day clock requirement during the fiscal year. Document achievement by letter to RL due 9/30/98.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: 310 FACILITY WILL BE OPERATED WITH LESS THAN 10% DOWNTIME			Date: -	
Assigned To: R. Bartmettlor			CIN:	
Program NBS Designator: 1.2.3.1			Due Date: 9/30/98	
PBS No: RL-WM05				
MC #: LEP-98-018		TPA No:		Rev: 0
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DMFSB STATUS: DMFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Downtime at 310 Facility, other than scheduled maintenance outages, will be less than 10%.				
Description of what constitutes completion of this milestone: Document achievement by letter to RL due 9/30/98.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: PERFORM REVIEW OF 340 FACILITY AUTHORIZATION BASIS			Date:	
Assigned To: R. Barwettlor			CIN:	
Program WBS Designator: 1.2.3.1			Due Date: 9/30/98	
PBS No: RL-WM05				
MC #: LEP-98-019		TPA No:		Rev: 0
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Per DOE Order 5480.23, review the 340 Facility Authorization Basis, which was updated in 1996.				
Description of what constitutes completion of this milestone: Transmit a letter to RL documenting that such a review has been completed and requesting approval of any revisions if necessary.				

PHMC
MILESTONE DESCRIPTION SHEET

Title: COMPLETE OUTAGE AND CAMPAIGN FOR 242-A EVAPORATOR			Date:	
Assigned To: D. W. LINDSEY			CIN:	
Program WBS Designator: 1.2.3.1			Due Date: 9/30/98	
PBS No: RL-WM05				
NC #: LEP-98-020		TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ ☒ DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG ☒ OTHER	DMFSB STATUS: DMFSB (Y/N): N COMMIT #: RECOM #:	DELIVERABLE: Report ☒ Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ ☒ DOE-RL Other (Specify)
Milestone Description: Completion of one campaign per fiscal year as indicated by the engineering process control memo directing that the facility be secured and flushed.				
Description of what constitutes completion of this milestone: Submit a letter to DOE-RL by September 30, 1998 documenting successful completion of the campaign. Completion of this milestone is contingent upon TWRS staging and sampling of feed waste in sufficient time to allow processing by due date. Also, this milestone will not be completed if the constituent matrix of the proposed waste stream is not within the parameters/limits necessary for safe/compliant operation of the Evaporator.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: OPERATE 300 AREA TEDF WITHIN NPDES PERMIT ENFORCEMENT LIMITS			Date:	
Assigned To: R. Barnett/lor			CIN:	
Program WBS Designator: 1.2.3.1			Due Date: 9/30/98	
PBS No: RL-WM05				
MC #: LEP-98-021		TPA No:		Rev:
MILESTONE LEVEL:	MILESTONE TYPE:	DNFSB STATUS:	DELIVERABLE:	ADDRESS TO:
DOE-HQ X DOE-RL DOE-FQ CONTRACTOR	EA PEG X OTHER	DNFSB (Y/N): N COMMIT #: RECOMM #:	X Report Letter Drawing(s) Other (Specify)	DOE-HQ X DOE-RL Other (Specify)
<p>Milestone Description: Operate the 300 Area TEDF with no Notice of Violations from the EPA pertaining to the NPDES permit, and provide timely submissions of the monthly DMR.</p>				
<p>Description of what constitutes completion of this milestone: Submission of a letter to RL documenting no Notices of Violations issued by EPA Region X attributable to the improper operation and maintenance of the 300 Area TEDF. Any violations caused by inappropriate generator discharges to the 300 Area TEDF are specifically excluded from the scope of this measure due to the lack of retention capabilities or real time monitoring at the facilities.</p>				

PHMC
MILESTONE DESCRIPTION SHEET

Title: SUBMIT TO EPA & ECOL EVAL OF DEVEL STATUS OF TRITIUM TREAT TECH				Date:	
Assigned To:				CIN:	
Program WBS Designator: 1.2.3.1				Due Date: 7/31/99	
PBS No: RL-WM05					
MC #: LEP-99-001			TPA No: M-26-05F		Rev:
MILESTONE LEVEL: X DOE-HQ DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: X EA PEG OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: X Report Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)	
Milestone Description: Prepare a biennial report to evaluate the development status of tritium treatment technology that would be pertinent to the cleanup of tritiated waste water (e.g., the 242-A Evaporator Process Condensate liquid effluent) and tritium contaminated groundwater on the Hanford Site.					
Description of what constitutes completion of this milestone: Submit a completed report to RL by 7/31/99. This milestone supports an RL commitment to submit a biennial tritium evaluation to Ecology and EPA by 8/31/97.					

**PHMC
MILESTONE DESCRIPTION SHEET**

Title: SUBMIT TO EPA & ECOL EVAL OF DEVEL STATUS OF TRITIUM TREAT TECH			Date:	
Assigned To: D. W. Lindsey			CIN:	
Program WBS Designator: 1.2.3.1			Due Date: 7/31/01	
PBS No: RL-WM05				
MC #: LEP-01-001		TPA No: M-25-05H		Rev:
MILESTONE LEVEL: X DOE-HQ DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: X EA PEG OTHER	DMFSB STATUS: DMFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: X Report Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Prepare a biennial report to evaluate the development status of tritium treatment technology that would be pertinent to the cleanup of tritiated waste water (e.g., the 242-A Evaporator Process Condensate liquid effluent) and tritium contaminated groundwater on the Hanford Site.				
Description of what constitutes completion of this milestone: Submit a completed report to RL by 7/31/01. This milestone supports an RL commitment to submit a biennial tritium evaluation to Ecology and EPA by 8/31/97.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMPLETE BIENNIAL EVALUATION OF TRITIUM TREATMENT TECHNOLOGY			Date:	
Assigned To: O. W. Lindsey			CIN:	
Program NBS Designator: 1.2.3.1			Due Date: 8/31/03	
PBS No: RL-WM05				
MC #: LEP-03-001		TPA No: M-26-053		Rev:
MILESTONE LEVEL: X DOE-HQ DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: X EA PEG OTHER	DMFSB STATUS: DMFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: X Report Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Prepare a biennial report to evaluate the development status of tritium treatment technology that would be pertinent to the cleanup of tritiated waste water (e.g., the 242-A Evaporator Process Condensate liquid effluent) and tritium contaminated groundwater on the Hanford Site.				
Description of what constitutes completion of this milestone: Submit a completed report to RL. This milestone supports an RL commitment to submit a biennial tritium evaluation to Ecology and EPA by 8/31/97.				

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMPLETE BIENNIAL EVALUATION OF TRITIUM TREATMENT TECHNOLOGY			Date:	
Assigned To: D. N. Lindsey			CIN:	
Program WBS Designator: 1.2.3.I			Due Date: 8/31/05	
PBS No: RL-HM05				
MC #: LEP-05-001		TPA No: M-26-05L		Rev:
MILESTONE LEVEL:	MILESTONE TYPE:	DNFSB STATUS:	DELIVERABLE:	ADDRESS TO:
☒ DOE-HQ ☐ DOE-RL ☐ DOE-FO CONTRACTOR	☒ EA ☐ PEG ☐ OTHER	DNFSB (Y/N): N COMMIT #: RECOMM #:	☒ Report ☐ Letter ☐ Drawing(s) ☐ Other (Specify)	DOE-HQ ☒ DOE-RL ☐ Other (Specify)
Milestone Description: Prepare a biennial report to evaluate the development status of tritium treatment technology that would be pertinent to the cleanup of tritiated waste water (e.g., the 242-A Evaporator Process Condensate Liquid effluent) and tritium contaminated groundwater on the Hanford Site.				
Description of what constitutes completion of this milestone: Submit a completed report to RL. This milestone supports an RL commitment to submit a biennial tritium evaluation to Ecology and EPA by 8/31/97.				

HNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.2

FY1998

August 29, 1997

B.3.4.0 Cost Baseline

LIQUID EFFLUENT PROJECT
SUMMARY OF LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS: 1.2.1												EUSTOT
PBS TITLE	PBS NO	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997- FY2006
LIQUID EFFLUENT	RL-WMM03	37,368	31,870	31,689	38,267	39,453	39,664	38,930	39,833	39,159	42,453	371,607
												-
												-
												-
												-
												-
												-
												-
												-
												-
												-
												-
TOTAL BCWS/PBS¹		37,368	31,870	31,689	38,267	39,453	39,664	38,930	39,833	39,159	42,453	371,607

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS)
 Equals Performance Measurement Baseline
 (PMB); Expense Carryover Is NOT Included.

LIQUID EFFLUENT PROJECT
SUMMARY OF LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS : 1.2.3.1											TOTAL
PBS TITLE	PBS NO	FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	FY1997- FY2050
LIQUID EFFLUENT	RL-WW05	175,878	215,848	210,507	238,035	230,129	285,889	140,273	-	-	1,848,262
											-
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											-
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											-
											-
											-
											-
TOTAL BCWS/PMB¹		175,878	215,848	210,507	238,035	230,129	285,889	140,273	-	-	1,848,262

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS)
 Equals Performance Measurement Baseline
 (PMB); Expense Carryover is NOT included.

LIQUID EFFLUENT PROJECT
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1999

(\$000s)

PROJECT WBS: T 2.1.1												
PBS NO: WWS												
PBS TITLE: LIQUID EFFLUENT PROJECT												SUBTOT
FUND TYPE	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006		FY1997- FY2006
OPERATING EXPENSE	34,404	31,790	31,580	33,157	35,353	36,434	38,630	31,753	39,958	42,353		307,632
CERTFC	618	80	180	100	100	100	100	100	100	100		1,398
GENERAL PLANT PROJECT	362											362
LINE ITEM (See Work Org)												
FY-002	2,118											2,118
Subtotal Line Items	2,118											2,118
TOTAL BCWS/BSB ¹	37,359	31,870	31,860	33,257	35,453	36,534	38,730	31,853	39,158	42,453		311,807
ADMIN RESERVE ²												
UNPL. FTR. CONTINGENCY ³												
OPPOSITE TRANSFERS ⁴												
Subtotal												
TOTAL	37,359	31,870	31,860	33,257	35,453	36,534	38,730	31,853	39,158	42,453		311,807

Note: The information for FY1999 and FY1998 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB),

Expense Carryover NOT Included

²Management Reserve and Unplanned Contingency Held by PM.

⁴Work Performed at Base Other Than Hartford.

LIQUID EFFLUENT PROJECT
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBB)
FY 1996

(3000s)

PROJECT# 1231											TOTAL FY1997- FY2006	
PBB# 0000												
PBB TITLE LIQUID EFF												
FUND TYPE	FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046-			
OPERATING EXPENSE	175,975	215,345	210,597	227,535	229,035	265,369	140,273			1,942,137		
CONTRC	400	500	500	500	250	200				3,745		
GENERAL PLANT PROJECT										292		
LINE ITEM Contingency												
Notes										2,156		
										-		
										-		
										-		
Subtotal Line Item										2,115		
TOTAL BCWS/PBB ¹	175,975	215,345	210,597	228,035	230,035	265,369	140,273	-	-	1,942,292		
MAINT RESERVE ²										-		
LINE ITEM CONTINGENCY ³										-		
OFFICE TRANSFERS ⁴										-		
Subtotal										-		
TOTAL	175,975	215,345	210,597	228,035	230,035	265,369	140,273	-	-	1,942,292		

Note: The information for FY1996 and FY1997 are from the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB)

²Expense Carryover NOT Included

³Management Reserve and Line Item Contingency Held by RL

⁴Work Performed at Sites Other Than Headland

LIQUID EFFLUENT PROJECT
FY 1998 COST BASELINE (BCWS) BY MONTH
BY PROJECT BASELINE SUMMARY (PBS)
BY ACTIVITY DATA SHEET (ADS)
EXECUTION YEAR

(\$000s)

PROJECT WBS: 1.2.3.1																
PBS NO: RLW005																
PBS TITLE: LIQUID EFFLUENT PROJECT																
ADS TITLE	ADS NO	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	
Liquid Effluent Project	2004	OP EXP	2,265	2,894	2,299	2,418	2,391	3,138	2,509	3,013	2,534	2,280	3,143	2,910	31,790	
		CM&MTC												80	80	
		SPF														
		LI														
		SUBTOT	2,265	2,894	2,299	2,418	2,391	3,138	2,509	3,013	2,534	2,280	3,143	2,990	31,870	
		OP EXP														
		CM&MTC														
		SPF														
		LI														
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-	
		OP EXP														
		CM&MTC														
		SPF														
		LI														
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-	
		OP EXP														
		CM&MTC														
		SPF														
		LI														
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

*Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover is NOT included.

**LIQUID EFFLUENT PROJECT
FY 1998 COST BASELINE (BCWS) BY MONTH
BY PROJECT BASELINE SUMMARY (PBS)
BY ACTIVITY DATA SHEET (ADS)
EXECUTION YEAR**

(\$000s)

PROJECT WBS: 1.3.1															
PBS NO: RLWMS															
PBS TITLE: LIQUID EFFLUENT PROJECT															
ADS TITLE	ADS NO	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
		OP EXP													-
		CMRPG													-
		OPP													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
		OP EXP													-
		CMRPG													-
		OPP													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
		OP EXP													-
		CMRPG													-
		OPP													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
		OP EXP													-
		CMRPG													-
		OPP													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
		OP EXP													-
		CMRPG													-
		OPP													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL BCWS/PBS²			2,265	2,864	2,289	2,448	2,391	3,135	2,509	3,013	2,934	2,280	3,143	2,990	31,870

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance

²Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover is NOT included.

LIQUID EFFLUENT PROJECT
FY 1996 COST BASELINE (BCWS) BY MONTH BY FUND TYPE BY PROJECT
EXECUTION YEAR
(\$000s)

PROJECT WBS	PROJECT TITLE	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	
1 2 3 1	Liquid Effluent Project (RL-WW006)	Operating Expense	2,265	2,894	2,288	2,416	2,381	3,136	2,509	3,013	2,534	2,280	3,143	2,910	31,790	
		CENRTC													80	80
		GPP														0
		Line Item														0
		Total BCWS/PMB ¹	2,265	2,894	2,288	2,416	2,381	3,136	2,509	3,013	2,534	2,280	3,143	2,990	31,870	
		Mgmt Reserve ²														0
		Line Item Contingency ²														0
		Offsite Transfers ²														0
Total		2,265	2,894	2,288	2,416	2,381	3,136	2,509	3,013	2,534	2,280	3,143	2,980	31,870		

Note: This information for FY1996 and FY1997 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS) equals Performance Measurement Baseline (PMB). Expense Carryover is Not Included.

²Management Reserve and Line Item Contingency Held by GR.

LIQUID EFFLUENT PROJECT
FY 1998 COST BASELINE (BCWS) BY MONTH BY COST ELEMENT BY PROJECT
EXECUTION YEAR
(\$000s)

PROJECT YR98	PROJECT TITLE	COST ELEMENT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	
1.2.3.1	Liquid Effluent Project (RL-WYMG5)	0 Salaries	1,040	1,039	1,000	1,159	1,096	1,445	1,512	1,380	1,100	1,044	1,440	1,300	14,679	
		1 Material	87	126	109	114	146	155	140	130	130	108	156	249	1,601	
		2 Purchased Serv	67	72	67	69	60	73	60	76	83	67	78	69	799	
		3 Other Contr Chgs	34	30	34	35	35	38	37	32	27	24	33	29	392	
		4 Internal Serv	195	194	130	154	162	215	172	200	173	180	235	169	2,180	
		5 Internal Chgs	278	362	276	290	260	342	305	367	306	276	362	395	3,930	
		6 LM&M	2	2	1	2	2	2	2	2	2	1	2	2	23	
		7 Overhead's	524	470	383	369	600	725	580	667	660	667	720	638	7,318	
		8 Revenue														0
		9 Enterprise Cos	80	113	89	94	91	120	94	116	80	89	123	108	1,230	
Total BCWS/PMB ¹			2,295	2,694	2,300	2,414	2,391	3,135	2,609	3,013	2,534	2,297	3,143	2,907	31,670	

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

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

LIQUID EFFLUENT PROJECT
SUMMARY OF LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS: 1.2.3.1												SUBTOT
PBS TITLE	PBS NO	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997- FY2006
LIQUID EFFLUENT PROJECT	RL-WM05	36,289	31,870	31,880	38,267	36,463	39,594	38,930	38,833	39,158	42,453	360,537
												-
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												-
TOTAL NEW B/A		36,289	31,870	31,880	38,267	36,463	39,594	38,930	38,833	39,158	42,453	360,537

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

LIQUID EFFLUENT PROJECT
SUMMARY OF LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1996

(\$000s)

PROJECT WBS : 1.2.3.1											
PBS TITLE	PBS NO	FY2007-	FY2011-	FY2016-	FY2021-	FY2026-	FY2031-	FY2036-	FY2041-	FY2046-	TOTAL
		FY2010	FY2015	FY2020	FY2025	FY2030	FY2035	FY2040	FY2045	FY2050	FY1997-
LIQUID EFFLUENT PROJECT	RL-WW05	175,976	215,848	210,507	238,035	230,129	265,889	140,273			1,846,192
											-
											-
											-
											-
											-
											-
											-
											-
											-
											-
											-
											-
TOTAL NEW B/A		175,976	215,848	210,507	238,035	230,129	265,889	140,273	-	-	1,846,192

Note: The information for FY1996 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

LIQUID EFFLUENT PROJECT
LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998

(\$000s)

PROJECT WBS:	1.2.3.1										
PBS NO:	RL-44443										
PBS TITLE:	LIQUID EFFLUENT PROJECT										SUBTOT
FUND TYPE	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997- FY2006
OPERATING EXPENSE	35,114	31,790	31,589	38,197	35,353	39,494	38,830	36,733	39,089	42,353	368,482
CENRTC	175	80	100	100	100	100	100	100	100	100	1,055
GENERAL PLANT PROJECT											-
LINE ITEM (List Each One)											
VF-252											-
											-
											-
											-
Subtotal Line Items	-	-	-	-	-	-	-	-	-	-	-
TOTAL NEW B/A	35,289	31,870	31,689	38,297	35,453	39,594	38,930	36,833	39,189	42,453	369,537

Note: The information for FY1998 and FY1999
contains the planning guidance while FY2000
and beyond contains the Project Baseline
Summary guidance.

LIQUID EFFLUENT PROJECT
LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1996

(\$000s)

PROJECT WEB:	1.2.3.1										
PBS NO:	RL-4W105										
PBS TITLE:		LIQUID EFFLUENT PROJECT									TOTAL
FUND TYPE	FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	FY1997- FY2050	
OPERATING EXPENSE	175,576	215,348	210,007	237,535	229,879	255,689	140,273			1,842,737	
GENRTC	400	500	500	500	250	200				3,405	
GENERAL PLANT PROJECT										-	
LINE ITEM (List Each One)											
W052										-	
										-	
										-	
										-	
										-	
Subtotal/ Line Items										-	
TOTAL NEW B/A	175,976	215,848	210,507	238,035	230,129	255,889	140,273	-	-	1,846,122	

Note: The information for FY1996 and FY1999
contains the planning guidance while FY2000
and beyond contains the Project Baseline
Summary guidance.

Liquid Effluent Project
3 DIGIT CONTRACTOR IDENTIFIER-PR-WM12
Revision 0

AVERAGE ANNUAL FULL TIME EQUIVALENTS
(includes Major Subcontractors but not Enterprise Companies)

PHBS 1.2.3.1

Submittal Date: 8/29/97

PBS Number	PBS Title	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
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RL-WM05	Liquid Effluent	199	199	199	199	199	199	199	199	199	199
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Total PBS FTEs	<u>199</u>	<u>199</u>	<u>199</u>	<u>199</u>	<u>199</u>	<u>199</u>	<u>199</u>	<u>199</u>	<u>199</u>	<u>199</u>	<u>199</u>
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Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

BNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.2

FY1998

August 29, 1997

B.4 Technical Baseline (RL-WM05)

B.4 Analytical Services (RL-WM06)

B.4.1.0 Analytical Services Technical Baseline (RL-WM06)

B.4.1.1 Analytical Services Organization Mission (RL-WM06)

The Hanford Analytical Services Program supports the Hanford mission by providing analytical services to site programs. These services include waste and environmental sample analysis, process control support, field and sampling services, development services and site expertise in chemistry and data quality. The Analytical Services Program operates on-site analytical laboratories, contracts commercial services, establishes site laboratory quality standards, and integrates all Hanford analytical services through the site Sample Management Office. Cost effective, quality and timely services are provided utilizing a combination of government-contracted and commercial capabilities based on biannual site analytical services projections.

B.4.1.2 Analytical Services End Point Targets from Hanford Strategic Plan

B.4.1.2.1 Analytical Services Principal End Point Targets

- Transition high cost surplus facilities in the central plateau and south 600 areas to a low cost, stable, deactivated condition.

B.4.1.2.2 Analytical Services Supported End Point Targets

- Spent fuel removed and K-basins cleaned sufficient to transition to D&O.
- Spent fuels (light water reactor) removed to interim storage in 400 Area pending availability of 200 Area interim storage.
- Spent fuels (TRIGA and light water reactor) and applicable FFTF fuels removed from 400 Area interim storage area to 200 Area.
- Continue to provide safe storage for Cs/Sr capsules in the WESF indefinitely.
 - (1) WESF decoupled and a standalone facility.
- Retrievably stored TRU waste retrieved, processed, shipped offsite to WIPP.
- Low level and low level mixed waste from onsite and offsite sources (including FNRL special case wastes) will continue to be disposed of in the 200 Area.

B.4.1.3 Analytical Services Major Facilities

B.4.1.3.1 222-S Laboratory Facility

B.4.1.3.1.1 222-S Laboratory Facility Description

The 222-S Laboratory is a laboratory facility in the 200-WY Area of Hanford used for characterization of high level radioactive waste/materials. It was built in 1950-1951 and houses an analytical laboratory and a chemical sciences laboratory. Two of its three general areas contain radionuclides.

8.4.1.3.1.2 222-S Laboratory 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.

27 August 1977

Figure B-20 222.5 LABORATORY

B.4.1.3.1.3 222-S Laboratory Requirements and Life Cycle Function Descriptions

Requirements:

- Facilities discharging to the 200 Area TEDF shall implement Best Available Technology (BAT)/All Known, Available, and Reasonable Treatment (AKART). The generator shall provide the information required by WAC 173-240, Submission of Plans and Reports for Construction of Waste Water Facilities
- The Hanford Site Infrastructure shall be optimized
- Central Plateau high cost surplus facilities shall be transitioned to a low cost, stable, deactivated conditioned
- Central Plateau inactive facilities shall be maintained within the approved safety envelope
- 222-S shall be operated within the approved safety envelope
- 222-S shall be maintained within the approved safety envelope
- Central Plateau asbestos abatement shall be performed as necessary

Life Cycle Function Descriptions:

B.4.1.3.1.3.1 222-S LABORATORY PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program, establishing broad priorities, providing program technical direction, preparing and defending the program budget, controlling milestones, integrating all components of the program, providing public and private sector policy liaison, expediting interface activities and follow up actions, and retaining overall accountability for program success

B.4.1.3.1.3.2 222-S LABORATORY OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, required laboratory accreditations and certifications, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose

222-S LABORATORY OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B.4.1.3.1.3.3 Provide HL Radioactive Sample Services

Provide Hanford Site full-capability analytical laboratory services for characterizing routine HL radioactive matrices (alpha, beta, gamma), and first-of-a-kind development for HL radiological matrices

B.4.1.3.1.3.4 222-S LABORATORY POST OPERATIONS WORK SCOPE SUMMARY

Day-to-day work, including pre-stabilization surveillance and maintenance, stabilization, post-stabilization surveillance and maintenance, deactivation, and post-deactivation surveillance and maintenance, that is required to allow safe decontamination and decommissioning

222-S LABORATORY POST OPERATIONS SPECIFIC FUNCTIONS

B.4.1.3.1.3.5 Maintain Safe & Compliant 222-S Laboratory Facility in GP Areas

Maintain the 222-S Laboratory facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facilities are made available for clean-up.

B.4.1.3.1.3.6 Transition 222-S Laboratory Facility

Initiate the transition phase of decontamination and decommissioning for the 222-S Laboratory Facility

B.4.1.3.1.4 222-S Laboratory Boundary Diagram

Table B.4-1 222-S Laboratory Boundary Diagram

External Interfaces		External Interfaces
Hanford Legacy		Hanford Waste Disposal Contracts
Hanford Site Environmental System Interfaces		Offsite Landfill
Interface 1.2.1 999 K Area Facilities		Hanford Site Environmental System Interfaces
Interface 2.2.5 240-A Evaporator		Interface 2.3.2 Double Shell Tank (DST) System
Interface 2.2.7 8 Plant		Interface 2.3.3 Control Waste Complex
Interface 2.2.8 Waste Encapsulation and Storage Facility		Interface 2.4.3 304 Area Treated Effluent (Disposal) Facility
Interface 2.2.12 T-Plant Facility		Interface 4.7.1 331 Complex
Interface 2.2.15 HMFAP Module 1		Interface 4.7.1 331 Complex
Interface 2.3.1 Single Shell Tank (SST) System		
Interface 2.3.2 Double Shell Tank (DST) System		
Interface 2.3.5 Control Waste Complex		
Interface 2.5.2 Waste Sampling and Characterization Facility		
Interface 2.5.3 Control Platform System		
Interface 2.5.4 Control Platform Water System		
Interface 2.5.5 Control Platform Office Facilities		
Interface 2.5.6 Control Platform Electrical System		
Interface 2.5.8 Control Platform Telecommunication System		
Interface 2.5.9 Control Platform Shop Facilities		
Interface 2.5.10 Control Platform Road System		
Interface 2.5.11 Fuel Blue Train Facility		

B.1.1.1.5 222-S Laboratory Interface Description and Forecast

EXTERNAL INPUTS

Table B.4-2 External Inputs for 222-S Laboratory

SIGNAME	Category	Period	Baseline	Units
ECB Received Legacy Bagging Secondary Solid Waste Total quantity of secondary solid waste for the analytical lab	Secondary Solid Waste	1997 - 1997	92.0	cubic meters

INTERNAL INPUTS

Table B.4-3 Internal Inputs for 222-S Laboratory

SIGNAME	Category	Period	Baseline	Units
Items 2 2 1 000-K Area Facilities Analytical Laboratory Services for 200 Analytical Laboratory Services for 200	Analytical Laboratory Services	1998 - 2000	0-200	operation
Items 2 2 5 242-K Inspector Analytical Laboratory Services for 200-Airtop Analytical Laboratory Services for 200-Airtop	Analytical Laboratory Services	1998 - 2010	1200	samples
Items 2 2 7 00-Plant Analytical Laboratory Services for 200-Plant Analytical Laboratory Services for 200-Plant	Analytical Laboratory Services	1998 - 1998	0.0	variable
Items 2 2 8 Waste Encapsulation and Storage Facility Analytical Laboratory Services for WESF Analytical Laboratory Services for WESF	Analytical Laboratory Services	1998 - 2000	2140	samples
Items 2 2 10 Y Plant Facility Analytical Laboratory Services for 200-TP Analytical Laboratory Services for 200-TP	Analytical Laboratory Services	1998 - 2020	4140	samples
Items 2 2 15 WJMP Module 1 Analytical Laboratory Services for 200-WJMP Analytical Laboratory Services for 200-WJMP	Analytical Laboratory Services	1998 - 2034	5770	samples
Items 2 3 Central Waste Storage Facilities Storage Space (Program Owned) for Analytical Services Storage Space (Program Owned) for Analytical Services	Storage Space (Program Owned)	1997 - 2070	600000	sq ft
Items 2 3 1 Single Shell Tank (SST) System SST Samples Samples collected to support the Characterization of SSTs	(none forecasted)			—
Items 2 3 2 Double Shell Tank (DST) System DST Samples DST characterization samples	(none forecasted)			—
Items 2 3 3 Central Waste Complex Analytical Laboratory Services for 200-TRM Analytical Laboratory Services for 200-TRM	Analytical Laboratory Services	1998 - 2034	290.0	samples
Items 2 3 2 Waste Handling and Characterization Facility Analytical Laboratory Services for Analytical Services Analytical Laboratory Services for Analytical Services	Analytical Laboratory Services	1997 - 2070	750000	samples
Items 2 3 4 Central Plateau System System Shallow for Analytical Services Shallow for Analytical Services	Shallow	1997 - 1997	31800000	lb
Items 2 3 4 Central Plateau Water System Raw Water for Analytical Services Raw Water for Analytical Services	Raw Water	1997 - 2070	194.0	Mgal
Items 2 3 5 Central Plateau Office Facility Office Space (Program Owned) for Analytical Services Office Space (Program Owned) for Analytical Services	Office Space (Program Owned)	1997 - 2070	1700000	sq ft
Items 2 3 6 Central Plateau Electrical System Electricity for Analytical Services Electricity for Analytical Services	Electricity	1997 - 2070	879000	MWhr
Items 2 3 6 Data (PLANT) Transmission for Analytical Services Data (PLANT) Transmission for Analytical Services	Data (PLANT) Transmission	1997 - 2070	63500	mb of PCs

Table B.4-3 Internal Inputs for 222-S Laboratory (Continued)

Stream	Category	Period	Baseline	Units
Voice (Telephone) Communication for Analytical Services	Voice (Telephone) Communication	1997 - 2070	10000	no. of phones
Voice (Telephone) Communication for Analytical Services	Page Service	1997 - 2070	1400	no. of pages
Items 2.6.9 Central Filem Slip Facilities				
Custodial Services for Analytical Services	Custodial Services	1997 - 2070	476000	sq. ft.
Custodial Services for Analytical Services	Lifting (Crane)	1997 - 2070	982.0	c-rate days
Items 2.6.13 Central Filem Road System				
Bedroom Light Taps for Analytical Services	Bedroom Light Taps	1997 - 2070	286.0	no. of vehicles
Items 2.6.11 Final Flux Test Facility				
Analytical Laboratory Services for FFF	Analytical Laboratory Services	1996 - 2001	20.6	samples
Analytical Laboratory Services for FFF				

EXTERNAL OUTPUTS

Table B.4-4 External Outputs for 222-S Laboratory

Stream	Category	Period	Baseline	Units
222-S Lab Hazardous Waste	HAZ	1997 - 2070	308.0	cubic meters
Hazardous waste generated during day to day operations necessary to analyze high level radioactive samples.				
Offsite Landfill				
AN SWICS Solid Secondary Waste	Secondary Solid Waste	1997 - 2070	26599	cubic meters
Solid secondary waste generated during day to day operations of the analytical lab.	Refuse	1997 - 2070	56.0	cubic meters
AN SWICS, Asbestos				
Asbestos Disposed by 222-S Laboratory.				

INTERNAL OUTPUTS

Table B.4-5 Internal Outputs for 222-S Laboratory

Stream	Category	Period	Baseline	Units
Items 2.6.2 Double Deck Tank (DST) System				
Liquid Waste from 222-S Lab to West Area DSTs	Junk (Toxicology)			
Liquid waste from 222-S Area Lab Operations ready to be transferred to West Area DSTs	Junk (Toxicology)			
Waste from 222-S Lab to 244-AH	Junk (Toxicology)			
Waste from 222-S Lab operations activities transported to the 244-AH				
8 Final Transfers, HLM	HLM	1997 - 2070	15200	cubic meters
HLM Transferred by 222-S Laboratory.				
Items 2.6.6 Central Waste Complex				
ANALYT LIME CHLORINE	CHLORINE	1997 - 2070	10.0	cubic meters
CHLORINE Transferred by 222-S Laboratory.				
ANALYT LIME CHLORINE	CHLORINE	1997 - 2070	1250	cubic meters
CHLORINE Transferred by 222-S Laboratory.				
ANALYT LIME CHLORINE	CHLORINE	1997 - 2070	14000	cubic meters
CHLORINE Transferred by 222-S Laboratory.				
ANALYT LIME CHLORINE	CHLORINE	1997 - 2070	2090	cubic meters
CHLORINE Transferred by 222-S Laboratory.				
ANALYT LIME CHLORINE	CHLORINE	1997 - 2070	102.0	cubic meters
CHLORINE Transferred by 222-S Laboratory.				
Items 2.6.7 244-AH Waste Effluent Disposal Facility				
222-S Lab Waste Effluent	Treated Liquid Effluent	1997 - 2070	112000	cubic meters
Treated Liquid Effluent Transferred by 222-S Laboratory				
Items 2.6.11 Final Flux Test Facility				
Radioactive Standards (Calibration) for Analytical Services	Radioactive Standards (Calibration)	1997 - 2070	22204	calibrations
Radioactive Standards (Calibration) for Analytical Services	Radioactive Standards (Calibration)	1997 - 2070	7940	calibrations
Radioactive Standards (Calibration) for Analytical Services				
Radioactive Standards (Calibration) for Analytical Services				

B.4.1.3.2 Waste Sampling and Characterization Facility

B.4.1.3.2.1 Waste Sampling and Characterization Facility Description

The WSCF is a laboratory facility in the 200-W Area of Hanford that houses a low level radiological laboratory used for characterization of low level radioactive waste, RCRA materials, and industrial hygiene materials such as asbestos.

B.4.1.3.2.2 Waste Sampling and Characterization Facility 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.

Figure B-21 WASTE SAMPLING AND CHARACTERIZATION FACILITY

B 4 1 3 2 3 Waste Sampling and Characterization Facility Requirements and Life Cycle Function Descriptions

Requirements:

- The Hanford Site infrastructure shall be optimized
- Central Plateau high cost surplus facilities shall be transitioned to a low cost stable deactivated condition
- Central Plateau inactive facilities shall be maintained within the approved safety envelope
- The Waste Sampling and Characterization Facility (WSCF) complex shall be operated within the approved safety envelope
- The Waste Sampling and Characterization Facility (WSCF) complex shall be maintained within the approved safety envelope
- Central Plateau asbestos abatement shall be performed as necessary

Life Cycle Function Descriptions:

B 4 1 3 2 3 1 WASTE SAMPLING AND CHARACTERIZATION FACILITY PROGRAM PLANNING WORK SCOPE SUMMARY

Functions that include planning and developing the overall program, establishing broad priorities, providing program technical direction, preparing and defending the program budget, controlling milestones, integrating all components of the program, providing public and private sector policy liaison, expediting interface activities and follow-up actions, and retaining overall accountability for program success.

B 4 1 3 2 3 2 WASTE SAMPLING AND CHARACTERIZATION FACILITY OPERATIONS & MAINTENANCE WORK SCOPE SUMMARY

Day-to-day work, including preventive and predictive maintenance, required laboratory accreditations and certifications, that is required to maintain and preserve plant and capital equipment in a condition suitable for it to be used for its designated purpose.

WASTE SAMPLING AND CHARACTERIZATION FACILITY OPERATIONS & MAINTENANCE SPECIFIC FUNCTIONS

B 4 1 3 2 3 3 Provide LL Radioactive Sample Services

Provide Hanford Site full-capability analytical laboratory services for characterizing routine LL radioactive matrices and first-of-its-kind development for LL radiological matrices.

B 4 1 3 2 3 4 WASTE SAMPLING AND CHARACTERIZATION FACILITY POST OPERATIONS WORK SCOPE SUMMARY

Day-to-day work, including pre stabilization surveillance and maintenance, stabilization, post-stabilization surveillance and maintenance, deactivation, and post-deactivation surveillance and maintenance that is required to allow safe decontamination and decommissioning.

WASTE SAMPLING AND CHARACTERIZATION FACILITY POST OPERATIONS SPECIFIC FUNCTIONS

B.4.1.3.2.3.5 Maintain Safe & Compliant Waste Sampling and Characterization Facility In CP Areas

Maintain the Waste Sampling and Characterization facility structures, operating systems and equipment, and monitoring systems within the approved safety and compliance requirements until the facilities are made available for clean-up.

B.4.1.3.2.3.6 Transition Waste Sampling and Characterization Facility

Initiate the transition phase of decontamination and decommissioning for the Waste Sampling and Characterization Facility

B.4.1.3.2.4 Waste Sampling and Characterization Facility Boundary Diagram

Table B.4-F Waste Sampling and Characterization Facility Boundary Diagram

External Interfaces	External Interfaces
<p>None</p> <p>Marford Site Environmental System Interface</p> <p>Items: 1.2.1 300 K Area Facilities</p> <p>Items: 2.2.12 T-Plant Facility</p> <p>Items: 2.2.15 WRRAP Module I</p> <p>Items: 2.2.17 200 Area Effluent Treatment Facility</p> <p>Items: 2.2.3 Central Waste Complex</p> <p>Items: 4.2.1 300 Area Thermal Effluent Disposal Facility</p>	<p>None</p> <p>Hazardous Waste (Special Contracts)</p> <p>Marford Site Environmental System Interface</p> <p>Items: 2.2.2 Double Shell Tank (DST) System</p> <p>Items: 2.2.5 Central Waste Complex</p> <p>Items: 2.5.1 222 G Laboratory</p>

B.4.1.3.2.5 Waste Sampling and Characterization Facility Interface Description and Forecast

EXTERNAL INPUTS

None

INTERNAL INPUTS

Table B.4-7 Internal Inputs for Waste Sampling and Characterization Facility

Stream	Category	Period	Quantity	Units
Stream 1.3.1 100 K Area Facility In-Field Laboratory Services for 500 In-Field Laboratory Services for 500	In-Field Laboratory Services	1987 - 2034	30.0	samples
Stream 2.2.12 T-Plant Facility In-Field Laboratory Services for 200-TF In-Field Laboratory Services for 200-TF	In-Field Laboratory Services	1988 - 2028	181.8	samples
Stream 2.2.15 WWSF Module 1 In-Field Laboratory Services for 200-WWSF In-Field Laboratory Services for 200-WWSF	In-Field Laboratory Services	1988 - 2034	74.0	samples
Stream 2.2.17 200 Area Effluent Treatment Facility In-Field Laboratory Services for 200A-LEF In-Field Laboratory Services for 200A-LEF	In-Field Laboratory Services	1990 - 2032	70.48	samples
Stream 2.3.3 General Waste Complex In-Field Laboratory Services for 200-GWM In-Field Laboratory Services for 200-GWM	In-Field Laboratory Services	1990 - 2034	230.0	samples
Stream 4.3.1 300 Area Effluent Treatment Facility In-Field Laboratory Services for 300A-LEF In-Field Laboratory Services for 300A-LEF	Analytical Laboratory Services In-Field Laboratory Services	1990 - 2028 1990 - 2028	5098 860	samples samples

EXTERNAL OUTPUTS

Table B.4-8 External Outputs for Waste Sampling and Characterization Facility

Stream	Category	Period	Quantity	Units
X Hazardous Waste Disposal Corrosives WSCF, HAZ HAZ Transferred by Waste Sampling and Characterization Facility	HAZ	1987 - 2025	118.0	cubic meters

INTERNAL OUTPUTS

Table B.4-9 Internal Outputs for Waste Sampling and Characterization Facility

Stream	Category	Period	Quantity	Units
Stream 2.3.2 Double Shell Tank (DST) System WSCF Lab Waste LLMW Sludge Transferred by Waste Sampling and Characterization Facility	LLMW (Liquid)	1987 - 2034	1720	cubic meters
Stream 2.3.3 General Waste Complex WSCF, CH-LAWN CH-LAWN Transferred by Waste Sampling and Characterization Facility	CH-LAWN	1987 - 2028	38.8	cubic meters
WSCF, CH-LAWN CH-LAWN Transferred by Waste Sampling and Characterization Facility	CH-LAWN	1987 - 2028	88.8	cubic meters
Stream 2.3.7 200-B Laboratory Analytical Laboratory Services for Analytical Services Analytical Laboratory Services for Analytical Services	Analytical Laboratory Services	1987 - 2070	739000	samples

B.4.1.4 Drivers for Analytical Services

Table B-4-10 Source Documents for Analytical Services

Name	Title
DOE/ES-02220	Draft Hanford Remedial Action Environmental Impact Statement and Comprehensive Land Use Plan
DOE/RL-96-14	Updated Draft Mission Direction Document, June 1996
DOE/RL-96-92	Hanford Strategic Plan
ST 4502	State Waste Discharge Permit for the 200 Area TEDF

B.4.1.5 Analytical Services Risk Management

The Hanford Analytical Services Program operates and maintains the 222-S high level laboratory complex and the low-level Waste Sampling and Characterization Facility (WSCF) complex. The program also is responsible for integrating all site analytical services, establishing and implementing a site Analytical Services quality system, and for managing commercial contracts. Operation and maintenance of WSCF is comparable to that of commercial laboratories, where risks are from potential exposures to hazardous and low-level radioactive materials (less than 10mCi/g) and from common industrial hazards. Operation and maintenance of the 222-S laboratory involves a higher level of risk, mainly associated with inventories of highly radioactive (hundreds of R/hr) materials. Risks to the general public are low since release and dispersion of radioactive or hazardous materials outside of Hanford are not credible. Risks are present to worker safety and the environment at both facilities, and are higher at 222-S due to the higher radioactive inventory. Environmental risks are mainly associated with localized spills to the ground.

At minimum safe levels, 222-S and WSCF provide support to other Hanford programs to maintain their site minimum safe operations. This risk is assumed to be addressed in the other program's risk documentation. Examples of the analytical services role in other program's risks include:

- o Monitoring and assessing safety concerns in the high level waste tanks
- o Characterizing 100 K Basin materials to support transport away from the Columbia River to the Genetec Storage Building
- o Characterizing 105-N and 107-N Basin materials for the Environmental Restoration Contractor (ERC) in support of site restoration
- o Characterization of wastes generated during program operations, including stack sample analysis, liquid effluent analysis and solid waste characterization
- o Support to operating facilities, such as the 242-A Evaporator, the 200 Area Effluent Treatment Facility, and Solid Waste operations

Risks associated with WSCF not being available are that fast turn around time analysis would not be available, resulting in impacts to the operations in the Liquid Effluents Project, and reduced capability of Hanford for timely responses to off-standard conditions.

Risks associated with 222-S not being available are greater due to the higher risks associated with the programs being supported and the limited alternatives available for high-level analytical support.

HNT-SP-1229
Rev. 0
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WBS 1.2

FY1996

August 29, 1997

B.4.2.0 Work Breakdown Structure (WBS)

B.4.2.1 WBS Dictionary

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: HAS MANAGEMENT AND INTEGRATION		2. Date	3. PBS Number RL-WM06	4. Dict Rev
5. Contract NBS No. 1.2.4.1.1A	6. Corresponding FDS No. 1A5A	7. Baseline CR No.		
8. Organization Name HAS MANAGEMENT AND INTEGRATION				9. B & R No.
<p>10. Scope of Work</p> <p>Integration activities to establish consistent environmental, safety, RADCON, quality, program, and operational objectives for all analytical services providers. Maintain an organization, independent of customer and service providers, that provides program planning to integrate customer needs with site-wide capabilities.</p>				

**HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT**

WBS: 1.2

8/25/1997

1. Activity Title: 222-S FACILITY MAINTENANCE		2. Date	3. PBS Number RL-WMD6	4. Dict Rev
5. Contract WBS No. 1.2.4.1.1B	6. Corresponding FDS No. 1A5B	7. Baseline CR No.		
8. Organization Name 222-S LABORATORY			9. B & R No. EW3130030	
<p>10. Scope of Work</p> <p>Ensure that the 222-S Laboratory Complex is available in a 'ready-to-serve' configuration that meets the capability and capacity requirements of the Hanford Mission. Workscope includes readiness for preparation and analyses of samples greater than 1 m³/hr. Workscope includes maintenance of the building and analytical equipment, engineering, quality assurance, health physics, utilities, waste disposal, and other activities required to ensure a safe, efficient operation of the Laboratory. This activity specifically operates at a level that supports the monitoring and sampling activities of other programs in order to maintain their minimum safe level.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: WSCF FACILITY MAINTENANCE		2. Date	3. PBS Number RL-WM06	4. Dict Rev
5. Contract WBS No. 1.2.4.1.1C	6. Corresponding FDS No. 1A5C	7. Baseline CR No.		
8. Organization Name WASTE SAMPLING AND CHARACTERIZATION FACILITY				9. B & R No. EW3130039
<p>10. Scope of Work</p> <p>This activity provides for the operation and maintenance of the Waste Sample and Characterization Facility (WSCF) Complex in a ready-to-serve state. The mission of the WSCF is to provide general analytical chemistry services for samples less than 10 mR/hr in support of Hanford programmatic missions. Workscope includes operation and maintenance of the building and analytical equipment, field and analytical sampling and analyses, support from engineering, quality assurance and health physics, performance evaluation programs, laundry, utilities, waste burial/disposal, etc., production control and material control support, and other activities required to ensure a safe, efficient operation. This activity specifically operates at a level that supports the monitoring and sampling activities other programs perform in order to maintain their minimum safe level.</p>				

MANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
NBS: 1.2

8/25/1997

1. Activity Title: LABORATORY UPGRADES	2. Date	3. PBS Number RL-MM06	4. Dict Rev
5. Contract WBS No. 1.2.4.1.1D	6. Corresponding FDS No. 1A5D	7. Baseline CR No.	
8. Organization Name 222-S LABORATORY			9. B & R No. EW9130030
<p>10. Scope of Work General facility upgrades are required to ensure laboratory facility compliance with regulations such as MFPA, NEC, OSHA, etc. Examples include replacement stacks, water backflow preventers, exhaust duct structure support, etc. In addition, room life extension upgrades to address safety and production issues in order to maintain the 46-year old 222-S laboratory's viability to end of mission. Usually two to three room demolitions and reconstruction; and two designs for the following fiscal year rooms are performed each year.</p>			

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
NBS: 1.2

8/25/1997

1. Activity Title: COMMERCIAL LABORATORY SUPPORT		2. Date	3. PBS Number RL-WM06	4. Dict Rev
5. Contract WBS No. 1.2.4.1.1E	6. Corresponding FDS No. 1ASE	7. Baseline CR No.		
8. Organization Name HAS MANAGEMENT & INTEGRATION			9. B & R No. EN3130030	
<p>10. Scope of Work</p> <p>This activity provides for the management and support of sample data laboratory administration, sample data log-in, verification, and transmittal and disposal of remaining sample waste material from commercial laboratories. This includes assistance to offsite laboratories for packaging, unpacking, logging of returned samples to site, and safe disposal of all wastes.</p>				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: CHEMISTRY, ANALYTICAL, & TECHNOLOGY SUPP	2. Date	3. PBS Number RL-WM06	4. Dict Rev
5. Contract WBS No. 1.2.4.1.2A	6. Corresponding FDS No. 2A5A	7. Baseline CR No.	
8. Organization Name HAS MANAGEMENT AND INTEGRATION			9. B & R No. EW3130030
10. Scope of Work Procurement of new, upgrade, or replacement analytical equipment and instrumentation for Chemistry, Analytical, and Technology support group (NUMATEC) to keep abreast of new technologies, improve productivity, and facility life extensions.			

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: 222-S LABORATORY CENRTC	2. Date	3. PBS Number RL-WM06	4. Dict Rev
5. Contract WBS No. 1.2.4.1.2B	6. Corresponding FDS No. 2A5B	7. Baseline CR No.	
8. Organization Name 222-S LABORATORY			9. B & R No. EW3130030
10. Scope of Work Procurement of new, upgrade, or replacement analytical equipment and instrumentation for 222-S Laboratory to keep abreast of new technologies, improve productivity, and facility life extension.			

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: WSCF LABORATORY CENRTC		2. Date	3. PBS Number RL-WMD6	4. Dict Rev
5. Contract WBS No. 1.2.4.1.2C	6. Corresponding FDS No. 2ASC	7. Baseline CR No.		
8. Organization Name WASTE SAMPLING & CHARACTERIZATION FACILITY				9. B & R No. EW3130030
10. Scope of Work Procurement of new, upgrade, or replacement analytical equipment and instrumentation for the Waste Sampling and Characterization Facility to keep abreast of new technologies, improve productivity, and facility life extension.				

HANFORD SITE WORK BREAKDOWN STRUCTURE DICTIONARY
WASTE MANAGEMENT
WBS: 1.2

8/25/1997

1. Activity Title: 222-S LABORATORY PROJECTS		2. Date	3. PBS Number RL-WN06	4. Dict Rev
5. Contract WBS No. 1.2.4.2.3D	6. Corresponding FDS No. 3A5D	7. Baseline CR No.		
8. Organization Name 222-S LABORATORY			9. B & R No. 39EW31303	
<p>10. Scope of Work</p> <p>This activity addresses the activities to be completed in Phase II of Line Item Project W-178, 219-S Secondary Containment. Once complete, this phase will have addressed the Analytical Services portion of the M-32 milestone connecting the tanks in 219-S to the transfer pipeline in Project W-087, Radioactive Waste Transfer Lines (to be completed December 1997 with final closeout in January 1997). These tanks will receive the liquid waste from the 222-S Laboratory. Once interconnected with the transfer pipelines, this system will alleviate the need to transfer liquid waste from the 222-S Laboratory to the tanks via tanker truck. Failure to complete this project will result in less 219-S tank space being available than originally planned. This would result in less flexibility in the 222-S Laboratory operations.</p> <p>These tanks will be storing dilute quantities of radioactive wastes. The tanks will have to meet the regulations governing the stability and containment of these wastes. To accomplish this task, this activity will include the removal of Tanks 101 and 102 from service to allow the tanks to be physically removed from the concrete vault. A prefabricated stainless steel liner will then be installed in the bottom of the vault. The tanks will then be reinstalled and seismically secured. Leak capabilities will also be installed. At the end of Phase II, Tanks 101 and 102 will be placed back into service along with Tank 104 which was previously installed during Phase I of the project. Completion of these activities will bring the 219-S facility into compliance with MAC 173-303 state requirements for secondary containment and leak detection.</p>				

HNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.2

FY1998

August 29, 1997

B.4.2.2 Responsibility Assignment Matrix

WASTE MANAGEMENT
MBS 1.2

8/25/1997

Mission Area Responsibility Assignment Matrix

Proj. Lv1 (PMS #)	PDS Act Number	Activity Title	Activity Manager	Responsible Organization	Cost Account
RL-HND6		ANALYTICAL SERVICES			
	1A5A	HAS MANAGEMENT AND INTEGRATION	J. E. HYATT	HAS MANAGEMENT AND INTEGRATION	
	1A5B	222-S FACILITY MAINTENANCE	L. F. PERKINS	222-S LABORATORY	
	1A5C	MSCF FACILITY MAINTENANCE	G. E. MULLARD	WASTE SAMPLING AND CHARACTERIZATION FAC	
	1A5D	LABORATORY UPGRADES	L. F. PERKINS	222-S LABORATORY	
	1A5E	COMMERCIAL LABORATORY SUPPORT	J. E. HYATT	HAS MANAGEMENT & INTEGRATION	
	2A5A	CHEMISTRY, ANALYTICAL, & TECHNOLOGY SUPPORT CENTER	J. E. HYATT	HAS MANAGEMENT AND INTEGRATION	
	2A5B	222-S LABORATORY CENTER	L. F. PERKINS	222-S LABORATORY	
	2A5C	MSCF LABORATORY CENTER	G. E. MULLARD	WASTE SAMPLING & CHARACTERIZATION FACIL	
	3A5D	222-S LABORATORY PROJECTS	L. F. PERKINS	222-S LABORATORY	

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FY1998

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B.4.3.0 Schedule Baseline

Note: The Information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains Project Baseline Summary (PBS) guidance.

Activity ID	Activity Description	Early Start	Early Finish
AS064A	From ER - 200 Area DMD		30SEP92
AS070	PROVIDE 223-S SUPPORT TO WRAP OPERATIONS	01OCT87*	30SEP91
AS070A	From BW - WRAP 1 Operation		30SEP91
AS071	PROVIDE 223-S SUPPORT TO T PLANT	01OCT87*	30SEP93
AS071A	From SW - High Dose Equip / Waste Decan		30SEP93
AS071B	From SW - Low Dose Equip Decan / Sampling		30SEP93
AS073	PROVIDE 223-S SUPPORT TO S PLANT SUBPROJECT	01OCT87*	30SEP93
AS073A	From FS - Completion of Required AS Support		30SEP93
AS075	PROVIDE 223-S SUPPORT TO WEF	01OCT87*	30SEP93
AS075A	From FS - Completion of Required AS Support		30SEP93
AS077	PROVIDE 223-S SUPPORT TO 300 AREA SHM	01OCT87*	30SEP90
AS077A	From FS - Completion of Required AS Support		30SEP90
AS078	PROVIDE 223-S SUPPORT TO FFP DEACTIVATION	01OCT87*	13NOV90
AS078A	From FS - Completion of Required AS Support		13NOV90
AS079	PROVIDE 223-S SUPPORT TO FFP STABILIZATION	01OCT87*	31MAY92
AS079A	From FS - Completion of Required AS Support		31MAY92
AS080	PROVIDE 223-S SUPPORT TO FFP VAULT MANAGEMENT	01OCT87*	01OCT93
AS080A	From FS - Completion of Required AS Support		01OCT93
AS081	PROVIDE 223-S SUPPORT TO K BASIN PROJECT	01OCT87*	30DEC90

WASTE MANAGEMENT HANFORD
PBS WM08 - ANALYTICAL SERVICES
PROJECT MASTER BASELINE SCHEDULE

Activity ID	Activity Description	Early Start	Early Finish	Activity Description	Early Start	Early Finish
222-S Lab - WTP						
AS681A	From FS - Completion of Required AS Support		30SEP05	From FS - Completion of Required AS Support		
AS682	PROVIDE 222-S SUPP TO 300 AREA REUTILIZATION	01OCT97*	28SEP07	PROVIDE 222-S SUPP TO 300 AREA REUTILIZATION		
AS682A	From FS - Completion of Required AS Support		28SEP07	From FS - Completion of Required AS Support		
AS686	PROVIDE 222-S SUPPORT TO 242-A EVAPORATOR	01OCT97*	30SEP13	PROVIDE 222-S SUPPORT TO 242-A EVAPORATOR		
AS686A	From LW - 242-A Evaporator Campaigns - C&M Yrs		30SEP13	From LW - 242-A Evaporator Campaigns - C&M Yrs		
AS690	SHIP 222-S AQUEOUS LIQ WASTE TO TANK FARM	01OCT97*	30SEP48	SHIP 222-S AQUEOUS LIQ WASTE TO TANK FARM		
AS692	SHIP 222-S LUR WASTE TO CMC	01OCT97*	28SEP35	SHIP 222-S LUR WASTE TO CMC		
AS692A	To BW - Resolute Waste from all On-Site Generators		28SEP35	To BW - Resolute Waste from all On-Site Generators		
AS693	SHIP 222-S MIXED WASTE TO CMC	01OCT97*	28SEP35	SHIP 222-S MIXED WASTE TO CMC		
AS693A	To BW - Resolute Waste from all On-Site Generators		28SEP35	To BW - Resolute Waste from all On-Site Generators		
AS694	222-S LIQUID CONDENSATE TO 200 AREA TEDF	01OCT97*	28SEP34	222-S LIQUID CONDENSATE TO 200 AREA TEDF		
AS694A	To LW - 200 Area TEDF		28SEP35	To LW - 200 Area TEDF		
AS696	222-S LABORATORY MODERNIZATION	01OCT13*	30SEP19	222-S LABORATORY MODERNIZATION		
AS696	SEND 222-S LIQUID WASTE TO 200 AREA ETF	01OCT97*	30SEP32	SEND 222-S LIQUID WASTE TO 200 AREA ETF		
AS696A	To LW - 200 Area ETF		30SEP32	To LW - 200 Area ETF		
AS700	222-S Lab to Transition		30SEP34*	222-S Lab to Transition		
AS700A	To FS - 222-S Lab		30SEP34	To FS - 222-S Lab		
AS703	Complete Construction of Project W-178		30MAR00*	Complete Construction of Project W-178 AS-60-001		
AS704	W-178-02 COMP 210-S TANK INTERIM STATUS ACTIONS		30SEP00*	W-178-02 COMP 210-S TANK INTERIM STATUS ACTIONS AS-67-005

Activity ID	Activity Description	Early Start	Early Finish	
AS1165	From SW - Low Dose Equip Decom / Sampling		28SEP93	From SW - Low Dose Equip Decom / Sampling
AS1820	PROVIDE WSCF SUPPORT TO LL BURIAL GROUND	01OCT97	30SEP98	PROVIDE WSCF SUPPORT TO LL BURIAL GROUND
AS1820A	From SW - Operate LLW Burial Ground		30SEP98	From SW - Operate LLW Burial Ground
AS1821	PROVIDE WSCF SUPPORT TO RAD MIXED WASTE TRENCHES	01OCT97	30SEP98	PROVIDE WSCF SUPPORT TO RAD MIXED WASTE TRENCHES
AS1821A	From SW - Operate RRMW/C Storage		30SEP98	From SW - Operate RRMW/C Storage
AS1821B	From SW - Operate RRMW Trenches - Disposal		30SEP98	From SW - Operate RRMW Trenches - Disposal
AS1825	PROVIDE WSCF SUPP TO SDO AREA REVEALATION	01OCT97	28SEP07	PROVIDE WSCF SUPP TO SDO AREA REVEALATION
AS1825A	From RS - Completion of Required AS Support		28SEP07	From RS - Completion of Required AS Support
AS1830	SHIP WSCF MIXED WASTE TO CWC	01OCT98	30SEP98	SHIP WSCF MIXED WASTE TO CWC
AS1830A	To SW - Receive Waste from On-Site Generators		30SEP98	To SW - Receive Waste from On-Site Generators
AS1830B	From SW - Operate RRMW/C Storage		30SEP98	From SW - Operate RRMW/C Storage
AS1836	SHIP WSCF LLW WASTE TO BURIAL GROUND	01OCT98	30SEP98	SHIP WSCF LLW WASTE TO BURIAL GROUND
AS1836A	To SW - Receive Waste from On-Site Generators		30SEP98	To SW - Receive Waste from On-Site Generators
AS1870	WSCF MAJOR UPGRADE	01OCT97	30SEP98	WSCF MAJOR UPGRADE
AS1880	WSCF Decommission	01OCT97	30SEP98	WSCF Decommission
AS1890A	To ER - WSCF		30SEP98	To ER - WSCF
Continued on Late Dates Page 11				
AS1851	PROVIDE COMMERCIAL LAB SUPP TO SDO AREA TBLF	01OCT97	23MAR98	PROVIDE COMMERCIAL LAB SUPP TO SDO AREA TBLF

Printed by:
Date/Time:
User:

Project:
Activity:
Status:

Activity:
Description:
Status:

Printed by:
Date/Time:
User:

WASTE MANAGEMENT HANFORD
PBS WMM08 - ANALYTICAL SERVICES
PROJECT MASTER BASELINE SCHEDULE

Printed by:
Date/Time:
User:

Activity ID	Activity Description	Early Start	Early Finish	Activity ID	Activity Description	Early Start	Early Finish
Remedial Laboratory							
ASAS1A	From LHV - 310 Facility Operations (TEDF)		23MAR20		From LHV - 310 Facility Operations (TEDF)		
ASAS12	PROVIDE COMMERCIAL LAB SUPP. SPENT NUCLEAR FUELS	01OCT87	28SEP91		PROVIDE COMMERCIAL LAB SUPP. SPENT NUCLEAR FUELS		
ASAS13	PROVIDE COMMERCIAL LAB SUPP. LL BURIAL GROUNDS	01OCT87	30SEP91		PROVIDE COMMERCIAL LAB SUPP. LL BURIAL GROUNDS		
ASAS13A	From SW - Operate LHV Burial Grounds		30SEP91		From SW - Operate LHV Burial Grounds		
ASAS14	PROVIDE COMM. LAB SUPP. RAD MIXED WASTE TRENCHES	01OCT87	30SEP91		PROVIDE COMM. LAB SUPP. RAD MIXED WASTE TRENCHES		
ASAS14A	From SW - Operate REMEDIATION Storage		30SEP91		From SW - Operate REMEDIATION Storage		
ASAS14B	From SW - Operate RBN Trenches - Disposal		30SEP91		From SW - Operate RBN Trenches - Disposal		
ASAS30	PROVIDE COMM. SUPP. 100 AREA REMEDIAL ACTIONS	01OCT87	30SEP91		PROVIDE COMM. SUPP. 100 AREA REMEDIAL ACTIONS		
ASAS30A	From ER - 100 Area Remedial Actions		30SEP91		From ER - 100 Area Remedial Actions		
ASAS31	PROVIDE COMM. SUPP. 200 AREA REMEDIAL ACTIONS	01OCT87	30SEP91		PROVIDE COMM. SUPP. 200 AREA REMEDIAL ACTIONS		
ASAS31A	From ER - 200 Area Remedial Actions		30SEP91		From ER - 200 Area Remedial Actions		
ASAS32	PROVIDE COMM. SUPP. 300 AREA REMEDIAL ACTIONS	01OCT87	30SEP91		PROVIDE COMM. SUPP. 300 AREA REMEDIAL ACTIONS		
ASAS32A	From ER - 300 Area Remedial Actions		30SEP91		From ER - 300 Area Remedial Actions		
ASAS36	PROVIDE COMM. LAB SUPP. - 300 AREA REVITALIZATION	01OCT87	28SEP91		PROVIDE COMM. LAB SUPP. - 300 AREA REVITALIZATION		
ASAS36A	From FS - Complete of Required FS Support		28SEP91		From FS - Complete of Required FS Support		
ASAS39	PROVIDE COMM. LAB SUPP TO K BASIN PROJECT	01OCT87	30DEC95		PROVIDE COMM. LAB SUPP TO K BASIN PROJECT		
ASAS39A	From FS - Complete of Required FS Support		30DEC95		From FS - Complete of Required FS Support		

ASAS1A

ASAS12

ASAS13

ASAS13A

ASAS14

ASAS14B

ASAS30

ASAS30A

ASAS31

ASAS31A

ASAS32

ASAS32A

ASAS36

ASAS36A

ASAS39

ASAS39A

23MAR20

28SEP91

30SEP91

30SEP91

30SEP91

30SEP91

30SEP91

30SEP91

30SEP91

30SEP91

30SEP91

30SEP91

28SEP91

30DEC95

30DEC95

From LHV - 310 Facility Operations (TEDF)

PROVIDE COMMERCIAL LAB SUPP. SPENT NUCLEAR FUELS

PROVIDE COMMERCIAL LAB SUPP. LL BURIAL GROUNDS

From SW - Operate LHV Burial Grounds

PROVIDE COMM. LAB SUPP. RAD MIXED WASTE TRENCHES

From SW - Operate REMEDIATION Storage

From SW - Operate RBN Trenches - Disposal

PROVIDE COMM. SUPP. 100 AREA REMEDIAL ACTIONS

From ER - 100 Area Remedial Actions

PROVIDE COMM. SUPP. 200 AREA REMEDIAL ACTIONS

From ER - 200 Area Remedial Actions

PROVIDE COMM. SUPP. 300 AREA REMEDIAL ACTIONS

From ER - 300 Area Remedial Actions

PROVIDE COMM. LAB SUPP. - 300 AREA REVITALIZATION

From FS - Complete of Required FS Support

PROVIDE COMM. LAB SUPP TO K BASIN PROJECT

From FS - Complete of Required FS Support

WASTE MANAGEMENT HANFORD
PBB WM06 - ANALYTICAL SERVICES
PROJECT MASTER BASELINE SCHEDULE

WASTE MANAGEMENT HANFORD
PBB WM06 - ANALYTICAL SERVICES
PROJECT MASTER BASELINE SCHEDULE

Activity ID	Activity Description	Early Start	Early Finish	FY98												FY99	
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
RL WYDE Analytical Services																	
HSEMS 2515222-S Lab Ops & Maint																	
222-S Lab Ops																	
ASB01	PROVIDE 222-S SUPP SPENT NUCLEAR FUEL PROJECT	01OCT97	30SEP98	PROVIDE 222-S SUPP SPENT NUCLEAR FUEL PROJECT													
ASB02	PROVIDE 222-S SUPP TO 300 AREA STP	01OCT97	30SEP98	PROVIDE 222-S SUPP TO 300 AREA STP													
ASB03	PROVIDE 222-S SUPP FLAMMABILITY SAFETY ISSUE	01OCT97	30SEP98	PROVIDE 222-S SUPP FLAMMABILITY SAFETY ISSUE													
ASB04	PROVIDE 222-S SUPP TMSB TANK WASTE CHRG	01OCT97	30SEP98	PROVIDE 222-S SUPP TMSB TANK WASTE CHRG													
ASB05	PROVIDE 222-S SUPP TMSB PROCESS WASTE SUP PROJ	01OCT97	30SEP98	PROVIDE 222-S SUPP TMSB PROCESS WASTE SUP PROJ													
ASB06	PROVIDE 222-S SUPP TANK FARM SAFE OPERATIONS	01OCT97	30SEP98	PROVIDE 222-S SUPP TANK FARM SAFE OPERATIONS													
ASB07	PROVIDE 222-S SUPP TO 200 AREA D & O PROJECT	01OCT97	30SEP98	PROVIDE 222-S SUPP TO 200 AREA D & O PROJECT													
ASB08	PROVIDE 222-S SUPPORT TO WREAP OPERATIONS	01OCT97	30SEP98	PROVIDE 222-S SUPPORT TO WREAP OPERATIONS													
ASB09	PROVIDE 222-S SUPPORT TO T PLANT	01OCT97	30SEP98	PROVIDE 222-S SUPPORT TO T PLANT													
ASB10	PROVIDE 222-S SUPPORT TO B PLANT SUBPROJECT	01OCT97	30SEP98	PROVIDE 222-S SUPPORT TO B PLANT SUBPROJECT													
ASB11	PROVIDE 222-S SUPPORT TO WREAP	01OCT97	30SEP98	PROVIDE 222-S SUPPORT TO WREAP													
ASB12	PROVIDE 222-S SUPPORT TO 300 AREA STP	01OCT97	30SEP98	PROVIDE 222-S SUPPORT TO 300 AREA STP													
ASB13	PROVIDE 222-S SUPPORT TO PFP DEACTIVATION	01OCT97	30SEP98	PROVIDE 222-S SUPPORT TO PFP DEACTIVATION													
ASB14	PROVIDE 222-S SUPPORT TO PFP STABILIZATION	01OCT97	30SEP98	PROVIDE 222-S SUPPORT TO PFP STABILIZATION													
ASB15	PROVIDE 222-S SUPPORT TO PFP VAULT MANAGEMENT	01OCT97	30SEP98	PROVIDE 222-S SUPPORT TO PFP VAULT MANAGEMENT													
ASB16	PROVIDE 222-S SUPPORT TO 300 AREA REVITALIZATION	01OCT97	30SEP98	PROVIDE 222-S SUPPORT TO 300 AREA REVITALIZATION													

Function: Waste Management

Project: WYDE

Activity: ASB

Activity: ASB

Activity: ASB

Activity: ASB

Activity: ASB

Activity: ASB

Activity: ASB

WASTE MANAGEMENT HANFORD

PBS WYDE - ANALYTICAL SERVICES

FY98 - EXECUTION YEAR PMBS

Activity ID	Activity Description	Early Start	Early Finish	Activity	ETD
222-5 Laboratory				OCT 1 1997 DEC 1 1997 JAN 1 1998 FEB 1 1998 MAR 1 1998 APR 1 1998 MAY 1 1998 JUN 1 1998 JUL 1 1998 AUG 1 1998 SEP 1 1998 OCT 1 1998 NOV 1 1998 DEC 1 1998	
AS608	PROVIDE 222-5 SUPPORT TO 242-A EVAPORATOR	01OCT97	30SEP98	PROVIDE 222-5 SUPPORT TO 242-A EVAPORATOR	
AS609	SHIP 222-6 AMBULOUS LIQ WASTE TO TANK FARM	01OCT97	30SEP98	SHIP 222-6 AMBULOUS LIQ WASTE TO TANK FARM	
AS612	SHIP 222-6 LIR WASTE TO CWC	01OCT97	30SEP98	SHIP 222-6 LIR WASTE TO CWC	
AS613	SHIP 222-6 MIXED WASTE TO CWC	01OCT97	30SEP98	SHIP 222-6 MIXED WASTE TO CWC	
AS614	222-6 LIQUID CONDENSATE TO 200 AREA TIEOFF	01OCT97	30SEP98	222-6 LIQUID CONDENSATE TO 200 AREA TIEOFF	
AS615	SEND 222-6 LIQUID WASTE TO 200 AREA ETF	01OCT97	30SEP98	SEND 222-6 LIQUID WASTE TO 200 AREA ETF	
AS616	Submit Revised 222-5 Part B Permit for ResCom		31MAR98	Submit Revised 222-5 Part B Permit for ResCom AS-97-004	
AS617	Submit Annual ISB Update for Review & Approval		30MAR98	Submit Annual ISB Update for Review & Approval AS-98-001	
AS618	Submit Annual Update to 222-5 Death Haz Assessment		30SEP98	Submit Annual Update to 222-5 Death Haz Assessment AS-98-002	
222-5 WSCF Data Disposal Results					
222-5 WSCF Data					
AS619	PROVIDE WSCF SUPP FOR SPENT NUCLEAR FUELS	01OCT97	30SEP98	PROVIDE WSCF SUPP FOR SPENT NUCLEAR FUELS	
AS620	PROVIDE WSCF SUPP FOR SITE ON REMED ACTIONS	01OCT97	30SEP98	PROVIDE WSCF SUPP FOR SITE ON REMED ACTIONS	
AS621	PROVIDE WSCF SUPP TO 200 AREA ETF	01OCT97	30SEP98	PROVIDE WSCF SUPP TO 200 AREA ETF	
AS622	PROVIDE WSCF SUPP TO 200 AREA TIEOFF	01OCT97	30SEP98	PROVIDE WSCF SUPP TO 200 AREA TIEOFF	
AS623	SEND WSCF LL LIQUID WASTE TO 200 AREA TIEOFF	01OCT97	30SEP98	SEND WSCF LL LIQUID WASTE TO 200 AREA TIEOFF	
AS624	PROVIDE WSCF SUPP TO WRAP-1 OPERATIONS	01OCT97	30SEP98	PROVIDE WSCF SUPP TO WRAP-1 OPERATIONS	
AS625	PROVIDE WSCF ANALYTICAL SUPPORT TO T PLANT	01OCT97	30SEP98	PROVIDE WSCF ANALYTICAL SUPPORT TO T PLANT	
AS626	PROVIDE WSCF SUPPORT TO LL BURIAL GROUNDS	01OCT97	30SEP98	PROVIDE WSCF SUPPORT TO LL BURIAL GROUNDS	

Prepared: _____
 Prepared By: _____
 Date: _____
 Rev: _____

WASTE MANAGEMENT HANFORD
 PBS WMO6 - ANALYTICAL SERVICES
 FY98 - EXECUTION YEAR PMBS

Activity ID	Activity Description	Early Start	Early Finish	FY98												FY99															
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC				
Waste Laboratory																															
AS521	PROVIDE WSCF SUPPORT TO RAD MIXED WASTE TRENCHES	01OCT97	30SEP98	PROVIDE WSCF SUPPORT TO RAD MIXED WASTE TRENCHES																											
AS626	PROVIDE WSCF SUPP TO 300 AREA REVITALIZATION	01OCT97	30SEP98	PROVIDE WSCF SUPP TO 300 AREA REVITALIZATION																											
Commercial Labs Ops & Maint																															
Commercial Labs																															
AS411	PROVIDE COMMERCIAL LAB SUPP TO 300 AREA TEEF	01OCT97	30SEP98	PROVIDE COMMERCIAL LAB SUPP TO 300 AREA TEEF																											
AS412	PROVIDE COMMERCIAL LAB SUPP SPENT NUCLEAR FUELS	01OCT97	30SEP98	PROVIDE COMMERCIAL LAB SUPP SPENT NUCLEAR FUELS																											
AS430	PROVIDE COMM. SUPP 100 AREA REMEDIAL ACTIONS	01OCT97	30SEP98	PROVIDE COMM. SUPP 100 AREA REMEDIAL ACTIONS																											
AS431	PROVIDE COMM. SUPP 200 AREA REMEDIAL ACTIONS	01OCT97	30SEP98	PROVIDE COMM. SUPP 200 AREA REMEDIAL ACTIONS																											
AS432	PROVIDE COMM. SUPP 300 AREA REMEDIAL ACTIONS	01OCT97	30SEP98	PROVIDE COMM. SUPP 300 AREA REMEDIAL ACTIONS																											
AS435	PROVIDE COMM. LAB SUPP - 300 AREA REVITALIZATION	01OCT97	30SEP98	PROVIDE COMM. LAB SUPP - 300 AREA REVITALIZATION																											
AS436	PROVIDE COMM. LAB SUPP TO K BASIN PROJECT	01OCT97	30SEP98	PROVIDE COMM. LAB SUPP TO K BASIN PROJECT																											

M-020
8/26/97
12 08 pm

WYND/SSPP PLANNING MILESTONE LIST
REPORTING PERIOD 10/01/96 TO 12/31/99

Page 1

MILESTONE CONTROL #	TPA-MS NUMBER	TPA TYPE	MS LEVEL	MS TITLE	TYPE	DATES			PROJ CTR	PMS #
						PLANNED BASELINE	APPROVED BASELINE	REVISED BASELINE		
AS-97-004			RL	SUBMIT REVISED 222-S PART B PERMIT FOR REVIEW AND COMMENT	OTH	3/31/98				RL-WND5
AS-98-001			RL	SUBMIT ANNUAL INTERIM SAFETY BASIS UPDATE FOR REVIEW AND APPROVAL	OTH	5/29/98				RL-WND5
AS-99-015	M-32-02		HQ	COMPLETE 219-S TANK INTERIM STATUS ACTIONS	EA	9/30/99				RL-WND5
AS-99-031			RL	COMPLETE CONSTRUCTION OF PROJECT W-17A	OTH	3/31/99				RL-WND5
AS-98-002			RL	SUBMIT ANNUAL UPDATE TO 222-S BASELINE HAZARD ASSESSMENT	OTH	9/30/98				RL-WND5

PHMC
MILESTONE DESCRIPTION SHEET

Title: SUBMIT REVISED 222-S PART B PERMIT FOR REVIEW AND COMMENT			Date: 8/26/97	
Assigned To: K.J. TOLLEFSON			CIN:	
Program WBS Designator: 1.2.4.1			Due Date: 3/31/98	
PBS No: RL-WM06				
MC #: AS-97-004		TPA No:		Rev: <u> </u>
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: The revised 222-S Part B Permit is to be submitted to the Dept. of Ecology (Ecology) and the Environmental Protection Agency (EPA) in March 1997 for review and comment.				
Description of what constitutes completion of this milestone: A letter will be transmitted to DOE-RL March 28, 1998, stating the Part B Permit has been submitted to Ecology and EPA for review and comment.				

PMMC
MILESTONE DESCRIPTION SHEET

Title: SUBMIT ANNUAL INTERIM SAFETY BASIS UPDATE FOR REVIEW AND APPROVAL				Date: 8/26/97	
Assigned To: S.L. GREY				CIN:	
Program NBS Designator: 1.2.4.1				Due Date: 5/29/98	
PBS No: RL-MM06					
MC #: AS-98-001			TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ ☒ DOE-RL DOE-FD CONTRACTOR	MILESTONE TYPE: EA PEG ☒ OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report Letter Drawing(s) ☒ Other (Specify) ISB UPDATE	ADDRESS TO: DOE-HQ ☒ DOE-RL Other (Specify)	
Milestone Description: Submit annual update of the 222-S Facility Interim Safety Basis (ISB) to DOE-RL.					
Description of what constitutes completion of this milestone: Transmit annual update of ISB to DOE-RL by May 29, 1998.					

PHMC
MILESTONE DESCRIPTION SHEET

Title: COMPLETE 219-S TANK INTERIM STATUS ACTIONS				Date: 8/26/97	
Assigned To: M.A. CAHILL				CIN:	
Program WBS Designator: 1.2.4.1				Due Date: 9/30/97	
PBS No: RL-WM06					
NC #: AS-97-015			TPA No: M-32-02		Rev:
MILESTONE LEVEL: ☒ DOE-HQ ☐ DOE-RL ☐ DOE-FO ☐ CONTRACTOR	MILESTONE TYPE: ☒ EA ☐ PEG ☐ OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report Letter Drawing(s) ☒ Other (Specify) LETTER AND CONCURRENCE	ADDRESS TO: ☐ DOE-HQ ☒ DOE-RL Other (Specify)	
Milestone Description: Complete 219-S Tank interim status actions (M-32-02). Completion of M-32-02 consists of completion of construction on Project W-087, Radioactive Waste Transfer Line (M-32-02-T02); and completion of definitive design and Phase I construction on Project W-178, 219-S Secondary Containment (M-32-02-T01).					
Description of what constitutes completion of this milestone: A letter will be submitted to DOE-RL for transmittal to the regulators to close M-32-02. With concurrence from the regulators, this milestone will be completed.					

PHMC

MILESTONE DESCRIPTION SHEET

Title: COMPLETE CONSTRUCTION OF PROJECT W-178				Date: 8/26/97	
Assigned To: M.A. CAHILL				CIN:	
Program WBS Designator: 1.2.4.1				Due Date: 3/31/99	
PBS No: RL-WM06					
NC #: AS-99-001			TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)	
Milestone Description: Project W-178, 219-S Secondary Containment Upgrade, construction will be completed by March 31, 1999.					
Description of what constitutes completion of this milestone: The OAC # 1 and II document will be transmitted to DOE-RL by March 31, 1999, requesting concurrence for completion on Project W-178.					

PHMC

MILESTONE DESCRIPTION SHEET

Title: SUBMIT ANNUAL UPDATE TO 222-S BASELINE HAZARD ASSESSMENT			Date: 8/26/97	
Assigned To: D. PENFIELD			CIN:	
Program WBS Designator: I.2.4.1			Due Date: 9/30/98	
PBS No: RL-WNDS				
MC #: AS-98-002		TPA No:		Rev:
MILESTONE LEVEL: DOE-HQ X DOE-RL DOE-FO CONTRACTOR	MILESTONE TYPE: EA PEG X OTHER	DNFSB STATUS: DNFSB (Y/N): N COMMIT #: RECOMM #:	DELIVERABLE: X Report X Letter Drawing(s) Other (Specify)	ADDRESS TO: DOE-HQ X DOE-RL Other (Specify)
Milestone Description: Perform annual update to Baseline Hazard Assessment (BHA) for 222-S Facility.				
Description of what constitutes completion of this milestone: Transmit a letter and the annual Baseline Hazard Assessment report to Analytical Services management and DOE-RL by September 30, 1998.				

HNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.2

FY1998

August 29, 1997

B.4.4.0 Cost Baseline

ANALYTICAL SERVICES

SUMMARY OF LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY BY PROJECT BASELINE SUMMARY (PBS)

FY 1998

(\$000s)

PROJECT WBS: 1.2.4.1												SUBTOT
PBS TITLE	PBS NO	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997- FY2006
ANALYTICAL SERVICES	RL-MMD08	31,227	28,413	27,109	36,031	38,673	38,974	38,992	39,013	39,034	39,053	356,519
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Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the

Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS)

Equals Performance Measurement Baseline

(PMB); Expense Carryover is NOT included.

ANALYTICAL SERVICES
SUMMARY OF LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)

FY 1998

(\$000s)

PROJECT WBS :		1.2.4.1										TOTAL
PBS TITLE	PBS NO	FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	FY1997- FY2050	
ANALYTICAL SERVICES	RL-YM006	138,484	175,105	223,605	231,684	148,000	148,500	145,000	133,000	130,000	1,828,897	
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Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS)
 Equals Performance Measurement Baseline
 (PMB); Expense Carryover is NOT included.

(ANALYTICAL SERVICES)
LIFE CYCLE COST BASELINE (BCWS) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998
(\$000s)

PROJECT PBS#		CLASS										SUBTOT FY1997- FY2006	
PBS NO:		FUND											
PBS TITLE:		ANALYTICAL SERVICES											
FUND TYPE	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006			
OPERATING EXPENSE	30,227	25,427	25,085	32,821	33,665	34,948	35,947	36,896	36,624	34,578	328,280		
DEMETU	1,000	1,800	1,800	2,100	2,167	2,266	2,285	2,347	2,410	2,475	19,810		
GENERAL PLANT PROJECT						720	1,349				1,860		
LINE ITEM (See Item Only)													
WARP, Ratchapala Wagon Transfer Unit													
WE-475, 274-16 Secondary Control Valve		1,000	118								2,680		
Weld F-225-9 Auxiliary Equipment				1,000	3,000	1,000					5,000		
W-200, 200-8 Major Upgrade											-		
W-200, 200-8 Major Upgrade											-		
Subtotal Line Item	-	1,800	118	1,000	3,000	1,000	-	-	-	-	7,960		
TOTAL SCHEDULED ¹	31,227	26,433	27,003	35,921	36,673	36,974	36,946	39,242	39,034	36,603	366,119		
POINT RESERVE ²											-		
LINE ITEM CONTINGENCY ³											-		
OFFSITE TRANSPORT ⁴											-		
Subtotal	-	-	-	-	-	-	-	-	-	-	-		
TOTAL	31,227	26,433	27,003	35,921	36,673	36,974	36,946	39,242	39,034	36,603	366,119		

Note: The references to FY1998 and FY1999 comply the planning guidance while FY2000 and beyond comply the Project Baseline Summary guidance.

¹ Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB);

Expense Carryover NOT Included.

² Unallocated Reserve and Late Work Contingency Held by RL.

³ Work Performed at Sites Other than Hanford

(ANALYTICAL SERVICES)
FY 1998 COST BASELINE (BCWS) BY MONTH
BY PROJECT BASELINE SUMMARY (PBS)
BY ACTIVITY DATA SHEET (ADS)
EXECUTION YEAR
(\$000s)

PROJECT WBS:		1.2.4.1														
PBS NO:		WBS-01														
PBS TITLE:		ANALYTICAL SERVICES														
ADS TITLE	ADS NO	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	
LABORATORY OPERATIONS & UPGRADES	7100-4	OP EXP	1,729	2,191	1,769	1,842	1,833	2,467	1,940	2,474	2,107	1,727	2,393	2,160	24,652	
		CONTRC	72	62	72	76	76	100	60	66	60	72	100	66	1,000	
		GRP														-
		LI														-
		SUBTOT	1,801	2,253	1,841	1,918	1,909	2,567	2,020	2,570	2,167	1,799	2,463	2,266	25,652	
RADIOACTIVE WASTE TRANSFER	7100-5	OP EXP	12	15	8	7									43	
		CONTRC														-
		GRP														-
		LI														-
		SUBTOT	12	15	8	7	-	-	-	-	-	-	-	-	-	43
210-B SECONDARY CONTAINMENT UPGRADE	7100-3	OP EXP	44	56	46	34	61	60	64	77	64	68	60	70	732	
		CONTRC														-
		GRP														-
		LI	-	-	-	47	175	257	200	311	150	200	225	417	1,886	
		SUBTOT	44	56	46	81	240	337	264	368	214	268	305	487	2,718	
		OP EXP														-
		CONTRC														-
		GRP														-
		LI														-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

*Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover is NOT included.

(ANALYTICAL SERVICES)
FY 1998 COST BASELINE (BCWS) BY MONTH
BY PROJECT BASELINE SUMMARY (PBS)
BY ACTIVITY DATA SHEET (ADS)
EXECUTION YEAR
(\$000s)

PROJECT WBS:		1.2.1.1													
PBS NO:		198-06													
PBS TITLE:		ANALYTICAL SERVICES													
ADS TITLE	ADS NO	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL
		OP EXP													-
		CM&MTC													-
		OSP													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
		OP EXP													-
		CM&MTC													-
		OSP													-
		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
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		LI													-
		SUBTOT	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL BCWS/PBS ¹			1,888	2,363	1,918	2,008	2,149	2,884	2,284	2,987	2,401	2,085	2,788	2,755	28,413

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover is NOT Included.

(ANALYTICAL SERVICES)
FY 1988 COST BASELINE (BCWS) BY MONTH BY FUND TYPE BY PROJECT
EXECUTION YEAR
(\$000s)

PROJECT TAGS	PROJECT TITLE	FUND TYPE	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	
1.2.4.1	ANALYTICAL SERVICES (REL 36000)	Operating Expense	1,784	2,262	1,844	1,853	1,594	2,537	2,003	2,551	2,171	1,784	2,483	2,251	28,427	
		CEHRTC	71.7	81.8	71.7	75.7	75.7	88.8	78.7	85.8	78.7	71.7	88.8	87.8	1,000	
		GPP														0
		Line Item				47	179	257	280	311	150	200	225	417	1,986	
		Total BCWS/PMB ¹	1,856	2,354	1,916	2,008	2,149	2,884	2,283	2,956	2,401	2,056	2,788	2,766	28,413	
		Mgmt Reserve ²														0
		Line Item Contingency ²														0
		Offsite Transfers ³														0
Total				1,856	2,354	1,916	2,008	2,149	2,884	2,283	2,956	2,401	2,056	2,788	2,766	28,413

Note: The information for FY1984 and FY1985 contains the planning guidance while FY1986 and beyond contains the Project Baseline Summary guidance.

¹Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expenses Carryover is Not Included

²Management Reserve and Line Item Contingency Held By RL

(ANALYTICAL SERVICES)
FY 1998 COST BASELINE (BCWS) BY MONTH BY COST ELEMENT BY PROJECT
EXECUTION YEAR
(\$000s)

PROJECT WBS	PROJECT TITLE	COST ELEMENT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	TOTAL	
1.2.4.1	Analytical Services (RL-WM008)	0 Salaries	610	1,024	802	872	674	1,152	614	1,238	1,624	827	1,141	1,812	11,899	
		1 Material	108	137	119	121	117	153	116	143	120	106	140	135	1,531	
		2 Purchased Serv	36	100	106	91	80	134	112	117	101	82	112	128	1,288	
		3 Other Contr Chgs	6	6	6	8	8	11	9	10	6	3	11	10	94	
		4 Internal Serv	204	246	104	202	288	273	218	282	219	186	272	261	2,734	
		5 Internal Chgs	28	125	94	104	111	183	122	146	123	198	182	308	1,582	
		6 LMSI	3	4	3	3	3	4	7	4	3	3	6	3	44	
		7 Overheads	427	542	636	667	485	682	624	672	851	672	644	614	6,585	
		8 Revenue														6
		9 Enterprise Cst	120	168	149	123	233	123	268	371	344	258	307	308	2,884	
Total BCWS/FMS*			1,856	2,262	1,914	2,086	2,148	2,884	2,053	2,858	2,403	2,058	2,780	2,756	26,415	

Note: This information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

*Budgeted Cost of Work Scheduled (BCWS) Equals Performance Measurement Baseline (PMB); Expense Carryover is Not Included

(ANALYTICAL SERVICES)
SUMMARY OF LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1996
(\$000s)

PROJECT WBS: 1.2.4.1												SUBTOT
PBS TITLE	PBS NO	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	FY1997- FY2006
ANALYTICAL SERVICES	RL-WM06	29,739	28,927	28,595	30,031	30,673	30,974	30,992	30,013	30,034	30,053	355,031
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TOTAL NEW B/A		29,739	28,927	28,595	30,031	30,673	30,974	30,992	30,013	30,034	30,053	355,031

Note: The information for FY1996 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

(ANALYTICAL SERVICES)
SUMMARY OF LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998
(\$000s)

PROJECT WBS :		1.2.4.1										TOTAL
PBS TITLE	PBS NO	FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	FY1997- FY2050	
ANALYTICAL SERVICES	RL-WM06	139,484	175,105	223,605	231,684	148,000	148,500	145,000	133,000	130,000	1,827,409	
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Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

(ANALYTICAL SERVICES)
LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998
(\$000s)

PROJECT WBS:		1.2.4.1									
PBS NO:		WMD6									
PBS TITLE:		ANALYTICAL SERVICES									
FUND TYPE	FY1997	FY1998	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004	FY2005	FY2006	SUBTOT FY1997- FY2006
OPERATING EXPENSE	28,739	25,427	25,595	32,921	33,606	36,049	35,607	38,885	36,624	36,578	326,712
CENRTC	1,000	1,000	1,000	2,110	2,187	2,228	2,285	2,347	2,410	2,475	19,019
GENERAL PLANT PROJECT						709	1,100				1,809
LINE ITEM (List Each One)											
W-178, 219-S Secondary Containment		2,500									2,500
W-367, 222-S Auxiliary Equipment				1,000	3,000	1,000					5,000
W-368, 222-S Major Upgrades											-
W-369, WSCF Major Upgrades											-
Subtotal Line Items		2,500		1,000	3,000	1,000	-	-	-	-	7,500
TOTAL NEW B/A	28,739	28,927	26,595	34,031	36,673	38,974	38,892	39,013	39,034	39,053	355,031

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

(ANALYTICAL SERVICES)
LIFE CYCLE BUDGET AUTHORITY (B/A) BY YEAR BY FUND TYPE
BY PROJECT BASELINE SUMMARY (PBS)
FY 1998
(\$000s)

PROJECT WBS:	1.2.4.1									
PBS NO:	WM09									
PBS TITLE:	ANALYTICAL SERVICES									
FUND TYPE	FY2007- FY2010	FY2011- FY2015	FY2016- FY2020	FY2021- FY2025	FY2026- FY2030	FY2031- FY2035	FY2036- FY2040	FY2041- FY2045	FY2046- FY2050	FY1997- FY2000
OPERATING EXPENSE	127,284	169,105	159,105	163,864	132,000	132,000	132,000	128,000	127,000	1,578,890
GENRTC	8,200	11,500	11,500	3,500	11,500	11,500	11,500	3,500	1,500	94,219
GENERAL PLANT PROJECT	3,000	4,500	3,000	4,500	4,500	3,000	1,500	1,500	1,500	25,800
LINE ITEM (List Each One)										
W-175, ZEP-S Secondary Containment										2,500
W-267, ZEP-S Auxiliary Equipment										5,000
W-222, ZEP-S Filter Upgrades			60,000	60,000						100,000
W-222, WSCF Major Upgrades				20,000						20,000
Subtotal Line Items	-	-	60,000	70,000	-	-	-	-	-	127,500
TOTAL NEW B/A	139,484	175,105	223,905	231,864	146,500	146,500	145,000	133,000	130,000	1,827,409

Note: The information for FY1996 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

ANALYTICAL SERVICES
3 DIGIT CONTRACTOR IDENTIFIER-PR-XXXX
 Revision 0

AVERAGE ANNUAL FULL TIME EQUIVALENTS
 (includes Major Subcontractors but not Enterprise Companies)

PHBS 1.2.4.1

Submittal Date: 8/29/97

PBS Number	PBS Title	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007
RL4NMBS	Analytical Services	165	161	192	192	193	188	187	185	185	188
Total PBS FTEs		165	161	192	192	193	188	187	185	185	188

Note: The information for FY1998 and FY1999 contains the planning guidance while FY2000 and beyond contains the Project Baseline Summary guidance.

HNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.2

FY1998

August 29, 1997

Appendix A
Waste Management Project Pools

- 1MDDOP - Hazardous Waste Analysis
- 1ML - Solid Waste Service Assessment Pool
- 1MDR - Analytical Services Assessment Pool

ACTIVITY: 1MODOP
WBS NUMBER: 6.1.1.2.1.1
TITLE: HAZARDOUS WASTE ANALYSIS

FY 1998 Annual Work Plan Part I - Summary

Revision # 0

26-Aug-97

Cost Account Number 1MDDP	Cost Account Title Hazardous Waste Analysis	Funding Source: G&A X	
WBS Number 6.1.1.2.1.1	WBS Title Hazardous Waste Analysis	Service Center DOH/PMA	
Budget Analyst J.A. Hunt		FY 1998 CAP	
Cost Account Manager J.B. Buckley		COST ELEMENTS	\$000'S
Financial Manager L.L. Powers		D Labor	149
Program Manager C.G. Mattsson		1 Materials	9
RL Program Manager T.K. Teynor		2 Purchased Services	39
Full Time Equivalents (FTEs)		3 Other Hardord Contractors	0
Organizational Support Total	Exempt	Nonexempt	Bargaining
	Total	7K Fee/Non DOH	0
	1.8	0.2	0.0
	2.0	8 Revenue	0
0.0	0.0	0.0	0.0
1.8	0.2	0.0	2.0
		9 Enterprise Companies	28
		Subtotal Net Budget	225
		4 Site Services	2
		5 Internal Charges	9
		6 LMSI Support	1
		7C DOH	23
		Total Baseline	261

SIGNATURES CAM: _____ Program Manager: _____ RL Program Manager: _____		BASLINE APPROVAL: _____ Date: _____ Date: _____ Date: _____ Indirect Program Administration
--	--	--

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1MDDP

COST ACCOUNT WORKSCOPE SUMMARY

Provide documentation which meets waste disposal and landfill acceptance criteria to send non-regulated waste to offsite landfills. Shipment of hazardous and non-regulated waste directly offsite. Preparation activities include preparing shipping documents, profiling, transport scheduling, traffic inspection coordination, maintenance of records, spill response, sampling of unknown wastes and orphan containers, and demolition of shock sensitive chemicals. Provide product predetermination including technical guidance and maintenance of the Product Predetermination List. Manage contracts with offsite Treatment, Storage, and Disposal Facilities (TSDF) which receive waste from Hanford. Inspect and evaluate the condition and performance of these offsite TSDF's. Maintain the Solid Waste Engineering Analysis database which is a tool used by site waste generators to designate waste.

APPROVED BASELINE:

Activity Description:

Services to Hanford Site for product predetermination, technical guidance, documentation and shipping of hazardous non-hazardous and non-regulated waste to offsite waste disposal and landfill destinations.

Mutually Agreed Upon Workscope Deliverables and Due Dates:

1

2

FY 1998

FTEs

Dollars

Subtotal Net

2.0

226

Total Activity

2.0

251

Approved Net

2.0

226

Approved Total

2.0

251

ACTIVITY: 1ML
WBS NUMBER: 7.1.1.3.3
TITLE: SOLID WASTE SERVICE POOL

FY 1998 Annual Work Plan Part I - Summary

Revision # 0

26-Aug-97

Cost Account Number 1ML	Cost Account Title Solid Waste Service Assessment Pool	Funding Source: G&A
WBS Number 7.1.1.3.3	WBS Title Solid Waste Service Pool	Service Center DOH/PMMA X

Budget Analyst					K L Haberman		FY 1998 CAP	
Cost Account Manager					R J Guor		COST ELEMENTS	\$000'S
Financial Manager					L L Powers		0 Labor	2,188
Program Manager					C G Mattsson		1 Materials	632
PL Program Manager					T K Teynor		2 Purchased Services	0
					Full Time Equivalents (FTEs)		3 Other Hanford Contractors	250
Organizational Support		Exempt	Nonexempt	Bargaining	Total	7x Fee/Non DOH	0	
		17.9	2.5	10.5	30.9	8 Revenue	0	
		0.0	0.0	0.0	0.0	8 Enterprise Companies	873	
	Total	17.9	2.5	10.5	30.9	Subtotal Net Budget	3,948	
						4 Site Services	750	
						5 Internal Charges	0	
						6 LMSI Support	5	
						7C DOH	339	
						Total Baseline	5,851	

SIGNATURES			BASELINE APPROVAL:		Date
CAM	_____	Date	_____	_____	_____
Program Manager	_____	Date	_____	_____	_____
PL Program Manager	_____	Date	_____	Indirect Program Administration	_____

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP # 1ML

COST ACCOUNT WORKSCOPE SUMMARY

ML accounts provide for storage or disposal of Low Level Waste, Low Level Mixed Waste and Transuranic waste receipts per the requirements of the Hanford Site Waste Acceptance Criteria in support of onsite and offsite generators and for shipment coordination of offsite hazardous waste shipments for treatment and disposal in support of onsite generators. Activities also include SWITS data management and waste forecasting.

APPROVED BASELINE:

Activity Description 1ML2

Solid Waste Assessment Data Management: SWITS input includes inventory tracking and waste forecasting activities.

Mutually Agreed Upon Workscope Deliverables and Due Dates

- 1
- 2

Subtotal Net	3.2	903.2
Total Activity	3.2	941.8

Activity Description 1ML4

Low Level Waste Disposal: waste approvals, receipts, verifications, and generator assistance, in accordance with applicable permits and waste receipt criteria. Maintain waste disposal trenches ready to receive waste

Mutually Agreed Upon Workscope Deliverables and Due Dates

- 1
- 2

Subtotal Net	14.2	1,736.5
Total Activity	14.2	2,598.8

FY 1998 Annual Work Plan

Part II - Activity Detail, cont.

CAP # 1ML

Activity Description 1ML5

TRU storage waste approvals, receipts, verifications, and generator assistance, in accordance with applicable permits and waste receipt criteria. Also, Non-Destructive Examination/Non-Destructive Assay verification.

Mutually Agreed Upon Workscope Deliverables and Due Dates

1

2

Subtotal Net	1.7	163.4
Total Activity	1.7	190.6

Activity Description 1ML6

RMW/CWC receipt: waste approvals, receipts, verifications, and generator assistance for storage at the Central Waste Complex, in accordance with applicable permits and waste receipt criteria.

Mutually Agreed Upon Workscope Deliverables and Due Dates

1

2

Subtotal Net	9.3	849.9
Total Activity	9.3	1,002.4

Activity Description 1ML8

Hazardous Waste Shipment: provide coordination of hazardous waste to offsite facilities for treatment and/or disposal. Perform hazardous waste designations.

Mutually Agreed Upon Workscope Deliverables and Due Dates

1

2

Subtotal Net	2.5	298.0
Total Activity	2.5	317.8

Approved Net	30.9	3,847.9
Approved Total	30.9	5,051.2

FY 1998 Annual Work Plan

Part III - DOH/PMA/Service Center Rate Calculation Worksheet
(Dollars in 000's)

CAP #

1ML

Pool Title: Solid Waste Service Assessment

Basis for Rate:

Provide the basis of the rate(s). (If another spreadsheet is used, insert that document for Part III.)

- Show what base is being used to calculate your rates.
- Where do the liquidation numbers come from? Specify by program if possible.
- Assumptions used, i.e., escalation, historical, activity based costing ...

RATES WILL BE UNAVAILABLE UNTIL WORKSCOPE AND BUDGET HAVE BEEN AGREED UPON WITH RL

ACTIVITY: 1MDR
WBS NUMBER: 7.1.1.4.3
TITLE: SAMPLE ANALYSIS

The FY 1998 Annual Work Plan (AWP) for 1MDR, Sample Analysis, is submitted unsigned due to recent reductions in the sample load for the Tank Characterization Program. These reductions have not been incorporated into the attached AWP. A revised AWP, reflecting the Tank Characterization reduction, will be submitted by September 22, 1997 with the appropriate signatures.

FY 1998 Annual Work Plan Part I - Summary

Revision # 0

26-Aug-97

Cost Account Number 1MDR51		Cost Account Title WSCF Laboratory			Funding Source:	
WBS Number 7.1.1.4.3.1		WBS Title WSCF Laboratory			G&A Service Center x DOH/PMA	
Budget Analyst J. L. Spehr					FY 1998 CAP	
Cost Account Manager G. E. Millward					COST ELEMENTS	\$000'S
Financial Manager R. A. Spahr					0 Labor	2,459
Program Manager C. G. Mattsson					1 Materials	633
RL Program Manager R. P. Carter					2 Purchased Services	190
Full Time Equivalents (FTEs)					3 Other Hanford Contractors	10
Organizational Support Total	Exempt	Nonexempt	Bargaining	Total	7x Fee/Non DOH	0
	21.5	0.6	11.1	33.4	8 Revenue	0
	0.1	0.1	0.0	0.2	9 Enterprise Companies	13
					Subtotal Net Budget	3,385
					4 Site Services	106
					5 Internal Charges	300
					6 LMSI Support	9
					7C DOH	389
					Total Baseline	4,111

SIGNATURES			BASILINE APPROVAL:	
CAAC: _____	Date: _____	_____ Date _____ Inclined Program Administration		
Program Manager: _____	Date: _____			
RL Program Manager: _____	Date: _____			

The FY 1998 Annual Work Plan (AWP) for 1MDR, Sample Analysis, is being submitted unsigned due to recent reductions in the sample load for Tank Characterization Program. These reductions has not been incorporated into the AWP. A Revised AWP for the sample analysis will be submitted by September 22, 1997 with the appropriate signatures.

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP # 1MDR51

COST ACCOUNT WORKSCOPE SUMMARY

Functional organization: WSCF Laboratory

Workscope Summary: Provide general analytical chemistry services for samples that are < 1mR/hr in support of Hanford programmatic missions. WSCF will provide support to 1) Liquid Effluent Facilities, 2) Industrial Hygiene, 3) RCRA Groundwater Monitoring, 4) Environmental Monitoring, and 5) Other programs as requested.

APPROVED BASELINE:

Activity Description - Sample Receiving/Preparation

This activity entails receiving samples into WSCF Laboratory; logging the sample; assuring all samples are under strict chain-of-custody; ensuring inventory of radionuclides content of the Laboratory is up to date and current; and HPT screening of the samples.

Sample Receiving/Preparation

HPT Support

FY 1998

FTEs

Dollars

1.0

77.5

0.3

31.8

0.5

32.0

Mutually Agreed Upon Workscope Deliverables and Due Dates

- 1 10/01/97 to 09/30/98

Receiving samples into WSCF Laboratory; logging the sample; assuring all samples are under strict chain-of-custody, and ensuring inventory of radionuclides content of the Laboratory is up to date and current.

- 2 10/01/97 to 09/30/98

Perform radiological screening at WSCF Laboratory.

Subtotal Net

1.8

141.1

Total Activity

1.8

166.8

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1MDR31

Activity Description - Analyses

This activity is for the analytical work that is performed on each sample after it has been received. It includes Organic, Inorganic, and Radiochemical lab analyses, development and procurement of standards to support analyses at WSCF, and procurement of shop and lab supplies needed to perform analyses. It also includes maintenance on analytical equipment.

Inorganic Chemistry	8.0	578.3
Radioanalytical Chemistry	10.0	720.1
Organic Chemistry	7.0	574.7
Standards Laboratory	0.7	50.9
Stockroom	1.1	714.1
WSCF Analytical Instrument Maintenance	0.2	28.4

Mutually Agreed Upon Workscope Deliverables and Due Dates

- 10/01/97 to 09/30/98
Analytical work performed on each sample after it has been received. It includes Organic, Inorganic and Radiochemical laboratory analyses.
- 10/01/97 to 09/30/98
Development and procurement of analytical standards to support analyses.
- 10/01/97 to 09/30/98
Procurement of analytical supplies for the Stockroom necessary to perform analyses.
- 10/01/97 to 09/30/98
Instrument maintenance of analytical equipment.

Subtotal Net	25.0	2,683.5
Total Activity	25.0	3,106.8

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

TMDR31

Activity Description - Data Administration/Reporting

This activity supports QA, and LIMS/LABCORE to track data through the Laboratory and to meet reporting requirements for WSCF Laboratory.

LIMS/LABCORE

QA Support

0.2

42.0

0.8

60.0

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

QA support to WSCF Laboratory

2 10/01/97 to 09/30/98

LIMS/LABCORE support to track data through the laboratory and to meet reporting requirements.

Subtotal Net

1.0

102.0

Total Activity

1.0

117.0

Activity Description - Archive/Disposal

This activity provides support to archive samples as required by the customer and/or disposal of the samples as appropriate.

Waste Handling

2.7

183.6

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Archive samples and/or disposal of the samples as appropriate.

Subtotal Net

2.7

183.6

Total Activity

2.7

387.3

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1MDR51

Activity Description - Program/Administration

This activity provides program support and customer interface: tracking of costs versus budget, procedure maintenance, provide instructions, development of training programs/modules and training records administration per Analytical Services training requirements, and provide Sample Management support which provides determination on which laboratory provides the customer with the best product to meet their analytical requirements, ensure Data Management services meet the requirements of the new site customer, prepares SAFs which are forwarded to WSCF Laboratory and to the sampling group to notify them of all sampling and analysis requirements and prepares cost estimates for new project startup

Procedure Maintenance

02

167

Training

04

267

Program Business Management

08

428

WSCF Sample Management

20

1267

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Provide program support and customer interface

2 10/01/97 to 09/30/98

Provide Sample Management support for WSCF Laboratory

3 10/01/97 to 09/30/98

Procedure preparation and maintenance of existing procedures

4 10/01/97 to 09/30/98

Provide instructions, development of training programs/modules and training records administration per Analytical Services training requirements

Subtotal Net

31

2148

Total Activity

31

2729

Approved Net

338

3,3058

Approved Total

338

4,1108

**FY 1998 Program Plan
Work Breakdown Structure Dictionary
DOH/Proration/Service Center Rate Calculation Worksheet
(Dollars in 000's)**

RL WBS # 7.1.1.4.3.1

CAP # 1MDR51

Pool Title:

Basis for Rate:

Provide the basis of the rate(s). (If another spreadsheet is used, insert that document for Part V.)

- Show what base is being used to calculate your rates.
- Where do the liquidation numbers come from? Specify by program if possible.
- Discuss significant changes from last year to this year
- Assumptions used, i.e., escalation, historical, activity based costing ...

This is liquidated out to Programs within WHC and other contractors for samples received at WGSF Laboratory.

		Chemist/Chem Tech Hours*
Sample Receipt	Chemist/Chem Tech hours x	8%
Management	Chemist/Chem Tech hours x	17%
Standards Laboratory	Chemist/Chem Tech hours x	5%
Data Adm/Reporting	Chemist/Chem Tech hours x	24%
HPTs	Chemist/Chem Tech hours x	3%
Archive/Disposal	Chemist/Chem Tech hours x	8%
Program Administration	Chemist/Chem Tech hours x	21%
		= Total Analytical work hours
Stockroom Supplies	Total hours x Labor rate x overhead rate = Analytical cost x Stockroom percentage (15%)	
Total Analytical cost + Stockroom + Total Infrastructure Cost + Non-Labor \$ = Unit Price		

*Hours based on the time it takes for the analysis to be performed.

Assumptions:

- (1) The %s remains the same as FY 1997 but a 3% escalation factor is added for escalation for FY 1998 unit prices.

1MDR51, WSCF LABORATORY
FY 1998 PROJECTIONS TO PROGRAMS

RL WBS # 7.1.1.4.3.1

PROGRAM	FUNCTIONAL \$	PROGRAM \$
Environmental Monitoring	666	791
Transition Projects	114	135
Liquid Effluent Facilities	1,386	1,647
Solid Waste	118	140
Analytical Services	494	587
ROM (Groundwater)	688	817
Spent Nuclear Fuels	30	36
Special Activities	199	237
Bechtel	35	41
Miscellaneous Customers	91	108
Tank Characterization	160	180
	3,981	4,729

Based on Hanford Sample Projections (May 23, 1997)

UNIT PRICES

FY 1997 WSCF UNIT PRICES - REV D			
U:\YL97\UNIT97_UPWS1.XLS			
2D-Sep-98			
04:17:42 PM			
WSCF UNIT PRICES FOR FY 1997			
ANALYTE	METHOD REF No	MATRIX	FY 1997 PRICE
INORGANIC CHEMISTRY			
ICP Metals	8010	LIQUID	\$ 186
ICP Metals (INCL EXTRACTION)	8010	SOLID	\$ 276
ICP MS	200 8	LIQUID	\$ 200
ICP MS (INCL EXTRACTION)	200 8	SOLID	\$ 260
ICP Metals -- ADDITIONAL			\$ 53
Arsenic by IC	9055 / 300 0	LIQUID	\$ 158
Arsenic by IC	9055 / 300 0	SOLID	\$ 212
GFAA	7XXX	LIQUID	\$ 42
GFAA	7XXX	SOLID	\$ 53
GFAA (CLP)	CLP	LIQUID	\$ 340
GFAA (CLP)	CLP	SOLID	\$ 400
AA-Hg (Cold Vap AA)	7471	LIQUID	\$ 64
AA-Hg (Cold Vap AA)	7471	SOLID	\$ 85
AA-Hg -- TCLP			#VALUE!
Fluoride	340 1 / 340 2	LIQUID	\$ 53
Fluoride	340 1 / 340 2	SOLID	\$ 89
Ammonia	350 5	LIQUID	\$ 53
Ammonia	350 5	SOLID	\$ 74
Cyanide	8010	LIQUID	\$ 106

UNIT PRICES

Cyanide		9010	SOLID	\$ 127
Cellulose		9010	SOLID	\$ 53
Dissolved O2 (442)		442		\$ 27
Turbidity (160.1)		160.1		\$ 22
Bio Oxygen Demand		405.1		\$ 80
Chem Oxygen Demand		410.1/410.2		\$ 80
Particle Size		ASTM D422		\$ 53
Specific Gravity				\$ 53
Total Dissolved Solids		160.1		\$ 38
Total Suspended Solids		160.2		\$ 38
Pct solids/Moisture				\$ 32
Boil-down				\$ 53
Alkalinity (Carbonate/Bi-Carbonate)		310.1		\$ 48
Conductivity		120.1	LIQUID	\$ 23
Conductivity		120.1	SOLID	\$ 32
pH Direct Measurement		160.1	LIQUID	\$ 19
pH Direct Measurement		160.1	SOLID	\$ 27
RADIOCHEMISTRY				
Alpha/Beta			AIR	\$ 108
Alpha/Beta			LIQUID	\$ 108
Alpha/Beta			SOLID	\$ 133
Room Air Sample				\$ 32
AgZ (incl Ru-106, Sr-113, Sb-125, I-129)				\$ 186
GEA			Air	\$ 133
GEA			Liquid	\$ 133
GEA			Solid	\$ 154
H-3			Air	\$ 133
H-3			Liquid	\$ 108

UNIT PRICES

Pt-19			Solid	\$ 133
C-14			LIQUID	\$ 159
C-14			SOLID	\$ 212
Ni-63			LIQUID	\$ 210
Ni-63			SOLID	\$ 237
Sr-90			Air	\$ 212
Sr-90			Liquid	\$ 180
Sr-90			Solid	\$ 239
Tc-99			LIQUID	\$ 170
Tc-99			SOLID	\$ 212
I-129			LIQUID	\$ 186
I-129			SOLID	\$ 212
Pm-147			LIQUID	\$ 191
Ra-226			LIQUID	\$ 265
Ra-226			SOLID	\$ 292
Total Radium (Ra-226 PLUS Ra-226)			LIQUID	\$ 265
Total Radium (Ra-226 PLUS Ra-226)			SOLID	\$ 292
Np-237			LIQUID	\$ 212
Np-237			SOLID	\$ 265
Pu-238, 239/240			AIR	\$ 292
Pu-238, 239/240			LIQUID	\$ 223
Pu-238, 239/240			SOLID	\$ 265
Pu-241			AIR	\$ 318
Pu-241			LIQUID	\$ 318
Pu-241			SOLID	\$ 318
Am-241			AIR	\$ 265
Am-241			LIQUID	\$ 212
Am-241			SOLID	\$ 266
U-Gross			AIR	\$ 85

UNIT PRICES

U-Gross			LIQUID	\$ 95
U-Gross			SOLID	\$ 159
Isotopic Uranium (U234,235,238)			AIR	\$ 265
Isotopic Uranium (U234,235,238)			LIQUID	\$ 272
Isotopic Uranium (U234,235,238)			SOLID	\$ 265
MISCELLANEOUS RAD CHEM SERVICES				
Stream Volume for Liquid Effluents			AIR	\$ 11
Composite Preparation (each composite)			AIR	\$ 53
Composite Preparation (each composite)			LIQUID	\$ 27
Archive/Hold for Composite			AIR/LIQ	\$ 11
Digestion/Leaching			SOLID	\$ 53
Sample Disposal			ALL	#VALUE!
Consulting (per hour)			ALL	\$ 132
Overtime - Chemist (per hour)			ALL	\$ 198
Overtime - Chem Tech (per hour)			ALL	\$ 180
ORGANIC CHEMISTRY				
VOA		8260	LIQUID	\$ 318
VOA		8260	SOLID	\$ 371
SVOA		8270	LIQUID	\$ 530
SVOA		8270	SOLID	\$ 583
SVOA (partic)-customized				\$ 135
Miscellaneous Organic Analysis			LIQUID	\$ 170
WTPH-G	GAS	8015M	LIQUID	\$ 117
WTPH-G	GAS	8015M	SOLID	\$ 119
WTPH-D	DIESEL	8015M	LIQUID	\$ 122
WTPH-D	DIESEL	8015M	SOLID	\$ 133

UNIT PRICES

Oil/Grease		9070	LIQUID	\$ 69
Oil/Grease		9071	SOLID	\$ 80
TIC				\$ 80
TIC				\$ 80
TOC		9060		\$ 80
TOC				\$ 80
Total Carbon				\$ 80
TOX		9020	LIQUID	\$ 88
TOX		9023.0	SOLID	\$ 88
PCB's - Water		8081.0	LIQUID	\$ 110
PCB's - Solid or Oil		8081.0	SOLID	\$ 110
MISCELLANEOUS ORGANIC SERVICES				
Toxicity Characteristic Leaching Procedure (EPA 1311)		1311		
- Extraction (metals, pesticides, herbicides, & SVOA's)				\$ 90
- Extraction (zero headspace (ZHE for volatiles)				\$ 120
Analysis of Leachate by EPA SW-846 Procedures				
- Herbicides		8151.0		\$ 239
- Metals		8010		\$ 188
- Pesticides		8081.0		\$ 180
- Semi-Volatile Organics		8270		\$ 530
- Volatile Organics		8280		\$ 318
- Reactivity Cyanide				\$ 95
- Reactivity Sulfide				\$ 95
INDUSTRIAL HYGIENE				
IH ANALYSIS				
Acetic Acid				\$ 52

UNIT PRICES

Acids: 6 By IC (or i)				\$ 129
Bulk Asbestos				\$ 34
Fiber Counts				\$ 20
Beryllium - Air				\$ 38
Beryllium - Smear				\$ 38
Chromium VI				\$ 42
Coal Tar Pitch Volatiles				\$ 49
Cyanide/HCN (each)				\$ 47
Formaldehyde - Chrom				\$ 51
Glutaraldehyde				\$ 104
Hydrazine				\$ 53
ICP Scan				\$ 230
Iscyanates				\$ 150
Lead-Bulk, Including Paint				\$ 35
Lead - Swipes				\$ 35
Mercury				\$ 64
Metals - Flame AA				\$ 35
NO/NO2				\$ 70
Nuisance Dust - Total				\$ 15
Nuisance Dust - Resp				\$ 15
Oil Mist				\$ 53
PCBs - Swipes				\$ 110
PNAs				\$ 178
Silica, Crystalline				\$ 85
TBP				\$ 80
Common Org Solvents				\$ 40
Ethylene Oxide				\$ 68
Carbon Disulfide				\$ 88
PCBs - Florisil Tubes				\$ 68

UNIT PRICES

PRICES FROM SQW (Additions to orig FY 95 list)			
Pesticides/PCBs	8081	\$	220
Paint Filler Liquid	8095	\$	11
Ignitability	1010	\$	37
Corrosivity	1110	\$	11
TCL	1311		
- Metals Extraction		\$	90
- Semi VOA Extraction		\$	90
- Zero Headspace Ext		\$	120
- VOA Analysis		\$	267
- Semi VOA Analysis		\$	418
- Pesticides/PCB Analysis		\$	170
- Herbicide Analysis		\$	212
TPH	418	\$	58
Methylene Blue Active Substances	4251	\$	53
Organics/Purgeable Halocarbons	601	\$	143
Organics/Acetoin and Acrylonitrile	603	\$	85
Organochlorine Pesticide and PCBs	608	\$	180
Organics - Base/Neutral and Acids	625	\$	424
ADDITIONAL IN CHARGES			
24-HOUR TURNAROUND		\$	25
EXTRA HANDLING - e.g. RAD SAMPLES		\$	20
DIFFICULT MATRIX		\$	60
NOTE: Prices that changed by other than escalation are shaded.			
UTLY96POOLCONS.WSS.WK3			

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP # 1MDR51

COST ACCOUNT WORKSCOPE SUMMARY

Functional organization: WSCF Laboratory

Workscope Summary: Provide general analytical chemistry services for samples that are < 1mR/hr in support of Hamford programmatic missions. WSCF will provide support to 1) Liquid Effluent Facilities, 2) Industrial Hygiene, 3) RCRA Groundwater Monitoring, 4) Environmental Monitoring, and 5) Other programs as requested.

APPROVED BASELINE:

Activity Description - Sample Receiving/Preparation

This activity entails receiving samples into WSCF Laboratory; logging the sample; assuring all samples are under strict chain-of-custody; ensuring inventory of radionuclides content of the Laboratory is up to date and current; and HPT screening of the samples.

Sample Receiving/Preparation

HPT Support

FY 1998

FTEs

Dollars

1.0

77.5

0.3

31.6

0.5

32.0

Mutually Agreed Upon Workscope Deliverables and Due Dates

- 1 10/01/97 to 09/30/98

Receiving samples into WSCF Laboratory; logging the sample; assuring all samples are under strict chain-of-custody; and ensuring inventory of radionuclides content of the Laboratory is up to date and current.

- 2 10/01/97 to 09/30/98

Perform radiological screening at WSCF Laboratory.

Subtotal Net

1.8

141.1

Total Activity

1.8

166.8

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1MDR51

Activity Description - Analyses

This activity is for the analytical work that is performed on each sample after it has been received. It includes Organic, Inorganic, and Radiochemical lab analyses, development and procurement of standards to support analyses at WSCF, and procurement of shop and lab supplies needed to perform analyses. It also includes maintenance on analytical equipment.

Inorganic Chemistry	6.0	576.3
Radioanalytical Chemistry	10.0	720.1
Organic Chemistry	7.0	574.7
Standards Laboratory	0.7	50.9
Stockroom	1.1	714.1
WSCF Analytical Instrument Maintenance	0.2	28.4

Mutually Agreed Upon Workscope Deliverables and Due Dates

- 10/01/97 to 09/30/98
Analytical work performed on each sample after it has been received. It includes Organic, Inorganic and Radiochemical laboratory analyses.
- 10/01/97 to 09/30/98
Development and procurement of analytical standards to support analyses.
- 10/01/97 to 09/30/98
Procurement of analytical supplies for the Stockroom necessary to perform analyses.
- 10/01/97 to 09/30/98
Instrument maintenance of analytical equipment.

Subtotal Net	25.0	2,683.5
Total Activity	25.0	3,166.6

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1MDR51

Activity Description - Data Administration/Recording

This activity supports QA and LIMS/LABCORE to track data through the Laboratory and to meet reporting requirements for WSCF Laboratory.

LIMS/LABCORE

QA Support

0.2

42.0

0.8

60.6

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

QA support to WSCF Laboratory

2 10/01/97 to 09/30/98

LIMS/LABCORE support to track data through the laboratory and to meet reporting requirements.

Subtotal Net

1.0

102.6

Total Activity

1.0

117.0

Activity Description - Archive/Disposal

This activity provides support to archive samples as required by the customer and/or disposal of the samples as appropriate.

Waste Handling

2.7

183.6

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Archive samples and/or disposal of the samples as appropriate.

Subtotal Net

2.7

183.6

Total Activity

2.7

387.3

FY 1998 Annual Work Plan

Part II - Activity Detail

GAP #

1MDR51

Activity Description - Program/Administration

This activity provides program support and customer interface, tracking of costs versus budget, procedure maintenance, provide instructions, development of training programs/modules and training records administration per Analytical Services training requirements, and provide Sample Management support which provides determination on which laboratory provides the customer with the best product to meet their analytical requirements; ensure Data Management services meet the requirements of the new site customer; prepares SAFs which are forwarded to WSCF Laboratory and to the sampling group to notify them of all sampling and analysis requirements and prepares cost estimates for new project startup.

Procedure Maintenance

0.2

15.7

Training

0.4

29.7

Program Business Management

0.5

42.8

WSCF Sample Management

2.0

126.7

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Provide program support and customer interface.

2 10/01/97 to 09/30/98

Provide Sample Management support for WSCF Laboratory.

3 10/01/97 to 09/30/98

Procedure preparation and maintenance of existing procedures.

4 10/01/97 to 09/30/98

Provide instructions, development of training programs/modules and training records administration per Analytical Services training requirements.

Subtotal Net

3.1

214.9

Total Activity

3.1

272.9

Approved Net

33.6

3,306.9

Approved Total

33.6

4,110.6

**FY 1998 Program Plan
Work Breakdown Structure Dictionary
DOH/Proration/Service Center Rate Calculation Worksheet
(Dollars in 000's)**

RL WBS # 7.1.1.4.3.1

CAP #

1MDR51

Pool Title:

Basis for Rate:

Provide the basis of the rate(s). (If another spreadsheet is used, insert that document for Part V.)

- Show what base is being used to calculate your rates.
- Where do the liquidation numbers come from? Specify by program if possible.
- Discuss significant changes from last year to this year.
- Assumptions used, i.e., escalation, historical, activity based costing ...

This is liquidated out to Programs within WMC and other contractors for samples received at WCSF Laboratory.

		Chemist/Chem Tech Hours*
Sample Receipt	Chemist/Chem Tech hours x	8%
Management	Chemist/Chem Tech hours x	17%
Standards Laboratory	Chemist/Chem Tech hours x	8%
Data Admin/Reporting	Chemist/Chem Tech hours x	24%
HPTs	Chemist/Chem Tech hours x	3%
Archive/Disposal	Chemist/Chem Tech hours x	8%
Program Administration	Chemist/Chem Tech hours x	21%
		= Total Analytical work hours
Stockroom Supplies	Total hours x Labor rate x overhead rate = Analytical cost x Stockroom percentage (15%)	
Total Analytical cost + Stockroom + Total Infrastructure Cost + Non-Labor \$ = Unit Price		

*Hours based on the time it takes for the analysis to be performed.

Assumptions:

- (1) The %s remains the same as FY 1997 but a 3% escalation factor is added for escalation for FY 1998 unit prices.

1MDR51, WSCF LABORATORY
FY 1998 PROJECTIONS TO PROGRAMS

RL WBS # 7.1.1.4.3.1

PROGRAM	FUNCTIONAL \$	PROGRAM \$
Environmental Monitoring	666	791
Transition Projects	114	135
Liquid Effluent Facilities	1,386	1,647
Solid Waste	118	140
Analytical Services	494	587
ROM (Groundwater)	688	817
Spent Nuclear Fuels	30	36
Special Activities	199	237
Bechtel	35	41
Miscellaneous Customers	91	108
Tank Characterization	160	190
	3,981	4,729

Based on Hanford Sample Projections (May 23, 1997)

UNIT PRICES

FY 1997 WSCF UNIT PRICES - REV 0			
U:\YL97\UNIT97_UPWS1.XLS			
20-Sep-96			
04:17:42 PM			
WSCF UNIT PRICES FOR FY 1997			
ANALYTE	METHOD REF No	MATRIX	FY 1997 PRICE
INORGANIC CHEMISTRY			
ICP Metals	9010	LIQUID	\$ 186
ICP Metals (INCL EXTRACTION)	9010	SOLID	\$ 276
ICP MS	200 B	LIQUID	\$ 200
ICP MS (INCL EXTRACTION)	200 B	SOLID	\$ 280
ICP Metals - ADDITIONAL			\$ 53
Anions by IC	9056 / 300 0	LIQUID	\$ 159
Anions by IC	9056 / 300 0	SOLID	\$ 212
GFAA	700X	LIQUID	\$ 42
GFAA	700X	SOLID	\$ 53
GFAA (CLP)	CLP	LIQUID	\$ 340
GFAA (CLP)	CLP	SOLID	\$ 400
AA-Hg (Cold Vap AA)	7471	LIQUID	\$ 64
AA-Hg (Cold Vap AA)	7471	SOLID	\$ 85
AA-Hg - TCAP			#VALUE!
Fluoride	340 1 / 340 2	LIQUID	\$ 53
Fluoride	340 1 / 340 2	SOLID	\$ 69
Ammonia	350 5	LIQUID	\$ 53
Ammonia	350 5	SOLID	\$ 74
Cyanide	9010	LIQUID	\$ 106

UNIT PRICES

Cyanide		9010	SOLID	\$ 127
Coliform		9010	SOLID	\$ 53
Dissolved O2 (442)		442		\$ 27
Turbidity (180.1)		180.1		\$ 22
Bio Oxygen Demand		405.1		\$ 80
Chem Oxygen Demand		410.1/410.2		\$ 80
Particle Size		ASTM D422		\$ 53
Specific Gravity				\$ 53
Tot Dissolved Solids		180.1		\$ 38
Tot Suspended Solids		180.2		\$ 38
Pct solids/Moisture				\$ 32
Bottom				\$ 53
Alkalinity (Carbonate/Bi-Carbonate)		310.1		\$ 48
Conductivity		120.1	LIQUID	\$ 23
Conductivity		120.1	SOLID	\$ 32
pH Direct Measurement		150.1	LIQUID	\$ 19
pH Direct Measurement		150.1	SOLID	\$ 27
RADIOCHEMISTRY				
Alpha/Beta			AIR	\$ 106
Alpha/Beta			LIQUID	\$ 106
Alpha/Beta			SOLID	\$ 133
Room Air Sample				\$ 32
AgZ (Ind Ru-106, Sn-113, Sb-125, I-129)				\$ 186
GEA			Air	\$ 133
GEA			Liquid	\$ 133
GEA			Solid	\$ 154
H-3			Air	\$ 133
H-3			Liquid	\$ 106

UNIT PRICES

H-3			Solid	\$ 133
C-14			LIQUID	\$ 159
C-14			SOLID	\$ 212
N-63			LIQUID	\$ 210
N-63			SOLID	\$ 237
Sr-90			Air	\$ 212
Sr-90			Liquid	\$ 180
Sr-90			Solid	\$ 239
Tc-99			LIQUID	\$ 170
Tc-99			SOLID	\$ 212
I-129			LIQUID	\$ 186
I-129			SOLID	\$ 212
Pm-147			LIQUID	\$ 191
Ra-226			LIQUID	\$ 285
Ra-226			SOLID	\$ 292
Total Radium (Ra-226 PLUS Ra-226)			LIQUID	\$ 285
Total Radium (Ra-226 PLUS Ra-226)			SOLID	\$ 292
Np-237			LIQUID	\$ 212
Np-237			SOLID	\$ 265
Pu-238, 239/240			AIR	\$ 292
Pu-238, 239/240			LIQUID	\$ 223
Pu-238, 239/240			SOLID	\$ 285
Pu-241			AIR	\$ 318
Pu-241			LIQUID	\$ 318
Pu-241			SOLID	\$ 318
Am-241			AIR	\$ 265
Am-241			LIQUID	\$ 212
Am-241			SOLID	\$ 286
U-Gross			AIR	\$ 95

UNIT PRICES

U-Gross				LIQUID	\$ 95
U-Gross				SOLID	\$ 159
Isotopic Uranium (U234,235,238)				AIR	\$ 265
Isotopic Uranium (U234,235,238)				LIQUID	\$ 212
Isotopic Uranium (U234,235,238)				SOLID	\$ 265
MISCELLANEOUS RAD CHEM SERVICES					
Stream Volume for Liquid Effluents				AIR	\$ 11
Composite Preparation (each composite)				AIR	\$ 53
Composite Preparation (each composite)				LIQUID	\$ 27
Archive/Hold for Composite				AIR/LIQ	\$ 11
Digestion/Leaching				SOLID	\$ 53
Sample Disposal				ALL	#VALUE!
Consulting (per hour)				ALL	\$ 132
Overtime - Chemist (per hour)				ALL	\$ 198
Overtime - Chem Tech (per hour)				ALL	\$ 180
ORGANIC CHEMISTRY					
VOA			8260	LIQUID	\$ 318
VOA			8260	SOLID	\$ 371
SVOA			8270	LIQUID	\$ 530
SVOA			8270	SOLID	\$ 583
SVOA (partial)-customized					\$ 135
Miscellaneous Organic Analysis				LIQUID	\$ 170
WTPH-G	GAS		8015M	LIQUID	\$ 117
WTPH-G	GAS		8015M	SOLID	\$ 118
WTPH-D	DIESEL		8015M	LIQUID	\$ 122
WTPH-D	DIESEL		8015M	SOLID	\$ 133

UNIT PRICES

Oil/Grease		9070	LIQUID	\$ 89
Oil/Grease		9071	SOLID	\$ 80
TIC				\$ 80
TIC				\$ 80
TOC		9060		\$ 80
TOC				\$ 80
Total Carbon				\$ 80
TOX		9020	LIQUID	\$ 88
TOX		9023.0	SOLID	\$ 88
PCB's - Water		9081.0	LIQUID	\$ 110
PCB's - Solid or Oil		9081.0	SOLID	\$ 110
MISCELLANEOUS ORGANIC SERVICES				
Toxicity Characteristic Leaching Procedure (EPA 1311)		1311		
- Extraction (metals, pesticides, herbicides, & SVOC's)				\$ 90
- Extraction (zero headspace (ZHE for volatiles)				\$ 120
Analysis of Leachate by EPA SW-846 Procedures				
- Herbicides		8161.0		\$ 239
- Metals		8010		\$ 188
- Pesticides		9081.0		\$ 180
- Semi-Volatile Organics		8270		\$ 530
- Volatile Organics		8290		\$ 318
- Reactivity Cyanide				\$ 95
- Reactivity Sulfide				\$ 95
INDUSTRIAL HYGIENE				
IH ANALYSIS				
Acetic Acid				\$ 52

UNIT PRICES

Acids - 8 By IC (or I)			\$	129
Bulk Asbestos			\$	34
Fiber Counts			\$	20
Beryllium - Air			\$	38
Beryllium - Smear			\$	38
Chromium VI			\$	42
Coal Tar Pitch Volatiles			\$	40
Cyanide/HCN (each)			\$	47
Formaldehyde - Chrom			\$	51
Glutaraldehyde			\$	104
Hydrazine			\$	53
ICP Scan			\$	230
Isocyanates			\$	150
Lead-Bulk, Including Paint			\$	35
Lead - Swipe			\$	35
Mercury			\$	64
Metals - Flame AA			\$	35
NOx/NO2			\$	70
Nuisance Dust - Total			\$	15
Nuisance Dust - Resp.			\$	15
Oil Mist			\$	53
PCBs - Swipes			\$	110
PNAa			\$	178
Silica, Crystalline			\$	85
TSP			\$	80
Common Org. Solvents			\$	40
Ethylene Oxide			\$	68
Carbon Disulfide			\$	68
PCBs - Florist Tubes			\$	88

UNIT PRICES

PRICES FROM SOHW (Additions to orig FY 95 list)			
Pesticides/PCBs	8081	\$	220
Paint Filler Liquid	9095	\$	11
Ignitability	1010	\$	37
Corrosivity	1110	\$	11
TCL	1311		
- Metals Extraction		\$	90
- Semi VOA Extraction		\$	90
- Zero Headspace Ext.		\$	120
- VOA Analysis		\$	267
- Semi VOA Analysis		\$	419
- Pesticides/PCB Analysis		\$	170
- Herbicide Analysis		\$	212
TPH	418	\$	58
Methylene Blue Active Substances	4251	\$	53
Organics/Purgeable Halocarbons	801	\$	143
Organics/Acroleins and Acrylonitrile	803	\$	85
Organochlorine Pesticide and PCBs	808	\$	180
Organics - Base/Neutral and Acids	825	\$	424
ADDITIONAL IN CHARGES			
24-HOUR TURNAROUND		\$	25
EXTRA HANDLING - e.g. RAD SAMPLES		\$	20
DIFFICULT MATRIX		\$	60
NOTE: Prices that changed by other than escalation are shaded..			
LT/L96/POOL/CONS-W55.WK3			

FY 1998 Annual Work Plan

Part I - Summary

Revision # 0				28-Aug-97	
Cost Account Number	Cost Account Title	Funding Source:			
1MDR51	222-S Non-Tank Characterization	G&A			
WBS Number	WBS Title	Service Center		x	
7.1.1.4.3.2	222-S Laboratory	DOH/PM			
Budget Analyst: J. M. Kier		FY 1998 CAP			
Cost Account Manager	J. R. Pfruck	COST ELEMENTS		\$000'S	
Financial Manager	R. A. Spahr	0 Labor	2,971		
Program Manager	C. G. Matteson	1 Materials	488		
RL Program Manager	R. P. Carter	2 Purchased Services	196		
Full Time Equivalents (FTEs)		3 Other Hanford Contractors	35		
	Exempt	Nonexempt	Bargaining	Total	7x Fee/Non DOH
Organizational	11.7	1.0	24.8	37.5	0
Support	2.8	0.6	0.0	3.3	0
Total	14.5	1.5	24.8	40.8	0
		Subtotal Net Budget		3,884	
		4 Site Services		85	
		5 Internal Charges		130	
		6 LMSI Support		6	
		7C DOH		490	
		Total Baseline		4,404	
SIGNATURES		BASELINE APPROVAL			
CAM:	Date:			Date:	
Program Manager:	Date:				
RL Program Manager:	Date:	Indirect Program Administration:			
<p>The FY 1998 Annual Work Plan (AWP) for 1MDR, Sample Analysis, is being submitted unsigned due to recent reductions in the sample load for Tank Characterization Programs. These reductions has not been incorporated into the AWP. A Revised AWP for the sample analysis will be submitted by September 22, 1997 with the appropriate signatures.</p>					

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1MOR81

COST ACCOUNT WORKSCOPE SUMMARY

Functional Organization: 222-S Laboratory

Workscope Summary: 222-S Laboratory is to provide analytical chemistry services for Process Control Samples that are >1mR/hr performed to ensure Facility Operations (242-A process and slurry; Environmental Restoration total activities; stacks/soil/water monitoring for B-Plant, K-Basins, etc.) are maintained within specified parameters. Process Control in general has lower QA and faster reporting requirements.

222-S Laboratory is to provide analytical chemistry services for Protocols samples. Protocols samples are analyses that require additional oversight of operations and requires formal documentation. Protocols require QA oversight, blanks, standards, duplicates, C G Monitor

222-S Laboratory supports a multitude of Programs.

APPROVED BASELINE:

FY 1998

Activity Description - Hot Cell Sample Receipt Team

FTEs

Dollars

This activity entails receiving samples into 222-S Laboratory; logging the sample; assuring all samples are under strict chain-of-custody; ensuring inventory of radionuclides content of the Laboratory is up to date and current; and HPTs to perform dose rate and contamination surveys upon receipt of samples.

Sample Custodians

Sample Receipt Team

HPT Support

02

130

06

480

12

1020

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 08/30/98

Receiving samples into 222-S Laboratory; logging the sample; assuring all samples are under strict chain-of-custody; and ensuring inventory of radionuclides content of the Laboratory is up to date and current

2 10/01/97 to 08/30/98

Perform radiological screening at 222-S Laboratory

Summary

Subtotal Net

20

1610

Total Activity

20

1693

FY 1998 Annual Work Plan

Part III - Activity Detail

CAP #

1000661

Activity Description - Sample Analysis Team

This activity is for the analytical work that is performed on each sample after it has been received. This work entails sample preparation, Radiochemistry, Inorganic, and Organic analyses; development of procurement of standards to support analyses at 222-S; shop and laboratory supplies needed to perform analyses; HPT screening; and troubleshooting.

Counting Room Team

8.8

547.8

Direct Analysis/Wet Chemistry Team

3.9

296.0

Preparation Analysis Team

3.0

241.4

Radiochemical Separations Team

7.2

606.4

Standards Laboratory Team

2.4

183.6

Stockroom Support

0.3

423.6

HPT Support - Analysis

1.8

157.7

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 06/30/98

Analytical work performed on each sample after it has been received. This includes sample preparation and analysis of the samples.

2 10/01/97 to 06/30/98

Development and procurement of analytical standards to support analyses.

3 10/01/97 to 06/30/98

Procurement of analytical supplies for the Stockroom necessary to perform analysis.

4 10/01/97 to 06/30/98

HPT screening to support analysis.

Subtotal Net

25.4

2,450.6

Total Activity

25.4

2,537.2

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

TMDR01

Activity Description - Data Administration/Reporting

This activity provides Quality Assurance (QA) and Quality Control (QC) officer support, QA support for the preparation review and approval of project data packages. This account includes daily operations support to the LABCORE computer systems, Buyer Technical Representative activities, updating reports and instrument interfaces, and acceptance testing of updates.

QA Support

0 9

56 7

LIMS/LABCORE Support

0 2

61 6

Laboratory Leader Support

0 4

29 1

Project Coordination

0 6

48 0

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Provide Quality Assurance (QA) and Quality Control (QC) officer support for preparation review and approval of project data packages at 222-S Laboratory

2 10/01/97 to 09/30/98

LIMS/LABCORE support to track data through the laboratory and to meet reporting requirements.

3 10/01/97 to 09/30/98

Preparation of Data Packages per customer's requirements

Subtotal Net

2 1

214 6

Total Activity

2 1

242 9

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

15DR61

Activity Description - Archive/Disposal

This activity provides support to dispose/archive of samples as required by the customer, tracking samples for disposal, provide HPTs to perform dose rate and contamination surveys for short/long term archival or for disposal, and transportation support.

Waste Handling

33

239.0

Sample Custodian

04

26.2

HPT Support

08

68.2

Transportation

00

5.0

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Archive samples and/or disposal of the samples as appropriate

2 10/01/97 to 09/30/98

Provide HPT screening for Archive and disposing to samples

3 10/01/97 to 09/30/98

Provide transportation of samples for disposal.

4 10/01/97 to 09/30/98

Tracking of samples for disposal/archive

Subtotal Net

45

338.4

Total Activity

45

519.4

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

IMDR#1

Activity Description - Facility Planning Team/Support

This activity provides program support and customer interface, establishes customer points of contact, developing a facility analytical schedule, establishing facility priorities, tracking and reporting progress against the integrated schedule, Laboratory Leaders for project setup, sample disposal, and will provide customer interface for small projects, records scanning support, provide technical quality support for all aspects of the analytical process and tracking of cost versus budget support.

Process Analysis Management

03

312

Coordinator

03

234

Laboratory Leaders

09

581

Project Coordination

11

665

Analytical Work Scheduler

03

236

QA Support

04

321

Records Management

03

320

Financial Representative

05

393

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Tracking and reporting progress against the integrated schedule

2 10/01/97 to 09/30/98

Provide progress reports to customers

3 10/01/97 to 09/30/98

Conduct/coordinate technical reviews of analytical work

4 10/01/97 to 09/30/98

Develop short/long range analytical work schedule

5 10/01/97 to 09/30/98

Coordinate/perform reviews for data quality and accuracy for organic, inorganic and radiochemistry

6 10/01/97 to 09/30/98

Approve disposition of samples and prep after analysis

7 10/01/97 to 09/30/98

Establish agreements with customers for quality, schedule, and sample disposition for identified work

Subtotal Net

41

3262

Total Activity

41

3782

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1MDR61

Activity Description - Technical Support

This activity provide procedure maintenance, develop training program/modules per Analytical Services training requirements, Sample Management support which provides determination on which laboratory provides the customer with the best product to meet their analytical requirements; ensure Data Management services meet the requirements of the new site customer; prepares SAFs which are forwarded to 222-S Laboratory and to the sampling group; and technical support from NUMATEC to perform specific analysis (Particle Size, Adiabatic Calorimetry, settled density, etc.).

222-S Training

0.4

30.0

Procedure Administration

0.4

44.8

Sample Administrative Support

0.7

51.3

Technical Development (NUMATEC)

1.0

68.3

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 06/30/98

Procedure preparation and maintenance of existing procedures.

2 10/01/97 to 06/30/98

Provide instructions, development of training program/modules, and training records administration per

Analytical Services training requirements.

3 10/01/97 to 06/30/98

Perform specific analysis per customer's requirements.

4 10/01/97 to 06/30/98

Provide Sample Management support

Subtotal Net

2.6

196.2

Total Activity

2.5

238.0

Approved Net

40.6

3,694.0

Approved Total

40.6

4,404.0

1MDR61, 222-S NON-TANK CHARACTERIZATION
FY 1998 PROJECTIONS BY PROGRAM

RL WBS # 7.1.1.4.3.2

PROGRAM	FUNCTIONAL \$	PROGRAM \$
Liquid Effluents	35	42
Solid Waste	188	200
B-Plant/WESF	184	195
PUREX	63	75
PFP	25	30
Spent Nuclear Fuels	758	900
Tank Farm Operations	76	90
Safety Issue Resolution	285	339
Environmental Monitoring	74	88
Analytical Services	581	666
Misc. Programs	25	30
Bechtel	631	750
Total 222-S Non-Tank Char.	2865	3405

Based on Hanford Sample Projections (May 23, 1997)

RL WBS # 7.1.1.4.3.2

222-S LABORATORY	HOURS PER ANALYTE/ REPORT	% OF HOURS PER ANALYTE										
		QC	SAMPLE RECEIPT	TRAINING	ADMIN/ OPB TIME	MGMT	HPTs	STAND. LAB	TOTAL ANALYT HRS	TOTAL LABOR \$	STOCK- ROOM	TOTAL ANALYTE \$
SAMPLE PREPARATION	HOURS	20.0%	N/A	3.0%	21.6%	4.0%	10.6%	N/A		Convert Labor Hour to Dollars	10.70%	Total Labor + Stock- Room
INORGANIC CHEMISTRY	HOURS	20.0%	3.1%	3.0%	21.6%	4.0%	10.6%	6.0%			10.70%	
RADIOCHEMISTRY (1)	HOURS	20.0%	20.0%	3.0%	21.6%	4.0%	10.6%	6.0%			10.70%	
ORGANIC CHEMISTRY	HOURS	20.0%	3.1%	3.0%	21.6%	4.0%	10.6%	6.0%			10.70%	
Duplicates = 1 Sample Sample QC = 1 Sample QC consist of Blank, Spikes, Standards.												

222-S LABORATORY	% OF TOTAL ANALYTE HOURS SUPPORT TO ANALYTICAL WORK					NON- LABOR \$	TOTAL UNIT PRICE (2)
	ARCH/ DISP	DATA ADM/ REPTYG	FAC PLAN TM/SUP/ TECH	TOTAL SUPPORT HOURS	TOTAL SUPPORT LABOR \$		
SAMPLE PREPARATION	13.0%	4.6%	6.0%		Convert Labor Hours to Dollars	9.80%	Total Analyte \$ +
INORGANIC CHEMISTRY	13.0%	4.6%	6.0%			9.80%	Total Analyte \$ +
RADIOCHEMISTRY (1)	13.0%	4.0%	6.0%			9.80%	Total Support + Non-Labor \$
ORGANIC CHEMISTRY	13.0%	4.6%	6.0%			9.80%	+ Unit Cost
						Adder to total Analyte & Suppt \$	
Data Report	N/A	N/A	6.0%			9.80%	

COMMENTS:

(1) The increase in Sample Receipt percentage is due to Depot workscope associated with radiochemistry work which requires additional handling and cleanup.

*Admin/Opb Time includes downtime, building operations, changeout, procedure review, housekeeping, etc.

222-S LABORATORY

FY 1988 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.2

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 88 PRICES
NOT CELL/SAMPLE RECEIPT TEAM					
#EXTRD01	DLQVOL1	LIQUID	Drainable Liquid Recovered-Vol	LO-180-103	38
#EXTRD01	DLQVOL1	SOLID	Drainable Liquid Recovered-Vol	LO-180-103	38
#EXTRD01	DLQWT01	LIQUID	Drainable Liquid Recovered-WT	LO-180-103	38
#EXTRD01	DLQWT01	SOLID	Drainable Liquid Recovered-WT	LO-180-103	38
#EXTRD01	EST GML	LIQUID	Estimated GML - Calculated	LO-180-103	38
#EXTRD01	EST GML	SOLID	Estimated GML - Calculated	LO-180-103	38
#EXTRD01	EXTRUD01	LIQUID	Extrude Segment in Hot Cell	LO-180-103	888
#EXTRD01	EXTRUD01	SOLID	Extrude Segment in Hot Cell TE	LO-180-103	1049
#EXTRD01	EXTRUD01	SOLID	Extrude Segment in Hot Cell - Rotary	LO-180-103	1855
#EXTRD01	LLQWT01	LIQUID	Drainable Liquid Recovered-WT	LO-180-103	38
#EXTRD01	ILLQWT01	SOLID	Drainable Liquid Recovered-WT	LO-180-103	38
#EXTRD01	NOTEBOOK	LIQUID	Notabook with Source Data	LO-180-103	38
#EXTRD01	NOTEBOOK	SOLID	Notabook with Source Data	LO-180-103	38
#EXTRD01	ORGVOL01	LIQUID	Organic Volume Present	LO-180-103	38
#EXTRD01	ORGVOL01	SOLID	Organic Volume Present	LO-180-103	38
#EXTRD01	SLDVOL01	LIQUID	Solids Recovered - Volume	LO-180-103	38
#EXTRD01	SLDVOL01	SOLID	Solids Recovered - Volume	LO-180-103	38
#EXTRD01	SLDWT01	LIQUID	Solids Recovered - Weight	LO-180-103	38
#EXTRD01	SLDWT01	SOLID	Solids Recovered - Weight	LO-180-103	38
#EXTRD01			EXTRUSION - AUGERS	LO-180-103	585
#EXTRD01			EXTRUSION - GLURP	LO-180-103	323
#APPEAR1	APPEAR01	LIQUID	Appearance of a sample	LA-519-151	21
#APPEAR1	APPEAR01	SOLID	Appearance of a sample	LA-519-151	21
#ARCHV01	ARCHV01	LIQUID	Archive aliqu of sample/hotcell	None	25
#ARCHV01	ARCHV01	SOLID	Archive aliqu of sample/hotcell	None	27
#ARCHV02	ARCHV02	LIQUID	Archive aliqu of sam/sample prep	None	23
#ARCHV02	ARCHV02	SOLID	Archive aliqu of sam/sample prep	None	27
#ARCHIVE	ARCHIVE	LIQUID	Archive an aliquot of sample	None	21
#ARCHIVE	ARCHIVE	SOLID	Archive an aliquot of sample	None	21
#BKDEN01	BKDEN01	LIQUID	Bulk Density of Sample	LO-180-103	78
#BKDEN01	BKDEN01	SOLID	Bulk Density of Sample	LO-180-103	127
#COMPOS01	COMPOS01	LIQUID	Make Composite Sample	LO-180-103	35
#COMPOS01	COMPOS01	SOLID	Make Composite Sample	LO-180-103	38
#FILTER01	FILTER01	LIQUID	Filter Liquid / hotcell	LA-504-101	28
#FILTER02	FILTER02	LIQUID	Filter Liquid / sample prep	LA-504-101	22
#FSLDWT01	FSLDWT01	LIQUID	Weight of Solids - Filtered	LA-548-141	31
#FSLDWT01	FSLDWT01	SOLID	Weight of Solids - Filtered	LA-548-141	31
#HOMGNZ01	HOMGNZ01	SOLID	Homogenize Sample	LO-180-103	38
#SHIP-PNL	SHIP-PNL	LIQUID	Ship aliquot of sample to PNL	None	85
#SHIP-PNL	SHIP-PNL	SOLID	Ship aliquot of sample to PNL	None	72
			EOX	LI-000-200	22
PCL ANALYSIS:					
#ICP-P02		SOLID	ICP (PCL Digest of Solids)	LA-505-151/152	182
#ICP-P03		LIQUID	ICP (PCL Digest) Li Only	LA-505-151/153	182
#ICP-P04		SOLID	ICP (PCL Digest) Cd, Cr, Pb	LA-505-151/154	182
#ISU-A1	#ISU-A1	SOLID	(Isotopic Uranium (ICP/MS) Acid Dig- Solid	LT-508-101	182
#ISU-A1	#ISU-A1	SOLID	(Isotopic Uranium (ICP/MS) Fusion Dig	LT-508-101	192

222-S LABORATORY
FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.2

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
MSU-B1	MSU-B1	LIQUID	Isotopic Uranium (ICP/MS) Acid Dig-Liquid	LT-506-101	192
MSU-D1	MSU-D1	LIQUID	Isotopic Uranium (ICP/MS) Direct Liquid	LT-506-101	192
MSACT-A1	MSACTA1	SOLID	Actinides (ICP/MS) Acid Dig - Solid	LT-506-101	258
MSACT-F1	MSACTF1	SOLID	Actinides (ICP/MS) Fusion Dig	LT-506-101	258
MSACT-B1	MSACTB1	LIQUID	Actinides (ICP/MS) Acid Dig - Liquid	LT-506-101	258
MSACT-D1	MSACTD1	LIQUID	Actinides (ICP/MS) Direct Liquid	LT-506-101	258
MSCTC-A1	MSCTC-A1	SOLID	Tc-99 (ICP/MS) Acid Dig - Solid	LT-506-101	154
MSCTC-F1	MSCTC-F1	SOLID	Tc-99 (ICP/MS) Fusion Dig - Solid	LT-506-101	154
MSCTC-B1	MSCTC-B1	LIQUID	Tc-99 (ICP/MS) Acid Dig - Liquid	LT-506-101	154
MSCTC-D1	MSCTC-D1	LIQUID	Tc-99 (ICP/MS) Direct Liquid	LT-506-101	154
MSCS-A1	MSCS-A1	SOLID	Isotopic Cesium (ICP/MS) Acid Dig-Solid	LT-506-101	192
MSCS-F1	MSCS-F1	SOLID	Isotopic Cesium (ICP/MS) Fusion Dig	LT-506-101	192
MSCS-B1	MSCS-B1	LIQUID	Isotopic Cesium (ICP/MS) Acid Dig-Liquid	LT-506-101	192
MSCS-D1	MSCS-D1	LIQUID	Isotopic Cesium (ICP/MS) Direct Liquid	LT-506-101	192
MSZR-A1	MSZR-A1	SOLID	Zr-93 (ICP/MS) Acid Dig - Solid	LT-506-101	192
MSZR-F1	MSZR-F1	SOLID	Zr-93 (ICP/MS) Fusion Dig	LT-506-101	192
MSZR-B1	MSZR-B1	LIQUID	Zr-93 (ICP/MS) Acid Dig - Liquid	LT-506-101	192
MSZR-D1	MSZR-D1	LIQUID	Zr-93 (ICP/MS) Direct Liquid	LT-506-101	192
MSSN-A1	MSSN-A1	SOLID	Sn-126 (ICP/MS) Acid Dig - Solid	LT-506-101	192
MSSN-F1	MSSN-F1	SOLID	Sn-126 (ICP/MS) Fusion Dig	LT-506-101	192
MSSN-B1	MSSN-B1	LIQUID	Sn-126 (ICP/MS) Acid Dig - Liquid	LT-506-101	192
MSSN-D1	MSSN-D1	LIQUID	Sn-126 (ICP/MS) Direct Liquid	LT-506-101	192
MSSEL-A1	MSSEL-A1	SOLID	Elemental Analysis (ICP/MS) Acid Dig-Solid	LT-506-101	258
MSSEL-F1	MSSEL-F1	SOLID	Elemental Analysis (ICP/MS) Fusion Dig	LT-506-101	258
MSSEL-B1	MSSEL-B1	LIQUID	Elemental Analysis (ICP/MS) Acid Dig-Liquid	LT-506-101	258
MSSEL-D1	MSSEL-D1	LIQUID	Elemental Analysis (ICP/MS) Direct Liquid	LT-506-101	258
VISCOB1	VISCOB1	LIQUID	Viscosity Analysis by PCL	LT-519-115	369
VISCOB1	VISCOB1	SOLID	Viscosity Analysis by PCL	LT-519-115	403
ICP-P01		SOLID	ICP (PCL Digest)	LA-505-151/H01	192
ADIABC01	ADIABC01	LIQUID	Adiabatic Calorimetry	WHC-SD-WM4	1007
ADIABC01	ADIABC01	SOLID	Adiabatic Calorimetry	WHC-SD-WM4	1158
BOILPTD1	BOILPTD1	LIQUID	Boiling Point Study	PCL does this	127
PARTSZ01	PARTSZ01	SOLID	Particle Size Analysis	LT-519-101	111
PCLDIG01			Digestion done by PCL	PCL Method	263
RSSLD-D1		SOLID	Digestion - Water No Acid & A Added	LA-504-101	293
RSSLD-D1		WATER	Digestion - Water Acid Added	LA-504-101	291
			Laser Ablation/Mass Spec Screen	LT-506-102	458
			TCLP Digestion/Extraction	LA-544-134	510
			Setting Rate	Test Plan	182
			Sediment Density	Test Plan	182
			Centrifuge Particle Density	Test Plan	374
PREPARATION ANALYSIS TEAM					
EDTA-D1			EDTA/HEDTA by C Z E	LA-533-113	45
IC2-01		LIQUID	Organic Acids-IC Dionex 4000	LA-533-105	384
IC2-01		SOLID	Organic Acids-IC Dionex 4000	LA-533-105	384
IC3-01		LIQUID	Anions by IC - Dionex 100	LA-533-101	192
IC3-01		SOLID	Anions by IC - Dionex 100	LA-533-101	192
IC3-01		ALL	Single Analyte Parameter - IC	LA-533-101	128
IC4-01		LIQUID	F. ORG Acid-IC Dionex 4000 / 4500	LA-533-105	384

FY 1998 UNIT PRICES - LABCORE

Code Test	Parameters Lab/cost	MATRIX	Description	Reference #	FY 88 PRICE
IC4-01		SOLID	F. ORG Acid-IC Dionex 4000/4500	LA-533-105	384
IC4-01		ALL	Single Analyte Parameter - IC	LA-533-105	182
IC5-01		LIQUID	Anions & Cations on Dionex 600	LA-533-115	384
IC5-01		SOLID	Anions & Cations on Dionex 500	LA-533-115	384
IC5-01		ALL	Anions & Cations on Dionex 500	LA-533-115	182
ICP-T01			TCLP Digest of Liquids	LA-505-151	182
ICP-Z01			Fusion Zr Crucible (all metals)	LA-505-151	182
ICDIP-01		LIQUID	Acid Dig-Sandfilter Backwash	LA-505-162	508
ICDIG-01		SOLID	Acid Dig-Sandfilter Backwash	LA-505-162	557
IC-01		LIQUID	Anions by IC - Dionex 4000/4500	LA-533-105	320
IC-01		SOLID	Anions by IC - Dionex 4000/4500	LA-533-105	320
ICP-A01		SOLID	ICP (Acid Digest) All Metals	LA-505-151/161	182
ICP-A02		SOLID	ICP (Acid Digest of Solids)	LA-505-151/161	182
ICP-A03		SOLID	ICP (Acid Digest) Li Only	LA-505-151/161	182
ICP-A04		SOLID	ICP (Acid Digest) Li Fe Mn	LA-505-151/161	182
ICP-B01		LIQUID	ICP (Acid Digest of Liquid)	LA-505-151/161	182
ICP-B02		LIQUID	ICP (Acid Digest of a Liquid)	LA-505-151/161	182
ICP-B03		LIQUID	ICP (Acid Digest) Li Only	LA-505-151/161	182
ICP-B04		LIQUID	ICP (Acid Digest) Li Fe Mn	LA-505-151/161	182
ICP-C01		LIQUID	ICP (Acid Digest to Liquid)	LA-505-151/161	182
ICP-C02			ICP (Acid Digest of a Liquid)	LA-505-151/161	182
ICP-C03		LIQUID	ICP (Acid Digest) Li Only	LA-505-151/161	182
ICP-C04		LIQUID	ICP (Acid Digest) Li Fe Mn	LA-505-151/161	231
ICP-F01		SOLID	ICP (Fusion Digest) All Metals	LA-505-151/161	182
ICP-F02		SOLID	ICP (Fusion Digest)	LA-505-151/161	182
ICP-F03		SOLID	ICP (Fusion Digest) Li Only	LA-505-151/161	182
ICP-F04		SOLID	ICP (Fusion Digest) Li Fe Mn	LA-505-151/161	182
ICP-H01		SOLID	ICP (H2O2/Acid) All Metals	LA-505-151/161	182
ICP-QC		QC	ICP (QC) All Metals	LA-505-151	182
ICP (>1)			ICP (High dose runs > 1g)	LA-505-151/161	218
ICP (>20)			ICP (>20 samples 5% discount return)	LA-505-151/161	88
ICP (1-5)			ICP (1-5 Analytes) primary	LA-505-151/161	182
ICP (35-40)			ICP (35-40 Analytes) Tertiary	LA-505-151/161	218
ICP (5-10)			ICP (5-10 Analytes) Secondary	LA-505-151/161	243
ACDGFA01	ACDGFA01	LIQUID	Digestion - Acid (LIQUID) ICP/FL&GFAA	LA-505-156	253
ACIDIG02	ACIDIG02	LIQUID	Acid Digest	LA-505-156	263
ACIDIG03		SOLID	Digestion - Acid (Solid) ICP/FL&HYAA/GF	LA-505-156	508
ACIDL01	ACIDL01	LIQUID	Acid Dilution	LA-505-156	32
CD-03	CD-03	LIQUID	Cadmium by GFAA	LA-505-402	182
CD-03	CD-03	SOLID	Cadmium by GFAA	LA-505-402	182
GRADIG01		SOLID	GFAA Acid Digest	LA-505-401	253
H20DIG02		LIQUID	Water Digest	LA-504-101	133
H20DIL01		LIQUID	Water Dilution of a Sample	LA-504-101	133
	SE-05	LIQUID	Selenium by HYAA	LA-385-132	384
	SE-05	SOLID	Selenium by HYAA	LA-385-132	384
	SUSPLSLD1	SOLID			118
DIRECT ANALYSIS/WET CHEMISTRY TEAM					
PCB			PCBs by SIM-846	LA-523-434	251

222-S LABORATORY

FY 1988 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.2

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 88 PRICE\$
PCB-OIL		OIL	PCBs in oil by SW-84B	LA-523-434	278
CLPEST		LIQ	Pesticides by CLP protocol	LA-523-434	251
CLPEST		SOL	Pesticides by CLP protocol	LA-523-434	278
CLPSVO		LIQ	Semi-VOA GC/MS by CLP protocol	LA-523-402	841
CLPSVO		SOL	Semi-VOA GC/MS by CLP protocol	LA-523-402	925
CLPVOA		LIQ	VOA by GC/MS - CLP protocol	LA-523-401	468
CLPVOA		SOL	VOA by GC/MS - CLP protocol	LA-523-401	512
IC-01	F-3-01	LIQUID	Fluoride by IC-Dionex 100	LA-533-105	288
NPHTBP	DECANE	SOL	NPHTBP by GC	LA-523-437	192
NPHTBP	UNDECANE	LIQ	NPHTBP by GC	LA-523-437	175
PEST-WP	A-BHC	LIQ	Pesticides by CLP protocol	LA-523-434	251
RCRA-SV	1-NAPHA	SOL	Semi-VOA GC/MS RCRA protocol	LA-523-408	925
RCRA-SV	TRITOLP	LIQ	Semi-VOA GC/MS RCRA protocol	LA-523-408	841
RCRAVOA	11-DCL2	SOL	VOA by GC/MS - RCRA protocol	LA-523-405	512
RCRAVOA	VINYLDE2	LIQ	VOA by GC/MS - RCRA protocol	LA-523-405	468
SVEVAP	2CPD4-01	LIQ	Semi-Voa Evaporator	LA-523-408	841
TIC/TOC1	TIC-02	SOLID	TIC/TOC Acid Persulfate	LA-542-100	214
TIC/TOC1	TOC-02	LIQUID	TIC/TOC Acid-Persulfate	LA-542-100	214
U-01	U-02	SOLID	Uranium by Phosphorescence	LA-525-008	283
U-01	U-02E	AIR	Uranium by Phosphorescence	LA-525-009	257
U-01	U-02E	LIQUID	Uranium by Phosphorescence	LA-525-009	257
U-03	U-03	AIR	ENV Uranium	LA-525-008	281
U-03	U-03	LIQUID	ENV Uranium	LA-525-008	309
U-03	U-03E	SOLID	ENV Uranium	LA-525-008	340
VOA-WP	11-DCL2	LIQ	VOA by GC/MS - 824 protocol	LA-523-405	468
VOAEVAP	BFB-01	LIQ	VOA Evaporator	LA-523-405	468
12-DBEN1			1,2-Dichlorobenzene (RCRA-VOA)	LA-523-405	45
13-DBEN1			1,3-Dichlorobenzene (RCRA-VOA)	LA-523-405	45
14-DBEN1			1,4-Dichlorobenzene (RCRA-VOA)	LA-523-408	46
1BUTAN-1	1BUTAN-1	SOL	1-Butanol	LA-523-405	45
2BUETHOL	2BUETHOL	SOL	2-Ethoxyethanol	LA-523-408	45
2CPD4-01	2CPD4-01	SOL	2-Chlorophenol-04 Surr	LA-523-408	45
2FP-01	2FP-01	SOL	2-Fluorophenol Surr	LA-523-408	45
2HEXANO1	2HEXANO1	SOL	2-Hexanone	LA-523-405	45
2PENTNON	2PENTNON	SOL	2-Pentanone	LA-523-408	45
4MET2PE1	4MET2PE1	SOL	4-Methyl-2-pentanone	LA-523-405	45
ACETONE1	ACETONE1	SOLID	Acetone	LA-523-405	32
CR-01		LIQUID	Caustic Ratio	LA-211-105	81
CR-01		SOLID	Caustic Ratio	LA-211-105	81
CN-03	CN-03	LIQUID	Cyanide NEW METHOD	LA-695-102	289
CN-03	CN-03	SOLID	Cyanide NEW METHOD	LA-695-102	289
CN-03	CN-03	SOLID	Cyanide NEW METHOD	LA-695-103	220
CRVI-01	CRVI-01	LIQUID	Chromium (VI) by Spec.	LA-285-101	192
CRVI-01	CRVI-01	SOLID	Chromium (VI) by Spec.	LA-285-101	192
D2EHPA			D-2 Ethylhexyl Phosphoric acid		43
DSC-01	DSC-01	LIQUID	DSC Exotherm using Mettler	LA-514-113	258
DSC-03	DSC-03	LIQUID	DSC Exotherm on Perkin Elmer	LA-514-114	258
DSC-03	DSC-03	SOLID	DSC Exotherm on Perkin Elmer	LA-514-114	258
ETHYGLY	ETHYGLY	LIQ	Ethylene Glycol	LA-523-108	65
ETHYGLY	ETHYGLY	SOL	Ethylene Glycol	LA-523-108	72
HION-01			Hydrogen Ion Analysis	LA-211-102	81

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.2

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
HG-02	HG-02	LIQUID	Mercury by CVAA (Porkin Elmer)	LA-325-104	384
HG-02	HG-02	SOLID	Mercury by CVAA (Porkin Elmer)	LA-325-104	384
NH3-01	NH3-01	LIQUID	Ammonia by ISE-Std Additions	LA-631-001	90
NH3-01	NH3-01	SOLID	Ammonia by ISE-Std Additions	LA-631-001	90
OH-01	OH-01	LIQUID	OH- by Pot. Titration	LA-211-102	81
OH-01	OH-01	SOLID	OH- by Pot. Titration	LA-211-102	81
OHDEMAND	OHDEMAND	LIQUID	Causitic Demand	LA-211-104	154
PH-01	PH-01	LIQUID	pH Direct	LA-212-106	19
PH-02	PH-02	SOLID	pH on SST Samples	LA-212-106	36
PH-QC	PH-QC	QC	pH Measurement QC		19
SOLID-01	SOLID-01	LIQUID	Solids % - Gravimetric	LA-584-101	77
SOLID-01	SOLID-01	SOLID	Solids % - Gravimetric	LA-584-101	77
SPG-01	SPG-01	LIQUID	Specific Gravity	LA-510-112	77
SPG-02	SPG-02	SOLID	Specific Gravity-Solids/Sludges	LA-510-118	206
TOTC-02	TOTC-02	LIQUID	Total Carbon by Persulfate	LA-342-100	269
TDS-01	TDS-01	LIQUID	Total Dissolv. Solids - Grav.	LA-510-115	115
TDS-01	TDS-01	SOLID	Total Dissolv. Solids - Grav.	LA-510-115	115
TGA-01	TGA-01	LIQUID	% Water by TGA using Mettler	LA-580-112	258
TGA-01	TGA-01	SOLID	% Water by TGA using Mettler	LA-580-112	258
TGA-03	TGA-03	LIQUID	% Water by TGA on Porkin Elmer	LA-514-114	258
TGA-03	TGA-03	SOLID	% Water by TGA on Porkin Elmer	LA-514-114	258
TIC-01	TIC-01	LIQUID	Tot. Inorg. Carbon by Coul.	LA-342-100	269
TIC-01	TIC-01	SOLID	Tot. Inorg. Carbon by Coul.	LA-342-100	269
TIC-02	TIC-02	LIQUID	Tot. Inorg. Carbon by Persulfate	LA-342-100	269
TIC-02	TIC-02	SOLID	Tot. Inorg. Carbon by Persulfate	LA-342-100	269
TOC-01	TOC-01	LIQUID	Tot. Organic Carbon by Coul.	LA-344-105	269
TOC-01	TOC-01	SOLID	Tot. Organic Carbon by Coul.	LA-344-105	269
TOC-02	TOC-01	SOLID	Tot. Organic Carbon by Persulfate	LA-344-105	269
TOTC-01	TOTC-01	LIQUID	Total Carbon by Coulometry	LA-344-105	269
TOTC-01	TOTC-01	SOLID	Total Carbon by Coulometry	LA-344-105	269
TOTC-02	TOTC-02	SOLID	Total Carbon by Persulfate	LA-342-100	269
WATER-01	WATER-01	LIQUID	% Water by Gravimetric	LA-584-101	77
WATER-01	WATER-01	SOLID	% Water by Gravimetric	LA-584-101	77
	AS-05		Arsenic by HYAA	LA-355-131	384
		DIRECT	CONDUCTIVITY	LA-512-104	19
			ELECTRICAL CONDUCTANCE	LA-512-104	19
RADIOCHEMICAL SEPARATIONS TEAM					
LAB-01	ALPHA01	LIQUID	Alpha and Beta Liquid Samples	LA-508-101	115
LAB-01	ALPHA01	SOLID	Alpha and Beta Liquid Samples	LA-508-101	115
LAB-02	ALPHA02	AIR	ENV ALPHA/BETA	LA-508-101	174
LAB-02	ALPHA02	SOLID	ENV ALPHA/BETA	LA-508-101	191
LAB-02	ALPHA02E	LIQUID	ENV ALPHA/BETA	LA-508-101	143
LAB-03	LAB-03	LIQUID	ENV ALPHA/BETA LARGE VOLUME	LA-508-101	143
AIR-01	ALPHA01	AIR	AIR	LA-508-101	57
ALPHA02	ALPHA02	AIR	ENV Alpha Analysis of Liquids	LA-508-101	183
ALPHA02	ALPHA02	LIQUID	ENV Alpha Analysis of Liquids	LA-508-101	183
ALPHA02	ALPHA02	SOLID	ENV Alpha of Digested Solids	LA-508-101	310
ALPHA03	ALPHA03	LIQUID	ENV Alpha Analysis of Liquids	LA-508-101	89

222-S LABORATORY
FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.2

Code Test	Parameter Labcore	MATRIX	Description	Reference #	FY 98 PRICES
BETA-02	BETA-02	AIR	ENV Beta of Liquid Samples	LA-508-101	183
BETA-02	BETA-02	LIQUID	ENV Beta of Liquid Samples	LA-508-101	183
BETA-02	BETA-02	SOLID	ENV Beta of Digested Solids	LA-508-101	310
BETA-03		LIQUID	ENV Beta Large Volume	LA-508-101	183
GEA-00	GEA-00	LIQUID	GEA Large Library Method	LA-548-121	159
GEA-08	GEA-08	AIR	ENV. GEA for Co, Cs, Eu	LA-548-121	181
GEA-08	GEA-08	LIQUID	ENV. GEA for Co, Cs, Eu	LA-548-121	199
GEA-08	GEA-08	SOLID	ENV. GEA for Co, Cs, Eu	LA-548-121	199
GEA-07	GEA-07	AIR	ENV GEA-2" mount for Co, Cs, Eu	LA-548-121	189
GEA-07	GEA-07	LIQUID	ENV GEA-2" mount for Co, Cs, Eu	LA-548-121	199
GEA-07	GEA-07	SOLID	ENV GEA-2" mount for Co, Cs, Eu	LA-548-121	199
H3-04	H3-04	LIQUID	ENV TRITIUM (H3) - Ion Removal	LA-215-116	272
PU23904		LIQUID	ENV Pu239/Pu238/Pu240 by TTA Ex	LA-943-123	741
PU23904		SOLID	ENV Pu239/Pu238/Pu240 by TTA Ex	LA-943-123	909
PUAM-01		AIR	Pu239/241 by TRU-SPEC Resin	LA-953-104	588
PUAM-01		LIQUID	Pu239/241 by TRU-SPEC Resin	LA-953-104	647
PUAM-01		SOLID	Pu239/241 by TRU-SPEC Resin	LA-953-104	647
PUAM-02		LIQUID	Pu238,239 by TRU-SPEC Resin	LA-953-104	647
PUAM-02		SOLID	Pu238,239 by TRU-SPEC Resin	LA-953-104	647
PUAM-03		LIQUID	ENV Pu238, Pu239	LA-953-104	647
PUAM-03		SOLID	ENV Pu238, Pu239	LA-953-104	647
PUAM-04		LIQUID	ENV Pu238, Am241/Cm243 Tru-Sp	LA-953-104	647
PUAM-04		SOLID	ENV Pu238, Am241/Cm243 Tru-Sp	LA-953-104	647
PUTOT01		LIQUID	Total Pu by TTA Extraction	LA-943-101	847
PUTOT01		SOLID	Total Pu by TTA Extraction	LA-943-101	847
TC99-04	TC99-03	LIQUID	ENV Tc-99 Large Volume	LA-438-111	308
TC99-00	TC99-00	AIR	Technetium - Lq. Scint.	LA-438-101	287
ALPHA01	ALPHA01	AIR	Alpha (AEA/FILTER)	LA-508-101	87
ALPHA01	ALPHA01	LIQUID	Alpha in Liquid Samples	LA-508-101	205
ALPHA01	ALPHA01	SOLID	Alpha of Digested Solid	LA-508-101	78
AM24101	AM24101	AIR	Am241 by Extraction	LA-953-103	789
AM24101	AM24101	LIQUID	Am241 by Extraction	LA-953-103	789
AM24101	AM24101	SOLID	Am241 by Extraction	LA-953-103	789
AM24102	AM24101	LIQUID	Am241/Cm243 by Extraction	LA-953-103	789
AM24102	AM24101	SOLID	Am241/Cm243 by Extraction	LA-953-103	789
AM24103	AM24103	LIQUID	ENV Am241/Cm243	LA-943-123	897
AM24103	AM24103E	SOLID	ENV Am241/Cm243	LA-943-123	897
BETA-01	BETA-01	AIR	Beta in (AEA/FILTER)	LA-508-101	87
BETA-01	BETA-01	LIQUID	Beta in Liquid Samples	LA-508-101	205
BETA-01	BETA-01	SOLID	Beta of Digested Solids	LA-508-101	78
C14-01	C14-01	SOLID	Carbon 14 Small Volume	LA-548-104	647
C14-01	C14-01E	LIQUID	Carbon 14 Small Volume	LA-548-104	647
GEA-01	CO60-02	SOLID	GEA for Co60 Cs137	LA-548-121	159
GEA-01	CB13702E	LIQUID	GEA for Co60 Cs137	LA-548-121	159
GEA-02	AM24102	SOLID	GEA:Cs137Co60Eu154-155Am241	LA-548-121	159
GEA-02	EU15502E	LIQUID	GEA:Cs137Co60Eu154-155Am241	LA-548-121	159
GEA-03	CE14402	SOLID	GEA for CoNbRuCsCeEuRe	LA-548-121	159
GEA-03	RU10802E	LIQUID	GEA for CoNbRuCsCeEuRe	LA-548-121	159
GEA-04	GEA-04	AIR	GEA	LA-548-121	145
GEA-04	GEA-04	LIQUID	GEA (ALL)	LA-548-121	159
GEA-04	GEA-04	SOLID	GEA (ALL)	LA-548-121	159

FY 1998 UNIT PRICES - LABCORE**IRL WBS # 7.1.1.4.3.2**

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
GEA-05	GEA-05	AIR	ENV. GEA	LA-548-121	181
GEA-05	GEA-05	LIQUID	ENV. GEA	LA-548-121	189
GEA-03	GEA-05	SOLID	ENV. GEA	LA-548-121	199
H3-01	H3-01	AIR	Tritium (H3) by Lachat	LA-218-114	217
H3-01	H3-01	LIQUID	Tritium (H3) by Lachat	LA-218-114	217
H3-01	H3-01	SOLID	Tritium (H3) by Lachat	LA-218-114	198
H3-03	H3-03	LIQUID	ENV TRITIUM (H3)	LA-218-114	272
H3-03	H3-03E	SOLID	ENV TRITIUM (H3)	LA-218-114	247
I129-01	I129-01	SOLID	Iodine-129 Waste Tank Samples	LA-378-103	300
I129-01	I129-01E	LIQUID	Iodine-129 Waste Tank Samples	LA-378-103	258
NP23701	NP23701	SOLID	Np237 by TTA Extraction	LA-933-141	286
NP23701	NP23701E	LIQUID	Np237 by TTA Extraction	LA-933-141	283
PU23901	PU23901	SOLID	Pu239 by TRU-SPEC Resin	LA-943-127	589
PU23901	PU23901T	AIR	Pu239 by TRU-SPEC Resin	LA-943-127	539
PU23901	PU23901T	LIQUID	Pu239 by TRU-SPEC Resin	LA-943-127	539
PU23902	PU23901	SOLID	Pu239/Pu238 by TRU-SPEC Resin	LA-943-127	647
PU23902	PU23803	AIR	Pu239, Pu238	LA-943-123	741
PU23902	PU23801T	LIQUID	Pu239/Pu238 by TRU-SPEC Resin	LA-943-127	593
PU23903	PU23803	AIR	ENV Pu239, Pu238	LA-943-123	674
PU23903	PU23803	LIQUID	ENV Pu239, Pu238	LA-943-123	741
PU23903	PU23803E	SOLID	ENV Pu239, Pu238	LA-943-123	809
SE79-01	SE79-01	SOLID	Selenium-79 by Liquid Scint.	LA-365-132	1121
SE79-01	SE79-01E	AIR	Selenium-79 by Liquid Scint.	LA-365-132	1019
SE79-01	SE79-01E	LIQUID	Selenium-79 by Liquid Scint.	LA-365-132	1121
SR90-01	SR90-01	SOLID	Sr-90/90 High Level	LA-220-101	316
SR90-01	SR90-01E	AIR	Sr-90/90 High Level	LA-220-101	289
SR90-01	SR90-01E	LIQUID	Sr-90/90 High Level	LA-220-101	289
SR90-03	SR90-03	LIQUID	Env SR-90	LA-220-103	382
SR90-03	SR90-03E	SOLID	Env SR-90	LA-220-103	395
SR90-03	SR90-03E	AIR	Env SR-90 on Sample	LA-220-103	395
TC99-01	TC99-01	SOLID	Technetium - Liq. Scint.	LA-438-101	282
TC99-01	TC99-01T	AIR	Technetium - Liq. Scint.	LA-438-101	257
TC99-01	TC99-01T	LIQUID	Technetium - Liq. Scint.	LA-438-101	257
TC99-03	TC99-03	LIQUID	ENV Tc-99	LA-438-101	308
TC99-03	TC99-03E	SOLID	ENV Tc-99	LA-438-101	338
ASH-01		AIR	Ash and Leach of Env. Samples	LA-544-102	159
ASH-01		SOLID	Ash and Leach of Env. Samples	LA-544-102	175
CM24303		AIR	Cm-243/244 Env.	LA-943-123	699
CM24303		LIQUID	Cm-243/244 Env.	LA-943-123	697
CM24303		SOLID	Cm-243/244 Env.	LA-943-123	697
FUS-2R01	FUS-2R01	SOLID	Fusion (Zr Crucible) with KOH	LA-549-141	460
FUSION01	FUSION01	SOLID	Fusion with KOH	LA-549-141	508
PU23802	PU23802	AIR	Pu-238 by Ion Exchange	LA-943-127	539
PU23802	PU23802	LIQUID	Pu-238 by Ion Exchange	LA-943-127	588
PU23902	PU23902	LIQUID	Pu-239/240 by Ion Exchange	LA-943-127	593
PU23902	PU23902	SOLID	Pu-239/240 by Ion Exchange	LA-943-127	647
TE12302	TE12302		Tellurium-123m by GEA	LA-548-121	199

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.2

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
TOTACT1			Total Activity by LSC	LA-548-111	54
DATA REPORTING					
			Data Report		2450
			Full Data Report (TANK CHAR REPT)		22900

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1M0R81

COST ACCOUNT WORKSCOPE SUMMARY

Functional Organization: 222-S Laboratory

Workscope Summary: 222-S Laboratory is to provide analytical chemistry services for Process Control Samples that are >1mR/hr performed to ensure Facility Operations (242-A process and slurries; Environmental Restoration total activities; stacks/soil/water monitoring for B-Plant, K-Basins, etc.) are maintained within specified parameters. Process Control in general has lower QA and faster reporting requirements.

222-S Laboratory is to provide analytical chemistry services for Protocols samples. Protocols samples are analyses that require additional oversight of operations and requires formal documentation. Protocols require QA oversight, blanks, standards, duplicates, C G Matteson

222-S Laboratory supports a multitude of Programs.

APPROVED BASELINE:

FY 1998

Activity Description - Hot Cell Sample Receipt Team

FTEs

Dollars

This activity entails receiving samples into 222-S Laboratory; logging the sample; assuring all samples are under strict chain-of-custody; ensuring inventory of radionuclides content of the Laboratory is up to date and current, and HPTs to perform dose rate and contamination surveys upon receipt of samples.

Sample Custodians

Sample Receipt Team

HPT Support

0.2

13.0

0.6

46.0

1.2

162.0

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Receiving samples into 222-S Laboratory; logging the sample; assuring all samples are under strict chain-of-custody; and ensuring inventory of radionuclides content of the Laboratory is up to date and current.

2 10/01/97 to 09/30/98

Perform radiological screening at 222-S Laboratory

Subtotal

Subtotal Net

2.0

161.0

Total Activity

2.0

166.3

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1MDR81

Activity Description - Sample Analysis Team

This activity is for the analytical work that is performed on each sample after it has been received. This work entails sample preparation, Radiochemistry, Inorganic, and Organic analyses; development of procurement of standards to support analyses at 222-S; shop and laboratory supplies needed to perform analyses; HPT screening; and troubleshooting.

Counting Room Team

0.8

547.9

Direct Analysis/Wet Chemistry Team

3.9

296.0

Preparation Analysis Team

3.0

241.4

Radiochemical Separations Team

7.2

608.4

Standards Laboratory Team

2.4

183.6

Stockroom Support

0.8

423.6

HPT Support - Analysis

1.8

157.7

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Analytical work performed on each sample after it has been received. This includes sample preparation and analysis of the samples.

2 10/01/97 to 09/30/98

Development and procurement of analytical standards to support analyses.

3 10/01/97 to 09/30/98

Procurement of analytical supplies for the Stockroom necessary to perform analyses.

4 10/01/97 to 09/30/98

HPT screening to support analysis

Subtotal Net

25.4

2,458.6

Total Activity

25.4

2,837.2

FY 1998 Annual Work Plan

Part II - Activity Detail

GAP #

198081

Activity Description - Data Administration/Reporting

This activity provides Quality Assurance (QA) and Quality Control (QC) officer support, QA support for the preparation review and approval of project data packages. This account includes daily operations support to the LABSCORE computer systems, Buyer Technical Representative activities, updating reports and instrument interfaces, and acceptance testing of updates.

QA Support

0.9

56.7

LIMS/LABSCORE Support

0.2

81.8

Laboratory Leader Support

0.4

29.1

Project Coordination

0.6

45.0

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Provide Quality Assurance (QA) and Quality Control (QC) officer support for preparation review and approval of project data packages at Z22-S Laboratory.

2 10/01/97 to 09/30/98

LIMS/LABSCORE support to track data through the laboratory and to meet reporting requirements.

3 10/01/97 to 09/30/98

Preparation of Data Packages per customer's requirements.

Subtotal Net

2.1

214.6

Total Activity

2.1

242.9

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1MDR61

Activity Description - Archive/Disposal

This activity provides support to dispose/archive of samples as required by the customer: tracking samples for disposal, provide HPTs to perform dose rate and contamination surveys for short/long term archival or for disposal, and transportation support.

Waste Handling

3.3

230.0

Sample Custodian -

0.4

26.2

HPT Support

0.8

66.2

Transportation

0.0

5.0

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Archive samples and/or disposal of the samples as appropriate

2 10/01/97 to 09/30/98

Provide HPT screening for Archive and disposing to samples.

3 10/01/97 to 09/30/98

Provide transportation of samples for disposal

4 10/01/97 to 09/30/98

Tracking of samples for disposal/archive

Subtotal Net

4.5

338.4

Total Activity

4.5

519.4

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

199801

Activity Description - Facility Planning Team/Support

This activity provides program support and customer interface, establishes customer points of contact, developing a facility analytical schedule, establishing facility priorities, tracking and reporting progress against the integrated schedule, Laboratory Leaders for project setup, sample disposal, and will provide customer interface for small projects. records searching support. provide technical quality support for all aspects of the analytical process and tracking of cost versus budget support.

Process Analysis Management	03	312
Coordinator	03	234
Laboratory Leaders	00	591
Project Coordination	11	855
Analytical Work Scheduler	03	236
QA Support	04	321
Records Management	03	320
Financial Representative	05	393

Mutually Agreed Upon Workscope Deliverables and Due Dates

1	10/01/97 to 09/30/98		
	Tracking and reporting progress against the integrated schedule		
2	10/01/97 to 09/30/98		
	Provide progress reports to customers		
3	10/01/97 to 09/30/98		
	Conduct/coordinate technical reviews of analytical work		
4	10/01/97 to 09/30/98		
	Develop short/long range analytical work schedule		
5	10/01/97 to 09/30/98		
	Coordinate/perform reviews for data quality and accuracy for organic, inorganic and radiochemistry		
6	10/01/97 to 09/30/98		
	Approve disposition of samples and preps after analysis		
7	10/01/97 to 09/30/98		
	Establish agreements with customers for quality, schedule, and sample disposition for identified work		
	Subtotal Net	41	3262
Total Activity		41	3782

FY 1998 Annual Work Plan

Part II - Activity Detail

Activity Description - Technical Support		CAP #	199801
This activity provide procedure maintenance, develop training program/modules per Analytical Services training requirements, Sample Management support which provides determination on which laboratory provides the customer with the best product to meet their analytical requirements; ensure Data Management services meet the requirements of the new site customer; prepares SAPs which are forwarded to 222-S Laboratory and to the sampling group; and technical support from NUMATEC to perform specific analysis (Particle Size, Adiabatic Calorimetry, settled density, etc.).			
222-S Training		0.4	30.0
Procedure Administration		0.4	44.8
Sample Administrative Support		0.7	51.3
Technical Development (NUMATEC)		1.0	60.3
Mutually Agreed Upon Workscope Deliverables and Due Dates			
1	10/01/97 to 09/30/98		
	Procedure preparation and maintenance of existing procedures.		
2	10/01/97 to 09/30/98		
	Provide instructions, development of training programs/modules and training records administration per Analytical Services training requirements.		
3	10/01/97 to 09/30/98		
	Perform specific analysis per customer's requirements.		
4	10/01/97 to 09/30/98		
	Provide Sample Management support.		
	Subtotal Net	2.5	195.2
	Total Activity	2.5	238.0
Approved Net		40.8	3,694.0
Approved Total		40.8	4,404.0

1MDR81, 222-S NON-TANK CHARACTERIZATION
FY 1998 PROJECTIONS BY PROGRAM

RL WBS # 7.1.1.4.3.2

PROGRAM	FUNCTIONAL \$	PROGRAM \$
Liquid Effluents	35	42
Solid Waste	168	200
B-Plant/WESF	164	195
PUREX	63	75
PFP	25	30
Spent Nuclear Fuels	758	900
Tank Farm Operations	78	90
Safety Issue Resolution	285	339
Environmental Monitoring	74	88
Analytical Services	561	666
Misc. Programs	25	30
Bechtel	631	750
Total 222-S Non-Tank Char.	2865	3405

Based on Hanford Sample Projections (May 23, 1997)

RL WBS # 7.1.1.4.3.2

222-S LABORATORY	HOURS PER ANALYTE/ REPORT	% OF HOURS PER ANALYTE										
		QC	SAMPLE RECEIPT	TRAINING	ADMIN OPS TIME	MGMT	HPTs	STAND. LAB	TOTAL ANALYT HRS	TOTAL LABOR \$	STOCK- ROOM	TOTAL ANALYTE \$
SAMPLE PREPARATION	HOURS	20.0%	N/A	3.0%	21.8%	4.0%	10.8%	N/A		Convert Labor Hour to Dollars	10.70%	Total
INORGANIC CHEMISTRY	HOURS	20.0%	3.1%	3.0%	21.8%	4.0%	10.8%	8.0%			10.70%	Labor +
RADIOCHEMISTRY (1)	HOURS	20.0%	20.0%	3.0%	21.8%	4.0%	10.8%	8.0%			10.70%	Stock-
ORGANIC CHEMISTRY	HOURS	20.0%	3.1%	3.0%	21.8%	4.0%	10.8%	0.0%			10.70%	Room
Duplicate = 1 Sample												
Sample QC = 1 Sample												
QC consist of Blanks, Spikes, Standards												

222-S LABORATORY	% OF TOTAL ANALYTE HOURS SUPPORT TO ANALYTICAL WORK					NON- LABOR \$	TOTAL UNIT PRICE (2)
	ARCH/ DISP	DATA ADM/ REPTG	FAC PLN TIME/SUP/ TECH	TOTAL SUPPORT HOURS	TOTAL SUPPORT LABOR \$		
SAMPLE PREPARATION	13.0%	4.5%	8.0%		Convert	9.80%	Total
INORGANIC CHEMISTRY	13.0%	4.5%	8.0%		Labor Hours	9.80%	Analyte
RADIOCHEMISTRY (1)	13.0%	4.5%	8.0%		to Dollars	9.80%	\$ +
ORGANIC CHEMISTRY	13.0%	4.5%	8.0%			9.80%	Total
						9.80%	Support +
							Add to total
							Non-Labor \$
							= Unit Cost
Data Report	N/A	N/A	8.0%			9.80%	

COMMENTS:

(1) The increase in Sample Receipt percentage is due to Decon, workspace associated with radiochemistry work which requires additional handling and cleanup.

*Admin/Op Time includes downtime, building operations, changeout, procedure review, housekeeping, etc.

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.2

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
HOT CELL/SAMPLE RECEIPT TEAM					
#EXTRD01	DUQVOL1	LIQUID	Drainable Liquid Recovered-Vol	LO-180-103	36
#EXTRD01	DUQVOL1	SOLID	Drainable Liquid Recovered-Vol	LO-180-103	36
#EXTRD01	DUQWT01	LIQUID	Drainable Liquid Recovered-WT	LO-180-103	36
#EXTRD01	DUQWT01	SOLID	Drainable Liquid Recovered-WT	LO-180-103	36
#EXTRD01	EST G/M/L	LIQUID	Estimated G/M/L - Calculated	LO-180-103	36
#EXTRD01	EST G/M/L	SOLID	Estimated G/M/L - Calculated	LO-180-103	36
#EXTRD01	EXTRUD01	LIQUID	Extrude Segment in Hot Cell	LO-180-103	968
#EXTRD01	EXTRUD01	SOLID	Extrude Segment in Hot Cell 1E	LO-180-103	1049
#EXTRD01	EXTRUD01	SOLID	Extrude Segment in Hot Cell -Rotary	LO-180-103	1855
#EXTRD01	LIQVOT01	LIQUID	Drainable Liquid Recovered-WT	LO-180-103	36
#EXTRD01	LIQWT01	SOLID	Drainable Liquid Recovered-WT	LO-180-103	36
#EXTRD01	NOTEBOOK	LIQUID	Notebook with Source Data	LO-180-103	36
#EXTRD01	NOTEBOOK	SOLID	Notebook with Source Data	LO-180-103	36
#EXTRD01	ORGVOL01	LIQUID	Organic Volume Present	LO-180-103	36
#EXTRD01	ORGVOL01	SOLID	Organic Volume Present	LO-180-103	36
#EXTRD01	SLDVOL01	LIQUID	Solids Recovered - Volume	LO-180-103	36
#EXTRD01	SLDVOL01	SOLID	Solids Recovered - Volume	LO-180-103	36
#EXTRD01	SLDWT-01	LIQUID	Solids Recovered - Weight	LO-180-103	36
#EXTRD01	SLDWT-01	SOLID	Solids Recovered - Weight	LO-180-103	36
#EXTRD01			EXTRUSION - AUGERS	LO-180-103	866
#EXTRD01			EXTRUSION - SLURP	LO-180-103	323
@APPEAR1	APPEAR01	LIQUID	Appearance of a sample	LA-519-151	21
@APPEAR1	APPEAR01	SOLID	Appearance of a sample	LA-519-151	21
ARCHIV01	ARCHIV01	LIQUID	Archive aliqu of sample/hotcell	None	25
ARCHIV01	ARCHIV01	SOLID	Archive aliqu of sample/hotcell	None	27
ARCHIV02	ARCHIV02	LIQUID	Archive aliqu of sam/sample prep	None	28
ARCHIV02	ARCHIV02	SOLID	Archive aliqu of sam/sample prep	None	27
ARCHIVE	ARCHIVE	LIQUID	Archive an aliquot of sample	None	21
ARCHIVE	ARCHIVE	SOLID	Archive an aliquot of sample	None	21
BLKDEN01	BLKDEN01	LIQUID	Bulk Density of Sample	LO-180-103	76
BLKDEN01	BLKDEN01	SOLID	Bulk Density of Sample	LO-180-103	127
COMPOS01	COMPOS01	LIQUID	Make Composite Sample	LO-180-103	95
COMPOS01	COMPOS01	SOLID	Make Composite Sample	LO-180-103	38
FILTER01	FILTER01	LIQUID	Filter Liquid / hotcell	LA-504-101	28
FILTER02	FILTER02	LIQUID	Filter Liquid / sample prep	LA-504-101	22
FSLDWT01	FSLDWT01	LIQUID	Weight of Solids - Filtered	LA-548-141	31
FSLDWT01	FSLDWT01	SOLID	Weight of Solids - Filtered	LA-548-141	31
HOMGENZ01	HOMGENZ01	SOLID	Homogenize Sample	LO-180-103	38
SHIP-PNL	SHIP-PNL	LIQUID	Ship aliquot of sample to PNL	None	65
SHIP-PNL	SHIP-PNL	SOLID	Ship aliquot of sample to PNL	None	72
			EOX	LI-000-200	22
PCL ANALYSIS:					
@ICP-P02		SOLID	ICP (PCL Digest of Solids)	LA-505-151/182	182
@ICP-P03		LIQUID	ICP (PCL Digest) Li Only	LA-505-151/183	192
@ICP-P04		SOLID	ICP (PCL Digest) Cd, Cr, Pb	LA-505-151/184	182
@MSU-A1	@MSU-A1	SOLID	Isotopic Uranium (ICP/MS) Acid Dig- Solid	LT-508-101	182
@MSU-F1	@MSU-F1	SOLID	Isotopic Uranium (ICP/MS) Fusion Dig	LT-508-101	192

222-S LABORATORY

FY 1988 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.2

Code Test	Parameters Labcom	MATRIX	Description	Reference #	FY 88 PRICES
MSU-B1	MSUB1	LIQUID	Isotopic Uranium (ICP/MS) Acid Dig-Liquid	LT-506-101	192
MSU-D1	MSUD1	LIQUID	Isotopic Uranium (ICP/MS) Direct Liquid	LT-506-101	192
MSACT-A1	MSACTA1	SOLID	Actinides (ICP/MS) Acid Dig - Solid	LT-506-101	268
MSACT-F1	MSACTF1	SOLID	Actinides (ICP/MS) Fusion Dig	LT-506-101	258
MSACT-B1	MSACTB1	LIQUID	Actinides (ICP/MS) Acid Dig - Liquid	LT-506-101	258
MSACT-D1	MSACTD1	LIQUID	Actinides (ICP/MS) Direct Liquid	LT-506-101	258
MSTC-A1	MSMTC-A1	SOLID	Tc-99 (ICP/MS) Acid Dig - Solid	LT-506-101	154
MSMTC-F1	MSMTC-F1	SOLID	Tc-99 (ICP/MS) Fusion Dig - Solid	LT-506-101	154
MSMTC-B1	MSMTC-B1	LIQUID	Tc-99 (ICP/MS) Acid Dig - Liquid	LT-506-101	154
MSMTC-D1	MSMTC-D1	LIQUID	Tc-99 (ICP/MS) Direct Liquid	LT-506-101	154
MSCS-A1	MSCS-A1	SOLID	Isotopic Cesium (ICP/MS) Acid Dig-Solid	LT-506-101	192
MSCS-F1	MSCS-F1	SOLID	Isotopic Cesium (ICP/MS) Fusion Dig	LT-506-101	192
MSCS-B1	MSCS-B1	LIQUID	Isotopic Cesium (ICP/MS) Acid Dig-Liquid	LT-506-101	192
MSCS-D1	MSCS-D1	LIQUID	Isotopic Cesium (ICP/MS) Direct Liquid	LT-506-101	192
MSZR-A1	MSZR-A1	SOLID	Zr-93 (ICP/MS) Acid Dig - Solid	LT-506-101	192
MSZR-F1	MSZR-F1	SOLID	Zr-93 (ICP/MS) Fusion Dig	LT-506-101	192
MSZR-B1	MSZR-B1	LIQUID	Zr-93 (ICP/MS) Acid Dig - Liquid	LT-506-101	192
MSZR-D1	MSZR-D1	LIQUID	Zr-93 (ICP/MS) Direct Liquid	LT-506-101	192
MSNN-A1	MSNN-A1	SOLID	Sn-126 (ICP/MS) Acid Dig - Solid	LT-506-101	192
MSNN-F1	MSNN-F1	SOLID	Sn-126 (ICP/MS) Fusion Dig	LT-506-101	192
MSNN-B1	MSNN-B1	LIQUID	Sn-126 (ICP/MS) Acid Dig - Liquid	LT-506-101	192
MSNN-D1	MSNN-D1	LIQUID	Sn-126 (ICP/MS) Direct Liquid	LT-506-101	192
MSSEL-A1	MSSEL-A1	SOLID	Elemental Analysis (ICP/MS) Acid Dig-Solid	LT-506-101	258
MSSEL-F1	MSSEL-F1	SOLID	Elemental Analysis (ICP/MS) Fusion Dig	LT-506-101	258
MSSEL-B1	MSSEL-B1	LIQUID	Elemental Analysis (ICP/MS) Acid Dig-Liquid	LT-506-101	258
MSSEL-D1	MSSEL-D1	LIQUID	Elemental Analysis (ICP/MS) Direct Liquid	LT-506-101	258
VISCOB1	VISCOB1	LIQUID	Viscosity Analysis by PCL	LT-519-115	368
VISCOB1	VISCOB1	SOLID	Viscosity Analysis by PCL	LT-519-115	409
ICP-P01		SOLID	ICP (PCL Digest)	LA-505-151/161	192
ADIABC01	ADIABC01	LIQUID	Adiabatic Calorimetry	WHC-SD-WM-	1007
ADIABC01	ADIABC01	SOLID	Adiabatic Calorimetry	WHC-SD-WM-	1158
BOILPT01	BOILPT01	LIQUID	Boiling Point Study	PCL does this	127
PARTSZ01	PARTSZ01	SOLID	Particle Size Analysis	LT-519-101	111
PCLDIG01			Digestion done by PCL	PCL Method	295
RSSLD-01		SOLID	Digestion - Water No Acid & A Added	LA-504-101	265
RSSLD-01		WATER	Digestion - Water Acid Added	LA-504-101	291
			Laser Ablation/Mass Spec Screen	LT-506-102	468
			TCLP Digestion/Extraction	LA-544-134	519
			Settling Rate	Test Plan	182
			Settled Density	Test Plan	182
			Centrifuge Particle Density	Test Plan	374
PREPARATION ANALYSIS TEAM					
EDTA-01			EDTA/HEDTA by C 2 E	LA-533-113	45
IC2-01		LIQUID	Organic Acids-IC Dionex 4000	LA-533-105	384
IC2-01		SOLID	Organic Acids-IC Dionex 4000	LA-533-105	384
IC3-01		LIQUID	Anions by IC - Dionex 100	LA-533-101	192
IC3-01		SOLID	Anions by IC - Dionex 100	LA-533-101	192
IC3-01		ALL	Single Analyte Parameter - IC	LA-533-101	128
IC4-01		LIQUID	F. ORG. Acid-IC Dionex 4000 / 4500	LA-533-105	384

FY 1998 UNIT PRICES - LABCORE

IRL WBS # 7.1.1.4.3.2

Code Test	Parameters Labware	MATRIX	Description	Reference #	FY 98 PRICES
IC4-01		SOLID	IC DRG Acid-IC Dionex 4000 / 4500	LA-533-105	384
IC4-01		ALL	Single Analyte Parameter - IC	LA-533-105	192
IC5-01		LIQUID	Anions & Cations on Dionex 500	LA-533-115	384
IC5-01		SOLID	Anions & Cations on Dionex 500	LA-533-115	384
IC5-01		ALL	Anions & Cations on Dionex 500	LA-533-115	192
ICP-T01			TCLP Digest of Liquids	LA-505-151	162
ICP-Z01			Fusion Zr Crucible (all metals)	LA-505-151	162
ICDNG-01		LIQUID	Acid Dig-Sandfilter Backwash	LA-505-162	606
ICDNG-01		SOLID	Acid Dig-Sandfilter Backwash	LA-505-162	557
ICIC-01		LIQUID	Anions by IC - Dionex 4000 / 4500	LA-533-106	320
ICIC-01		SOLID	Anions by IC - Dionex 4000 / 4500	LA-533-106	320
ICIP-A01		SOLID	ICP (Acid Digest) All Metals	LA-505-151/161	192
ICIP-A02		SOLID	ICP (Acid Digest) Solids	LA-505-151/161	192
ICIP-A03		SOLID	ICP (Acid Digest) Li Only	LA-505-151/161	192
ICIP-A04		SOLID	ICP (Acid Digest) U Fe Mn	LA-505-151/161	192
ICIP-B01		LIQUID	ICP (Acid Digest of Liquid)	LA-505-151/161	192
ICIP-B02		LIQUID	ICP Acid Digest of a Liquid	LA-505-151/161	192
ICIP-B03		LIQUID	ICP (Acid Digest) Li Only	LA-505-151/161	192
ICIP-B04		LIQUID	ICP (Acid Digest) U Fe Mn	LA-505-151/161	192
ICIP-D01		LIQUID	ICP (Acid Added to Liquid)	LA-505-151/161	192
ICIP-D02			ICP Acid Digest of a Liquid	LA-505-151/161	192
ICIP-D03		LIQUID	ICP (Acid Digest) U Only	LA-505-151/161	192
ICIP-D04		LIQUID	ICP (Acid Digest) U Fe Mn	LA-505-151/161	231
ICIP-F01		SOLID	ICP (Fusion Digest) All Metals	LA-505-151/161	192
ICIP-F02		SOLID	ICP (Fusion Digest)	LA-505-151/161	192
ICIP-F03		SOLID	ICP (Fusion Digest) Li Only	LA-505-151/161	192
ICIP-F04		SOLID	ICP (Fusion Digest) U Fe Mn	LA-505-151/161	192
ICIP-I01		SOLID	ICP (H2O/Acid) All Metals	LA-505-151/161	192
ICIP-QC		QC	ICP (QC) All Metals	LA-505-151	192
ICP (>1)			ICP (High dose rate > 1)	LA-505-151/161	218
ICP (>20)			ICP (>20 samples 5% discount return)	LA-505-151/161	96
ICP (1-5)			ICP (1-5 Analytes) primary	LA-505-151/161	192
ICP (35-40)			ICP (35-40 Analytes) Tertiary	LA-505-151/161	218
ICP (5-10)			ICP (5-10 Analytes) Secondary	LA-505-151/161	243
ACDGF01	ACDGF01	LIQUID	Digestion - Acid (LIQUID) ICP/PL&GFAA	LA-505-158	253
ACIDIG02	ACIDIG02	LIQUID	Acid Digest	LA-505-158	253
ACIDIG03		SOLID	Digestion - Acid (Solid) ICP/PL&HYAA/GF	LA-505-159	606
ACIONL01	ACIONL01	LIQUID	Acid Dilution	LA-505-158	32
CD-03	CD-03	LIQUID	Cadmium by GFAA	LA-505-402	192
CD-03	CD-03	SOLID	Cadmium by GFAA	LA-505-402	192
GRADIG01		SOLID	GFAA Acid Digest	LA-505-401	253
H2ODIG02		LIQUID	Water Digest	LA-504-101	133
H2ODIL01		LIQUID	Water Dilution of a Sample	LA-504-101	133
	SE-05	LIQUID	Selenium by HYAA	LA-565-132	384
	SE-05	SOLID	Selenium by HYAA	LA-565-132	384
	SUSPLSLDT	SOLID			115
DIRECT ANALYSIS/WET CHEMISTRY TEAM					
PCB			PCBs by SW-846	LA-523-434	251

222-S LABORATORY
FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.2

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
PCB-ORL		OL	PCBs in oil by SW-846	LA-523-434	276
CLPEST		LIQ	Pesticides by CLP protocol	LA-523-434	251
CLPEST		SOL	Pesticides by CLP protocol	LA-523-434	276
CLPSVO		LIQ	Semi-VOA GC/MS by CLP protocol	LA-523-402	841
CLPSVO		SOL	Semi-VOA GC/MS by CLP protocol	LA-523-402	825
CLPVOA		LIQ	VOA by GC/MS - CLP protocol	LA-523-401	468
CLPVOA		SOL	VOA by GC/MS - CLP protocol	LA-523-401	512
IC-01	F3-01	LIQUID	Fluoride by IC-Dionex 100	LA-533-105	288
NPHTBP	DECANE	SOL	NPH/TBP by GC	LA-523-437	192
NPHTBP	UNDECANE	LIQ	NPH/TBP by GC	LA-523-427	173
PEST-WP	A-BHC	LIQ	Pesticides by CLP protocol	LA-523-434	251
RCRA-SV	1-NAPHA	SOL	Semi-VOA GC/MS RCRA protocol	LA-523-406	925
RCRA-SV	TRITOLP	LIQ	Semi-VOA GC/MS RCRA protocol	LA-523-406	841
RCRAVOA	11-OCL2	SOL	VOA by GC/MS - RCRA protocol	LA-523-405	512
RCRAVOA	VINYLDEZ	LIQ	VOA by GC/MS - RCRA protocol	LA-523-405	488
SVEVAP	2CPD4-01	LIQ	Semi-Voa Evaporator	LA-523-408	841
TIC/TOC1	TIC-02	SOLID	TIC/TOC Acid Persulfate	LA-342-100	214
TIC/TOC1	TOC-02	LIQUID	TIC/TOC Acid-Persulfate	LA-342-100	214
U-01	U-02	SOLID	Uranium by Phosphorescence	LA-925-009	283
U-01	U-02E	AIR	Uranium by Phosphorescence	LA-925-009	257
U-01	U-02E	LIQUID	Uranium by Phosphorescence	LA-925-008	257
U-03	U-03	AIR	ENV Uranium	LA-925-008	281
U-03	U-03	LIQUID	ENV Uranium	LA-925-008	309
U-03	U-03E	SOLID	ENV Uranium	LA-925-008	340
VOA-WP	11-OCL2	LIQ	VOA by GC/MS - 824 protocol	LA-523-403	468
VOAEVAP	BFB-01	LIQ	VOA Evaporator	LA-523-405	488
12-DBEN1			1,2-Dichlorobenzene (RCRA-VOA)	LA-523-403	43
13-DBEN1			1,3-Dichlorobenzene (RCRA-VOA)	LA-523-403	48
14-DBEN1			1,4-Dichlorobenzene (RCRA-VOA)	LA-523-403	43
1BUTAN-1	1BUTAN-1	SOL	1-Butanol	LA-523-405	45
2BUETHOL	2BUETHOL	SOL	2-Butoxyethanol	LA-523-408	45
2CPD4-01	2CPD4-01	SOL	2-Chlorophenol-04 Surr	LA-523-406	43
2FP-01	2FP-01	SOL	2-Fluorophenol Surr	LA-523-408	45
2HEXAN01	2HEXAN01	SOL	2-Hexanone	LA-523-405	43
2PENTN0N	2PENTN0N	SOL	2-Pentanone	LA-523-405	45
4MET2PE1	4MET2PE1	SOL	4-Methyl-2-pentanone	LA-523-405	45
ACETONE1	ACETONE1	SOLID	Acetone	LA-523-405	32
CR-01		LIQUID	Caustic Ratio	LA-211-105	81
CR-01		SOLID	Caustic Ratio	LA-211-105	81
CN-03	CN-03	LIQUID	Cyanide NEW METHOD	LA-895-102	269
CN-03	CN-03	SOLID	Cyanide NEW METHOD	LA-895-102	269
CN-03	CN-03	SOLID	Cyanide NEW METHOD	LA-895-103	220
CRVI-01	CRVI-01	LIQUID	Chromium (VI) by Spec.	LA-285-101	192
CRVI-01	CRVI-01	SOLID	Chromium (VI) by Spec.	LA-285-101	182
D2ENPA			Di-2 Ethylhexyl Phosphoric acid		45
DSC-01	DSC-01	LIQUID	DSC Exotherm using Mather	LA-514-113	256
DSC-03	DSC-03	LIQUID	DSC Exotherm on Parkin Elmer	LA-514-114	258
DSC-03	DSC-03	SOLID	DSC Exotherm on Parkin Elmer	LA-514-114	256
ETHYGLY	ETHYGLY	LIQ	Ethylene Glycol	LA-523-108	65
ETHYGLY	ETHYGLY	SOL	Ethylene Glycol	LA-523-108	72
H-HON-01			Hydrogen Ion Analysis	LA-211-102	81

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.2

Code Test	Parameters Labors	MATRIX	Description	Reference #	FY 98 PRICES
HG-02	HG-02	LIQUID	Mercury by CVAA (Perkin Elmer)	LA-325-104	384
HG-02	HG-02	SOLID	Mercury by CVAA (Perkin Elmer)	LA-325-104	384
NH3-01	NH3-01	LIQUID	Ammonia by ISE-Std Additions	LA-631-001	90
NH3-01	NH3-01	SOLID	Ammonia by ISE-Std Additions	LA-631-001	80
OH-01	OH-01	LIQUID	OH- by Pot. Titration	LA-211-102	81
OH-01	OH-01	SOLID	OH- by Pot. Titration	LA-211-102	81
OHDEMAND	OHDEMAND	LIQUID	Caustic Demand	LA-211-104	154
PH-01	PH-01	LIQUID	pH Direct	LA-212-106	19
PH-02	PH-02	SOLID	pH on SST Samples	LA-212-106	38
PH-QC	PH-QC	QC	pH Measurement QC		19
SOLID-01	SOLID-01	LIQUID	Solids % - Gravimetric	LA-584-101	77
SOLID-01	SOLID-01	SOLID	Solids % - Gravimetric	LA-584-101	77
SPG-01	SPG-01	LIQUID	Specific Gravity	LA-510-112	77
SPG-02	SPG-02	SOLID	Specific Gravity-Solids/Sludges	LA-510-116	205
TOTC-02	TOTC-02	LIQUID	Total Carbon by Persulfate	LA-342-100	269
TDS-01	TDS-01	LIQUID	Total Dissolv. Solids - Grav.	LA-510-115	115
TDS-01	TDS-01	SOLID	Total Dissolv. Solids - Grav.	LA-510-115	115
TGA-01	TGA-01	LIQUID	% Water by TGA using Mettler	LA-580-112	258
TGA-01	TGA-01	SOLID	% Water by TGA using Mettler	LA-580-112	258
TGA-03	TGA-03	LIQUID	% Water by TGA on Perkin Elmer	LA-514-114	258
TGA-03	TGA-03	SOLID	% Water by TGA on Perkin Elmer	LA-514-114	258
TIC-01	TIC-01	LIQUID	Tot. Inorg. Carbon by Coul.	LA-342-100	269
TIC-01	TIC-01	SOLID	Tot. Inorg. Carbon by Coul.	LA-342-100	269
TIC-02	TIC-02	LIQUID	Tot. Inorg. Carbon by Persulfate	LA-342-100	269
TIC-02	TIC-02	SOLID	Tot. Inorg. Carbon by Persulfate	LA-342-100	269
TOC-01	TOC-01	LIQUID	Tot. Organic Carbon by Coul.	LA-344-105	269
TOC-01	TOC-01	SOLID	Tot. Organic Carbon by Coul.	LA-344-105	269
TOC-02	TOC-01	SOLID	Tot. Organic Carbon by Persulfate	LA-344-105	269
TOTC-01	TOTC-01	LIQUID	Total Carbon by Coulometry	LA-344-105	269
TOTC-01	TOTC-01	SOLID	Total Carbon by Coulometry	LA-344-105	269
TOTC-02	TOTC-02	SOLID	Total Carbon by Persulfate	LA-342-100	269
WATER-01	WATER-01	LIQUID	% Water by Gravimetric	LA-584-101	77
WATER-01	WATER-01	SOLID	% Water by Gravimetric	LA-584-101	77
	AS-05		Arsenic by HYAA	LA-355-131	384
		DIRECT	CONDUCTIVITY	LA-512-104	19
			ELECTRICAL CONDUCTANCE	LA-512-104	19
RADIOCHEMICAL SEPARATIONS TEAM					
QAB-01	ALPHA01	LIQUID	Alpha and Beta Liquid Samples	LA-508-101	115
QAB-01	ALPHA01	SOLID	Alpha and Beta Liquid Samples	LA-508-101	115
QAB-02	ALPHA02	AIR	ENV ALPHA/BETA	LA-508-101	174
QAB-02	ALPHA02	SOLID	ENV ALPHA/BETA	LA-508-101	191
QAB-02	ALPHA02E	LIQUID	ENV ALPHA/BETA	LA-508-101	143
QAB-03	QAB-03	LIQUID	ENV ALPHA/BETA LARGE VOLUME	LA-508-101	143
QAIR-01	ALPHA01	AIR	AIR	LA-508-101	57
QALPHA02	QALPHA02	AIR	ENV Alpha Analysis of Liquids	LA-508-101	183
QALPHA02	QALPHA02	LIQUID	ENV Alpha Analysis of Liquids	LA-508-101	183
QALPHA02	QALPHA02	SOLID	ENV Alpha of Digested Solids	LA-508-101	310
QALPHA03	QALPHA03	LIQUID	ENV Alpha Analysis of Liquids	LA-508-101	68

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.2

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
@BETA-02	@BETA-02	AIR	ENV Beta of Liquid Samples	LA-508-101	183
@BETA-02	@BETA-02	LIQUID	ENV Beta of Liquid Samples	LA-508-101	183
@BETA-02	@BETA-02	SOLID	ENV Beta of Digested Solids	LA-508-101	310
@BETA-03		LIQUID	ENV Beta Large Volume	LA-508-101	183
@GEA-00	@GEA-00	LIQUID	GEA Large Library Method	LA-548-121	159
@GEA-06	@GEA-06	AIR	ENV. GEA for Co, Cs, Eu	LA-548-121	181
@GEA-06	@GEA-06	LIQUID	ENV. GEA for Co, Cs, Eu	LA-548-121	189
@GEA-06	@GEA-06	SOLID	ENV. GEA for Co, Cs, Eu	LA-548-121	199
@GEA-07	@GEA-07	AIR	ENV GEA-2" mount for Co, Cs, Eu	LA-548-121	189
@GEA-07	@GEA-07	LIQUID	ENV GEA-2" mount for Co, Cs, Eu	LA-548-121	189
@GEA-07	@GEA-07	SOLID	ENV GEA-2" mount for Co, Cs, Eu	LA-548-121	199
@H3-04	@H3-04	LIQUID	ENV TRITILUM (H3) - Ion Removal	LA-218-115	272
@PU23804		LIQUID	ENV Pu238/Pu239/Pu240 by TTA Ex	LA-943-123	741
@PU23904		SOLID	ENV Pu238/Pu239/Pu240 by TTA Ex	LA-943-123	809
@PUAM-01		AIR	Pu239/241 by TRU-SPEC Resin	LA-953-104	588
@PUAM-01		LIQUID	Pu239/241 by TRU-SPEC Resin	LA-953-104	647
@PUAM-01		SOLID	Pu239/241 by TRU-SPEC Resin	LA-953-104	647
@PUAM-02		LIQUID	Pu238, 239 by TRU-SPEC Resin	LA-953-104	647
@PUAM-02		SOLID	Pu238, 239 by TRU-SPEC Resin	LA-953-104	647
@PUAM-03		LIQUID	ENV Pu238, Pu239	LA-953-104	647
@PUAM-03		SOLID	ENV Pu238, Pu239	LA-953-104	647
@PUAM-04		LIQUID	ENV Pu238, 241/Am241/Cm243 Tru-Sp	LA-953-104	647
@PUAM-04		SOLID	ENV Pu238, 241/Am241/Cm243 Tru-Sp	LA-953-104	647
@PUTOT01		LIQUID	Total Pu by TTA Extraction	LA-943-101	847
@PUTOT01		SOLID	Total Pu by TTA Extraction	LA-943-101	847
@TC99-04	TC99-03	LIQUID	ENV Tc-99 Large Volume	LA-438-111	308
@TC99-00	@TC99-00	AIR	Technetium - Lq. Solnt.	LA-438-101	267
@ALPHA01	ALPHA01	AIR	Alpha (AEA/FILTER)	LA-508-101	87
@ALPHA01	ALPHA01	LIQUID	Alpha in Liquid Samples	LA-508-101	205
@ALPHA01	ALPHA01	SOLID	Alpha of Digested Solid	LA-508-101	76
@AM24101	AM24101	AIR	Am241 by Extraction	LA-953-103	689
@AM24101	AM24101	LIQUID	Am241 by Extraction	LA-953-103	700
@AM24101	AM24101	SOLID	Am241 by Extraction	LA-953-103	788
@AM24102	AM24102	LIQUID	Am241/Cm243 by Extraction	LA-953-103	789
@AM24102	AM24101	SOLID	Am241/Cm243 by Extraction	LA-953-103	789
@AM24103	AM24103	LIQUID	ENV Am241/Cm243	LA-943-123	897
@AM24103	AM24103E	SOLID	ENV Am241/Cm243	LA-943-123	897
@BETA-01	BETA-01	AIR	Beta in (AEA/FILTER)	LA-508-101	87
@BETA-01	BETA-01	LIQUID	Beta in Liquid Samples	LA-508-101	205
@BETA-01	BETA-01	SOLID	Beta of Digested Solids	LA-508-101	76
@C14-01	C14-01	SOLID	Carbon 14 Small Volume	LA-348-104	647
@C14-01	C14-01E	LIQUID	Carbon 14 Small Volume	LA-348-104	647
@GEA-01	CE08-02	SOLID	GEA for Co60 Cs137	LA-548-121	159
@GEA-01	CE13702E	LIQUID	GEA for Co60 Cs137	LA-548-121	159
@GEA-02	AM24102	SOLID	GEA: Cs137Co60Eu154-155Am241	LA-548-121	159
@GEA-02	EU15502E	LIQUID	GEA: Cs137Co60Eu154-155Am241	LA-548-121	159
@GEA-03	CE14402	SOLID	GEA for CoNiRuCsCeEuRa	LA-548-121	159
@GEA-03	RU10602E	LIQUID	GEA for CoNiRuCsCeEuRa	LA-548-121	159
@GEA-04	@GEA-04	AIR	GEA	LA-548-121	145
@GEA-04	@GEA-04	LIQUID	GEA (ALL)	LA-548-121	159
@GEA-04	@GEA-04	SOLID	GEA (ALL)	LA-548-121	159

FY 1988 UNIT PRICES - LABCORE

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 68 PRICES
GGEA-05	GGEA-05	AIR	ENV. GEA	LA-548-121	181
GGEA-05	GGEA-05	LIQUID	ENV. GEA	LA-548-121	199
GGEA-05	GGEA-05	SOLID	ENV. GEA	LA-548-121	199
H3-01	H3-01	AIR	Tritium (H3) by Lachat	LA-218-114	217
H3-01	H3-01	LIQUID	Tritium (H3) by Lachat	LA-218-114	217
H3-01	H3-01	SOLID	Tritium (H3) by Lachat	LA-218-114	196
H3-03	H3-03	LIQUID	ENV TRITIUM (H3)	LA-218-114	27
H3-03	H3-03E	SOLID	ENV TRITIUM (H3)	LA-218-114	247
I129-01	I129-01	SOLID	Iodine-129 Waste Tank Samples	LA-378-103	300
I129-01	I129-01E	LIQUID	Iodine-129 Waste Tank Samples	LA-378-103	259
NP23701	NP23701	SOLID	Np237 by TTA Extraction	LA-933-141	256
NP23701	NP23701E	LIQUID	Np237 by TTA Extraction	LA-933-141	283
Pu23901	Pu23901	SOLID	Pu239 by TRU-SPEC Resin	LA-943-127	588
Pu23901	Pu23901T	AIR	Pu239 by TRU-SPEC Resin	LA-943-127	539
Pu23901	Pu23901T	LIQUID	Pu239 by TRU-SPEC Resin	LA-943-127	539
Pu23902	Pu23901	SOLID	Pu239/Pu238 by TRU-SPEC Resin	LA-943-127	647
Pu23902	Pu23903	AIR	Pu239, Pu238	LA-943-123	741
Pu23902	Pu23901T	LIQUID	Pu239/Pu238 by TRU-SPEC Resin	LA-943-127	593
Pu23903	Pu23903	AIR	ENV Pu239, Pu238	LA-943-123	674
Pu23903	Pu23903	LIQUID	ENV Pu239, Pu238	LA-943-123	741
Pu23903	Pu23903E	SOLID	ENV Pu239, Pu238	LA-943-123	800
SE79-01	SE79-01	SOLID	Selenium-79 by Liquid Scint.	LA-385-132	1121
SE79-01	SE79-01E	AIR	Selenium-79 by Liquid Scint.	LA-385-132	1010
SE79-01	SE79-01E	LIQUID	Selenium-79 by Liquid Scint.	LA-385-132	1121
SR90-01	SR90-01	SOLID	Sr-90/Sr High Level	LA-220-101	316
SR90-01	SR90-01E	AIR	Sr-90/Sr High Level	LA-220-101	299
SR90-01	SR90-01E	LIQUID	Sr-90/Sr High Level	LA-220-101	289
SR90-03	BR90-03	LIQUID	Env SR-90	LA-220-103	382
SR90-03	BR90-03E	SOLID	Env SR-90	LA-220-103	385
SR90-03	SR90-03E	AIR	Env SR-90 on Sample	LA-220-103	395
TC99-01	TC99-01	SOLID	Technetium - Liq. Scint.	LA-438-101	282
TC99-01	TC99-01T	AIR	Technetium - Liq. Scint.	LA-438-101	257
TC99-01	TC99-01T	LIQUID	Technetium - Liq. Scint.	LA-438-101	257
TC99-03	TC99-03	LIQUID	ENV Tc-99	LA-438-101	308
TC99-03	TC99-03E	SOLID	ENV Tc-99	LA-438-101	339
ASH-01		AIR	Ash and Leach of Env. Samples	LA-544-102	159
ASH-01		SOLID	Ash and Leach of Env. Samples	LA-544-102	175
CM24303		AIR	Cm-243/244 Env.	LA-943-123	889
CM24303		LIQUID	Cm-243/244 Env.	LA-943-123	897
CM24303		SOLID	Cm-243/244 Env.	LA-943-123	887
FUS-ZR01	FUS-ZR01	SOLID	Fusion (Zr Crucible) with KOH	LA-549-141	480
FUSION01	FUSION01	SOLID	Fusion with KOH	LA-549-141	505
Pu23802	Pu23802	AIR	Pu-238 by Ion Exchange	LA-943-127	539
Pu23802	Pu23802	LIQUID	Pu-238 by Ion Exchange	LA-943-127	568
Pu23902	Pu23902	LIQUID	Pu-239/240 by Ion Exchange	LA-943-127	583
Pu23902	Pu23902	SOLID	Pu-239/240 by Ion Exchange	LA-943-127	647
TE12302	TE12302		Tellurium-123m by GEA	LA-548-121	198
RADIOLOGICAL SCREENING					

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.2

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
0TOTACT1			Total Activity by CSC	LA-545-111	54
DATA REPORTING					
			Data Report		2450
			Full Data Report (TANK CHAR REPT)		22300

FY 1998 Annual Work Plan

Part I - Summary

Revision # 0				26-Aug-97	
Cost Account Number	Cost Account Title			Funding Source:	
1MDR82	222-S Tank Characterization			G&A	
WBS Number	WBS Title			Service Center	x
7.1.1.4.3.3	222-S Tank Characterization			DOH/PMA	
Budget Analyst	J. M. Ker			FY 1998 CAP	
Cost Account Manager	J. R. Priluck			COST ELEMENTS	\$000'S
Financial Manager	R. A. Spahr			0 Labor	5,951
Program Manager	C. G. Mattison			1 Materials	861
RL Program Manager	R. P. Carter			2 Purchased Services	210
Full Time Equivalents (FTEs)				3 Other Hanford Contractors	96
	Exempt	Nonexempt	Bargaining	Total	7x Fee/Non DOH
Organizational	20.3	1.1	\$2.7	74.1	8 Revenue
Support	5.8	0.9	0.0	6.5	9 Enterprise Companies
Total	25.9	2.0	\$2.7	80.6	Subtotal Net Budget
				4 Site Services	184
				5 Internal Charges	297
				6 LMSI Support	48
				7C DOH	968
				Total Baseline	\$,718
SIGNATURES				BASELINE APPROVAL:	
CAM:		Date:		Date:	
Program Manager:		Date:			
RL Program Manager:		Date:		Indirect Program Administration	
<p>The FY 1998 Annual Work Plan (AWP) for 1MDR, Sample Analysis, is being submitted unsigned due to recent reductions in the sample load for Tank Characterization Program. These reductions has not been incorporated into the AWP. A Revised AWP for the sample analysis will be submitted by September 22, 1997 with the appropriate signatures.</p>					

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

11MDR#2

COST ACCOUNT WORKSCOPE SUMMARY

Functional Organization: 222-S Laboratory

Workscope Summary: 222-S Laboratory is to provide analytical chemistry services for Protocol Samples that are > 10mR/hr in support of Tank Characterization programmatic missions. Protocols are analyses that require additional oversight of operations and require formal documentation. Protocols QA oversight, blanks, standard, duplicates, and spikes to be performed and are subject to regulatory requirements (i.e., CERCLA, RCRA, etc.). Protocols provide support to Tank Characterization Project (TCP) to meet their safety and DNFSS requirements.

222-S Laboratory scheduled to perform 42.6 AELs in FY 1998 for Tank Characterization Program.

APPROVED BASELINE:

FY 1998

Activity Description - Hot Cell/Sample Receipt Team

FTEs

Dollars

This activity entails receiving samples into 222-S Laboratory; logging the sample; assuring all samples are under strict chain-of-custody, ensuring inventory of radionuclides content of the Laboratory is up to date and current, and HPTs to perform dose rate and contamination surveys upon receipt of samples.

Sample Custodians

Hot Cell/Sample Receipt Team

HPT Support

0.9

80.0

6.4

753.0

3.6

270.0

Mutually Agreed Upon Workscope Deliverables and Due Dates:

1. 10/01/97 to 09/30/98

Receiving samples into 222-S Laboratory; logging the sample; assuring all samples are under strict chain-of-custody, and ensuring inventory of radionuclides content of the Laboratory is up to date and current.

2. 10/01/97 to 09/30/98

4. Perform radiological screening at 222-S Laboratory for Tank Characterization.

3. 10/01/97 to 09/30/98

Performing extractions in the Hot Cell in support of Tank Characterization

Subtotal Net

13.8

1,083.0

Total Activity

13.8

1,272.4

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1M0R62

Activity Description - Sample Analysis Team

This activity is for the analytical work that is performed on each sample after it has been received. This work entails sample preparation, Radiochemistry, Inorganic, and Organic analyses, development of procurement of standards to support analyses at 223-S, shop and laboratory supplies needed to perform analyses, HPT screening, and troubleshooting.

Counting Room Team

4 2

315 6

Direct Analysis/Wet Chemistry Team

13 1

1,011 8

Preparation Analysis Team

12 1

945 1

Radiochemical Separations Team

4 4

352 0

Standards Laboratory Team

4 4

335 6

Stockroom Support

0 3

687 8

HPT Support - Analysts

8 0

713 6

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 06/30/98

Analytical work performed on each sample after it has been received. This includes sample preparation and analysis of the samples.

2 10/01/97 to 06/30/98

Development and procurement of analytical standards to support analyses for Tank Characterization.

3 10/01/97 to 06/30/98

Procurement of analytical supplies for the Stockroom necessary to perform analysis for Tank Characterization.

4 10/01/97 to 06/30/98

HPT screening to support analysis for Tank Characterization.

Subtotal Net

48 5

4,341 7

Total Activity

48 5

5,018 6

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

110482

Activity Description - Data Administration/Reporting

This activity provides Quality Assurance (QA) and Quality Control (QC) officer support, QA support for the preparation review and approval of project data packages. This account includes daily operations support to the LABCORE computer systems, Buyer Technical Representative activities, updating reports and instrument interfaces, and acceptance testing of updates.

QA Support

10

77.0

LIMS/LABCORE Support

06

216.8

Laboratory Leader Support

07

45.9

Project Coordination

16

144.7

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Provide Quality Assurance (QA) and Quality Control (QC) officer support for preparation review and approval of project data packages at 222-S Laboratory.

2 10/01/97 to 09/30/98

LIMS/LABCORE support to track data through the laboratory and to meet Tank Characterization reporting requirements.

3 10/01/97 to 09/30/98

Preparation of Data Packages per Tank Characterization requirements.

Subtotal Net

39

484.4

Total Activity

39

581.6

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

IMDR#2

Activity Description - Archive/Disposal

This activity provides support to dispose/archive of samples as required by the customer, tracking samples for disposal, provide HPTs to perform dose rate and contamination surveys for short/long term archival or for disposal, and transportation support.

Waste Handling

55

464.3

Sample Custodian

04

26.2

HPT Support

16

130.5

Transportation

00

26.0

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Archive samples and/or disposal of the samples as appropriate for the Tank Characterization Program.

2 10/01/97 to 09/30/98

Provide HPT screening for Archive and disposing to samples.

3 10/01/97 to 09/30/98

Provide transportation of samples for disposal in support of the Tank Characterization Program.

4 10/01/97 to 09/30/98

Tracking of samples for disposal/archive.

Subtotal Net

75

647.0

Total Activity

75

1,037.0

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

IMDR92

Activity Description - Facility Planning Team/Support

This activity provides program support and customer interface, establishes customer points of contact, developing a facility analytical schedule, establishing facility priorities, tracking and reporting progress against the integrated schedule, Laboratory Leaders for project setup, sample disposal, and will provide customer interface for small projects, records scanning support, provide technical quality support for all aspects of the analytical process and tracking of cost versus budget support.

Process Analysis Management

0.7

54.6

Coordinator

0.7

54.6

Laboratory Leaders

1.1

72.2

Project Coordination

0.7

59.5

Analytical Work Scheduler

0.7

54.6

QA Support

0.4

31.2

Records Management

0.7

46.1

Financial Representative

0.6

39.3

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Tracking and reporting progress against the integrated schedule

2 10/01/97 to 09/30/98

Provide progress reports to Tank Characterization.

3 10/01/97 to 09/30/98

Conduct/coordinate technical reviews of analytical work.

4 10/01/97 to 09/30/98

Develop short/long range analytical work schedule

5 10/01/97 to 09/30/98

Coordinate/perform reviews for data quality and accuracy for organic, inorganic and radiochemistry.

6 10/01/97 to 09/30/98

Approve disposition of samples and preps after analysis

7 10/01/97 to 09/30/98

Establish agreements with Tank Characterization for quality, schedule, and sample disposition for identified work

Subtotal Net

6.6

412.1

Total Activity

5.5

478.2

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1MDR92

Activity Description - Technical Support

This activity provide procedure maintenance, develop training programs/modules per Analytical Services training requirements, and consulting services on the latest technology.

222-S Training

0.8

59.6

Procedure Administration

1.0

68.8

Technical Development (NUMATEC)

1.5

114.8

Activity Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Procedure preparation and maintenance of existing procedures.

2 10/01/97 to 09/30/98

Provide instructions, development of training programs/modules and training records administration per Analytical Services training requirements.

3 10/01/97 to 09/30/98

Provides consulting services by performing studies and assessments to determine data quality, data requirements or to determine best measurement technology.

Subtotal Net

3.4

273.2

Total Activity

3.4

330.6

Approved Net

80.6

7,241.4

Approved Total

80.6

8,716.4

1MDR62, 222-S TANK CHARACTERIZATION
FY 1998 PROJECTIONS BY PROGRAM

RL WBS # 7.1.1.4.3.3

PROGRAM	FUNCTIONAL \$	PROGRAM \$
222-S Tank Characterization	8718	10357

Based on Hanford Sample Projections (May 23, 1997)
Performing 42.5 AEUs in FY 1998.

RL WBS # 7.1.1.4.3.3

222-G LABORATORY	HOURS PER ANALYTE/ REPORT	% OF HOURS PER ANALYTE										
		QC	SAMPLE RECEIPT	TRAINING	ADMIN/ OPS TIME	MGMT	HET's	STAND LAB	TOTAL ANALYT HRS	TOTAL LABOR \$	STOCK- ROOM	TOTAL ANALYTE \$
SAMPLE PREPARATION	HOURS	20.0%	N/A	3.0%	21.6%	4.0%	10.8%	N/A		Convert Labor Hour to Dollars	10.70%	Total Labor + Stock- Room
INORGANIC CHEMISTRY	HOURS	20.0%	3.1%	3.0%	21.6%	4.0%	10.8%	8.0%			10.70%	
RADIOCHEMISTRY (1)	HOURS	20.0%	20.0%	3.0%	21.6%	4.0%	10.8%	8.0%			10.70%	
ORGANIC CHEMISTRY	HOURS	20.0%	3.1%	3.0%	21.6%	4.0%	10.8%	8.0%			10.70%	
Duplicates = 1 Sample Sample QC = 1 Sample QC consist of Blanks, Spikes, Standards.												

222-S LABORATORY	% OF TOTAL ANALYTE HOURS SUPPORT TO ANALYTICAL WORK					NON- LABOR \$	TOTAL UNIT PRICE (2)
	ARCH/ DISP	DATA ADM/ REPTG	PROG/ ADMIN	TOTAL SUPPORT HOURS	TOTAL SUPPORT LABOR \$		
SAMPLE PREPARATION	13.0%	4.6%	8.0%		Convert Labor Hours to Dollars	8.80%	Total Analyte \$ +
INORGANIC CHEMISTRY	13.0%	4.6%	8.0%			8.80%	
RADIOCHEMISTRY (1)	13.0%	4.6%	8.0%			8.80%	Total Support +
ORGANIC CHEMISTRY	13.0%	4.6%	8.0%			8.8%	Non-Labor \$ = Unit Cost
							to total Analyte & Supt \$
Data Report	N/A	N/A	8.0%			8.80%	

COMMENTS:

(1) The increase in Sample Receipt percentage is due to Devcon, workscope associated with radiochemistry work which requires additional handling and cleanout.

*Admin/Ops Time includes downtime, building operations, changeout, procedure review, housekeeping, etc.

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.3

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
HOT CELL/SAMPLE RECEIPT TEAM					
#EXTRD01	DUQVOL1	LIQUID	Drainable Liquid Recovered-Vol	LO-160-103	36
#EXTRD01	DUQVOL1	SOLID	Drainable Liquid Recovered-Vol	LO-160-103	36
#EXTRD01	DLIQWT01	LIQUID	Drainable Liquid Recovered-WT	LO-160-103	36
#EXTRD01	DLIQWT01	SOLID	Drainable Liquid Recovered-WT	LO-160-103	36
#EXTRD01	EST.G/M/L	LIQUID	Estimated G/M/L - Calculated	LO-160-103	36
#EXTRD01	EST.G/M/L	SOLID	Estimated G/M/L - Calculated	LO-160-103	36
#EXTRD01	EXTRUD01	LIQUID	Extrude Segment in Hot Cell	LO-160-103	968
#EXTRD01	EXTRUD01	SOLID	Extrude Segment in Hot Cell 1E	LO-160-103	1049
#EXTRD01	EXTRUD01	SOLID	Extrude Segment in Hot Cell -Rotary	LO-160-103	1856
#EXTRD01	LLIQWT01	LIQUID	Drainable Liquid Recovered-WT	LO-160-103	36
#EXTRD01	LLIQWT01	SOLID	Drainable Liquid Recovered-WT	LO-160-103	36
#EXTRD01	NOTEBOOK	LIQUID	Notebook with Source Data	LO-160-103	36
#EXTRD01	NOTEBOOK	SOLID	Notebook with Source Data	LO-160-103	36
#EXTRD01	ORGVOL01	LIQUID	Organic Volume Present	LO-160-103	36
#EXTRD01	ORGVOL01	SOLID	Organic Volume Present	LO-160-103	36
#EXTRD01	SLDVOL01	LIQUID	Solids Recovered - Volume	LO-160-103	36
#EXTRD01	SLDVOL01	SOLID	Solids Recovered - Volume	LO-160-103	36
#EXTRD01	SLDWT-01	LIQUID	Solids Recovered - Weight	LO-160-103	36
#EXTRD01	SLDWT-01	SOLID	Solids Recovered - Weight	LO-160-103	36
#EXTRD01			EXTRUSION - AUGERS	LO-160-103	565
#EXTRD01			EXTRUSION - SLURP	LO-160-103	323
@APPEAR1	APPEAR01	LIQUID	Appearance of a sample	LA-519-151	21
@APPEAR1	APPEAR01	SOLID	Appearance of a sample	LA-519-151	21
ARCHIV01	ARCHIV01	LIQUID	Archive aliqu of sample/hotcell	None	25
ARCHIV01	ARCHIV01	SOLID	Archive aliqu of sample/hotcell	None	27
ARCHIV02	ARCHIV02	LIQUID	Archive aliqu of sample/sample prep	None	23
ARCHIV02	ARCHIV02	SOLID	Archive aliqu of sample/sample prep	None	27
ARCHIVE	ARCHIVE	LIQUID	Archive an aliquot of sample	None	21
ARCHIVE	ARCHIVE	SOLID	Archive an aliquot of sample	None	21
BLKDEN01	BLKDEN01	LIQUID	Bulk Density of Sample	LO-160-103	78
BLKDEN01	BLKDEN01	SOLID	Bulk Density of Sample	LO-160-103	127
COMPOS01	COMPOS01	LIQUID	Make Composite Sample	LO-160-103	35
COMPOS01	COMPOS01	SOLID	Make Composite Sample	LO-160-103	38
FILTER01	FILTER01	LIQUID	Filter Liquid / hotcell	LA-504-101	28
FILTER02	FILTER02	LIQUID	Filter Liquid / sample prep	LA-504-101	22
FSLDWT01	FSLDWT01	LIQUID	Weight of Solids - Filtered	LA-548-141	31
FSLDWT01	FSLDWT01	SOLID	Weight of Solids - Filtered	LA-548-141	31
HOMGNZ01	HOMGNZ01	SOLID	Homogenize Sample	LO-160-103	38
SHIP-PNL	SHIP-PNL	LIQUID	Ship aliquot of sample to PNL	None	65
SHIP-PNL	SHIP-PNL	SOLID	Ship aliquot of sample to PNL	None	72
			EOX	LI-000-200	22
PCL ANALYSIS:					
@ICP-P02		SOLID	ICP (PCL Digest of Solids)	LA-505-151/162	192
@ICP-P03		LIQUID	ICP (PCL Digest) Li Only	LA-505-151/163	192
@ICP-P04		SOLID	ICP (PCL Digest) Cd, Cr, Pb	LA-505-151/164	192
@MSU-A1	@MSU-A1	SOLID	Isotopic Uranium (ICP/MS) Acid Dig- Solid	LT-508-101	192
@MSU-F1	@MSU-F1	SOLID	Isotopic Uranium (ICP/MS) Fusion Dig	LT-508-101	192

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.3

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICE
MSLU-B1	MSLU-B1	LIQUID	Isotopic Uranium (ICP/MS) Acid Dig-Liquid	LT-508-101	192
MSLU-D1	MSLU-D1	LIQUID	Isotopic Uranium (ICP/MS) Direct Liquid	LT-508-101	192
MSACT-A1	MSACT-A1	SOLID	Actinides (ICP/MS) Acid Dig - Solid	LT-508-101	258
MSACT-F1	MSACT-F1	SOLID	Actinides (ICP/MS) Fusion Dig	LT-508-101	258
MSACT-B1	MSACT-B1	LIQUID	Actinides (ICP/MS) Acid Dig - Liquid	LT-508-101	258
MSACT-D1	MSACT-D1	LIQUID	Actinides (ICP/MS) Direct Liquid	LT-508-101	258
MSSTC-A1	MSSTC-A1	SOLID	Tc-99 (ICP/MS) Acid Dig - Solid	LT-508-101	154
MSSTC-F1	MSSTC-F1	SOLID	Tc-99 (ICP/MS) Fusion Dig - Solid	LT-508-101	154
MSSTC-B1	MSSTC-B1	LIQUID	Tc-99 (ICP/MS) Acid Dig - Liquid	LT-508-101	154
MSSTC-D1	MSSTC-D1	LIQUID	Tc-99 (ICP/MS) Direct Liquid	LT-508-101	154
MSCS-A1	MSCS-A1	SOLID	Isotopic Cesium (ICP/MS) Acid Dig-Solid	LT-508-101	192
MSCS-F1	MSCS-F1	SOLID	Isotopic Cesium (ICP/MS) Fusion Dig	LT-508-101	192
MSCS-B1	MSCS-B1	LIQUID	Isotopic Cesium (ICP/MS) Acid Dig-Liquid	LT-508-101	192
MSCS-D1	MSCS-D1	LIQUID	Isotopic Cesium (ICP/MS) Direct Liquid	LT-508-101	192
MSZR-A1	MSZR-A1	SOLID	Zr-93 (ICP/MS) Acid Dig - Solid	LT-508-101	192
MSZR-F1	MSZR-F1	SOLID	Zr-93 (ICP/MS) Fusion Dig	LT-508-101	192
MSZR-B1	MSZR-B1	LIQUID	Zr-93 (ICP/MS) Acid Dig - Liquid	LT-508-101	192
MSZR-D1	MSZR-D1	LIQUID	Zr-93 (ICP/MS) Direct Liquid	LT-508-101	192
MSGN-A1	MSGN-A1	SOLID	Sn-126 (ICP/MS) Acid Dig - Solid	LT-508-101	192
MSGN-F1	MSGN-F1	SOLID	Sn-126 (ICP/MS) Fusion Dig	LT-508-101	192
MSGN-B1	MSGN-B1	LIQUID	Sn-126 (ICP/MS) Acid Dig - Liquid	LT-508-101	192
MSGN-D1	MSGN-D1	LIQUID	Sn-126 (ICP/MS) Direct Liquid	LT-508-101	192
MSSEL-A1	MSSEL-A1	SOLID	Elemental Analysis (ICP/MS) Acid Dig-Solid	LT-508-101	258
MSSEL-F1	MSSEL-F1	SOLID	Elemental Analysis (ICP/MS) Fusion Dig	LT-508-101	258
MSSEL-B1	MSSEL-B1	LIQUID	Elemental Analysis (ICP/MS) Acid Dig-Liquid	LT-508-101	258
MSSEL-D1	MSSEL-D1	LIQUID	Elemental Analysis (ICP/MS) Direct Liquid	LT-508-101	258
VISCOB1	VISCOB1	LIQUID	Viscosity Analysis by PCL	LT-519-115	388
VISCOF1	VISCOF1	SOLID	Viscosity Analysis by PCL	LT-519-115	403
ICP-P01		SOLID	ICP (PCL Digest)	LA-505-151/161	192
ADIABC01	ADIABC01	LIQUID	Adsorbent Calorimetry	WHC-SD-WM-	1007
ADIABC01	ADIABC01	SOLID	Adsorbent Calorimetry	WHC-SD-WM-	1158
BOILPT01	BOILPT01	LIQUID	Boiling Point Study	PCL does this	127
PARTSZ01	PARTSZ01	SOLID	Particle Size Analysis	LT-519-101	111
PCLDIG01			Digestion done by PCL	PCL Method	255
RSSTD-01		SOLID	Digestion - Water No Acid & A Added	LA-504-101	285
RSSTD-01		WATER	Digestion - Water Acid Added	LA-504-101	291
			Laser Ablation/Mass Spec Screen	LT-508-102	468
			TCLP Digestion/Extraction	LA-544-134	519
			Settling Rate	Test Plan	182
			Settled Density	Test Plan	182
			Centrifuge Particle Density	Test Plan	374
PREPARATION ANALYSIS TEAM					
EDTA-D1			EDTA-HEDTA by C.Z.E	LA-533-113	45
IC2-01		LIQUID	Organic Acids-IC Dionex 4000	LA-533-105	384
IC2-01		SOLID	Organic Acids-IC Dionex 4000	LA-533-105	384
IC3-01		LIQUID	Anions by IC - Dionex 100	LA-533-101	192
IC3-01		SOLID	Anions by IC - Dionex 100	LA-533-101	192
IC3-01		ALL	Single Analyte Parameter - IC	LA-533-101	128
IC4-01		LIQUID	F. ORG. Acid-IC Dionex 4000 / 4500	LA-533-105	384

FY 1998 UNIT PRICES - LABCORE**IRL WBS # 7.1.1.4.3.3**

Code Test	Parameters Labcode	MATRIX	Description	Reference #	FY 98 PRICES
IC4-01		SOLID	F. ORG. Acid-IC Dionex 4000 / 4500	LA-533-105	384
IC4-01		ALL	Single Analyte Parameter - IC	LA-533-105	162
IC5-01		LIQUID	Anions & Cations on Dionex 500	LA-533-115	384
IC5-01		SOLID	Anions & Cations on Dionex 500	LA-533-115	384
IC5-01		ALL	Anions & Cations on Dionex 500	LA-533-115	192
ICP-T01			TCLP Digest of Liquids	LA-505-151	192
ICP-Z01			Fusion 2x Crucible (all metals)	LA-505-151	192
KDIG-01		LIQUID	Acid Dig-Sandfilter Backwash	LA-505-162	506
KDIG-01		SOLID	Acid Dig-Sandfilter Backwash	LA-505-162	557
IC-01		LIQUID	Anions by IC - Dionex 4000i / 4500	LA-533-105	320
IC-01		SOLID	Anions by IC - Dionex 4000i / 4500	LA-533-105	320
ICP-A01		SOLID	ICP (Acid Digest) All Metals	LA-505-151/161	192
ICP-A02		SOLID	ICP (Acid Digest of Solids)	LA-505-151/161	192
ICP-A03		SOLID	ICP (Acid Digest) Li Only	LA-505-151/161	192
ICP-A04		SOLID	ICP (Acid Digest) U Fe Mn	LA-505-151/161	192
ICP-B01		LIQUID	ICP (Acid Digest of Liquid)	LA-505-151/161	192
ICP-B02		LIQUID	ICP (Acid Digest of a Liquid)	LA-505-151/161	192
ICP-B03		LIQUID	ICP (Acid Digest) Li Only	LA-505-151/161	192
ICP-B04		LIQUID	ICP (Acid Digest) U Fe Mn	LA-505-151/161	192
ICP-D01		LIQUID	ICP (Acid Added to Liquid)	LA-505-151/161	192
ICP-D02			ICP (Acid Digest of a Liquid)	LA-505-151/161	192
ICP-D03		LIQUID	ICP (Acid Digest) Li Only	LA-505-151/161	192
ICP-D04		LIQUID	ICP (Acid Digest) U Fe Mn	LA-505-151/161	231
ICP-F01		SOLID	ICP (Fusion Digest) All Metals	LA-505-151/161	192
ICP-F02		SOLID	ICP (Fusion Digest)	LA-505-151/161	192
ICP-F03		SOLID	ICP (Fusion Digest) Li Only	LA-505-151/161	192
ICP-F04		SOLID	ICP (Fusion Digest) U Fe Mn	LA-505-151/161	192
ICP-H01		SOLID	ICP (H2O/Acid) All Metals	LA-505-151/161	192
ICP-QC		QC	ICP (QC) All Metals	LA-505-151	192
ICP (>1)			ICP (>High dose rate > 1r)	LA-505-151/161	218
ICP (>20)			ICP (>20 samples 5% discount rerun)	LA-505-151/161	96
ICP (1-5)			ICP (1-5 Analytes) primary	LA-505-151/161	192
ICP (35-40)			ICP (35-40 Analytes) Tertiary	LA-505-151/161	218
ICP (5-10)			ICP (5-10 Analytes) Secondary	LA-505-151/161	243
ACDIGFA01	ACDIGFA01	LIQUID	Digestion - Acid (LIQUID) ICP/PL&GFAA	LA-505-156	253
ACDIG02	ACDIG02	LIQUID	Acid Digest	LA-505-158	253
ACDIG03		SOLID	Digestion - Acid (Solid) ICP/FL&HYA&GF	LA-505-159	506
ACDIL01	ACDIL01	LIQUID	Acid Dilution	LA-505-158	32
CD-03	CD-03	LIQUID	Cadmium by GFAA	LA-505-402	192
CD-03	CD-03	SOLID	Cadmium by GFAA	LA-505-402	192
GRADIG01		SOLID	GFAA Acid Digest	LA-505-401	253
H2ODIG02		LIQUID	Water Digest	LA-504-101	133
H2ODIL01		LIQUID	Water Dilution of a Sample	LA-504-101	133
SE-05	SE-05	LIQUID	Selenium by HYAA	LA-385-132	384
SE-05	SE-05	SOLID	Selenium by HYAA	LA-385-132	384
SUSPLSLD1		SOLID			116

DIRECT ANALYSIS WET CHEMISTRY TEAM

PCB		PCBs by SW-846	LA-523-434	251
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222-S LABORATORY
FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.3

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
PCB-OIL		OIL	PCBs in oil by 8W-848	LA-523-434	278
CLPEST		LIQ	Pesticides by CLP protocol	LA-523-434	251
CLPEST		SOL	Pesticides by CLP protocol	LA-523-434	278
CLPSVO		LIQ	Semi-VOA GC/MS by CLP protocol	LA-523-402	841
CLPSVO		SOL	Semi-VOA GC/MS by CLP protocol	LA-523-402	825
CLPVOA		LIQ	VOA by GC/MS - CLP protocol	LA-523-401	988
CLPVOA		SOL	VOA by GC/MS - CLP protocol	LA-523-401	512
IC-01	F3-01	LIQUID	Fluoride by IC-Dionex T00	LA-533-105	288
NPH/TBP	DECANE	SOL	NPH/TBP by GC	LA-523-437	192
NPH/TBP	UNDECANE	LIQ	NPH/TBP by GC	LA-523-437	175
PEST-WP	A-BHC	LIQ	Pesticides by CLP protocol	LA-523-434	251
RCRA-SV	1-NAPHA	SOL	Semi-VOA GC/MS RCRA protocol	LA-523-408	825
RCRA-SV	TRITOLP	LIQ	Semi-VOA GC/MS RCRA protocol	LA-523-408	841
RCRAVOA	11-DCL2	SOL	VOA by GC/MS - RCRA protocol	LA-523-405	512
RCRAVOA	VINYLDE2	LIQ	VOA by GC/MS - RCRA protocol	LA-523-405	488
SVEVAP	2CPD4-01	LIQ	Semi-Voa Evaporator	LA-523-408	841
TIC/TOC1	TIC-02	SOLID	TIC/TOC Acid Persulfate	LA-542-100	214
TIC/TOC1	TOC-02	LIQUID	TIC/TOC Acid-Persulfate	LA-542-180	214
U-01	U-02	SOLID	Uranium by Phosphorescence	LA-925-009	283
U-01	U-02E	AIR	Uranium by Phosphorescence	LA-925-009	257
U-01	U-02E	LIQUID	Uranium by Phosphorescence	LA-925-009	257
U-03	U-03	AIR	ENV Uranium	LA-925-008	281
U-03	U-03	LIQUID	ENV Uranium	LA-925-008	306
U-03	U-03E	SOLID	ENV Uranium	LA-925-008	340
VOA-WP	11-DCL2	LIQ	VOA by GC/MS - 624 protocol	LA-523-405	488
VOAEVAP	BFB-01	LIQ	VOA Evaporator	LA-523-405	466
12-DBEN1			1,2-Dichlorobenzene (RCRA-VOA)	LA-523-405	45
13-DBEN1			1,3-Dichlorobenzene (RCRA-VOA)	LA-523-405	45
14-DBEN1			1,4-Dichlorobenzene (RCRA-VOA)	LA-523-405	45
1BUTAN-1	1BUTAN-1	SOL	1-Butanol	LA-523-405	45
2BUETHOL	2BUETHOL	SOL	2-Butoxyethanol	LA-523-408	45
2CPD4-01	2CPD4-01	SOL	2-Chlorophenol-04 Surr	LA-523-408	45
2FP-01	2FP-01	SOL	2-Fluorophenol Surr	LA-523-408	45
2HEXANO1	2HEXANO1	SOL	2-Hexanone	LA-523-405	45
2PENTNON	2PENTNON	SOL	2-Pentanone	LA-523-408	45
4MET2PE1	4MET2PE1	SOL	4-Methyl-2-pentanone	LA-523-405	45
ACETONE1	ACETONE1	SOLID	Acetone	LA-523-405	32
CR-01		LIQUID	Cautic Ratio	LA-211-105	81
CR-01		SOLID	Cautic Ratio	LA-211-105	81
CN-03	CN-03	LIQUID	Cyanide NEW METHOD	LA-885-102	269
CN-03	CN-03	SOLID	Cyanide NEW METHOD	LA-885-102	269
CN-03	CN-03	SOLID	Cyanide NEW METHOD	LA-885-103	220
CRVI-01	CRVI-01	LIQUID	Chromium (VI) by Spec.	LA-265-101	192
CRVI-01	CRVI-01	SOLID	Chromium (VI) by Spec.	LA-265-101	192
D2EHPA			Di-2 Ethylhexyl Phosphoric acid		45
DSC-01	DSC-01	LIQUID	DSC Exotherm using Mettler	LA-514-113	258
DSC-03	DSC-03	LIQUID	DSC Exotherm on Perkin Elmer	LA-514-114	258
DSC-03	DSC-03	SOLID	DSC Exotherm on Perkin Elmer	LA-514-114	258
ETHYGLY	ETHYGLY	LIQ	Ethylene Glycol	LA-523-106	65
ETHYGLY	ETHYGLY	SOL	Ethylene Glycol	LA-523-106	72
H+ION-01			Hydrogen Ion Analysis	LA-211-102	81

222-S LABORATORY
FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.3

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
HG-02	HG-02	LIQUID	Mercury by CVAA (Perkin Elmer)	LA-325-104	384
HG-02	HG-02	SOLID	Mercury by CVAA (Perkin Elmer)	LA-325-104	384
NH3-01	NH3-01	LIQUID	Ammonia by ISE-Std Additions	LA-631-001	90
NH3-01	NH3-01	SOLID	Ammonia by ISE-Std Additions	LA-631-001	90
OH-01	OH-01	LIQUID	OH- by Pot. Titration	LA-211-102	81
OH-01	OH-01	SOLID	OH- by Pot. Titration	LA-211-102	81
OHDEMAND	OHDEMAND	LIQUID	Caustic Demand	LA-211-104	154
PH-01	PH-01	LIQUID	pH Direct	LA-212-108	10
PH-02	PH-02	SOLID	pH on SST Samples	LA-212-108	38
PH-QC	PH-QC	QC	pH Measurement QC		18
SOLID-01	SOLID-01	LIQUID	Solids % - Gravimetric	LA-584-101	77
SOLID-01	SOLID-01	SOLID	Solids % - Gravimetric	LA-584-101	77
SPG-01	SPG-01	LIQUID	Specific Gravity	LA-510-112	77
SPG-02	SPG-02	SOLID	Specific Gravity-Solids/Sludges	LA-510-110	206
TOTC-02	TOTC-02	LIQUID	Total Carbon by Persulfate	LA-342-100	289
TDS-01	TDS-01	LIQUID	Total Dissolv. Solids - Grav.	LA-510-113	113
TDS-01	TDS-01	SOLID	Total Dissolv. Solids - Grav.	LA-510-113	115
TGA-01	TGA-01	LIQUID	% Water by TGA using Mettler	LA-580-112	256
TGA-01	TGA-01	SOLID	% Water by TGA using Mettler	LA-580-112	256
TGA-03	TGA-03	LIQUID	% Water by TGA on Perkin Elmer	LA-514-114	256
TGA-03	TGA-03	SOLID	% Water by TGA on Perkin Elmer	LA-514-114	256
TIC-01	TIC-01	LIQUID	Tot. Inorg. Carbon by Coul.	LA-342-100	289
TIC-01	TIC-01	SOLID	Tot. Inorg. Carbon by Coul.	LA-342-100	289
TC-02	TC-02	LIQUID	Tot. Inorg. Carbon by Persulfate	LA-342-100	289
TC-02	TC-02	SOLID	Tot. Inorg. Carbon by Persulfate	LA-342-100	289
TOC-01	TOC-01	LIQUID	Tot. Organic Carbon by Coul.	LA-344-105	289
TOC-01	TOC-01	SOLID	Tot. Organic Carbon by Coul.	LA-344-105	289
TOC-02	TOC-01	SOLID	Tot. Organic Carbon by Persulfate	LA-344-105	289
TOTC-01	TOTC-01	LIQUID	Total Carbon by Coulometry	LA-344-105	289
TOTC-01	TOTC-01	SOLID	Total Carbon by Coulometry	LA-344-105	289
TOTC-02	TOTC-02	SOLID	Total Carbon by Persulfate	LA-342-100	289
WATER-01	WATER-01	LIQUID	% Water by Gravimetric	LA-584-101	77
WATER-01	WATER-01	SOLID	% Water by Gravimetric	LA-584-101	77
	AS-05		Arsenic by HYAA	LA-355-131	384
		DIRECT	CONDUCTIVITY	LA-512-104	16
			ELECTRICAL CONDUCTANCE	LA-512-104	18
RADIOCHEMICAL SEPARATIONS TEAM					
AS-01	ALPHA01	LIQUID	Alpha and Beta Liquid Samples	LA-508-101	115
AS-01	ALPHA01	SOLID	Alpha and Beta Liquid Samples	LA-508-101	115
AS-02	ALPHA02	AIR	ENV ALPHA/BETA	LA-508-101	174
AS-02	ALPHA02	SOLID	ENV ALPHA/BETA	LA-508-101	191
AS-02	ALPHA02E	LIQUID	ENV ALPHA/BETA	LA-508-101	143
AS-03	AS-03	LIQUID	ENV ALPHA/BETA LARGE VOLUME	LA-508-101	143
AIR-01	ALPHA01	AIR	AIR	LA-508-101	57
ALPHA02	ALPHA02	AIR	ENV Alpha Analysis of Liquids	LA-508-101	183
ALPHA02	ALPHA02	LIQUID	ENV Alpha Analysis of Liquids	LA-508-101	183
ALPHA02	ALPHA02	SOLID	ENV Alpha of Digested Solids	LA-508-101	310
ALPHA03	ALPHA03	LIQUID	ENV Alpha Analysis of Liquids	LA-508-101	68

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.3

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
BETA-02	BETA-02	AIR	ENV Beta of Liquid Samples	LA-508-101	183
BETA-02	BETA-02	LIQUID	ENV Beta of Liquid Samples	LA-508-101	183
BETA-02	BETA-02	SOLID	ENV Beta of Digested Solids	LA-508-101	310
BETA-03		LIQUID	ENV Beta Large Volume	LA-508-101	183
GEA-00	GEA-00	LIQUID	GEA Large Library Method	LA-548-121	159
GEA-06	GEA-06	AIR	ENV. GEA for Co, Cs, Eu	LA-548-121	181
GEA-06	GEA-06	LIQUID	ENV. GEA for Co, Cs, Eu	LA-548-121	199
GEA-06	GEA-06	SOLID	ENV. GEA for Co, Cs, Eu	LA-548-121	199
GEA-07	GEA-07	AIR	ENV GEA-2" mount for Co, Cs, Eu	LA-548-121	199
GEA-07	GEA-07	LIQUID	ENV GEA-2" mount for Co, Cs, Eu	LA-548-121	199
GEA-07	GEA-07	SOLID	ENV GEA-2" mount for Co, Cs, Eu	LA-548-121	199
H3-04	H3-04	LIQUID	ENV TRITIUM (H3) - Ion Removal	LA-218-115	272
PU23904		LIQUID	ENV Pu239/Pu238/Pu240 by TTA Ex	LA-943-123	741
PU23904		SOLID	ENV Pu239/Pu238/Pu240 by TTA Ex	LA-943-123	808
PUAM-01		AIR	Pu239/241 by TRU-SPEC Resin	LA-953-104	847
PUAM-01		LIQUID	Pu239/241 by TRU-SPEC Resin	LA-953-104	847
PUAM-01		SOLID	Pu239/241 by TRU-SPEC Resin	LA-953-104	847
PUAM-02		LIQUID	Pu238,239 by TRU-SPEC Resin	LA-953-104	847
PUAM-02		SOLID	Pu238,239 by TRU-SPEC Resin	LA-953-104	847
PUAM-03		LIQUID	ENV Pu239, Pu238	LA-953-104	847
PUAM-03		SOLID	ENV Pu239, Pu238	LA-953-104	847
PUAM-04		LIQUID	ENV Pu238, 241/Am241/Cm243 Tru-Sp	LA-953-104	847
PUAM-04		SOLID	ENV Pu238, 241/Am241/Cm243 Tru-Sp	LA-953-104	847
POTOT01		LIQUID	Total Pu by TTA Extraction	LA-943-101	847
POTOT01		SOLID	Total Pu by TTA Extraction	LA-943-101	847
TC-89-04	TC89-03	LIQUID	ENV Tc-89 Large Volume	LA-438-111	308
TC98-00	TC98-00	AIR	Technetium - Lq. Scint.	LA-438-101	257
ALPHA01	ALPHA01	AIR	Alpha (AEA/FILTER)	LA-508-101	87
ALPHA01	ALPHA01	LIQUID	Alpha in Liquid Samples	LA-508-101	205
ALPHA01	ALPHA01	SOLID	Alpha of Digested Solid	LA-508-101	78
AM24101	AM24101	AIR	Am241 by Extraction	LA-953-103	769
AM24101	AM24101	LIQUID	Am241 by Extraction	LA-953-103	769
AM24101	AM24101	SOLID	Am241 by Extraction	LA-953-103	769
AM24102	AM24102	LIQUID	Am241/Cm243 by Extraction	LA-953-103	769
AM24102	AM24102	SOLID	Am241/Cm243 by Extraction	LA-953-103	769
AM24103	AM24103	LIQUID	ENV Am241/Cm243	LA-943-123	897
AM24103	AM24103E	SOLID	ENV Am241/Cm243	LA-943-123	897
BETA-01	BETA-01	AIR	Beta in (AEA/FILTER)	LA-508-101	87
BETA-01	BETA-01	LIQUID	Beta in Liquid Samples	LA-508-101	205
BETA-01	BETA-01	SOLID	Beta of Digested Solids	LA-508-101	78
C14-01	C14-01	SOLID	Carbon 14 Small Volume	LA-348-104	647
C14-01	C14-01E	LIQUID	Carbon 14 Small Volume	LA-348-104	647
GEA-01	CO60-02	SOLID	GEA for Co60 Cs137	LA-548-121	159
GEA-01	CS13702E	LIQUID	GEA for Co60 Cs137	LA-548-121	159
GEA-02	AM24102	SOLID	GEA:Cs137Co60Eu154-155Am241	LA-548-121	159
GEA-02	EU15502E	LIQUID	GEA:Cs137Co60Eu154-155Am241	LA-548-121	159
GEA-03	CE14402	SOLID	GEA for CoNiBrRuCsCoEuRa	LA-548-121	159
GEA-03	RU10602E	LIQUID	GEA for CoNiBrRuCsCoEuRa	LA-548-121	159
GEA-04	GEA-04	AIR	GEA	LA-548-121	145
GEA-04	GEA-04	LIQUID	GEA (ALL)	LA-548-121	159
GEA-04	GEA-04	SOLID	GEA (ALL)	LA-548-121	169

IRL WBS # 7.1.1.4.3.3

RADIOLOGICAL SCREENING

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.3

Code Test	Parameters Labours	MATRIX	Description	Reference #	FY 98 PRICES
TOTACT1			Total Activity by LSC	LA-548-111	54
DATA REPORTING					
			Data Report		2450
			Full Data Report (TANK CHAR REPT)		22300

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1NDR62

COST ACCOUNT WORKSCOPE SUMMARY

Functional Organization: 222-S Laboratory

Workscope Summary: 222-S Laboratory is to provide analytical chemistry services for Protocol Samples that are > 10mR/hr in support of Tank Characterization programmatic missions. Protocols are analyses that require additional oversight of operations and require formal documentation. Protocols QA oversight, blanks, standard, duplicates, and spikes to be performed and are subject to regulatory requirements (i.e., CERCLA, RCRA, etc.). Protocols provide support to Tank Characterization Project (TCP) to meet their Safety and DNFEB requirements.

222-S Laboratory scheduled to perform 42.5 AEUs in FY 1998 for Tank Characterization Program.

APPROVED BASELINE:

FY 1998

Activity Description - Hot Cell/Sample Receipt Team

FTEs

Dollars

This activity entails receiving samples into 222-S Laboratory; logging the sample; assuring all samples are under strict chain-of-custody; ensuring inventory of radionuclides content of the Laboratory is up to date and current; and HPTs to perform dose rate and contamination surveys upon receipt of samples.

Sample Custodians

Hot Cell/Sample Receipt Team

HPT Support

0.8

60.0

9.4

753.0

3.5

270.0

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Receiving samples into 222-S Laboratory; logging the sample; assuring all samples are under strict chain-of-custody; and ensuring inventory of radionuclides content of the Laboratory is up to date and current.

2 10/01/97 to 09/30/98

Perform radiological screening at 222-S Laboratory for Tank Characterization.

3 10/01/97 to 09/30/98

Performing estimations in the Hot Cell in support of Tank Characterization.

Subtotal Net

13.8

1,083.0

TOTAL LABOR Total Activity

13.8

1,272.4

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

IMDR62

Activity Description - Sample Analysis Team

This activity is for the analytical work that is performed on each sample after it has been received. This work entails sample preparation, Radiochemistry, Inorganic, and Organic analyses, development of procurement of standards to support analyses at 222-B, shop and laboratory supplies needed to perform analyses, HPT screening, and troubleshooting

Counting Room Team

4.2

315.8

Direct Analysis/Wet Chemistry Team

13.1

1,011.8

Preparation Analysis Team

12.1

945.1

Radiochemical Separations Team

4.4

352.0

Standards Laboratory Team

4.4

335.8

Stockroom Support

0.3

667.8

HPT Support - Analysis

8.0

713.6

Milestones Achieved Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Analytical work performed on each sample after it has been received. This includes sample preparation and analysis of the samples

2 10/01/97 to 09/30/98

Development and procurement of analytical standards to support analyses for Tank Characterization.

3 10/01/97 to 09/30/98

Procurement of analytical supplies for the Stockroom necessary to perform analysis for Tank Characterization.

4 10/01/97 to 09/30/98

HPT screening to support analysis for Tank Characterization

Subtotal Net

48.5

4,341.7

Total Activity

48.5

5,018.6

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

FMDR#2

Activity Description - Data Administration/Reporting

This activity provides Quality Assurance (QA) and Quality Control (QC) officer support, QA support for the preparation review and approval of project data packages. This account includes daily operations support to the LABCORE computer systems, Buyer Technical Representative activities, updating reports and instrument interfaces, and acceptance testing of updates.

QA Support

10

770

LIMS/LABCORE Support

06

216.8

Laboratory Leader Support

07

45.8

Project Coordination

16

144.7

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Provide Quality Assurance (QA) and Quality Control (QC) officer support for preparation review and approval of project data packages at 222-B Laboratory.

2 10/01/97 to 09/30/98

LIMS/LABCORE support to track data through the laboratory and to meet Tank Characterization reporting requirements.

3 10/01/97 to 09/30/98

Preparation of Data Packages per Tank Characterization requirements.

Subtotal Net

38

434.4

Total Activity

38

581.6

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

110062

Activity Description - Archive/Disposal

This activity provides support to dispose/archive of samples as required by the customer, tracking samples for disposal, provide HPTs to perform dose rate and contamination surveys for short/long term archival or for disposal, and transportation support.

Waste Handling

6.5

484.3

Sample Custodian

0.4

26.2

HPT Support

1.6

130.5

Transportation

0.0

26.0

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Archive samples and/or disposal of the samples as appropriate for the Tank Characterization Program.

2 10/01/97 to 09/30/98

Provide HPT screening for Archive and disposing to samples

3 10/01/97 to 09/30/98

Provide transportation of samples for disposal in support of the Tank Characterization Program.

4 10/01/97 to 09/30/98

Tracking of samples for disposal/archive

Subtotal Net

7.6

647.0

Total Activity

7.5

1,037.0

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

18DR82

Activity Description - Facility Planning Team/Support

This activity provides program support and customer interface, establishes customer points of contact, developing a facility analytical schedule, establishing facility priorities, tracking and reporting progress against the integrated schedule, Laboratory Leaders for project setup, sample disposal, and will provide customer interface for small projects, records scanning support, provide technical quality support for all aspects of the analytical process and tracking of cost versus budget support.

Process Analysis Management	0.7	54.6
Coordinator	0.7	54.6
Laboratory Leaders	1.1	72.2
Project Coordination	0.7	59.5
Analytical Work Scheduler	0.7	54.6
QA Support	0.4	31.2
Records Management	0.7	48.1
Financial Representative	0.5	39.3

Mutually Agreed Upon Deliverables and Due Dates

1	10/01/97 to 09/30/98	
	Tracking and reporting progress against the integrated schedule.	
2	10/01/97 to 09/30/98	
	Provide progress reports to Tank Characterization.	
3	10/01/97 to 09/30/98	
	Conduct/coordinate technical reviews of analytical work.	
4	10/01/97 to 09/30/98	
	Develop short/long range analytical work schedule.	
5	10/01/97 to 09/30/98	
	Coordinate/perform reviews for data quality and accuracy for organic, inorganic and radiochemistry.	
6	10/01/97 to 09/30/98	
	Approve disposition of samples and prep after analysis.	
7	10/01/97 to 09/30/98	
	Establish agreements with Tank Characterization for quality, schedule, and sample disposition for identified work.	
	Subtotal Net	5.5 412.1
	Total Activity	5.5 478.2

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP # UM0262

Activity Description - Technical Support

This activity provide procedure maintenance, develop training program/modules per Analytical Services training requirements, and consulting services on the latest technology.

222-S Training

08

59.6

Procedure Administration

10

88.8

Technical Development (NUMATEC)

15

114.8

Multitask Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Procedure preparation and maintenance of existing procedures.

2 10/01/97 to 09/30/98

Provide instructions, development of training program/modules and training records administration per Analytical Services training requirements.

3 10/01/97 to 09/30/98

Provides consulting services by performing studies and assessments to determine data quality, data requirements, or to determine best measurement technology.

Subtotal Net

34

273.2

Total Activity

34

330.8

Approved Net

80.8

7,241.4

Approved Total

80.8

8,718.4

1MDR82, 222-S TANK CHARACTERIZATION
FY 1998 PROJECTIONS BY PROGRAM

RL WBS # 7.1.1.4.3.3

PROGRAM	FUNCTIONAL \$	PROGRAM \$
222-S Tank Characterization	8718	10357

Based on Hanford Sample Projections (May 23, 1997)
Performing 42.5 AEU's in FY 1998.

RL WBS #7.1.1.4.3.3

222-S LABORATORY	HOURS PER ANALYTE/ REPORT	% OF HOURS PER ANALYTE										
		QC	SAMPLE RECEIPT	TRAINING	ADMIN/ OPS TIME	MGMT	HPTs	STAND. LAB	TOTAL ANALYT HRS	TOTAL LABOR \$	STOCK- ROOM	TOTAL ANALYTE \$
SAMPLE PREPARATION	HOURS	20.0%	N/A	3.0%	21.6%	4.0%	10.6%	N/A		Convert	10.70%	Total
INORGANIC CHEMISTRY	HOURS	20.0%	3.1%	3.0%	21.6%	4.0%	10.6%	6.0%		Labor Hour	10.70%	Labor +
RADIOCHEMISTRY (1)	HOURS	20.0%	20.0%	3.0%	21.6%	4.0%	10.6%	6.0%		to Dollars	10.70%	Stock-
ORGANIC CHEMISTRY	HOURS	20.0%	3.1%	3.0%	21.6%	4.0%	10.6%	6.0%			10.70%	Room.
Duplicate = 1 Sample Sample QC = 1 Sample QC consist of Blanks, Spikes, Standards												
											Add to Total Labor \$	

Z22-S LABORATORY	% OF TOTAL ANALYTE HOURS SUPPORT TO ANALYTICAL WORK					NON- LABOR \$	TOTAL UNIT PRICE (2)
	ARCH/ DISP	DATA ADM/ REPTG	PROG/ ADMIN	TOTAL SUPPORT HOURS	TOTAL SUPPORT LABOR \$		
SAMPLE PREPARATION	13.0%	4.5%	6.0%		Convert	\$ 60%	Total
INORGANIC CHEMISTRY	13.0%	4.5%	6.0%		Labor Hours	\$ 60%	Analyte
RADIOCHEMISTRY (1)	13.0%	4.5%	6.0%		to Dollars	\$ 60%	\$ +
ORGANIC CHEMISTRY	13.0%	4.5%	6.0%			\$ 60%	Total
						\$ 60%	Support +
						\$ 6%	Non-Labor \$
						to total	= Unit Cost
						Analyte	
						& Supp \$	
Data/Report	N/A	N/A	2.0%			\$ 60%	

COMMENTS.

(1) The increase in Sample Receipt percentage is due to Decon. Workscope associated with radiochemistry work which requires additional handling and cleanout.

*Admin/Ops Time includes downtime, building operations, changeout, procedure review, housekeeping, etc.

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.3

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
HOT CELL/SAMPLE RECEIPT TEAM					
#EXTRD01	DIQVOL1	LIQUID	Drainable Liquid Recovered-Vol	LO-180-103	38
#EXTRD01	DIQVOL1	SOLID	Drainable Liquid Recovered-Vol	LO-180-103	38
#EXTRD01	DIQWT01	LIQUID	Drainable Liquid Recovered-WT	LO-180-103	38
#EXTRD01	DIQWT01	SOLID	Drainable Liquid Recovered-WT	LO-180-103	38
#EXTRD01	EST G/M/L	LIQUID	Estimated G/M/L - Calculated	LO-180-103	38
#EXTRD01	EST G/M/L	SOLID	Estimated G/M/L - Calculated	LO-180-103	38
#EXTRD01	EXTRUD01	LIQUID	Extrude Segment in Hot Cell	LO-180-103	888
#EXTRD01	EXTRUD01	SOLID	Extrude Segment in Hot Cell 1E	LO-180-103	1049
#EXTRD01	EXTRUD01	SOLID	Extrude Segment in Hot Cell -Rotary	LO-180-103	1855
#EXTRD01	LIQWT01	LIQUID	Drainable Liquid Recovered-WT	LO-180-103	38
#EXTRD01	LIQWT01	SOLID	Drainable Liquid Recovered-WT	LO-180-103	38
#EXTRD01	NOTEBOOK	LIQUID	Notebook with Source Data	LO-180-103	38
#EXTRD01	NOTEBOOK	SOLID	Notebook with Source Data	LO-180-103	38
#EXTRD01	ORGVOL01	LIQUID	Organic Volume Present	LO-180-103	38
#EXTRD01	ORGVOL01	SOLID	Organic Volume Present	LO-180-103	38
#EXTRD01	SLDVOL01	LIQUID	Solids Recovered - Volume	LO-180-103	38
#EXTRD01	SLDVOL01	SOLID	Solids Recovered - Volume	LO-180-103	38
#EXTRD01	SLDWT-01	LIQUID	Solids Recovered - Weight	LO-180-103	38
#EXTRD01	SLDWT-01	SOLID	Solids Recovered - Weight	LO-180-103	38
#EXTRD01			EXTRUSION - AUGERS	LO-180-103	563
#EXTRD01			EXTRUSION - SLURP	LO-180-103	323
@APPEAR1	APPEAR01	LIQUID	Appearance of a sample	LA-519-151	21
@APPEAR1	APPEAR01	SOLID	Appearance of a sample	LA-519-151	21
ARCHV01	ARCHIV01	LIQUID	Archive aliqu of sample/hotcell	None	25
ARCHV01	ARCHIV01	SOLID	Archive aliqu of sample/hotcell	None	27
ARCHV02	ARCHIV02	LIQUID	Archive aliqu of sample/sample prep	None	23
ARCHV02	ARCHIV02	SOLID	Archive aliqu of sample/sample prep	None	27
ARCHIVE	ARCHIVE	LIQUID	Archive an aliquot of sample	None	21
ARCHIVE	ARCHIVE	SOLID	Archive an aliquot of sample	None	21
BUKDEN01	BUKDEN01	LIQUID	Bulk Density of Sample	LO-180-103	78
BUKDEN01	BUKDEN01	SOLID	Bulk Density of Sample	LO-180-103	127
COMPOS01	COMPOS01	LIQUID	Make Composite Sample	LO-180-103	38
COMPOS01	COMPOS01	SOLID	Make Composite Sample	LO-180-103	38
FILTER01	FILTER01	LIQUID	Filter Liquid / hotcell	LA-504-101	28
FILTER02	FILTER02	LIQUID	Filter Liquid / sample prep	LA-504-101	22
FSLDWT01	FSLDWT01	LIQUID	Weight of Solids - Filtered	LA-548-141	31
FSLDWT01	FSLDWT01	SOLID	Weight of Solids - Filtered	LA-548-141	31
HOMGNZ01	HOMGNZ01	SOLID	Homogenize Sample	LO-180-103	38
SHIP-PNL	SHIP-PNL	LIQUID	Ship aliquot of sample to PNL	None	65
SHIP-PNL	SHIP-PNL	SOLID	Ship aliquot of sample to PNL	None	72
			EOX	LI-000-200	22
PCL ANALYSIS:					
@ICP-P02		SOLID	ICP (PCL Digest of Solids)	LA-505-151/182	192
@ICP-P03		LIQUID	ICP (PCL Digest) Li Only	LA-505-151/183	192
@ICP-P04		SOLID	ICP (PCL Digest) Cd, Cr, Pb	LA-505-151/184	192
@MSU-A1	@MSU-A1	SOLID	Isotopic Uranium (ICP/MS) Acid Dig. Solid	LT-506-101	192
@MSU-F1	@MSU-F1	SOLID	Isotopic Uranium (ICP/MS) Fusion Dig	LT-506-101	192

222-S LABORATORY
FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.3

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
MSU-B1	MSU-B1	LIQUID	Isotopic Uranium (ICP/MS) Acid Dig-Liquid	LT-508-101	192
MSU-D1	MSU-D1	LIQUID	Isotopic Uranium (ICP/MS) Direct Liquid	LT-508-101	192
MSACT-A1	MSACTA1	SOLID	Actinides (ICP/MS) Acid Dig - Solid	LT-508-101	258
MSACT-F1	MSACTF1	SOLID	Actinides (ICP/MS) Fusion Dig	LT-508-101	258
MSACT-B1	MSACTB1	LIQUID	Actinides (ICP/MS) Acid Dig - Liquid	LT-508-101	258
MSACT-D1	MSACTD1	LIQUID	Actinides (ICP/MS) Direct Liquid	LT-508-101	258
MSTC-A1	MSTC-A1	SOLID	Tc-99 (ICP/MS) Acid Dig - Solid	LT-508-101	154
MSTC-F1	MSTC-F1	SOLID	Tc-99 (ICP/MS) Fusion Dig - Solid	LT-508-101	154
MSTC-B1	MSTC-B1	LIQUID	Tc-99 (ICP/MS) Acid Dig - Liquid	LT-508-101	154
MSTC-D1	MSTC-D1	LIQUID	Tc-99 (ICP/MS) Direct Liquid	LT-508-101	154
MSCS-A1	MSCS-A1	SOLID	Isotopic Cesium (ICP/MS) Acid Dig-Solid	LT-508-101	182
MSCS-F1	MSCS-F1	SOLID	Isotopic Cesium (ICP/MS) Fusion Dig	LT-508-101	182
MSCS-B1	MSCS-B1	LIQUID	Isotopic Cesium (ICP/MS) Acid Dig-Liquid	LT-508-101	182
MSCS-D1	MSCS-D1	LIQUID	Isotopic Cesium (ICP/MS) Direct Liquid	LT-508-101	182
MSZR-A1	MSZR-A1	SOLID	Zr-93 (ICP/MS) Acid Dig - Solid	LT-508-101	182
MSZR-F1	MSZR-F1	SOLID	Zr-93 (ICP/MS) Fusion Dig	LT-508-101	182
MSZR-B1	MSZR-B1	LIQUID	Zr-93 (ICP/MS) Acid Dig - Liquid	LT-508-101	182
MSZR-D1	MSZR-D1	LIQUID	Zr-93 (ICP/MS) Direct Liquid	LT-508-101	182
MSSN-A1	MSSN-A1	SOLID	Sr-128 (ICP/MS) Acid Dig - Solid	LT-508-101	182
MSSN-F1	MSSN-F1	SOLID	Sr-128 (ICP/MS) Fusion Dig	LT-508-101	182
MSSN-B1	MSSN-B1	LIQUID	Sr-128 (ICP/MS) Acid Dig - Liquid	LT-508-101	182
MSSN-D1	MSSN-D1	LIQUID	Sr-128 (ICP/MS) Direct Liquid	LT-508-101	182
MSSEL-A1	MSSEL-A1	SOLID	Elemental Analysis (ICP/MS) Acid Dig-Solid	LT-508-101	258
MSSEL-F1	MSSEL-F1	SOLID	Elemental Analysis (ICP/MS) Fusion Dig	LT-508-101	258
MSSEL-B1	MSSEL-B1	LIQUID	Elemental Analysis (ICP/MS) Acid Dig-Liquid	LT-508-101	258
MSSEL-D1	MSSEL-D1	LIQUID	Elemental Analysis (ICP/MS) Direct Liquid	LT-508-101	258
VISCO51	VISCO51	LIQUID	Viscosity Analysis by PCL	LT-519-115	368
VISCO81	VISCO81	SOLID	Viscosity Analysis by PCL	LT-519-115	409
ICP-F01		SOLID	ICP (PCL Digest)	LA-505-151/101	192
ADIABC01	ADIABC01	LIQUID	Adiabatic Calorimetry	WHC-SD-WM-	1007
ADIABC01	ADIABC01	SOLID	Adiabatic Calorimetry	WHC-SD-WM-	1158
BOILPT01	BOILPT01	LIQUID	Boiling Point Study	PCL does this	127
PARTSZ01	PARTSZ01	SOLID	Particle Size Analysis	LT-519-101	111
PCLDIG01			Digestion done by PCL	PCL Method	285
RSSLD-01		SOLID	Digestion - Water No Acid & A Added	LA-504-101	285
RSSLD-01		WATER	Digestion - Water Acid Added	LA-504-101	291
			Laser Ablation/Mass Spec Screen	LT-508-102	468
			TCLP Digestion/Extraction	LA-544-134	519
			Settling Rate	Test Plan	182
			Settled Density	Test Plan	182
			Centrifuge Particle Density	Test Plan	374
PREPARATION ANALYSIS TEAM					
EDTA-01			EDTA/HEDTA by CZE	LA-533-113	45
IC2-01		LIQUID	Organic Acids-IC Dionex 4000	LA-533-105	384
IC2-01		SOLID	Organic Acids-IC Dionex 4000	LA-533-105	384
IC3-01		LIQUID	Anions by IC - Dionex 100	LA-533-101	182
IC3-01		SOLID	Anions by IC - Dionex 100	LA-533-101	182
IC3-01		ALL	Single Analyte Parameter - IC	LA-533-101	128
IC4-01		LIQUID	F ORG Acid-IC Dionex 4000 / 4500	LA-533-105	384

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.3

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
IC4-01		SOLID	F. ORG. Acid-IC Dionex 4000 / 4500	LA-533-105	384
IC4-01		ALL	Single Analyte Parameter - IC	LA-533-105	192
IC5-01		LIQUID	Anions & Cations on Dionex 500	LA-533-115	364
IC5-01		SOLID	Anions & Cations on Dionex 500	LA-533-115	384
IC5-01		ALL	Anions & Cations on Dionex 500	LA-533-115	192
ICP-T01			TCLP Digest of Liquids	LA-505-151	192
ICP-Z01			Fusion Zr Crucible (all metals)	LA-505-151	192
KDIG-01		LIQUID	Acid Dig-Sandfilter Backwash	LA-505-162	508
KDIG-01		SOLID	Acid Dig-Sandfilter Backwash	LA-505-162	557
IC-01		LIQUID	Anions by IC - Dionex 4000 / 4500	LA-533-105	320
IC-01		SOLID	Anions by IC - Dionex 4000 / 4500	LA-533-105	320
ICP-A01		SOLID	ICP (Acid Digest) All Metals	LA-505-151/161	192
ICP-A02		SOLID	ICP (Acid Digest of Solids)	LA-505-151/161	192
ICP-A03		SOLID	ICP (Acid Digest) Li Only	LA-505-151/161	192
ICP-A04		SOLID	ICP (Acid Digest) U Fe Mn	LA-505-151/161	192
ICP-B01		LIQUID	ICP (Acid Digest of Liquid)	LA-505-151/161	192
ICP-B02		LIQUID	ICP Acid Digest of a Liquid	LA-505-151/161	192
ICP-B03		LIQUID	ICP (Acid Digest) Li Only	LA-505-151/161	192
ICP-B04		LIQUID	ICP (Acid Digest) U Fe Mn	LA-505-151/161	192
ICP-D01		LIQUID	ICP (Acid Added to Liquid)	LA-505-151/161	192
ICP-D02			ICP Acid Digest of a Liquid	LA-505-151/161	192
ICP-D03		LIQUID	ICP (Acid Digest) Li Only	LA-505-151/161	192
ICP-D04		LIQUID	ICP (Acid Digest) U Fe Mn	LA-505-151/161	231
ICP-F01		SOLID	ICP (Fusion Digest) All Metals	LA-505-151/161	192
ICP-F02		SOLID	ICP (Fusion Digest)	LA-505-151/161	192
ICP-F03		SOLID	ICP (Fusion Digest) Li Only	LA-505-151/161	192
ICP-F04		SOLID	ICP (Fusion Digest) U Fe Mn	LA-505-151/161	192
ICP-X01		SOLID	ICP (H2O/Acid) All Metals	LA-505-151/161	192
ICP-QC		QC	ICP (QC) All Metals	LA-505-151	192
ICP (>1r)			ICP (high dose rate > 1r)	LA-505-151/161	218
ICP (>20)			ICP (>20 samples 5% discount runn)	LA-505-151/161	96
ICP (1-5)			ICP (1-5 Analytes) primary	LA-505-151/161	192
ICP (35-40)			ICP (35-40 Analytes) Tertiary	LA-505-151/161	218
ICP (5-10)			ICP (5-10 Analytes) Secondary	LA-505-151/161	243
ACDGFA01	ACDGFA01	LIQUID	Digestion - Acid (LIQUID) ICP/FL&GFAA	LA-505-158	253
ACIDIG02	ACIDIG02	LIQUID	Acid Digest	LA-505-158	253
ACIDIG03		SOLID	Digestion - Acid (Solid) ICP/FL&HYAA/GF	LA-505-159	508
ACIDIL01	ACIDIL01	LIQUID	Acid Dilution	LA-505-136	32
CD-03	CD-03	LIQUID	Cadmium by GFAA	LA-505-402	192
GD-03	GD-03	SOLID	Cadmium by GFAA	LA-505-402	192
GRADIG01		SOLID	GFAA Acid Digest	LA-505-401	253
H2ODIG02		LIQUID	Water Digest	LA-504-101	133
H2ODIL01		LIQUID	Water Dilution of a Sample	LA-504-101	133
	SE-05	LIQUID	Selenium by HYAA	LA-365-132	384
	SF-05	SOLID	Selenium by HYAA	LA-365-132	384
	SUSPLSD1	SOLID			118
DIRECT ANALYSIS/WET CHEMISTRY TEAM					
PCB			PCBs by BW-846	LA-523-434	251

222-S LABORATORY
FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.3

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
PCB-OIL		OIL	PCBs in oil by SW-846	LA-523-434	278
CLPEST		LIQ	Pesticides by CLP protocol	LA-523-434	251
CLPEST		SOL	Pesticides by CLP protocol	LA-523-434	276
CLPSVO		LIQ	Semi-VOA GC/MS by CLP protocol	LA-523-402	841
CLPSVO		SOL	Semi-VOA GC/MS by CLP protocol	LA-523-402	925
CLPVOA		LIQ	VOA by GC/MS - CLP protocol	LA-523-401	468
CLPVOA		SOL	VOA by GC/MS - CLP protocol	LA-523-401	512
IC-01	F3-01	LIQUID	Fluoride by IC-Dionex 100	LA-533-105	268
NPH/TBP	DECANE	SOL	NPH/TBP by GC	LA-523-437	192
NPH/TBP	UNDECANE	LIQ	NPH/TBP by GC	LA-523-437	175
PEST-WP	A-8HC	LIQ	Pesticides by CLP protocol	LA-523-434	251
RCRA-SV	1-NAPHA	SOL	Semi-VOA GC/MS RCRA protocol	LA-523-406	925
RCRA-SV	TRITOLP	LIQ	Semi-VOA GC/MS RCRA protocol	LA-523-406	841
RCRAVOA	11-DCL2	SOL	VOA by GC/MS - RCRA protocol	LA-523-405	512
RCRAVOA	VINYLDE2	LIQ	VOA by GC/MS - RCRA protocol	LA-523-405	466
SVEVAP	2CPD4-01	LIQ	Semi-Vos Evaporator	LA-523-406	841
TIC/TOC1	TIC-02	SOLID	TIC/TOC Acid Persulfate	LA-342-100	214
TIC/TOC1	TOC-02	LIQUID	TIC/TOC Acid-Persulfate	LA-342-100	214
U-01	U-02	SOLID	Uranium by Phosphorescence	LA-925-009	283
U-01	U-02E	AIR	Uranium by Phosphorescence	LA-925-009	257
U-01	U-02E	LIQUID	Uranium by Phosphorescence	LA-925-009	257
U-03	U-03	AIR	ENV Uranium	LA-925-008	309
U-03	U-03	LIQUID	ENV Uranium	LA-925-008	309
U-03	U-03E	SOLID	ENV Uranium	LA-925-008	340
VOA-WP	11-DCL2	LIQ	VOA by GC/MS - 824 protocol	LA-523-405	466
VOAEVAP	BFB-01	LIQ	VOA Evaporator	LA-523-405	466
12-DBEN1			1,2-Dichlorobenzene (RCRA-VOA)	LA-523-405	45
13-DBEN1			1,3-Dichlorobenzene (RCRA-VOA)	LA-523-405	45
14-DBEN1			1,4-Dichlorobenzene (RCRA-VOA)	LA-523-405	45
1BUTAN-1	1BUTAN-1	SOL	1-Butanol	LA-523-405	45
2BUETHOL	2BUETHOL	SOL	2-Butoxyethanol	LA-523-406	45
2CPD4-01	2CPD4-01	SOL	2-Chlorophenol-d4 Surr	LA-523-406	45
2FP-01	2FP-01	SOL	2-Fluorophenol Surr	LA-523-406	45
2HEXANO1	2HEXANO1	SOL	2-Hexanone	LA-523-405	45
2PENTNON	2PENTNON	SOL	2-Pentanone	LA-523-405	45
4MET2PE1	4MET2PE1	SOL	4-Methyl-2-pentanone	LA-523-405	45
ACETONE1	ACETONE1	SOLID	Acetone	LA-523-405	32
CIR-01		LIQUID	Caustic Ratio	LA-211-105	81
CIR-01		SOLID	Caustic Ratio	LA-211-105	81
CN-03	CN-03	LIQUID	Cyanide NEW METHOD	LA-895-102	268
CN-03	CN-03	SOLID	Cyanide NEW METHOD	LA-895-102	268
CN-03	CN-03	SOLID	Cyanide NEW METHOD	LA-895-103	220
CRVI-01	CRVI-01	LIQUID	Chromium (VI) by Spec.	LA-265-101	192
CRVI-01	CRVI-01	SOLID	Chromium (VI) by Spec.	LA-265-101	192
D2EHPA			D-2 Ethylhexyl Phosphoric acid		45
DSC-01	DSC-01	LIQUID	DSC Exotherm using Mettler	LA-514-113	256
DSC-03	DSC-03	LIQUID	DSC Exotherm on Perkin Elmer	LA-514-114	256
DSC-03	DSC-03	SOLID	DSC Exotherm on Perkin Elmer	LA-514-114	256
ETHYGLY	ETHYGLY	LIQ	Ethylene Glycol	LA-523-106	65
ETHYGLY	ETHYGLY	SOL	Ethylene Glycol	LA-523-106	72
HION-01			Hydrogen Ion Analysis	LA-211-102	81

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.3

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
HG-02	HG-02	LIQUID	Mercury by CAAA (Perkin Elmer)	LA-325-104	384
HG-02	HG-02	SOLID	Mercury by CAAA (Perkin Elmer)	LA-325-104	384
NH3-01	NH3-01	LIQUID	Ammonia by ISE-Sid Additions	LA-431-001	80
NH3-01	NH3-01	SOLID	Ammonia by ISE-Sid Additions	LA-431-001	80
OH-01	OH-01	LIQUID	OH- by Pot. Titration	LA-211-102	81
OH-01	OH-01	SOLID	OH- by Pot. Titration	LA-211-102	81
ONDEMAND	ONDEMAND	LIQUID	Causitic Demand	LA-211-104	154
PH-01	PH-01	LIQUID	pH Direct	LA-212-108	19
PH-02	PH-02	SOLID	pH on SST Samples	LA-212-108	38
PH-QC	PH-QC	QC	pH Measurement QC		19
SOLID-01	SOLID-01	LIQUID	Solids % - Gravimetric	LA-584-101	77
SOLID-01	SOLID-01	SOLID	Solids % - Gravimetric	LA-584-101	77
SPG-01	SPG-01	LIQUID	Specific Gravity	LA-510-112	77
SPG-02	SPG-02	SOLID	Specific Gravity-Solids/Sludges	LA-510-116	205
TOTC-02	TOTC-02	LIQUID	Total Carbon by Persulfate	LA-342-100	269
TDS-01	TDS-01	LIQUID	Total Dissolv. Solids - Grav.	LA-510-115	115
TDS-01	TDS-01	SOLID	Total Dissolv. Solids - Grav.	LA-510-115	115
TGA-01	TGA-01	LIQUID	% Water by TGA using Mettler	LA-580-112	266
TGA-01	TGA-01	SOLID	% Water by TGA using Mettler	LA-580-112	235
TGA-03	TGA-03	LIQUID	% Water by TGA on Perkin Elmer	LA-514-114	258
TGA-03	TGA-03	SOLID	% Water by TGA on Perkin Elmer	LA-514-114	258
TIC-01	TIC-01	LIQUID	Tot. Inorg. Carbon by Coul.	LA-342-100	269
TIC-01	TIC-01	SOLID	Tot. Inorg. Carbon by Coul.	LA-342-100	269
TIC-02	TIC-02	LIQUID	Tot. Inorg. Carbon by Persulfate	LA-342-100	269
TIC-02	TIC-02	SOLID	Tot. Inorg. Carbon by Persulfate	LA-342-100	269
TOC-01	TOC-01	LIQUID	Tot. Organic Carbon by Coul.	LA-344-105	269
TOC-01	TOC-01	SOLID	Tot. Organic Carbon by Coul.	LA-344-105	269
TOC-02	TOC-01	SOLID	Tot. Organic Carbon by Persulfate	LA-344-105	269
TOTC-01	TOTC-01	LIQUID	Total Carbon by Coulometry	LA-344-105	269
TOTC-01	TOTC-01	SOLID	Total Carbon by Coulometry	LA-344-105	269
TOTC-02	TOTC-02	SOLID	Total Carbon by Persulfate	LA-342-100	269
WATER-01	WATER-01	LIQUID	% Water by Gravimetric	LA-584-101	77
WATER-01	WATER-01	SOLID	% Water by Gravimetric	LA-584-101	77
	AS-05		Arsenic by HYAA	LA-365-131	384
		DIRECT	CONDUCTIVITY	LA-512-104	19
			ELECTRICAL CONDUCTANCE	LA-513-104	19
RADIOCHEMICAL SEPARATIONS TEAM					
ALB-01	ALPHA01	LIQUID	Alpha and Beta Liquid Samples	LA-508-101	115
ALB-01	ALPHA01	SOLID	Alpha and Beta Liquid Samples	LA-508-101	115
ALB-02	ALPHA02	AIR	ENV ALPHA/BETA	LA-508-101	174
ALB-02	ALPHA02	SOLID	ENV ALPHA/BETA	LA-508-101	181
ALB-02	ALPHA02E	LIQUID	ENV ALPHA/BETA	LA-508-101	143
ALB-03	ALB-03	LIQUID	ENV ALPHA/BETA LARGE VOLUME	LA-508-101	143
ALR-01	ALPHA01	AIR	AIR	LA-508-101	57
ALPHA02	ALPHA02	AIR	ENV Alpha Analysis of Liquids	LA-508-101	193
ALPHA02	ALPHA02	LIQUID	ENV Alpha Analysis of Liquids	LA-508-101	189
ALPHA02	ALPHA02	SOLID	ENV Alpha of Digested Solids	LA-508-101	310
ALPHA03	ALPHA03	LIQUID	ENV Alpha Analysis of Liquids	LA-508-101	89

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.3

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
BETA-02	BETA-02	AIR	ENV Beta of Liquid Samples	LA-508-101	183
BETA-02	BETA-02	LIQUID	ENV Beta of Liquid Samples	LA-508-101	183
BETA-02	BETA-02	SOLID	ENV Beta of Digested Solids	LA-508-101	310
BETA-03	BETA-03	LIQUID	ENV Beta Large Volume	LA-508-101	183
GEA-00	GEA-00	LIQUID	GEA Large Library Method	LA-548-121	159
GEA-06	GEA-06	AIR	ENV. GEA for Co, Cs, Eu	LA-548-121	181
GEA-06	GEA-06	LIQUID	ENV. GEA for Co, Cs, Eu	LA-548-121	199
GEA-06	GEA-06	SOLID	ENV. GEA for Co, Cs, Eu	LA-548-121	199
GEA-07	GEA-07	AIR	ENV GEA-2" mount for Co, Cs, Eu	LA-548-121	199
GEA-07	GEA-07	LIQUID	ENV GEA-2" mount for Co, Cs, Eu	LA-548-121	199
GEA-07	GEA-07	SOLID	ENV GEA-2" mount for Co, Cs, Eu	LA-548-121	199
H3-04	H3-04	LIQUID	ENV TRITIUM (H3) - Ion Removal	LA-218-115	272
Pu23904		LIQUID	ENV Pu239/Pu238/Pu240 by TTA Ex	LA-943-123	741
Pu23904		SOLID	ENV Pu239/Pu238/Pu240 by TTA Ex	LA-943-123	809
PUAM-01		AIR	Pu239/241 by TRU-SPEC Resin	LA-953-104	847
PUAM-01		LIQUID	Pu239/241 by TRU-SPEC Resin	LA-953-104	847
PUAM-01		SOLID	Pu239/241 by TRU-SPEC Resin	LA-953-104	847
PUAM-02		LIQUID	Pu238,239 by TRU-SPEC Resin	LA-953-104	847
PUAM-02		SOLID	Pu238,239 by TRU-SPEC Resin	LA-953-104	847
PUAM-03		LIQUID	ENV Pu239, Pu238	LA-953-104	847
PUAM-03		SOLID	ENV Pu239, Pu238	LA-953-104	847
PUAM-04		LIQUID	ENV Pu238,9/Am241/Cm243 Tru-Sp	LA-953-104	847
PUAM-04		SOLID	ENV Pu238,9/Am241/Cm243 Tru-Sp	LA-953-104	847
PuT0T01		LIQUID	Total Pu by TTA Extraction	LA-943-101	847
PuT0T01		SOLID	Total Pu by TTA Extraction	LA-943-101	847
TC99-03	TC99-03	LIQUID	ENV Tc-99 Large Volume	LA-436-111	308
TC99-00	TC99-00	AIR	Technetium - Lq. Scint.	LA-436-101	257
ALPHA01	ALPHA01	AIR	Alpha (AEA/FILTER)	LA-508-101	87
ALPHA01	ALPHA01	LIQUID	Alpha in Liquid Samples	LA-508-101	205
ALPHA01	ALPHA01	SOLID	Alpha of Digested Solid	LA-508-101	78
AM24101	AM24101	AIR	Am241 by Extraction	LA-953-103	769
AM24101	AM24101	LIQUID	Am241 by Extraction	LA-953-103	769
AM24101	AM24101	SOLID	Am241 by Extraction	LA-953-103	769
AM24102	AM24101	LIQUID	Am241/Cm243 by Extraction	LA-953-103	769
AM24102	AM24101	SOLID	Am241/Cm243 by Extraction	LA-953-103	769
AM24103	AM24103	LIQUID	ENV Am241/Cm243	LA-943-123	897
AM24103	AM24103E	SOLID	ENV Am241/Cm243	LA-943-123	927
BETA-01	BETA-01	AIR	Beta In (AEA/FILTER)	LA-508-101	87
BETA-01	BETA-01	LIQUID	Beta in Liquid Samples	LA-508-101	205
BETA-01	BETA-01	SOLID	Beta of Digested Solids	LA-508-101	78
C14-01	C14-01	SOLID	Carbon 14 Small Volume	LA-348-104	647
C14-01	C14-01E	LIQUID	Carbon 14 Small Volume	LA-348-104	647
GEA-01	CO80-02	SOLID	GEA for Co80 Cs137	LA-548-121	159
GEA-01	CS13702E	LIQUID	GEA for Co80 Cs137	LA-548-121	159
GEA-02	AM24102	SOLID	GEA: Cs137Co80Eu154-155Am241	LA-548-121	159
GEA-02	EU15502E	LIQUID	GEA: Cs137Co80Eu154-155Am241	LA-548-121	159
GEA-03	CE14402	SOLID	GEA for CoNdRuCsCeEuRa	LA-548-121	159
GEA-03	RU10602E	LIQUID	GEA for CoNdRuCsCeEuRa	LA-548-121	159
GEA-04	GEA-04	AIR	GEA	LA-548-121	145
GEA-04	GEA-04	LIQUID	GEA (ALL)	LA-548-121	159
GEA-04	GEA-04	SOLID	GEA (ALL)	LA-548-121	159

FY 1998 UNIT PRICES - LABCORE**RL WBS # 7.1.1.4.3.3**

Code Test	Parameters Labcode	MATRIX	Description	Reference #	FY 98 PRICES
QGEA-05	QGEA-05	AIR	ENV GEA	LA-548-121	181
QGEA-05	QGEA-05	LIQUID	ENV, GEA	LA-548-121	189
QGEA-05	QGEA-05	SOLID	ENV, GEA	LA-548-121	199
QH3-01	H3-01	AIR	Tritium (H3) by Lachet	LA-218-114	217
QH3-01	H3-01	LIQUID	Tritium (H3) by Lachet	LA-218-114	217
QH3-01	H3-01	SOLID	Tritium (H3) by Lachet	LA-218-114	199
QH3-03	H3-03	LIQUID	ENV TRITIUM (H3)	LA-218-114	277
QH3-03	H3-03E	SOLID	ENV TRITIUM (H3)	LA-218-114	277
QI129-01	I129-01	SOLID	Iodine-129 Waste Tank Samples	LA-378-103	300
QI129-01	I129-01E	LIQUID	Iodine-129 Waste Tank Samples	LA-378-103	239
QNP23701	NP23701	SOLID	Np237 by TTA Extraction	LA-933-141	258
QNP23701	NP23701E	LIQUID	Np237 by TTA Extraction	LA-933-141	283
QPU23901	PU23901	SOLID	Pu239 by TRU-SPEC Resin	LA-943-127	586
QPU23901	PU23901T	AIR	Pu239 by TRU-SPEC Resin	LA-943-127	539
QPU23901	PU23901T	LIQUID	Pu239 by TRU-SPEC Resin	LA-943-127	539
QPU23902	PU23901	SOLID	Pu239/Pu238 by TRU-SPEC Resin	LA-943-127	647
QPU23902	PU23903	AIR	Pu239, Pu238	LA-943-123	741
QPU23902	PU23901T	LIQUID	Pu239/Pu238 by TRU-SPEC Resin	LA-943-127	593
QPU23903	PU23903	AIR	ENV Pu239, Pu238	LA-943-123	674
QPU23903	PU23903	LIQUID	ENV Pu239, Pu238	LA-943-123	741
QPU23903	PU23903E	SOLID	ENV Pu239, Pu238	LA-943-123	809
QSE79-01	SE79-01	SOLID	Selenium-79 by Liquid Solnt.	LA-365-132	1121
QSE79-01	SE79-01E	AIR	Selenium-79 by Liquid Solnt.	LA-365-132	1019
QSE79-01	SE79-01E	LIQUID	Selenium-79 by Liquid Solnt.	LA-365-132	1121
QSR90-01	SR90-01	SOLID	Sr-89/90 High Level	LA-220-101	316
QSR90-01	SR90-01E	AIR	Sr-89/90 High Level	LA-220-101	289
QSR90-01	SR90-01E	LIQUID	Sr-89/90 High Level	LA-220-101	289
QSR90-03	SR90-03	LIQUID	Env SR-90	LA-220-104	362
QSR90-03	SR90-03E	SOLID	Env SR-90	LA-220-103	393
QSR90-03	SR90-03E	AIR	Env SR-90 on Sample	LA-220-103	395
QTC99-01	TC99-01	SOLID	Technetium - Liq. Solnt.	LA-438-101	262
QTC99-01	TC99-01T	AIR	Technetium - Liq. Solnt.	LA-438-101	257
QTC99-01	TC99-01T	LIQUID	Technetium - Liq. Solnt.	LA-438-101	257
QTC99-03	TC99-03	LIQUID	ENV Tc-99	LA-438-101	306
QTC99-03	TC99-03E	SOLID	ENV Tc-99	LA-438-101	339
ASH-01		AIR	Ash and Leach of Env. Samples	LA-544-102	159
ASH-01		SOLID	Ash and Leach of Env. Samples	LA-544-102	175
CM24303		AIR	Cm-243/244 Env.	LA-943-123	699
CM24303		LIQUID	Cm-243/244 Env.	LA-943-123	897
CM24303		SOLID	Cm-243/244 Env.	LA-943-123	897
FUS-2R01	FUS-2R01	SOLID	Fusion (Zr Crucible) with KOH	LA-549-141	460
FUSION01	FUSION01	SOLID	Fusion with KOH	LA-549-141	506
PU23902	PU23902	AIR	Pu-239 by Ion Exchange	LA-943-127	539
PU23902	PU23902	LIQUID	Pu-239 by Ion Exchange	LA-943-127	588
PU23902	PU23902	LIQUID	Pu-239/240 by Ion Exchange	LA-943-127	593
PU23902	PU23902	SOLID	Pu-239/240 by Ion Exchange	LA-943-127	647
TE12302	TE12302		Tellurium-123m by GEA	LA-548-121	199

222-S LABORATORY

FY 1998 UNIT PRICES - LABCORE

RL WBS # 7.1.1.4.3.3

Code Test	Parameters Labcore	MATRIX	Description	Reference #	FY 98 PRICES
TOTACT1			Total Activity by LSC	LA-548-111	54
DATA REPORTING					
			Data Report		2450
			Full Data Report (TANK CHAR REPT)		22300

FY 1998 Annual Work Plan Part I - Summary

Revision # 0

28-Aug-87

Cost Account Number 1MDR63	Cost Account Title Commercial Support				Funding Source: G&A	
WBS Number 7.1 14.3.4	WBS Title Commercial Support				Service Center DONPMA	x
Budget Analyst J. M. Kier					FY 1998 CAP	
Cost Account Manager J. G. Pyetal					COST ELEMENTS	\$000'S
Financial Manager R. A. Spahr					0 Labor	222
Program Manager C. G. Mattsson					1 Materials	2
RL Program Manager R. P. Carter					2 Purchased Services	0
Full Time Equivalents (FTEs)					3 Other Hanford Contractors	0
Organizational Support	Exempt	Nonexempt	Bargaining	Total	7x Fee/Non DOH	0
	1.4	0.8	1.0	3.2	8 Revenue	0
	0.3	0.0	0.0	0.3	9 Enterprise Companies	59
	Total	1.7	0.8	1.0	3.5	Subtotal Net Budget
					4 Site Services	2
					5 Internal Charges	6
					6 LMSI Support	0
					7C DOH	35
					Total Baseline	325

SIGNATURES		BASELINE APPROVAL: _____ Date _____	
ICAd _____	Date _____		
Program Manager _____	Date _____		
RL Program Manager _____	Date _____	Indirect Program Administration	

The FY 1998 Annual Work Plan (AWP) for IMDR Sample Analysis, is being submitted unsigned due to recent reductions in the sample load for Tariff Characterization Program. These reductions have not been incorporated into the AWP. A Revised AWP for the sample analysis will be submitted by September 22, 1997 with the appropriate signatories.

FY 1998 Annual Work Plan

Part II - Activity Detail

GAP #

1M0R3

COST ACCOUNT WORKSCOPE SUMMARY

Functional Organization: Commercial Support

Workscope Summary: The Commercial Laboratory supports off-site commercial laboratory sampling and analysis requirements. Commercial laboratory analysis are sent by the Programs to determine what type of waste they have so that eventual disposal or burial of that waste meets EPA and state requirements. Also, programs have their samples analyzed to monitor groundwater to determine if levels meet EPA and state requirements. Sample residuals are returned to RFSH by the Commercial Laboratory for appropriate disposal and burial. Before it is transported to a commercial laboratory, the sample is received at 222-S Laboratory and a Total Activity analysis is performed to determine the radiological level.

APPROVED BASELINE:

Activity Description - Commercial Support

This supports off-site commercial laboratory sampling and analysis requirement. Commercial support provides coordination activities between laboratories to determine the best usage, develop/operate/maintain data tracking systems, validation support, contract administration and verification of data. This activity also provides QA support for review, evaluation and approval of commercial analytical laboratory services contractual documentation related to QA program maintenance and implementation.

Commercial Support

FY 1998

FTEs

Dollars

2.2

199.3

Mutually Agreed Upon Workscope Deliverables and Due Dates

- 1 10/01/97 to 09/30/98

This supports off-site commercial laboratory sampling and analysis requirement. Commercial support provides coordination activities between laboratories to determine the best usage, develop/operate/maintain data tracking systems, validation support, contract administration and verification of data.

- 2 10/01/97 to 09/30/98

Provides QA support for review, evaluation and approval of commercial analytical laboratory services contractual documentation related to QA program maintenance and implementation.

Subtotal Net

2.2

199.3

Total Activity

2.2

231.0

Activity Description - Sample Return

This supports sample residuals returned to RFSH by the commercial labs for appropriate disposal and burial. Disposal and burial of this waste is closely monitored by the EPA, State of Washington, and other regulatory entities to ensure proper disposal.

Sample Disposal

0.6

40.6

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP # 1MOR63

Mutually Agreed Upon Workscope Deliverables and Due Dates

- 1 10/01/97 to 09/30/98

Supports sample residuals returned to RFSM by the commercial laboratories for appropriate disposal and burial. Disposal and burial of this waste is closely monitored by the EPA, State of Washington, and other regulatory entities to ensure proper disposal.

Subtotal Net

06

40.6

Total Activity

06

46.9

Activity Description - Radiological Screening

The sample for Commercial Laboratory is received into 222-S Laboratory for logging in and HFT screening. Once the sample is received into 222-S Laboratory, a Total Activity (Alpha/Beta) is performed to determine the contents for radiological concerns. It is then shipped to the Commercial Laboratory for analysis.

Sample Receipts

01

6.6

Radiological Screening

06

36.7

Mutually Agreed Upon Workscope Deliverables and Due Dates

- 1 10/01/97 to 09/30/98

Receiving samples into 222-S Laboratory for logging in support of Commercial Laboratory

- 2 10/01/97 to 09/30/98

Performing a radiological screening (Total Activity analysis) to determine the contents for radiological concerns

Subtotal Net

07

43.3

Total Activity

07

60.0

Approved Net

35

283.2

Approved Total

35

327.9

**1MDR63, COMMERCIAL SUPPORT
FY 1998 VOLUME PROJECTIONS BY PROGRAM**

RL WBS # 711434

PROGRAM	COMMERCIAL LABORATORY \$s	COMMERCIAL SUPPORT \$s (31.7%)	SAMPLE RETURN \$s (6.4%)	RAD SCREENING # of Samples	\$s	TOTAL FUNCTIONAL DOLLARS	TOTAL PROGAM DOLLARS
Solid Waste	34,275	10,865	2,184	50	2,700	15,759	18,722
Liquid Effluents	182,811	51,611	10,420	155	8,370	70,401	83,636
Advanced Reactor	89,983	19,015	3,839	100	5,400	28,254	33,565
Spent Nuclear Fuels	214,225	67,909	13,710	200	10,800	92,420	109,785
Transition Projects	47,129	14,940	3,018	70	3,780	21,736	25,823
Waste Tank Safety	17,138	5,433	1,097	35	1,890	8,420	10,002
RCRA Grd Monit	182,802	61,118	12,339	175	9,450	82,906	98,494
Bechtel	3	-	-	150	8,100	8,100	9,623
Total	728,364	230,892	46,615	935	50,490	327,997	389,660

Commercial Support budget \$231,014 / \$728,364 Commercial Laboratory = 31.7%

Sample Return budget \$46,920 / \$728,364 Commercial Laboratory = 6.4%

FY 1998 Annual Work Plan

Part 6 - Activity Detail

CAP # 1MDR03

COST ACCOUNT WORKSCOPE SUMMARY

Functional Organization: Commercial Support

Workscope Summary: The Commercial Laboratory supports off-site commercial laboratory sampling and analysis requirements. Commercial laboratory analysis are sent by the Programs to determine what type of waste they have so that eventual disposal or burial of that waste meets EPA and state requirements. Also, programs have their samples analyzed to monitor groundwater to determine if levels meet EPA and state requirements. Sample residuals are returned to RFSH by the Commercial Laboratory for appropriate disposal and burial. Before it is transported to a commercial laboratory, the sample is received at 222-S Laboratory and a Total Activity analysis is performed to determine the radiological level.

APPROVED BASELINE:

Activity Description - Commercial Support

This supports off-site commercial laboratory sampling and analysis requirement. Commercial support provides coordination activities between laboratories to determine the best usage, develop/operate/maintain data tracking systems, validation support, contract administration and verification of data. This activity also provides QA support for review, evaluation and approval of commercial analytical laboratory services contractual documentation related to QA program maintenance and implementation.

Commercial Support

FY 1998

FTEs

Dollars

2.2

199.3

Mutually Agreed Upon Workscope Deliverables and Due Dates

1. 10/01/97 to 09/30/98

This supports off-site commercial laboratory sampling and analysis requirement. Commercial support provides coordination activities between laboratories to determine the best usage, develop/operate/maintain data tracking systems, validation support, contract administration and verification of data.

2. 10/01/97 to 09/30/98

Provides QA support for review, evaluation and approval of commercial analytical laboratory services contractual documentation related to QA program maintenance and implementation.

Subtotal Net

2.2

199.3

Total Activity

2.2

231.0

Activity Description - Sample Return

This supports sample residuals returned to RFSH by the commercial labs for appropriate disposal and burial. Disposal and burial of the waste is closely monitored by the EPA, State of Washington, and other regulatory entities to ensure proper disposal.

Sample Disposal

0.6

40.6

FY 1998 Annual Work Plan

Part II - Activity Detail

CAP #

1MDR63

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Supports sample residuals returned to RF5H by the commercial laboratories for appropriate disposal and burial. Disposal and burial of this waste is closely monitored by the EPA, State of Washington, and other regulatory entities to ensure proper disposal.

Subtotal Net

06

40.6

Total Activity

06

46.9

Activity Description - Radiological Screening

The sample for Commercial Laboratory is received into 222-S Laboratory for logging in and HFT screening. Once the sample is received into 222-S Laboratory, a Total Activity (Alpha/Beta) is performed to determine the contents for radiological concerns. It is then shipped to the Commercial Laboratory for analysis.

Sample Receipts

01

6.6

Radiological Screening

06

36.7

Mutually Agreed Upon Workscope Deliverables and Due Dates

1 10/01/97 to 09/30/98

Receiving samples into 222-S Laboratory for logging in support of Commercial Laboratory

2 10/01/97 to 09/30/98

Performing a radiological screening (Total Activity analysis) to determine the contents for radiological concerns.

Subtotal Net

07

43.3

Total Activity

07

50.0

Approved Net

35

283.2

Approved Total

38

327.9

ATTACHMENT 1

Fig. 40246 of T 11434

	SERIES OR ANALYSIS REPORT	QC	SAMPLE RECEIPT	% OF HOURS FOR ANALYTICAL WORK							% OF TOTAL LABORATORY HOURS						TOTAL UNIT PRICE (\$)	
				TRAINING	ANALYST ON TIME	AIDMT	SFTY	STAND LAB	TOTAL ANALY HRS	TOTAL LABOR \$	BROOK ROOM	TOTAL ANALY \$	ARCH DEPT	DATA AIDMT REPAIRS	FAC PLAN MAINT	TOTAL HOURS		TOTAL LABOR \$
PACIFIC NORTH CORP.	HOURS	50.0%	50.0%	5.0%	21.0%	4.0%	50.0%	0.0%	Chemical Laboratory - Pacific North Corp.	0.0%	0.0%	0.0%	0.0%	Chemical Laboratory - Pacific North Corp.	0.0%	0.0%	Total Analytical \$ = Total Support \$ = Unit Cost (\$54.00)	
COMMERCIAL SUPPORT IS 25% OF COMMERCIAL LABORATORY USAGE SAMPLES (DEPT) = 0.0% OF COMMERCIAL LABORATORY USAGE																		
COMMENTS (The Radiological Surveying is a Time Activity performed on the sample before it goes into the Chemical support and sample disposal is based on a percentage of 51.0% Commercial Laboratory business for FY 1987 - Credit of Custody is provided by Westinghouse to Commercial Laboratory during the receipt of samples, the customer and storage code. When day is received Commercial support and Sample Disposal cost are hospitalized out to the appropriate customer.) Laboratory Time related to training, indirect expenses, materials etc.																		

**1MDR63, COMMERCIAL SUPPORT
FY 1998 VOLUME PROJECTIONS BY PROGRAM**

RL WBS # 7 1 1.4 3 4

PROGRAM	COMMERCIAL LABORATORY \$s	COMMERCIAL SUPPORT \$s (31.7%)	SAMPLE RETURN \$s (8.4%)	RAD SCREENING # of Samples	\$s	TOTAL FUNCTIONAL DOLLARS	TOTAL PROGAM DOLLARS
Solid Waste	34,278	10,865	2,194	50	2,700	15,759	18,722
Liquid Effluents	182,811	51,611	10,420	155	8,370	70,401	83,836
Advanced Reactor	88,883	19,015	3,839	100	5,400	28,254	33,565
Spent Nuclear Fuels	214,225	67,909	13,710	200	10,800	92,420	109,795
Transition Projects	47,129	14,940	3,016	70	3,780	21,736	25,823
Waste Tank Safety	17,138	5,433	1,097	35	1,890	8,420	10,002
RCRA Grd Monit	192,802	61,118	12,338	175	9,450	82,908	98,494
Bechtel	-	-	-	150	8,100	8,100	9,623
Total	728,364	230,892	46,615	935	50,490	327,997	389,660

Commercial Support budget \$231,014 / \$728,364 Commercial Laboratory = 31.7%

Sample Return budget \$46,920 / \$728,364 Commercial Laboratory = 6.4%

HNF-SP-1229
Rev. 0
Waste Management Project
WBS 1.2

FY1998

August 29, 1997

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Waste Management Federal Services of Hanford

C. M. Allender	T3-02	-	-
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S. F. Davis	T3-02		
J. E. Hyatt	T6-04		
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Fluor-Daniel Hanford Company

R. L. Bisping	N1-26	-	-
J. W. Golden	N1-26	-	-
C. G. Mattsson	N1-26	-	-
K. J. Svoboda	N1-26	-	-
C. E. Whitford	N1-26	-	-

Waste Management Federal Services of Hanford

C. M. Allender	T3-02	-	-
E. S. Aromi	H6-30	-	-
S. F. Davis	T3-02	-	-
J. E. Hyatt	T6-04	-	-
E. F. Mares	T3-02	-	-
D. E. McKenney	H6-06	-	-
J. O. Perkins	H6-30	-	-
L. L. Powers	H6-29	-	-
D. L. Renberger	T3-03	-	-
R. R. Slaybaugh	T3-02	-	-
R. A. Spohr	T3-02	-	-
R. T. Wilde	H6-10	-	-
D. B. Van Lueven	H6-10	-	-